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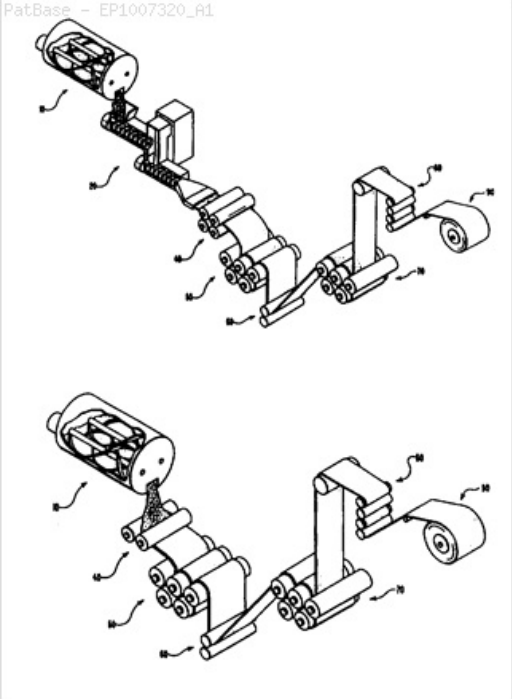
Search 1: STAC=(meat and (cut* or macerat*) and roll* and case) (Results 213)

1) Family number: 33376296 (EP1007320B1)

Title: METHODS FOR MANUFACTURING MOLDED SHEETS HAVING A HIGH STARCH CONTENT VERFAHREN ZUM HERSTELLEN GEFORMTER FOLIEN MIT HOHEM STAERKEGEHALT PROCEDES DE FABRICATION DE FEUILLES MOULEES A TENEUR ELEVEE EN AMIDON

Abstract:

Source: EP1007320B1 (Claim 1) 1. A method for manufacturing a starch-bound sheet comprising the steps of:(a) mixing together water, ungelatinized starch granules, a cellulosic ether, a fibrous material, and optionally an inorganic aggregate filler to form a moldable mixture;(b) forming the moldable mixture into an initial green sheet by passing the mixture between at least one set of forming **rollers** (40) having a temperature such that a portion of the cellulosic ether thermally precipitates so as to reduce adhesion of the initial green sheet to the forming **rollers** upon gelatinization of the ungelatinized starch granules in step (c);(c) passing the initial green sheet between at least one set of **rollers** having a temperature such that at least a portion of the ungelatinized starch granules become gelatinized and in order to form an intermediate green sheet; and(d) heating the green sheet in order to remove a portion of the water from the intermediate green sheet in order to form a hardened sheet having a binding matrix including dried starch and cellulosic ether.



International class (IPC 8-9): B05B11/00 B05C5/02 B27N3/00 B28B1/00 B28B1/52 B28B11/00 B28B23/00 B28B3/12 B28B3/20 B29C43/00 B29C43/06 B29C43/08 B29C43/22 B29C43/24 B29C43/34 B29C43/46 B29C44/04 B29C45/00 B29C47/00 B29C47/50 B29C47/52 B29C47/88 B29C49/00 B29C49/04 B29C49/06 B29C51/00 B29C51/04 B29C51/08 B29C51/10 B29C53/06 B29C53/58 B29C55/18 B29C67/24 B29C70/02 B29C70/50 B29C71/00 B29D7/01 B31B17/00 B32B13/02 B32B27/04 B32B27/20 B32B37/12 B32B37/14 B32B5/02 B32B5/18 B32B9/00 B65D43/16 B65D65/38 B65D65/46 C04B16/02 C04B26/00 C04B26/02 C04B26/28 C04B28/00 C04B40/00 C08J3/02 C08J5/04 C08J5/18 C08L1/28 C08L3/02 C08L5/12 E05D1/02 (Advanced/Invention); B05C5/02 B29C43/08 B29C43/22 B29C47/00 B29C47/88 B29C49/04 B29C51/08 B29C53/58 B29K1/00 B29L7/00 B32B37/12 C08J3/02 (Advanced/Non-invention)

International class (IPC 1-7): B28B1/52 B28B23/00 B29C43/22 B29C43/24 B29C47/00 B29C47/88 B29C70/02 B29D7/01 B29K1/00 B29L7/00 C08J3/02 C08J5/04 C08L3/02

CPC: Y02W30/97 Y02W90/11 B32B37/144 B05B11/0037 B05B11/30 B05C5/0245 B27N3/002 B27N3/007 B28B1/00 B28B1/52 B28B3/126 B28B3/20 B28B11/00 B28B11/003 B28B23/00 B28B23/0081 B28B23/0087 B29C43/00 B29C43/003 B29C43/08 B29C43/22 B29C43/222 B29C43/24 B29C43/34 B29C43/46 B29C44/0407 B29C45/0013 B29C47/0004 B29C47/0014 B29C47/0021 B29C47/0023 B29C47/0033 B29C47/0054 B29C47/02 B29C47/50 B29C47/522 B29C49/0005 B29C49/0047 B29C49/04 B29C49/06 B29C49/063 B29C51/002 B29C51/04 B29C51/08 B29C51/082 B29C51/10 B29C53/063 B29C53/58 B29C55/18 B29C67/24 B29C67/242 B29C70/50 B29C71/0009 B29C2043/3433 B29C2043/463 B29C2791/006 B29C2795/007 B29K2001/00 B29K2003/00 B29K2005/00 B29K2089/00 B29K2105/06 B29K2105/12 B29K2105/16 B29K2995/006 B29L2024/00 B29L2031/608 B29L2031/712 B29L2031/7132 B31D1/005 B32B5/02 B32B5/18 B32B9/00 B32B13/02 B32B27/04 B32B27/20 B32B37/00 B32B37/12 B65D43/162 B65D65/38 B65D65/466 B65D2565/385 C04B26/00 C04B26/02 C04B26/28 C08J5/18 C08J2303/02 C08J2323/02 C08L1/286 C08L3/02 C08L5/12 E05D1/02 E05Y2900/602 B29C47/8805 B31B50/32 B31B2105/0022

European class: B05B11/00B5 B27N3/00B B27N3/00R B28B1/00 B28B1/52 B28B11/00 B28B11/00E B28B23/00 B28B23/00Z B28B23/00Z1 B28B3/12C B28B3/20 B29C43/00B B29C43/22 B29C43/22B B29C43/24 B29C43/34 B29C43/46 B29C44/04A B29C45/00E B29C47/00B B29C47/50 B29C47/52B B29C49/00B B29C49/06B2B B29C51/00B B29C51/04 B29C51/10 B29C53/06B B29C55/18 B29C67/24 B29C67/24C B29C70/50 B29C71/00C B31B1/32 B31B17/00 B31D1/00H1 B32B13/02 B32B27/04 B32B27/20 B32B37/00 B32B37/14B B32B5/02 B32B5/18 B32B9/00 B65D43/16B B65D65/38 B65D65/46C C04B26/00 C04B26/02 C04B26/28 C08J5/18 C08L1/28F C08L3/02 C08L5/12 E05D1/02 L05B11/30 L05C5/02E L29C43/00 L29C43/08 L29C43/34B L29C43/46 L29C43/46A2 L29C47/00J10 L29C47/00J5 L29C47/00J6 L29C47/00L7 L29C47/02 L29C49/00F L29C49/04 L29C49/06 L29C51/04 L29C51/08 L29C51/08B L29C51/10 L29C53/58 L29C791/00E4 L29C795/00D L29K1/00 L29K105/00 L29K105/12 L29K105/16 L29K3/00 L29K5/00 L29K89/00 L29K995/00F14B L29L24/00 L29L31/60C L29L31/712 L29L31/7132 L31B201/26A1A L31B217/08A L32B37/12 L65D565/38Y7 M08J303/02 M08J323/02 P05D1/02 P05Y900/602

Family:

Publication number	Pub. date	Application number	App. date
AT299793 E	20050815	AT19970922292T	19970409
AU199728005 A1	19971029	AU19970028005	19970409
AU712982 B2	19991118	AU19970028005	19970409
BRPI9710428 A	19990817	BR1997PI10428	19970409
CA2248982 AA	19980915	CA19972248982	19970409
CA2248982 C	20020730	CA19972248982	19970409
DE69733779 D1	20050825	DE19976033779	19970409
DE69733779 T2	20060524	DE19976033779T	19970409
EP1007320 A1	20000614	EP19970922292	19970409
EP1007320 A4	20010314	EP19970922292	19970409
EP1007320 B1	20050720	EP19970922292	19970409
JP20000508258 T2	20000704	JP19970536442T	19970409
JP3296565 B2	20020702	JP19970536442T	19970409
KR19990087469 A	19991227	KR19980706895	19970409
NZ332697 A	20000623	NZ19970332697	19970409

Priority: US19960631676 19960409; VLF32239823 ; WO1997US05794 19970409;

Cited documents: WO9412328 A1, US5626954 A, US5508072 A, US5453310 A, US5385764 A, **Assignee(s):** (std): KHASHOGGI E IND ; E KHASHOGGI INDUSTRIES ; E KHASHOGGI INDUSTRIES LLC **Assignee(s):** ONG SHAO DE ; HODSON SIMON K ; ANDERSON PER J ; CHRISTENSEN BRUCE J ; E KHASHOGGI IND ; E KHASHOGGI IND LLC

Inventor(s): (std): ANDERSEN J ; ANDERSEN PER J ; ANDERSON PER J ; CHRISTENSEN BRUCE J ; CHRISTENSEN J ; HODSON K ; HODSON SIMON K ; ONG SHAO DE ; SIMON K HODSON ; SHAO DE ONG ; PER J ANDERSEN ; BRUCE J CHRISTENSEN
Designated states: AM AT AZ BE BY CH DE DK ES FI FR GB GR IE IT KE LI LU MC NL PT SD SE SZ

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT299793 E	20050815	LSGT	+	granted / extensions (spc, cpc, pte)	
AT299793 E	20060315	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	REF DOCUMENT NUMBER : 1007320 COUNTRY OF REF DOCUMENT : EP
AT299793 E	20090115	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AU199728005 A1	19971029	LSPB	+	published / reissued	
AU712982 B2	19991118	LSGT	+	granted / extensions (spc, cpc, pte)	
AU712982 B2	20000316	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
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BRPI9710428 A	20050524	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
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CA2248982 AA	19980915	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2248982 AA	19990713	LSSES	+EEER	EXAMINATION REQUEST	
CA2248982 AA	20090409	LSLE	-MKLA	LAPSED	
CA2248982 C	20020730	LSGT	+	granted / extensions (spc, cpc, pte)	
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DE69733779 T2	20060524	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP0485456 A1	20100226	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20090909 YEAR OF FEE PAYMENT : 20
EP0485456 A1	20100430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20090820 YEAR OF FEE PAYMENT : 20
EP0485456 A1	20100811	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : V4 EFFECTIVE DATE : 20100802
EP0485456 A1	20100813	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0485456 A1	20100825	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : PE20 EXPIRY DATE : 20100801
EP0485456 A1	20100831	LSLE	-BE20	BE: PATENT EXPIRED	OWNER NAME : M.J. *QUINLAN AND ASSOCIATES PTY. LTD EFFECTIVE DATE : 20100802
EP0485456 A1	20101029	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF

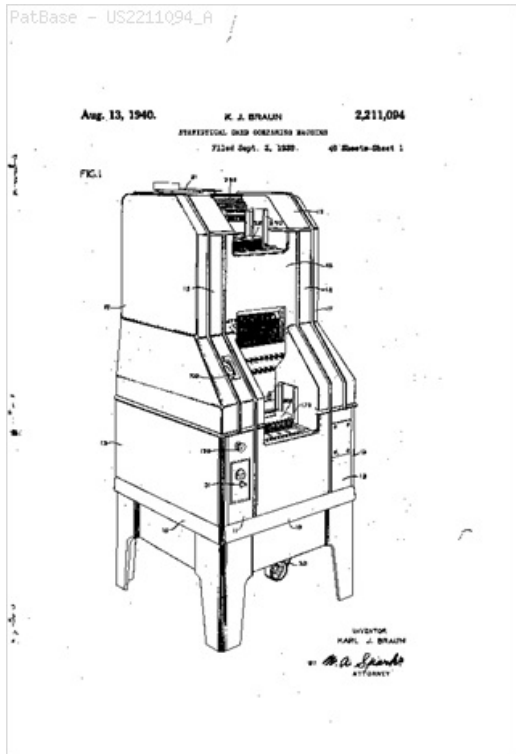
EP0485456 A1	20101231	LSLE	-PG25	POSTGRANT INFORM. FROM NAT. OFFICE TO EPO LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	PROTECTION EFFECTIVE DATE : 20100802 REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20100801
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JP3123752 B2	20010115	LSGT	+	granted / extensions (spc, cpc, pte)	
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JP3123752 B2	20071004	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20071027 YEAR OF FEE PAYMENT : 7
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US5268187 A	19931207	LSGT	+	granted / extensions (spc, cpc, pte)	
US5268187 A	19920313	LSAS	AS	ASSIGNMENT	OWNER NAME : M.J. QUINLAN AND ASSOCIATES PTY LIMITED, AUSTRALIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:QUINLAN, MICHAEL J.; REEL/FRAME:006220/0064 EFFECTIVE DATE : 19920121
US5268187 A	19931126	LSGT	PAT1	Patented Case	
US5268187 A	19970121	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5268187 A	20010426	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5268187 A	20050607	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO9101643 A1	19910221	LSPB	+	published / reissued	
WO9101643 A1	19920120	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1990911847 COUNTRY OF REF DOCUMENT : EP
WO9101643 A1	19920423	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO9101643 A1	19920520	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1990911847 COUNTRY OF REF DOCUMENT : EP
WO9101643 A1	19930402	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA
WO9101643 A1	19950308	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1990911847 COUNTRY OF REF DOCUMENT : EP

3) Family number: 20965545 (US2211094A)

Title: STATISTICAL CARD COMPARING MACHINE

Abstract:

Source: GB546590A [Class 106 (i)] [Also in Group VIII] A machine of the kind comprising means for sensing perforation patterns in master and detail cards, means for making a set-up of the master and pattern, separate pockets for receiving master and detail cards separate means for conveying master and detail cards to their receiving pockets, deflecting means for each conveying means arranged when operated to prevent the passing of cards to their respective pockets includes the combination with means for making a direct comparison between a perforation pattern sensed from a detail card and the contemporaneous setup made from a master card of means under the control of the comparing means to operate both said deflecting means when the result of the comparison is disagreement. The card feeding and comparing mechanism may be similar to that described in Specification 510,910, [Group VIII], and the driving and c. mechanism similar to that described in U.S.A. Specification 2,044,119. Master cards are fed singly from a box 290, Fig. 25, by a picker 292 into a sensing space between perforated plates 330, 331 against a stop 335 and whilst therein their perforations are sensed by a reciprocating pin box 360, of which certain pins located opposite to perforations in the card are locked in downwardly displaced position by slides 362 so that corresponding pins 395 in the reading retaining pin-box are also downwardly displaced and locked by slides 397, the displaced pins 395 in turn displacing pins 435 in the master card comparing pin assembly 425. Detail cards are fed singly from a box 170, Fig. 26, by a picker 172 into a sensing space between plates 220, 221 against a stop 265 and sensed by a reciprocating pin assembly 226, of which the displaced pins displace other pins 250, translator pins 260 and finally pins 455 in the detail card comparing pin assembly 445. The displaced comparing pins 435 and 455 interact through comparing levers 460 having forked ends engaging projections 464, 466 of smaller diameter than the forks so that a displacement of a pin 435 will transmit through a lever 460 only a partial displacement of a pin 455, and vice versa; other projections 472, 474 coact with cam points 471, 473 in slots on comparison slides 470 and unless the perforation columns in the compared cards correspond one or more of the projections 472, 474 will remain located on a cam point or points 471, 473 causing comparison slide 470 to be held displaced to the front of the machine with the result that the wide part of an interponent bar 476 in its raised effective position will prevent the free rearward swing of a bail bar 640. The cams controlling the feeding, punching, sorting and stopping of the machine are mounted on a sleeve 600, Fig. 60, to which are keyed two ratchets 605, 615 each with four teeth and four dwells arranged staggered and adapted to be engaged by pawls 608, 618 mounted on levers 610, 620 so disposed that normally pawl 608 engages a dwell on ratchet 605 and pawl 618 is held out of engagement with ratchet 615 by a pin 623 on pawl 608. When as the result of a disagreement between compared master and detail cards bail 640 is unable to complete its rearward swing as shown in Fig. 60 the bell crank lever 639 prevents downward movement of lever 610 on the next downward movement of push rod 625 and lever 620 moves down alone causing pawl 618 to become free of pin 623 and later to engage a tooth on ratchet 615 and then on the next rise of push rod 625 to rotate the control cam sleeve 600 through one step. Master card picker operating link 294 is operated as shown in Fig. 32 by a bell crank 299 and slide 301 moved forwardly by a cam 190 and rearwardly by a spring 303 detail card picker operating link 174 is operated by an arm 177 and slide 179 moved forwardly by cam 190 and rearwardly by spring 303; slide 301 can be held out of action by engaging a pin 304 thereon with a latch 305 on a rock shaft 195 and slide 179 by engaging a pin thereon with a second latch 194 on rock shaft 195. For this purpose shaft 195 is rocked by a crank and vertical link 647 adapted to be operated through levers and links by one or more of the cams on the control cam sleeve 600, link 647 in its high position locking feed slide 179 allowing master card feeding only and in its low position locking feed slide 301 allowing detail card feeding only and in its intermediate position locking neither feed slide and allowing simultaneous feeding of both master and record card. The various control cams on sleeve 600 are referred to later. Punching mechanism.-In many types of operation the entire perforation pattern in the master card is punched in the detail card by mechanism including a removable punch translator 485, Fig. 50, the pins 490 of which transfer the displacements of the master card comparing pins 435 to a reciprocal set pin box 495 with which reciprocates a plate 516 carrying punch pins 517 so that the detail card which has been passed to a punch space between two plates 520, 523 is perforated to agree with the master card. If certain columns of data are not to be transferred the requisite keys 385, Fig. 25, are set in their locking positions. Perforation may take place in the event of agreement of designation data in corresponding columns of master and c. record cards for which the requisite interponent 476 has been set in elevated position and prevented when there is disagreement. The punch translator 485 is placed in position only when detail cards are to be punched. Feed control mechanism.-Five feed control cams are mounted on the control sleeve 600 which as set out above is rotated through 45 degrees when a disagreement is sensed by the comparison mechanism each of which cams may be rendered operative by lever mechanism operated by projecting lugs on an equal number of discs on a parallel sleeve 702, Fig. 32, settable by an operation selector dial at the front of the machine. One of these control cams is in the form of a plain disc 710, Fig. 32, engaged by a **roller** 711 on a lever 712 carried by another lever 714 and connected by a link 715 to an arm of a shaft 650 having another arm 648 connected to the link 647 controlling the locking of the feed slides. This feed control cam or ring 710 is of such diameter as to effect locking of neither feed slide and permits master and record cards to be fed simultaneously both on agreement and disagreement since although **roller** 711 is held in contact with cam 710 by the projection 717 on operation selector disc 718 rotation of the concentric cam 710 will have no influence on link 647. Other cams on sleeve 600 may be operative during this type of feeding to effect an agreement or disagreement card sorting, card punching, or stopping of the machine to insert extra cards. In addition to feed cam 710 four other feed control cams mounted on sleeve 600 may be caused to operate the link 647 and are rendered operative by the selector dial. All five feed cams are shown in Fig. 69. The second cam 720 has four high dwells of a height permitting simultaneous master and detail card feeding on agreement and four lower dwells causing detail card feeding only on disagreement or vice versa since as shown in Fig. 69 this cam has a second key way for setting it displaced through 45 degrees on sleeve 600. Also on a low part of cam 720 becoming operative a rearward arm 655, Fig. 70, releases a shoulder 417 on a catch 416 from the arm 418 allowing the latter to be lifted by push rod 422 without raising arm 415 and rotating shaft 412 whereby operation of the retract bar 405, Fig. 25, by the link 410 is prevented and the set-up of the last fed master card reading retaining pins 395 is retained until an agreeing detail card is sensed whereupon sleeve 600 is rotated to bring a high dwell of cam 720 into operation. The third feed control cam 730 is a concentric ring of smaller radius causing detail card feeding only both on agreement and disagreement, the set-up by the master card reading retaining pins being maintained. The fourth feed control cam 740 has four low dwells of the radius of disc 710 causing simultaneous master and detail card feeding on agreement and four high dwells which on disagreement lift link 647 to its highest position causing master card feeding only. Since the last sensed detail card has to be retained in the sensing space until a corresponding master card is again sensed the card stop 265, Fig. 42, is held in its lower closed position all the time a high dwell on cam 740 is effective by a hook 660 on an arm 649 on shaft 650 engaging lever arm 281. The fifth feed control cam 750 has low dwells of same radius as the highs of cam 740 causing detail radius a cam disc 730 and high dwells of same card feeding only on agreement and master card feeding only on disagreement, the low dwells also causing retention of the set-up of the master card reading retaining pins and the high dwells also causing detail card stop 265 to be held closed. Cams 740 and 750 have second key ways at 45 degrees for adjustment in sleeve 600 to effect above operations on agreement and disagreement or vice versa. Sorting control mechanism.-Referring to Fig. 25 the master cards may be sorted into a rear box 25 or into an eject box 26 by operating a deflector 680 and the detail cards into a rear box 27, 27a, or into an eject box 28 by operating a deflector 690. These deflectors may be operated to eject master cards and detail cards for which there are no detail cards or master cards with corresponding designation punchings and are controlled by a cam 780, Fig. 71, with four low dwells and four high dwells such that when sleeve 600 is rotated bringing a high dwell into contact with **roller** 781 on bell crank 782 deflector 680 is raised by link 683 and deflects a d



International class (IPC 1-7): G03B27/32 G06F7/00 G06F7/02
CPC: C01B21/082
US class: 234/27 234/30 235/431
Family:

Publication number	Pub. date	Application number	App. date
FR859833 A	19401230		19390901
GB546590 A	19420721	GB19390023597	19390816
GB546602 A	19420721	GB19410000997	19390816
GB546603 A	19420721	GB19410001705	19390816
US2211094 A	19400813	US19380228381	19380903

Priority: US19380228381 19380903;

Assignee(s): (std): REMINGTON RAND INC
Inventor(s): (std): BRAUN KARL J

Legal status (INPADOC)

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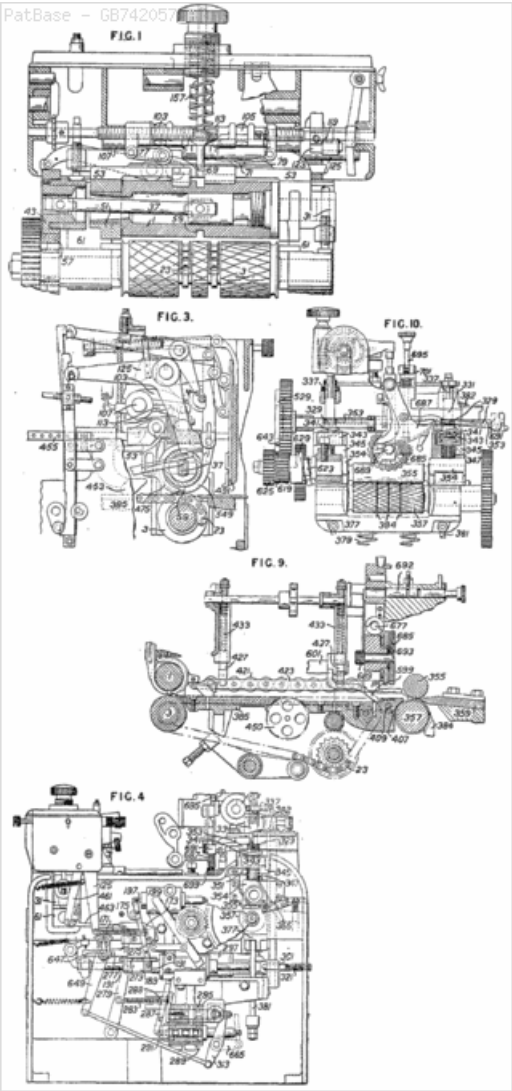
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FR859833 A	19401230	LSGT	+	granted / extensions (spc, cpc, pte)	
GB546590 A	19420721	LSGT	+	granted / extensions (spc, cpc, pte)	
GB546602 A	19420721	LSGT	+	granted / extensions (spc, cpc, pte)	
GB546603 A	19420721	LSGT	+	granted / extensions (spc, cpc, pte)	
US2211094 A	19400813	LSGT	+	granted / extensions (spc, cpc, pte)	

4) Family number: 20164880 (GB742057A)

Title: Improvements in or relating to machines organised for exerting a thickness measuring action on articles of sheet material and for dealing with said articles in accordance with measured thickness thereof

Abstract:

Source: GB742057A 742,057. Splitting-machines. BRITISH UNITED SHOE MACHINERY CO., Ltd., and MAWBEY, L. Sept. 17, 1953 [Sept. 18, 1952], No. 23416/52. Class 31 (1). [Also in Groups XIX and XXIV] A machine for operating upon shoe soles or other workpieces, such as to split or mark them, comprising fluid-operated means controlled by mechanism for measuring the thickness of the workpieces and arranged to adjust the splitting or other operating means in accordance with the differing measured thicknesses of the workpieces, has work-contacting members associated with the measuring mechanism for controlling the fluid-operated means so as to determine at what points of a workpiece the measurement starts and stops. Other features of the machine relate to the construction and action of the superposed **rolls** of the measuring mechanism, the use of servo-type fluid-pressure means for transmitting the minimum measured thickness of a workpiece to the operating means, and a clutch-tripping device actuated by the workpieces as they travel from the measuring mechanism to the means for operating upon the workpieces so as to control such means. In the machine shown in Fig. 9, the workpieces are fed over a table into the gap between the upper and lower **rolls** 1, 3 of the measuring mechanism which determines the minimum thickness of a workpiece, then beneath a device 685 for marking this measurement on the workpiece, and finally between the upper and lower **rolls** 355, 357 of the splitting or evening mechanism. Thickness-measuring mechanism.-The upper **roll** 1, Fig. 1, is rotatable in end bearings 31, 51 which are slidable in vertical guides 61 and carried by a lateral yoke 53 so that this **roll** can move to and from the lower **roll** 3 during the passage of a workpiece. The **roll** 3 is driven through gearing from a main drive shaft, and the **roll** 1 by a rod 37 universally coupled at one end to an end gear 43 driven from a gear 57 on the **roll** 3 and at the other end to the inner central part of the **roll** 1 so as to permit tilting of this **roll** when dealing with workpieces of uneven thicknesses. Movement of the upper **roll** upon the passage of a workpiece occurs against the downward pressure of a spring 157 and is communicated to **rolls** 69, 71, which are carried by pivoted arms 77, 79 and rest upon the face of the yoke 53, and thence to spring-pressed arms 103, 105 freely mounted on a transverse shaft 107, Figs. 1 and 3. This shaft has a fixed double-pronged member 113 engaging beneath the arms 103, 105, and a spring-pressed lever 125 freely mounted at one end of the shaft carries a block 123 which engages a wedge 119 on the shaft so that the latter will turn so far as permitted by the arms 77, 79 and **rolls** 69, 71. The lever 125 therefore moves in accordance with the upper **roll** 1 and is used through the transmitting mechanism described below to control the setting of the marking and splitting mechanisms; the mechanism for operating the lever is such that should the upper **roll** be tilted by a workpiece of uneven thickness the lever will move only to an extent proportional to the movement of whichever **roll** 69, 71 is over the thinner margin. Correct adjustment of the mechanism is provided by adjusting the wedge 119, and stop screws cooperate with the upper end of the lever 125 to set the limits to which the workpiece can be evened. The means including the spring 157 for adjusting the downward pressure of the upper **roll** 1 may be modified (Fig. 20, not shown) to permit the initial setting of that **roll** to roughly the thickness of the workpieces being operated upon. Measurement transmitting mechanism.-The lower end of the lever 125 acts through a rod 171, Fig. 4, to move a slide 173 carrying a pivoted lever 175 which is connected between the piston-rod 197 of a valve 199 in a hydraulic system and a block 189 on the piston-rod 191 of a piston-and-valve device controlled by the valve 199. The block 189 carries a rack 273 which therefore moves in accordance with the measured thickness of a workpiece, although in operation it is locked by one of two pawls 275, 277 so that it registers only diminishing thicknesses. The block 189 is also connected by a lever 279 and rod 283 with a second slide 288 carrying a pivoted lever 287 which is connected between the piston-rod 291 of a valve 289 in the hydraulic system and the piston-rod 301 of a piston-and-cylinder device 297 controlled by the valve 289 through a shut-off valve 295. The piston-rod 301 carries a rack 321 which acts through gearing to adjust, in accordance with the minimum measured thickness, the marking mechanism 685, Fig. 9, and the splitting mechanism (see below). The shut-off valve 295 is automatically opened and closed in the machine cycle by a main cam (529, Fig. 8, not shown) which acts through linkage including mechanism including links 665, 313, Fig. 4, and is brought into the drive by the engagement of a clutch (see Group XXIV) when the measured workpiece as it travels from the measuring **rolls** actuates a foot 599, Fig. 9, adjustably positioned along a bar 601. Control of the starting and stopping of measurement.-The point of a workpiece at which measurement starts is determined by a trailing shoe 453, Fig. 3, which is adjustable along a pivoted rod 455 and when engaged by the workpiece operates linkage 461, 463, Fig. 4, to release the pawls 275, 277 for engagement with the rack 273; to start measurement actually at the leading edge of the workpiece, an auxiliary shoe 475, Fig. 3, situated in a groove 59 in the upper **roll** 1 is caused to actuate the shoe 453 to release the pawls. Measurement is stopped by acting upon the lever 175, Fig. 4, so as to urge the rack 273 into locking position against one of the pawls by means of mechanism operable either to stop measurement actually at the trailing edge of the workpiece or at some earlier adjustable point. The mechanism is operated in the first **case** when a trailing shoe 549, Fig. 3, disposed in the groove 59 of the upper **roll** 1, drops off the trailing edge of the workpiece and in the second **case** when a vertically-movable gate 491, which is adjustably positioned some distance in front of the shoe 549, drops off the workpiece; the gate 491 is connected with the yoke 53 so that it is lowered on to the workpiece when the latter enters between the **rolls** 1, 3. Grade proximating mechanism.-The measurement to be transmitted from the measuring mechanism is assessed to the nearest half-iron by mounting one pawl 275, Fig. 4, on a simple pivot and the other pawl 277 on an eccentric pin 647 carried by a pivoted arm 649 which is connected at its lower end to the linkage 313, 665 controlling the shut-off valve 295 in the transmitting mechanism; the rack teeth 273 have a pitch of a half-iron and the two pawls are set apart to the extent of a half-pitch. By this means, when the foot 599, Fig. 9, is engaged by the workpiece to operate the valve as described above, the pawl 277 is given a small forward and rear movement which together with the locking-movement of the rack results in the pawl 275 being caused to engage whichever of the rack teeth represents the nearer half-iron to the actual measurement. Splitting mechanism.-The lower splitting **roll** 357, Figs. 9 and 10, is driven from the main drive shaft and is carried by a lower yoke 377 urged upwardly by springs 379 so far as permitted by rods 381. End bearing blocks 354, Figs. 4 and 10, carrying the upper **roll** 355 are guided for inclined vertical movement and urged upwardly by spring-pressed levers 365 into engagement with blocks 345 which are adjusted vertically by screws 341 and nuts 343 so as to position the upper **roll** in accordance with the measured thickness; for this purpose, the screws 341 are formed on vertical shafts 331 provided with pinions 329 engaging a rack 353 which is moved through gearing from the rack 321, Fig. 4, in the transmitting mechanism described above. The shafts 331 are mounted in threaded bushings 337 rotatable in unison to adjust the splitting mechanism, e.g. after sharpening the knife 359, Fig. 9. Stripper blades 384 project into grooves in the lower **roll** 357 in order to clear the scrap **cuttings**. It will be noted that the valve 295 is not operated to adjust the splitting mechanism until the workpiece has been split. Should it be desired to prevent splitting below a desired minimum thickness, the nuts 343, which are normally restrained from rotation by being formed with gears 347, Fig. 4, engaging a spring-pressed rack 351, are then rotated in a direction to permit the upper **roll** 355 to rise; at the selected thickness, the rack 351 is therefore moved by a cam on the rack 353 acting through a bellcrank. A pointer 382, Figs. 4 and 10, driven from the rack 321 gives a reading of the measured thickness. Marking mechanism.-This comprises a thickness-indicating wheel 685, Figs. 9 and 10, which is rotated in accordance with the measured thickness when the transmitting mechanism is rendered operative by the clutching in of the main cam (by the action of the foot 599); the wheel is then driven from the rack 321 and rack 353 through a rod 691, gear segment 687 and pinion 689. Stamping is effected from a shaft 677 which is mounted coaxially with the main cam and driven by it; the shaft 677 is connected with the cam by spring catches enabling it to be indexed so as to vary the point of operation. A stop 692 is provided for locking the mechanism out of action. For stamping the same size on successive workpieces, a manually-adjustable thickness wheel 693 is mounted coaxially with the wheel 685 for stamping from the shaft 677; a hand-operated spindle 695, Fig. 10, drives the wheel 693 and an indicating dial 701. Re-setting mechanism.-The main cam completes one revolution after being set into operation by the foot 599 and, in addition to opening and closing the valve 295 for transmitting the measurement, serves to release the measurement stopping pressure on the rack 273,



International class (IPC 8-9): A43D1/08 (Advanced/Invention)
CPC: A43D1/08
European class: A43D1/08
Family:

Publication number Pub. date Application number App. date
GB742057 A 19551221 GB19520023416 19520918

Priority: GB19520023416 19520918;

Assignee(s): (std): BRITISH UNITED SHOE MACHINERY ; LAWRENCE MAWBEY
Assignee(s): THE BRITISH UNITED SHOE MACHINERY COMPANY LIMITED

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Patent	Date recorded	Event group	Code	Event	Details
GB742057 A	19551221	LSGT	+	granted / extensions (spc, cpc, pte)	

5) Family number: 20044873 (US1976823A)

Title: METHOD OF AND APPARATUS FOR SLICING BACON

Abstract:

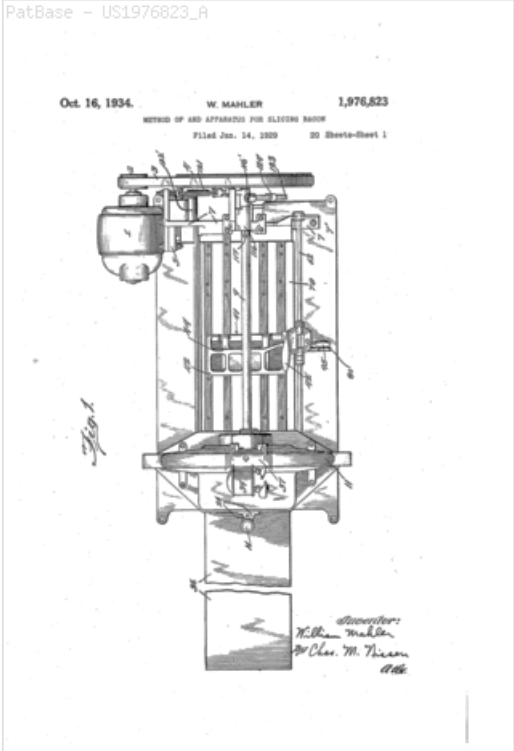
Source: US1976823A . 23), the latter being integral with the arm 60 and bolted together by upper and lower bolts '77T and 78. A lever 79 having a handle 80 is pivoted at B1 to the bracket 60. Arms or rods 82 and 83 having adjustable threaded ends are pivoted at 84 and to the lever '79 at opposite sides of the pivot 81. The housing halves '75 and 76 have aligned cylindrical recesses within which the cylindrical heads 88 carrying the half nuts 90 are movable toward and away from the feed screw. The half nuts are pinned by means of a pin 91 in a slot in the end of each head 38. The shanks B9 of the heads 83 extend through openings in the ends of the housing halves and one of the shanks is pivoted to the rod 83 at 92 while the other is pivoted at 93 to a clamp 94 carried by the rod 82. Springs S0 S5 86 and 87 tend to urge the half nuts toward the feed screw and when handle 95 rigid with the bracket 60 is grasped with the fingers lift-ing up on the handle 80, the half nuts are withdrawn from engagement with the feed screw and the entire clamp- may be slid on the rod 62 toward the fly-wheel or loading end of the machine. When the feed screw 71 is intermittently rotated, the substance clamp is advanced toward the knife pushing the platform 36 along with it to receive additional slices as they are deposited. A pair of slide rails 95, one at each side of the machine, has cross-bars 97 (Fig. 11) slidably supporting the platform 36. A rod 98 extends from the platform 36 and passes loosely through a hole 109 in a bracket 99 which may be integral with the bracket 60 near the feed screw. A second bracket or arm 101 has a pair of slotted ears 102 straddling a lug 103 extending laterally and downwardly from the bracket 60, A pin 104 extends through the slots in ears 102 into the lug 103 and a spring 105 bears at one end against the bottom of a recess in the bracket 99 at its other end against the bottom of a recess in the arm 101 tending to cant the arm 101 counter-clockwise as seen in Fig. 16. When the substance clamp is moved toward the knife the slant of the arm 101 causes the upper left-hand edge and the lower right-hand edge of the hole 106 to bite or grip the upper and lower portions of the rod 98. When the clamp is fed toward the knife by the feed screw, the rod 98 and platform, 36 will therefore move with the carriage. The feed screw, however, rotates only enough to advance the clamp a distance equal to the slice **cut** while it is desired that the clamp have a greater range of movement to prevent the slices from piling up under the knife. The feed to the platform through the arm 101 permits the platform to move farther than the clamp, because at the end of the rotating impulse imparted to the feed screw the platform can still continue to move forward due to its inertia. The arm 101 then offers no resistance to the passage of rod 118 through it, because the direction of motion of the rod 98 is such that it tends to straighten the arm 101. The slices lie on the platform 36 in overlapping relation and may be removed in stacks with the slices arranged face to face by holding the foremost of a series of slices still while the platform pushes the succeeding slices thereagainst. The mechanism for imparting motion to the feed screw is best shown in Figs. 2, 7, 9 and 15. An arm or plate 107 is loosely pivoted on the unthreaded end of the feed screw '71 and carries a pawl 108 pivoted at 109, the point of which engages a ratchet 110 keyed to the feed screw. A brake member 112 is slidable in an adjustable member 110' screw-threaded in a projection 113' on the bracket 7. A spring 113 yieldingly urges the member 112 into engagement with a brake drum 112' rigidly mounted on the shaft '71, or if desired, this may be made an integral part of the ratchet wheel 110. This arrangement prevents reverse rotation of the ratchet due to the friction between ratchet 119 and plate 107 caused by the spring '74. A pivot stud 117 (Figs. 2 and 15) is mounted a bracket 116 and a lever 116' having an arm 114 and a boss 115 is pivoted on the end of the stud 117. A **roller** 118 on the arm 114 engages a cam groove 119 formed in the hub of the fly-wheel 4. A spring 121 is connected at one end to an arm 120 of arm 114 and is connected at its other end to an adjustable bracket 121' adjustable by means of the bolt 122 passing through a part 122' of the frame to hold the **roller** in engagement with the cam at all times. The rod 123 has one end thereof secured rigidly in the boss 115 while on the free end thereof is adjustably secured by means of a thumb screw 125, the bracket 124 pivotally connected to the rod 126 at 1242. The lower end of the rod 126 is forked and is pivotally connected to the arm 127 of the pawl 108. Dotted lines show the position of the bracket 124 in one position of adjustment designed to give a slow feeding movement to the feed screw due to the small rocking motion imparted to the rod 126 when the bracket is in this position. A screw 129 threaded through the flange 131 of plate 107 serves as an adjustable stop for the pawl and a light spring 130 urges the point of the pawl into engagement with the ratchet teeth. Due to the bell crank shape of the pawl 108 and the fact that it is pivotally carried by the plate 107 journaled on the feed screw, the pawl is withdrawn from the ratchet teeth at each downward movement of the rod 126 imparted by the pump handle movement of arm 123. The pawl 108 is therefore less noisy than in the usual arrangement wherein the pawl rides over the teeth on its return movement. Since the plate 107 is loose on the shaft '71, the plate would tend to gain momentum on the down stroke of rod 126 and toward the end of the stroke is apt to be moving faster than the pawl 108. This would cause a counter-clockwise rotation of pawl 103 and it might engage the ratchet prematurely, causing wear and noise. The plate, however, is restrained from thus moving faster than the rod 126 by the slight friction between it and the ratchet 110 caused by the spring '74. On the upward movement of the rod 126 the same friction holds the plate 110 stationary until the pawl engages the ratchet, thus insuring that the feed will always be the same amount on each upward movement of the pawl. This gives uniform thickness to the slices **cut** by the knife. A shaft 133 (Figs. 10 and 11) is secured in a bracket 139 at one end and in the side 140 (Fig. 6) of the substance trough at the other end. A series of clips 138 having curved ends 134 pivoted on the shaft 133. Springs 136, one each clip and surrounding the shaft 133, are curved at one end to a collar 141 adjustably curved. To the shaft and its other end to a clip 138. The tension of the springs is such that they tend to rotate the clips away from the knife toward the fly-wheel end of the machine or counter-clockwise as seen in Fig. 10. Stops 135 maintain the clips in normal vertical position. The material to be sliced is pushed by the substance clamp 41 between the curved ends 134 of the clips 138 and the bottom 70 of the trough. The top surface of the material engages the curved ends 134 rotating the clips about their pivot 133, thereby increasing the tension on the springs causing them to push more firmly against the material passing through the opening 137 in the knife housing to be **cut** by the knife. The deflector shown in Figs. 25 and 26 performs the same function as the deflector first described, but is constructed somewhat differently. The deflector 142 has a flange 144 curved as at 145 to seat over the rounded hearing end of the knife arm 14. The bolts 143 securing the deflector in place may pass through slots in the flange 144 so that the deflector may be adjusted to and from the knife. The deflector 142 is also provided with grooves on its sides to T5 1,97e, s2s rms 146 to lessen the frictional contact of the deflector with the slices **cut**, Figs. 27 to 29 illustrate a modified form of connection between the platform 36 and the substance clamp. A bracket 147 is secured by means of bolts M8 to the end of the platform 36. The bracket is formed into a cylinder 149 within which is inserted a piston or plunger 150 secured to the bracket GD slidable on rod 62. Rings 151 form an air-tight connection between the plunger 150 and walls of the cylinder 149. A one-way valve 152 permits air to enter the end of cylinder' 149 through a passage 153, but prevents the escape of the air in the opposite direction. While the clamp is being fed toward the knife the plunger 150 transmits the motion to the platform 36 through the air trapped at the end of the plunger. The rings 151 on the plunger 150 form an air-tight connection between the plunger 150 and the walls of the cylinder 149. Therefore, when the substance conveyor, which includes the screw conveyor 71 and the substance clamp, moves at a higher rate of speed, the plunger 150 will also operate at greater speed, causing a greater momentum or force to the movement of the slice conveyor or platform 36. As the substance feeding conveyor is set to **cut** slices of different thicknesses the plunger 150 causes the slice receiving conveyor 36 to move a greater distance to receive the thicker slices in overlapping relationship. The slice conveyor or platform 36, therefore, is provided with means for varying its movement so as to vary the amount of overlapping of the slices on the slice conveyor 33. Both of the conveyors, the feed screw '21 and clamp and the slice receiving platform 36, therefore, are provided with means variable relatively to each other so that when the speed of the movement of the substance conveyor '71 is changed to vary the thickness of the slice, the movement of the second conveyor BG is changed to vary the amount of the overlapping of the slices on the slice conveyor 35 so as to secure the best shingling of the slices on the slice receiver or platform 36. When the clamp has stopped with the feed screw the platform 36 can by reason of its inertia continue to move as in the first form of the invention, because the air can pass through valve 152. The structure shown in Fig. 16 also causes the slice receiving platform or conveyor 36 to move relatively to the inoperative of the substance feeding conveyor, which latter conveyor is also the feed screw '71 and the substance clamp. The top surface of the top clamping member Q2 slopes upwardly and when the curved ends 1341 of the clips 138 ride up this sloping surface the added rotation of the clips increase the resistance of springs 136. thereby exerting additional pressure on clamping member 42 at a time when the added clamping effect is most needed, that is when the clips no longer hold the material in place against the bottom of the trough. The operation of the device is as follows: The substance to be sliced is placed on the support '70 and one end thereof is placed so as to be gripped by the upper and lower jaws 42 and 43 of the clamp 41. The motor transmits rotation to the shaft 9 and consequently to the knife 30 which rotates about its own axis and also axis 25, each movement about the axis 25 **cutting** a slice from the material which is advanced step-by-step toward the knife by the feed screw 71. The rotation of the fly-wheel actuates the feeding mechanism for the feed screw during the non-**cutting** stroke of the knife to advance the work to a position where the next slice can be **cut** therefrom. The rotation of the feed screw moves the clamp and work and also the platform 36 so that room will be made thereon for the next slice **cut** from the material. The platform 36 moves slightly more than the material to be out so as not to crowd the slices on the platform. Obviously other substances such as bread, cheese, fish, and the like, may be sliced by a machine embodying this invention without departing from the scope of the subjoined claims. In Fig. 30 I have shown a modification of the means for producing an added pressure on the upper clamping member so as to grip the butt end more firmly as it becomes shorter. The clamp designated generally as 157 in this instance has the lower clamping member 159, upper clamping member 160, and the abutment plate 161 similar to the corresponding parts 43, 42 and 44 shown in Fig. 16. But in this instance the upper clamping member carries a boss 162 on the end thereof adjacent the upstanding wall of the trough, and this boss has one end of a spring 164 fastened thereto by means of screws 163. At the other end of the spring is a curled portion 168 embracing a pin 165 adapted to engage the cam 166 secured as shown in Figs. 5, 6, 10, 11, 25 and 30 to the substance trough. The clamp shown in Fig. 30 is adapted to be substituted bodily for clamp 111, or only the clamping member 160 and attached parts may be substituted for clamping member 42 if desired, as the remaining parts of the clamps are identical. In operation, the clamp is advanced toward the knife step-by-step until the pin 165 strikes cam 166 which deflects the spring downwardly so as to increase the clamping pressure of the upper clamping member. It is understood that the spring clips 138 may or may not be used in this form of device, there being nothing to interfere with their use as the spring is to one side of clamping member 160 and at times it might be found advisable to dispense with

their use. ' Machines constructed according to the present invention are operated at extremely high speeds as compared with the speeds which the machines shown in the prior art are operated. The machine described operates at approximately 400 R. P. M. and does efficient slicing at that speed. A reciprocating type of knife cannot be operated at over 100 oscillations per minute and generally operates at approximately 50 to 100 oscillations per minute. This is due to the fact that reciprocating elements which have to be stopped and started require a considerable amount of energy to overcome the inertia effects of the moving knife and its support. By using a rotating knife which also rotates about an eccentric axis in a circular path, a more uniform movement of the slicing knife results. The fact that the knife is counterbalanced overcomes, any of the centrifugal force which might resist the rotation of the knife or cause it to vibrate the entire machine, as would be the case with a reciprocating knife operated at high speeds which must have its direction reversed periodically. Of course, vibration of the machine results in uneven slices being cut and also makes the machine very undesirable. Therefore the rotating type of knife is a valuable improvement over the reciprocating knife and especially in the combination used in this application. The method which is embraced in this invention is one which includes the steps of maintaining the slice in substantially extended position so that the same will be deposited flatly on the slice receiving surface after the same is formed so that the slices will be arranged in overlapping relation with respect to each other in order to facilitate packing and do away with the necessity of overlapping the slices by hand. The principal feature of this invention is the introduction of any intermittent feeding mechanism of a complicated character for transferring the slices onto the slice receiving surface. The method is for the purpose of discharging the slices directly onto the slice receiving surface after the slices are formed and without using any intermediate holding mechanism for actually holding the slices as they are being moved from the knife onto the slice receiving surface. The slabs or substance is carried along toward the cutting plane of the knife and at the knife position, a cutting element is provided which passes through the substance at a uniform speed. This cutting element is the knife 30, and since the knife is power driven at a uniform speed and moves only in 2. single direction, it is possible to impart to all parts of the slices a substantially uniform lateral throwing effect, that is to the left as viewed in Fig. 11, and 9. longitudinal throwing effect, that is one which is substantially parallel to the cutting plane. All portions of the slices, therefore, move outwardly away from the knife at substantially the same speed, and therefore as gravity pulls each slice or as the throwing force acting on the slice moves the same into engagement with the support 36, the slice contacts with the support throughout its entire length substantially at the same instant and one end does not strike appreciably before the other end thereof. In order that the longitudinal throwing effect will not be so great so as to displace the slice too far from the place at which the same is formed, and thus increase the chances of the slices curling or buckling, I have provided means already described for neutralizing the throwing effect of the knife, preferably so as to prevent all longitudinal throwing effect or at least to prevent any more than 2. very small amount of throwing effect in a longitudinal direction, which is parallel to the cutting plane of the knife and in the direction of the length of the slice. This is accomplished in the present invention by means of the shield 32, the action of which has already been described. This shield which contacts with substantially all portions of the slice just after the knife contacts with the same holds the slices out of any substantial engagement with the knife edge and moves in a direction opposite to the direction in which the knife is moving as it engages the slice. Since the slice is held out of any appreciable amount of engagement with the cutting edge of the knife, and since the knife and shield are moving in opposite directions with respect to each other, the throwing effect on the slice in a longitudinal direction is substantially neutralized or is neutralized to such an extent that the slices which are cut are thrown outwardly from the cutting plane of the knife substantially in prolongation of the slab of bacon which is being sliced. The shield acts to throw the slice outwardly and also downwardly and preferably with the lower or "heel" portion of the slice striking the conveyor first. The surface of the conveyor is parallel with the surface which supports the substance and consequently the entire lower edge of the slice strikes the slice receiving support 36 substantially at the same time and the rest of the slice pivots about the lower edge into its extended position on the support or conveyor. Each successive slice is deposited at the same position with respect to the cutting plane of the knife but since the substance support 36 moves laterally, each slice is moved out of that position after it is formed, and the successive slices are deposited in overlapping relation with respect to each other. The method therefore essentially comprises the moving of the substance along 2. predetermined path, slicing successive slices therefrom at a uniform high rate of speed while at the same time providing means for holding the slice in extended position so that when it strikes the conveyor, it will lie flatly thereon and permit the "shingling" of the slices in order to save a great amount of hand labor which would otherwise be necessary, for slices of this nature are extremely sticky and have a tendency to curl and adhere to each other, thus making it difficult to "shingle" the same by hand. Gravity acts on the slice to bring the slice into contact with the conveyor but this movement of the slice toward the conveyor is usually assisted by the action of the deflector 32 although even if the slice were thrown so as to maintain the same in a plane which is parallel to the cutting plane, gravity would bring the slice into contact with the conveyor and the lateral movement of the slice would cause the remaining portion of the slice to pivot about the lower edge thereof into flat extended position on the conveyor. When applicant speaks of "high speed" for 2. slicing machine, he is referring to a machine which operates at over 100 revolutions per minute, and not to the slower reciprocating type machines or those machines which are hand operated and are used for the purpose of slicing bread and the like at 11 speed which is not over 100 revolutions per minute, and the claims are to be so considered when reference is made to "high speed" slicing or to moving the slicing knife at 11, high speed. The following applications Serial ND. 331790, Serial No. 418,835 and Serial No. 431,306, assigned to the present assignee, also disclose slicing machines of a similar construction and operation, but the broad claims relating to the common subject matter of said applications are included in this application. Obviously those skilled in the art may make various changes in the details and arrangement of parts without departing from the spirit and scope of the invention as defined by the claims hereto appended and I wish therefore not to be restricted to the precise construction herein disclosed. Having thus fully disclosed an embodiment of my invention, what I desire to secure by Letters Patent of the United States is: 1. In a slicing machine, a rotary knife, means for rotating said knife around an axis eccentric to the axis of said knife, means for rotating said knife around its own axis in a direction opposite to its direction around said eccentric axis, a shield rotatable with said knife around said eccentric axis; said shield having a portion positioned adjacent the edge of said knife to engage the slices as they are being severed by said knife, and means for adjusting said shield radially with respect to said knife. 2. In a slicing machine, an arm, means for rotating said arm, a slicing knife rotatably mounted on said arm spaced from the axis of rotation of said arm, means for rotating said knife around its own axis in a direction opposite to the direction of rotation of said arm, a shield carried by said arm, said shield having a portion positioned adjacent the edge of said knife to engage the slices as they are being severed by said knife, and means for adjusting said shield radially of said knife comprising a plurality of securing means carried by said arm each of which passes through one of a plurality of parallel slots in said shield. 3. In a slicing machine, a slicing knife, a rod extending longitudinally of said machine, a bracket slidable on said rod, a substance clamp pivoted at one end on said bracket on an axis longitudinally of said rod and having the other end slidably supported on a portion of said machine, and adjustable means for limiting the pivotal movement of said clamp. 4. In a slicing machine, a knife, a substance clamp, means for imparting step-by-step movement to said clamp, a slice-receiving platform, and means connecting said clamp and platform for imparting said movement to said platform and for continuing to move said platform after said clamp stops during said step-by-step movement. 5. In a slicing machine, a slicing knife, a clamp slidable to and from the plane of said knife, means for imparting step-by-step movement to said clamp, a slice-receiving platform, a pivoted arm on said clamp, a rod on said platform extending through an orifice in said arm, and means tending to rotate said arm to engage an upper and lower edge of said orifice with said rod when said clamp is moved toward said knife. 6. In a slicing machine, a slicing knife, a substance clamp slidable to and from the plane of said knife, means for imparting step-by-step movement to said clamp, a slice-receiving platform, a cylinder secured to said platform, a plunger slidable in said cylinder and secured to said clamp, and a one-way air valve for the admission of air into the end of said cylinder. 7. In a slicing machine, a slicing knife, a substance clamp, a feed screw beneath said clamp positioned parallel to the axis of said knife, a rod at one side of the machine parallel to the axis of said knife, a bracket slidable on said rod and having a portion extended beneath said clamp, means securing said clamp to said bracket, a handle extending from said bracket, oppositely disposed feed nuts slidably carried by said bracket, springs urging said nuts into engagement with said screw, a lever pivoted to said bracket and having a handle portion beneath said first-named handle, and a pair of arms each of which is pivoted at one end to one of said nuts and pivoted at their other ends to said lever. 8. In a slicing machine, the combination with a support, of a knife, a shield for said knife, means to move the substance toward the plane of said knife, said slicing knife and shield moving so as to have substantially equal tendencies to throw the slices in opposite directions as they are out from the substance. 9. In a slicing machine, the combination with a knife, of a support for the substance to be sliced, means to move the substance toward the knife, and a shield for the knife moving into engagement with the slice at the same time but in the opposite direction to the movement of the cutting edge of the knife at relative speeds which substantially neutralize the tendency of the knife to carry the slice along therewith by holding the slice away from the surface of the knife adjacent the cutting edge thereof, the knife and shield moving at different speeds. 10. A slice receiver for slicing machines, comprising a slice support, an actuating member, yielding means for holding said support and said operating member away from each other a predetermined distance while said parts are at rest, and means for moving said operating member to actuate said platform and compress said yielding means, said yielding means thereafter expanding beyond its original dimensions to hold said support and operating means in different positions relatively to each other than before said operating member was actuated to move said platform. 11. In a slicing machine the combination with 21. slicing knife, of a substance support, means for feeding the substance towards the cutting plane of said knife, a slice receiving platform, interengaging means between said platform and feeding means, comprising a cylinder, plunger operable in said cylinder, said plunger being attached to said support and said cylinder being; attached to said feeding means, and a valve communicating with the interior of said cylinder to permit air to move into said cylinder when said cylinder moves in one direction. 12. In a slicing machine, the combination with a slicing knife, of a substance clamp, means for feeding said substance clamp towards the cutting plane of said knife, a slice receiver, a rod on said slice receiver, a member having an opening pivoted to a bracket which also has operative engagement with said clamp, said pivotal connection for said member being a lost motion connection, said rod being arranged in said opening, a spring for moving said member in one direction to tilt the same about its pivot and cause engagement of the edges of said opening with said rod, and feeding means for feeding said clamp towards the cutting plane of said knife, said clamp feeding said support through the intermediary of said rod and member and said member permitting excess movement of said support by its own inertia after said member becomes inoperative for the purposes set forth. 13. In a slicing machine, the combination with an arm, of a knife mounted on said arm, driving mechanism for said arm to move said knife continuously in one direction only at a substantially uniform high rate of speed through the material to be cut, means associated with said knife for engaging the slices as they are being severed to move the slices out of engagement with the surface of the knife adjacent, the cutting edge thereof, and means for moving said knife and said

means associated with said knife at relative speeds substantially neutralizing the entire throwing effect of said knife on the slices as they are being severed. 14. A slicing machine comprising a substance support, a slicing knife movable to cut a substance on said support and movable to a position below the supporting surface of said substance support, means for driving said knife continuously in one direction only along a closed path at a relatively uniform high rate of speed, a slice receiver positioned adjacent the **cutting** plane of said knife and in a position to directly receive the slices as they are formed, the slice receiving surface thereof being below the lowermost point in the path of travel of said knife and said knife moving through the **cutting** plane of said knife as such receiver is fed to receive the slices from the knife, and means associated with said knife having sufficient frictional contact with the slice during the formation thereof for substantially neutralizing the throwing effect thereof on said slice in the direction of movement of said knife through the substance and for turning the slice broad side down onto said slice receiver. 15. In a slicing machine, the combination with a slicing knife, of a substance support, means for feeding the substance towards the **cutting** plane of said knife, a slice receiving platform, interengaging means between said platform and feeding means comprising a cylinder, a plunger movable in said cylinder, and a valve communicating between the interior of said cylinder and the atmosphere, said plunger being attached to said support and said cylinder being attached to said feeding means, said valve being constructed to permit the air to enter the cylinder but not to leave the same so that as the air is compressed within the cylinder the air forms a yielding medium which acts after the feeding of said support to get an additional movement to said platform and said valve permitting the air to enter said cylinder after the compressed air has expanded to prevent the formation of any material amount of suction in said cylinder. 16. In a slicing machine, the combination with a slicing knife mounted for rotative movement on an axis, of an arm upon which said knife is rotatably mounted, a pivot for said arm eccentric to the axis of rotation of said knife, means for moving said arm about its pivot at a relatively high uniform rate of speed continuously in one direction, means for rotating said knife about its axis, and a slice deflector arranged adjacent the edge of said knife and having spaced projections thereon, said deflector being arranged with the edge thereof closely adjacent the **cutting** edge of said knife to substantially neutralize the entire throwing effect of said knife on the slices as they are **cut** from the substance being sliced and being mounted on the end of said arm remote from the pivotal axis thereof with said projections extending substantially in the direction of rotative movement of said deflector. 17. In a slicing machine for slicing **meat** and the like, the combination with a rotary knife, of means for rotating said knife uniformly and continuously in one direction in a closed substantially circular path and about an axis eccentric to the axis of said knife, means for rotating said knife about its own axis in a direction opposite to its direction about said eccentric axis, a movable conveyor for receiving successive slices as they are formed, and means for moving said conveyor to position different portions thereof in position to receive the successive slices, means operable during the formation of the slice for neutralizing the tangential throwing effect of said knife on the slice as it is severed by said knife and for turning the slices through a substantial angle broad side down onto said conveyor. 18. In a machine for slicing **meat** and the like, the combination with a rotary knife, means for rotating said knife uniformly and continuously in one direction in a closed substantially circular path and about an axis eccentric to the axis of said knife, means for rotating said knife about its own axis in a direction opposite to its direction about said eccentric axis, and a shield rotatable with said knife about said eccentric axis having a portion positioned closely adjacent the edge of said knife in engagement with the slices as they are being severed by said knife, whereby the slice is engaged by said shield substantially at the same time that the **cutting** edge of the knife engages said slice to hold the slice away from the **cutting** edge thereof and thereby substantially prevent the slice from being moved along with the knife as the latter passes through the substance and to immediately turn the slice broad side down onto a support. 19. In a machine for slicing **meat** and the like, the combination with a rotary knife, means for rotating said knife uniformly and continuously in one direction in a closed substantially circular path and also about an axis eccentric to the axis of said knife, means for rotating said knife about its own axis in a direction opposite to its direction about said eccentric axis, a shield rotatable with said knife about said eccentric axis having a portion positioned closely adjacent the edge of said knife to engage the slices as they are being severed by said knife whereby the slice is engaged by said shield substantially at the same time that the **cutting** edge of the knife engages said slice to hold the slice away from the **cutting** edge thereof and thereby substantially prevent the slice from being moved along with the knife as the latter passes through the substance and to immediately turn the slice broad side down onto a support, means for feeding material to be **cut** into the path of movement of said knife, and a movable slice receiving platform arranged partially beneath said knife and in close proximity thereto for receiving the slices as they are formed in overlapping relation with each other. 20. In a machine for slicing **meat** and the like, the combination with a rotary knife, of means for rotating said knife uniformly and continuously in one direction in a closed substantially circular path and about an axis eccentric to the axis of said knife, means for rotating said knife about its own axis in a direction opposite to its movement about said eccentric axis, a shield rotatable with said knife about said eccentric axis, said shield having a portion thereof positioned adjacent the edge of said knife to engage the slices as they are being severed by said knife to neutralize substantially the entire throwing effect of said knife and turn the slices broad side down onto said slice receiving member, and means for adjusting said shield with respect to the **cutting** edge of said knife whereby the operator may adjust the same in proper relation to the edge of the knife to secure proper deflection of the slice and proper neutralization of the throwing effect; which the knife has on the slice as will compensate for changes in the diameter of the knife. 21. In a slicing machine of the class described, the combination with a rotary knife, of means for rotating said knife uniformly and continuously in one direction in a closed substantially circular path and about an axis eccentric to the axis of said knife, means for rotating said knife about its own axis in a direction opposite to its movement about said eccentric axis, a movable slice receiver for receiving successive slices as they are formed in overlapping relation to each other, and a shield rotatable with said knife about said eccentric axis, said shield having a portion thereof positioned adjacent the edge of said knife to engage the slices as they are being severed by said knife, said shield being arranged closely adjacent the **cutting** edge of the knife and in a position to hold the slices outwardly away from the surface of the knife which lies next to the **cutting** edge thereof, whereby to prevent the slice from being dragged along with the knife by its engagement with the surface thereof and to turn the slice through a substantial angle broad side down onto said slice receiver. 22. In a machine for slicing **meat** and the like, the combination with a rotary knife, of means for rotating said knife uniformly and continuously in one direction in a closed substantially circular path and about an axis eccentric to the axis of said knife, means for rotating said knife about its own axis in a direction opposite to its movement about said eccentric axis, a movable slice receiving member, and a shield rotatable with said knife about said eccentric axis, said shield having a portion thereof positioned closely adjacent the edge of said knife to engage the slices as they are being severed by said knife and hold said slices substantially entirely free from the surface of the knife which lies adjacent the **cutting** edge thereof so that the slice is not carried along with the knife, said shield having a plurality of ribs thereon for engaging the slices as they are being severed and being positioned adjacent the **cutting** edge of the knife which lies farthest away from said eccentric axis and extending somewhat toward the edge of the knife which first engages the substance while lying closely adjacent the **cutting** edge of the knife so as to turn the slices with their broad sides down onto said slice receiving member without a substantial amount of lateral throwing effect on the slices in the direction of knife movement. 23. A slicing machine comprising a rotary knife, a support, a substance clamp comprising a plurality of clamping members adapted to be moved toward said knife, and means for increasing the clamping pressure of said clamp during its movement toward the knife comprising a yielding member on one of said clamping members, and a coin located adjacent the path of travel of said yielding member to flex the same during a considerable portion of the latter part of the movement of the clamping members toward the knife in a direction to increase the clamping pressure of said members during that portion of its travel. 24. A slicing machine comprising an arm, a slicing knife rotatably mounted on said arm for bodily movement therewith but having its axis of rotation spaced from the axis of rotation of said arm, means for rotating said arm uniformly and continuously in one direction to move said knife bodily in a closed substantially circular path, means for rotating said knife about its own axis, and a shield carried by said arm, said shield having a portion thereof positioned closely adjacent the edge of said knife to engage the slices as they are formed to hold the slices out of any substantial engagement with the surface of the knife adjacent the **cutting** edge thereof, and to turn the slices through a substantial angle broad side down onto a receiving surface. 25. In a slicing machine, the combination with an arm, of means for rotating said arm uniformly and continuously in one direction in a closed substantially circular path and about its own axis, a slicing knife rotatably mounted on said arm and spaced from the axis of rotation of said arm, means for moving said knife about its own axis in a direction opposite to the direction of rotation of said arm, means operable during the formation of the slice to hold the slice out of engagement with any substantial portion of the knife to substantially neutralize the entire tangential throwing effect of the knife on the slices of the material severed by said knife and to hold the slice out of any substantial contact with said knife, means for feeding material to be **cut** into the path of movement of said knife, and a movable slice receiving platform adjacent said knife for receiving successive slices in overlapping relation with each other. 26. In a slicing machine, the combination with a rotary knife, of means for rotating said knife uniformly and continuously in one direction in a closed substantially circular path and about an axis eccentric to the axis of said knife, means for rotating said knife about its own axis in a direction opposite to its movement about said eccentric axis, a shield rotatable with said knife about said eccentric axis, said shield having a portion positioned adjacent the edge of said knife to engage the slices as they are being severed by said knife and to hold the slices out of any substantial contact with the knife, means for feeding material to be **cut** into the path of movement of said knife, and a movable slice receiving platform adjacent said knife and arranged at a substantial angle to the **cutting** plane thereof for receiving successive slices as they are formed in overlapping relation with each other. 27. In a **meat** slicing machine or the like, the combination with a knife continuously moving in a circular path at a substantially uniform relatively high rate of speed and in one direction only, of slice deflecting means associated with the **cutting** edge of said knife and moving with the knife about the axis of rotation thereof and in unison therewith, the said deflecting means having a portion lying closely adjacent the **cutting** edge of said knife for engaging the slice to hold the slice out of any substantial contact with said knife except closely adjacent the **cutting** edge thereof and for turning the slice through a substantial angle in the direction of a slice receiving surface and away from the knife, whereby the slice is prevented from being carried along in the direction of movement of said knife to any appreciable extent and the slice is deflected laterally away from the knife broad side down onto a receiving surface. 28. In a slicing machine, the combination with a slicing knife, of a slice receiver having the supporting surface thereof extending at a substantial angle to the **cutting** plane of said knife, means for moving said slice receiver to position different portions thereof in slice receiving position adjacent said knife, said slice receiver being located closely adjacent the position where the slices are formed, means for moving said slicing knife continuously at a uniform high rate of speed always in the same direction along a closed path so that the knife periodically returns into slicing position, means for feeding substance into slicing position, means for determining the thickness of the slice to be formed, and means associated with said knife for turning all portions of the slice as it is formed outwardly away from

the knife through a substantial angle toward and against said slice receiver while at the same time holding the slice out of any substantial amount of contact with the surface of said knife adjacent the **cutting** edge thereof whereby the movement of the slice in the direction of travel of said knife along its path is substantially prevented so that the slice is thrown outwardly and downwardly broad side down onto said slice receiver. 29. In a slicing machine for slicing and shingling thin slices of **meat**, the combination with a knife moving uniformly at a relatively high rate of speed in one direction only along a circular closed path to move the **cutting** edge thereof periodically into and out of slicing position, of a movable slice receiver having the slice receiving surface thereof lying closely adjacent the path of movement of said knife at the position in which the slices are formed so as to be in a position to receive the slices as they are formed, means for moving said slice receiver, means for feeding a substance toward the **cutting** plane of said knife with the under side thereof at said **cutting** plane lying closely adjacent said slice receiver and substantially parallel therewith, means for holding the slices out of any substantial engagement with the knife as the same are being formed and for moving the same outwardly and downwardly directly against said slice receiver in a direction to cause the lower edges of said slices to strike the surface of said receiver first, whereafter said edges act substantially as pivots about which the remaining portions of the slices turn as the same continue their general movement, whereby each slice is laid flatly on the slice receiver or in flat overlapping relation with a previously laid slice on said receiver. 30. In a slicing machine for slicing and shingling thin slices of **meat** from a substance, the combination with a knife moving uniformly at a relatively high rate of speed in one direction only along a circular closed path to move the **cutting** edge thereof periodically into and out of slicing position, of a movable slice receiver having the slice receiving surface thereof lying closely adjacent the path of movement of said knife and substantially parallel to the line formed by the intersection of the plane of the knife and the plane of the lower side of the substance being sliced, means for moving said slice receiver, means for feeding a substance toward the **cutting** plane of said knife with the under side thereof at said **cutting** plane lying closely adjacent said slice receiver and substantially parallel therewith, means for throwing the slices in a general direction outwardly away from the knife substantially perpendicular to the end of the substance being sliced, and for applying to all portions of the slices as they are being formed substantially equal lineal and lateral forces, whereby the slices are thrown outwardly away from the substance in extended position directly onto said slice receiving surface, in a manner to cause portions of said slices, substantially along their entire length, to simultaneously strike the surface of said receiver, whereby each slice is laid flatly on the slice receiver or in flat overlapping relation with a previously laid slice on said receiver. 31. The method of slicing bacon slabs and the like comprising the steps of moving a slab of bacon along a predetermined path toward slice forming position, rapidly forming successive thin slices at said position and moving all portions of said slices outwardly away from that end of said slab from which the slices are formed with substantially equal force to maintain the slices in extended relation while they are being thrown away from slab, and simultaneously substantially eliminating all tendency of the slices to move in the direction of their length, providing a moving receiving surface having a portion moving closely adjacent said slice forming position for receiving slices as they are formed, and for moving each slice away from slice forming position after it is deposited on said surface, arranging the path of movement of said surface so that said surface first engages the lower edges of said slices as the latter are thrown outwardly from said slab, whereby the slices as they continue their movement after engaging said surface, pivot about their retarded bottom edges and fall broad side down flatly against the slice receiving surface or a previous slice deposited on said surface. 32. The method of slicing bacon slabs and the like comprising the steps of moving a slab of bacon along a predetermined path toward slice forming position, rapidly forming successive thin slices at said position and moving all portions of said slices outwardly away from that end of said slab from which the slices are formed with substantially equal force to maintain the slices in extended relation while they are being thrown away from said slab, and simultaneously substantially eliminating all tendency of the slices to move in the direction of their length, providing a moving receiving surface having a portion adapted to move closely adjacent said slice forming position for receiving slices as they are formed, and for moving each slice away from slice forming position after it is deposited thereon, arranging the path of movement of said surface so that said surface first engages the edge of a slice as the latter is thrown outwardly from said slab, whereby the slices as they continue their movement after engaging said surface, pivot about their retarded edge and fall broad side down flatly against the slice receiving surface or a previous slice deposited on said surface. 33. The method of slicing bacon slabs and the like comprising the steps of moving a slab of bacon along a predetermined path toward slice forming position, rapidly forming successive thin slices at said position and moving all portions of said slices outwardly away from that end of said slab from which the slices are formed with equal force to maintain the slice in extended position while it is being thrown away from said slab, and simultaneously substantially eliminating all tendency of the slices to move in the direction of their length, arresting the movement of the lower edge only of each slice as the same is thrown away from that slab, whereby the said edge acts substantially as a pivot about which the slice turns, arresting the pivotal movement of the slice after it has been turned to a predetermined position in flat extended position, and thereafter moving each slice away from said slab in a direction substantially parallel with its broad side but not sufficient to clear the next slice as it is deposited, whereby the slices are arranged in flat overlapping relation with each other. 34. A method for high speed slicing and stacking of slices comprising moving the substance to be sliced along a predetermined path, rapidly producing transverse **cuts** in said substance one at a time at a uniform high rate of speed at a given position in said path to sever successive slices from the substance, exerting a substantially uniform force on all portions of each slice both in the direction in which the **cut** is taken and also in the direction in which the slices are thrown away from the substance with the force which acts in the direction of the **cut** parallel to the broad face of the slice being relatively small to prevent any substantial movement of the slice under this force in a direction parallel to its broad face, arresting the movement of one edge of each slice first so that the slice turns about that edge as a pivot, subsequently entirely arresting the pivotal movement of each slice in not extended relation, moving the slice substantially parallel to the broad side thereof to another position not sufficiently removed from its first position to clear the next slice, whereby successive slices are arranged in overlapping relation with each other. 35. A method for high speed slicing and stacking of slices comprising the moving of the substance to be sliced along a predetermined path, at a uniform rate, rapidly producing transverse **cuts** in said substance one at a time at a uniform high rate of speed at a given position in said path to cause successive slices to be formed, moving all portions of each slice outwardly away from the end of the substance as it is formed, in flat extended position in a general direction substantially perpendicular to the **cutting** plane of said knife onto said slice receiving surface without the use of intermediate holding means for holding the slices as they are being moved onto the slice receiving surface, maintaining the slices in extended relation while they are being transferred directly onto the slice receiving surface, and moving the slices after they are on the slice receiving surface in a direction substantially parallel to their broad sides to another position removed from the position at which they are deposited whereby each successive slice is deposited in a different position along said slice receiving surface. 36. A slicing machine comprising a slicing knife, a substance advancing means for moving the substance to be sliced toward the **cutting** plane of said knife, a slice receiving platform for moving the slices away from the knife after the same are formed, and means moving in timed relation with said substance advancing means for actuating said platform, means for adjusting the substance advancing means to feed the substance different amounts between periods of rest therefor, the time interval for feeding the substance between periods of rest being substantially the same for different amounts which the substance is advanced between periods of rest, whereby the substance advancing means and consequently said platform moving means move at greater speeds for greater amounts of feed, said platform moving means being automatically releasable at the end of each movement of the substance advancing means to permit the inertia of said platform to carry the same a greater distance than the same is moved by its moving means, and said platform being free to move said additional distance after released from its moving means, the amount of travel of the platform being substantially proportional to the speed to which the substance is advanced by its moving means, whereby when thicker slices are being **cut** the spacing of the slices on said platform is correspondingly increased. 37. A device as set forth in claim 36, in which the platform moving means is directly connected to the substance advancing means. 38. In a slicing machine, the combination with a slicing knife, of a slice receiver having means for moving said slice receiver to position different portions thereof in slice receiving position adjacent said knife, said slice receiver being located closely adjacent the position where slices are formed, means for moving said slicing knife continuously at a uniform high rate of speed always in the same direction along a closed path, so that the knife periodically returns to slicing position, means for feeding a substance into slicing position, means for determining the thickness of the slice to be formed, and means associated with said knife for throwing all portions of the slice outwardly away from the knife onto said slice receiver while at the same time holding the slice out of any substantial amount of contact with the surface of said knife adjacent the **cutting** edge thereof, and maintaining the slice in extended relation, whereby the movement of the slice in the direction of travel of said knife along its path is substantially prevented, so that the slice is thrown outwardly broad side down on to said slice receiver. 39. In a slicing machine, the combination with a slicing knife, of a slice receiver having means for moving said slice receiver to position different portions thereof in slice receiving position adjacent said knife, said slice receiver being located closely adjacent the position where slices are formed, means for moving said slicing knife continuously at a uniform high rate of speed always in the same direction along a closed path, so that the knife periodically returns to slicing position, means for feeding a substance into slicing position, means for determining the thickness of the slice to be formed, means for moving said knife about an axis in one direction only, the **cutting** edge of said knife being eccentric to said axis, and means associated with said knife for throwing all portions of the slice outwardly away from the knife onto said slice receiver while at the same time holding the slice out of any substantial amount of contact with the surface of said knife adjacent the **cutting** edge thereof, and maintaining the slice in extended relation, whereby the movement of the slice in the direction of travel of said knife along its path is substantially prevented, so that the slice is thrown outwardly broad side down on to said slice receiver. 40. In a slicing machine the combination with a slicing knife, of a substance supporting conveyor for moving the substance toward the **cutting** plane of said knife, a conveyor for moving the slices away from the slice receiving position after the same are formed, driving means for both of said conveyors, means for moving said knife at a substantially uniform high rate of speed in a closed substantially circular path in one direction only to sever successive slices from the substance as the same is advanced toward said **cutting** plane, means associated with the knife for engaging the slices as they are formed to hold the same out of substantial contact with said knife to substantially neutralize the movement of the slices in the direction of knife movement, deflecting the same directly as they are formed in extended position on said second conveyor, means for selectively varying the movement of said first conveyor to vary the thickness of the slices formed by said knife, and means for varying the movement of the other conveyor for varying the amount of overlapping of the slices thereon, said last two mentioned means being variable relatively of each other so that when the speed of movement of the first conveyor is changed to vary the thickness of the slice the speed of movement of the second conveyor is changed to vary the amount of overlapping of the slices to secure the best shingling of the slices on the slice receiving conveyor. 41. In a slicing machine, the combination with a

substance supporting conveyor having the sup- 1 2 1,o1c,s2s porting surface thereof movable in one direction to iced substance, a slicing knife carried by a rotatable element and eccentrically mounted on said rotatable element, said. knife rotated about its own axis as well as the axis of said' rotatable element, power means for driving said rotatable element at a high rate of speed, a second conveyor having the supporting surface thereof, arranged in a position to receive slices directly as they are formed by said knife and being movable in a direction away from the **cutting** plane of said knife so that the slices will be received in overlapping relation with each other, means associated with said knife for directing the slices onto said second conveyor with the broad sides facing downwardly, means for driving one of said conveyors, and interconnecting means between said conveyors for drivig the other of said conveyors tlnough said driven conveyor when the driven conveyor is driven by said driving means. 42. In a slicing machine, the combination with a substance supporting conveyor having the supporting surface thereof movable in one direction to feed substance, a slicing knife carried by a rotatable element and eccentrically mounted on said rotatable element, means for rotating said element at a relatively high speed, said knife rotating about its own axis as well as the axis of said rotatable element. a. second conveyor having the supporting surface thereof arranged in a position to receive slices directly as they are formed by said knife and being movable in a direction away from the **cutting** plane of said knife at a speed suchthat the slices will be received in overlapping relationwith each other, means associated with said knife for directing the slices onto said second conveyor with the broad sides facing downwardly, means for driving one of said conveyors intermittently, and interconnecting means between said conveyors for driving the other of said conveyors through said driven conveyor when the driven conveyor is driven by said driving ITLGBIIS



International class (IPC 8-9): B26D1/16 (Advanced/Invention);
B26D1/01 (Core/Invention)
International class (IPC 1-7): B26D1/16
CPC: B26D1/16 Y10T83/0448 Y10T83/2098 Y10T83/21
European class: B26D1/16
US class: 83/112 83/113 83/23
Family:

Publication number	Pub. date	Application number	App. date
US1976823 A	19341016	US19290332525	19290114

Priority: US19290332525 19290114;

Assignee(s): (std): US SLICING MACHINE CO
Assignee(s): U S SLICING MACHINE CO ; U S SLICING MACHINE COMPANY
Inventor(s): (std): WILLIAM MAHLER
Inventor(s): MAHLER WILLIAM

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US1976823 A	19341016	LSGT	+	granted / extensions (spc, cpc, pte)	

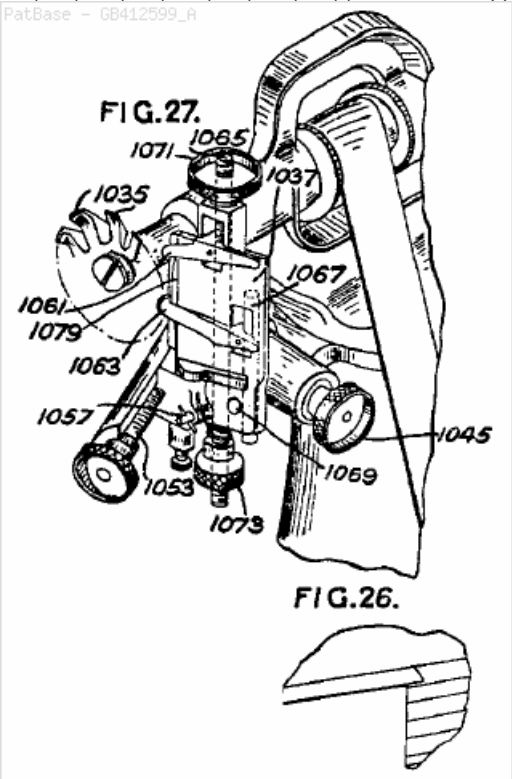
6) Family number: 19952964 (GB412599A)

Title: Improvements in or relating to the heeling of boots or shoes

Abstract:

Source: GB412599A 27289/32, 35636/32, and 18703/33. [Classes 17 (i) and 17 (ii).] Heels.-Relates to shoes having heels built up of superposed lifts which heels are shaped to final form around their side and rear surfaces before they are attached to the shoes, and consists in methods of making wherein the heels are first trimmed to a predetermined shape under templet control, then, if desired, scoured under templet control to ensure retention of the shape to which they have been trimmed, and, finally attached. The soles do not extend to the rear end of the heels, and the rear end of the sole and the attaching face of the heel are shaped to complementary form only lengthwise of the shoe, the wings of the rear end of the sole being trimmed flush with the sides of the heel after attachment. To shape the attaching face of the heel, a **cutting** tool is used which operates simultaneously across the whole width of the heel and forms a ledge adapted to support the heel end of the sole extending across the full width of the heel and located below the general plane of the periphery of the attaching face of the heel. The heel is first built up and compressed, the dies being shaped to form a flattened peripheral rim at the attaching face and a recess at a predetermined position in this face to facilitate positioning in the trimming and scouring machines. The heel is then trimmed in a machine such as that described in Specification 411,448 and scoured in a machine such as that described in Specification 411,143, [Group XXIII]. The attaching face may then be shaped to conform with the bevelled end of a sole in a machine comprising a driven **cutter** 1035 shaped as a frustum of a cone and positioned adjacent to a work-supporting plate 1037, inclined at some 16 to the perpendicular to the axis of the **cutter**. The plate is adjustable towards or away from the **cutter** by an adjusting screw 1045, substantially in the line of the axis of the **cutter** by a screw 1053, and is clamped in adjusted angular position by a bolt 1057. A pair of fingers 1061, 1063 have hooked ends for engaging the breast edges of a heel and are mounted on stems 1065, 1067, respectively, formed with rack teeth engaging a pinion 1069, so that the fingers move simultaneously inwards towards each other or outwards. To adjust the distance apart of the fingers, the ends of the stem 1065 are screw-threaded and provided with nuts 1071, 1073, the latter backed by a spring. A fibre block 1079 engages the work adjacent the **cutter**. The fingers are bevelled to grip the heel and ensure it being withdrawn laterally from the **cutter** when the **cut** has been made. Alternatively, the heel and the rear end of the sole may have their engaging parts shaped to complementary form. The heel end of the sole is shaped to correspond with the **cut** made by the knife 1035, but left wider than the heel. The projecting wings are reduced flush with the side surfaces of the heel after attachment, the machine described in Specification 181,099 being suitable. If the uppermost lift of the heel should be of board instead of leather, it is preferable to harden the edge surface, after attachment, by the pressure of a smooth-surfaced **roller**. In another modification, the uppermost lift of the heel may be skived before the heel is built to agree with a skive of some $\frac{1}{8}$ -inch width at the rear end of the sole. Specifications 181,099, [Class 17 (i)], 278,976, 305,276, [both in Class 17 (ii)], 306,192, 310,822, 331,934, 339,935, [all in Class 17 (i)], 398,845, and 408,210 also are referred to.

PatBase - GB412599_A



International class (IPC 8-9): A43D87/00 (Advanced/Invention); A43D87/00 (Core/Invention)

International class (IPC 1-7): A43D87/00 A43D95/08

CPC: A43D87/00

European class: A43D87/00

Family:

Publication number	Pub. date	Application number	App. date
GB412599 A	19340702	GB19320027289	19321001

Priority: GB19320027289 19321001;

Assignee(s): (std) CYRIL HARRY JAMES ; WILLIAM ISAAC BACON ; GEORGE HAZELTON ; WILLIAM RODERICK BARCLAY ; ARTHUR BATES ; BRITISH UNITED SHOE MACHINERY

Assignee(s): BRITISH UNITED SHOE MACHINERY CO LTD ; THE BRITISH UNITED SHOE MACHINERY COMPANY LIMITED

Legal status (INPADOC)

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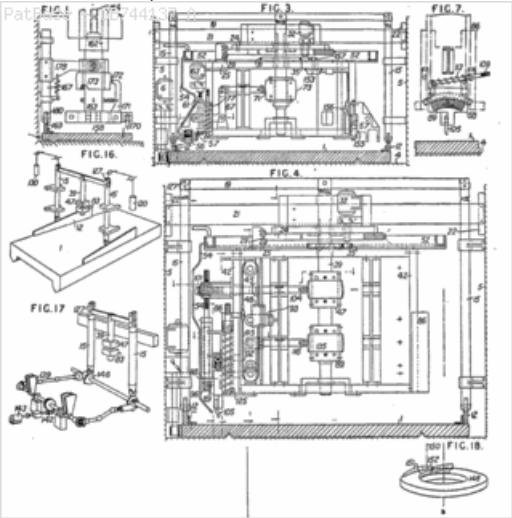
Patent	Date recorded	Event group	Code	Event	Details
GB412599 A	19340702	LSGT	+	granted / extensions (spc, cpc, pte)	

7) Family number: 20148376 (GB744137A)

Title: A new or improved surface shaping machine

Abstract:

Source: GB744137A 744,137. Copy-milling; copy-planing. BAIN, J. J. Nov. 9, 1953 [Aug. 16, 1952; Aug. 18, 1952; Aug. 25, 1952; March 9, 1953], Nos. 20647/52, 20676/52, 21251/52 and 6505/53. Class 83 (3). A machine for shaping aircraft wing-panels and other shapes comprises a work support 158, Fig. 1, for moving a workpiece relatively to the axis of a rotatable mill 163, a tool-holder 171 guided on the mill for movement having a component parallel to the mill axis, and a follower 172 on the mill engaging a control surface 173 on a support concentric with the mill axis for controlling the tool 170. In a vertical milling- machine the mill or **cutter** shank is secured in a screwed recess 164 in a spindle 162. The **cutter** carries one or more tools 170 on bellcrank levers 171 secured in slots in the **cutter** periphery. The ends of the levers are formed as followers 172 to contact the pattern surface 173. The pattern is non-rotatably supported by a yoke 178, the vertical movement of which is controlled by a template 169 mounted on the work-holder 158 and co-operating with a follower 180 carried by a rod 167 to which the yoke is secured. The surface 173 may be formed to control the tool to effect a roughing **cut** at the leading side of the **cutter** and a finishing **cut** at the trailing side, the work being of less width than the diameter of the tool path. In a modified machine, columns 5, Fig. 3, on the machine bed 4 or the floor, carry vertically-adjustable guides 22 for a cross beam 21 supporting a head 24. The mill 25 is supported on the head 24 by **rollers** 29 and is rotated by a motor 32 through gears 35, 31. One or more tools 56 are each rotated through a splined connection 61 by a motor 63 which receives its current through a slip-ring. The tools are each mounted on a slide 57 which may be counterweighted and which is controlled by the cam surface 73 through a lever 67, the cam being non-rotatably supported by a bar 19 carried by columns 15 resting on cams 12 at each side of the worktable 1. The table is traversed by a motor 6 through rack-and-pinion gearing 10, 11. The followers 71 are held in contact with the cam 73 by springs 77. The cam 73 may be formed to give roughing and finishing **cuts** as in the machine of Fig. 1. The **cutter** 56 may be replaced by an end-mill having a vertical axis or by a single-point tool. To obtain work of opposite hand, the cams 12 are reversed and the cam 73 is inverted. To obtain mating work, means may be provided to reverse the action of the lever 67 and thus the movement of the slide 57. The tools are lubricated by gravityfeed from a channel 52 and pipes 54. In a similar machine shown in Fig. 4, each tool-slide 86 is counterweighted by a weight 48 and cable 45. The operating lever 92 may be pivoted on a bracket 93 for the production of a mating surface. The cam 135 in this machine comprises a square block 83 to which cam surfaces are attached. To maintain a constant **cutting** angle, a similar cam 47 controls the position of a circular slide 88 carrying the tool 105 through a follower 104, a rack-and-pinion 101 and bevels 96, 89, the slide movement being about an axis containing the **cutting** point. The follower and cam are held in contact by a spring 113, Fig. 7, and may be rendered inactive by a collar and nut applied to the end of a screwed rod 109 carrying the spring. Pins 127 on the rods 15 of this machine and that shown in Fig. 3 are attached to counterbalancing weights 130, Fig. 16. To produce work of opposite hand, the cams 83, 47 are inverted, the cams 12 are reversed longitudinally of the table 1, the operating members for tilting the tool 105 are reversed, and the bias spring 113 is reversed. To produce work of mating form, the cams 83, 47 are inverted and the cams 12 are reversed as before, and the lever 92 and spring 125 are reversed to reverse the direction of movement of slide 86. The linkage between a tool and its follower may be in part by mechanical, electrical or fluid pressure means. Thus a " make- and-break " contact may control an electric motor having geared connection with the toolholder or an electrical quantitative indicating- means may control a motor through an amplifying circuit. Alternatively, the opening of an air-jet nozzle contacting the control surface may operate the tool-holder. The **cutter** may be a milling **cutter** rotated by a pneumatic motor and the biasing means may be pneumatic instead of spring. Thus a pump 153, Fig. 3, driven by gearing 157 supplies pressure air to a cylinder 155 biasing a tool-holder 57. A valve 156 permits the bias to be reversed. The control bodies may be moved by an electric motor. In a further modification, the work is carried on supports 139, Fig. 17, rotated by a motor 143 through gearing 142. The motor also rotates cams 146 (which may be reversed for work of opposite hand) which take the place of the cams 12. In yet another modification a rotatable work-support 148, Fig. 18, passes between the pillars 5, and the cams 12 are replaced by cams 151, 152 on the work-support, the mill axis being indicated at 150. The cams 152 serve as return cams between the cams 151 which control the operations on successive workpieces.



International class (IPC 8-9): B23Q35/10 (Advanced/Invention);
B23Q35/00 (Core/Invention)
International class (IPC 1-7): B44B1/02
CPC: B23Q35/10
European class: B23Q35/10
Family:

Publication number	Pub. date	Application number	App. date
GB744137 A	19560201	GB19520020647	19520816

Priority: GB19520020647 19520816;

Assignee(s): (std): JAMES JOHN BAIN

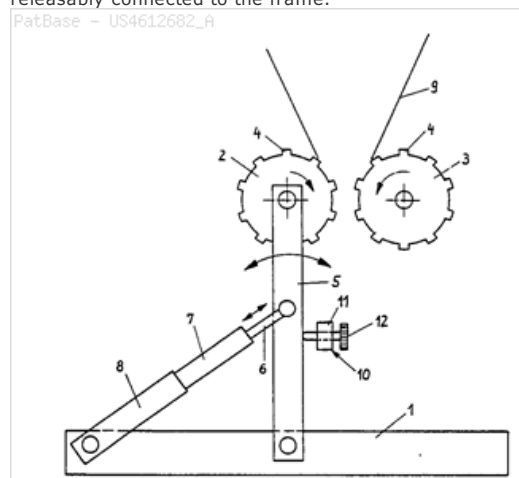
Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
GB744137 A	19560201	LSGT	+	granted / extensions (spc, cpc, pte)	

8) Family number: 1877317 (US4612682A)**Title:** Apparatus for treating meat**Abstract:**

Source: US4612682A Apparatus for treating **meat**, in particular for the purpose of improving its ability to absorb a curing liquid prior to cooking, comprises a frame mounting at least two spaced-apart side-by-side **rollers** which are rotated in opposite senses as **meat** to be treated is passed therebetween. To improve the effectiveness of treatment, the **rollers** are formed as pressure **rollers** arranged such that the spacing therebetween automatically varies to accommodate different thicknesses of **meat**. Preferably, each pressure **roller** is removably mounted in the frame by connecting one end of the **roller** to a drive shaft by a quick-release coupling and by mounting the other end in a bearing assembly releasably connected to the frame.



International class (IPC 8-9): A23B4/02 A23B4/32 (Advanced/Invention);
A23B4/02 A23B4/32 (Core/Invention)

International class (IPC 1-7): A22C7/00 A22C9/00 A23B4/02 A23C

CPC: A22C9/004 A23B4/021 A23B4/325

European class: A22C9/00D A23B4/02F A23B4/32S

US class: 452/142

Family:

Publication number	Pub. date	Application number	App. date
BE900952 A1	19850215	BE19846048026	19841030
DE3344284 A1	19850613	DE19833344284	19831207
DK471484 A	19850608	DK19840004714	19841002
DK471484 A0	19841002	DK19840004714	19841002
ES537005 A1	19851101	ES19840537005	19841023
ES8600988 A1	19860216	ES19840537005	19841023
FR2556180 A1	19850614	FR19840017407	19841113
FR2556180 B1	19890519	FR19840017407	19841113
GB2150812 A1	19850710	GB19840026155	19841016
GB2150812 B2	19880302	GB19840026155	19841016
GB8426155 A0	19841121	GB19840026155	19841016
IT1196335 A	19881116	IT19840023691	19841122
IT8423691 A0	19841122	IT19840023691	19841122
NL8403707 A	19850701	NL19840003707	19841206
US4612682 A	19860923	US19840671105	19841113

Priority: DE19833344284 19831207;

Cited documents: US881204 A, US4525896 A, US4453288 A, US4437208 A, US4360952 A, US4313963 A, US4270244 A, US28868461, US2690011 A, US2682078 A, US2640334 A, US2537946 A, US2534357 A, US2291809 A, US200746 A, US1991439 A, US1986075 A, GB749965 A, GB1441659 A, GB1407876 A, GB1407875 A, FR2481636 A1, FR2196756 A1, DE8014487 U, DE3002636 C2, DE2700125 A1, CH193606 A,

Assignee(s): (std): HOLAC MASCHB GMBH ; HOLAC MASCHBAU GMBH ; FED

Assignee(s): HOLAC MASCH ; HOLAC MASCHINENBAU GMBH ; HOLAC MASCHINENBAU GMBH TE HEIDENHEIM BONDSREPUBLIC DUTSLAND

Inventor(s): (std): ERNST HOLZ ; HOLZ E ; HOLZ ERNST

Inventor(s): VERZICHT DES ERFINDERS AUF NENNUNG ; E HOLZ

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BE900952 A1	19850215	LSPB	+	published / reissued	
BE900952 A1	19940430	LSLE	-RE	LAPSED	OWNER NAME : HOLAC MASCHINENBAU G.M.B.H. EFFECTIVE DATE : 19931031
DE3344284 A1	19850613	LSPB	+	published / reissued	
DE3344284 A1	19901220	LSSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE3344284 A1	19950309	LSWD	-8130	WITHDRAWAL	
DK471484 A	19850608	LSPB	+	published / reissued	
DK471484 A	19930628	LSWD	-AHB	APPLICATION SHELVED DUE TO NON-PAYMENT	
ES537005 A1	19970801	LSLE	-FD1A	PATENT LAPSED	EFFECTIVE DATE : 19970519
ES537005 A1	19970801	LSLE	-FD1A	PATENT LAPSED	EFFECTIVE DATE : 19970519

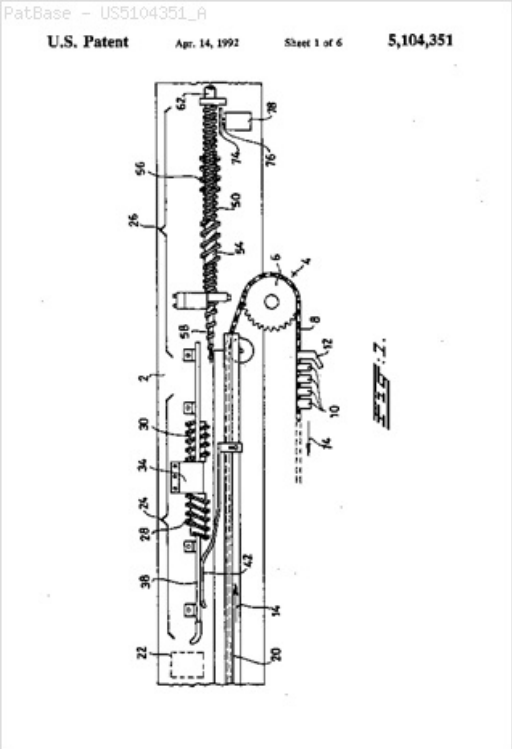
ES8600988 A1	19860216	LSPB	+	published / reissued	
FR2556180 A1	19850614	LSPB	+	published / reissued	
FR2556180 A1	19930924	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2556180 B1	19890519	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2150812 A1	19850710	LSPB	+	published / reissued	
GB2150812 A1	19930616	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 19921016
GB2150812 B2	19880302	LSGT	+	granted / extensions (spc, cpc, pte)	
IT1196335 A	19881116	LSGT	+	granted / extensions (spc, cpc, pte)	
NL8403707 A	19850701	LSPB	+	published / reissued	
NL8403707 A	19911202	LSSES	+BA	A REQUEST FOR SEARCH OR AN INTERNATIONAL-TYPE SEARCH HAS BEEN FILED	
NL8403707 A	19920203	LSSES	BB	A SEARCH REPORT HAS BEEN DRAWN UP	
NL8403707 A	19920506	LSSES	+BC	A REQUEST FOR EXAMINATION HAS BEEN FILED	
NL8403707 A	19930802	LSLE	-BV	THE PATENT APPLICATION HAS LAPSED	
US4612682 A	19860923	LSGT	+	granted / extensions (spc, cpc, pte)	
US4612682 A	19841113	LSAS	AS	ASSIGNMENT	OWNER NAME : HOLAC MASCHINENBAU GMBH WURZBURGER 74-76 D-7920 HE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:HOLZ, ERNST; REEL/FRAME:004335/0290 EFFECTIVE DATE : 19841019
US4612682 A	19841113	LSAS	AS	ASSIGNMENT	OWNER NAME : HOLAC MASCHINENBAU GMBH,GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HOLZ, ERNST; REEL/FRAME:004335/0290 EFFECTIVE DATE : 19841019
US4612682 A	19860722	LSGT	PAT1	Patented Case	
US4612682 A	19900216	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4612682 A	19940925	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4612682 A	19941206	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19940928

9) Family number: 4986260 (US5104351A)

Title: DEVICE FOR BONING A PIECE OF MEAT

Abstract:

Source: US5104351A A device for removing an elongated bone from a piece of meat comprising means for conveying the piece of meat in succession through; one or more processing stations where the meat is scraped away from the bone, at right angles to the lengthwise direction of the bone, until a certain part of the bone surface is exposed, apart from a narrow connection between the meat and the bone, while the meat removed is guided away from the bone; a processing station where the above-mentioned narrow connection is broken. In a first processing station a separation may be made along the length of the bone through the meat up to the bone. Preferably a second and a third processing station each comprise two first helical rollers provided with ribs with opposite pitch and rotating in opposite directions to each other, the helical rollers being disposed parallel to and on either side of the path of the bone.



International class (IPC 8-9): A22C17/00 A22C21/00 (Advanced/Invention)
International class (IPC 1-7): A22C17/00 A22C17/04 A22C21/00 A22C25/16
CPC: A22C21/0076
European class: A22C17/00C A22C21/00J2
US class: 452/135 452/138
Family:

Publication number	Pub. date	Application number	App. date
DE69019660 D1	19950629	DE19906019660	19901004
DE69019660 T2	19960118	DE19906019660T	19901004
DK0421551 T3	19950918	DK19900202649T	19901004
EP0421551 A1	19910410	EP19900202649	19901004
EP0421551 B1	19950524	EP19900202649	19901004
ES2074526 T3	19950916	ES19900202649T	19901004
JP3244341 A2	19911031	JP19900267511	19901004
NL8902493 A	19910501	NL19890002493	19891006
US5104351 A	19920414	US19900591836	19901002

Priority: NL19890002493 19891006;

Cited documents: US4644608 A, US4639972 A, US4610051 A, US4557017 A, US4402112 A, US4385421 A, US4077089 A, US4025001 A, US3930282 A, US3570050 A, NL8502785 A, NL8502784 A, GB2120925 A1, FR2244404 A1,
Assignee(s): (std): STORK PMT
Assignee(s): STORK PMT B V ; STORK PMT BV ; STORK PMT B V BOXMEER NL ; STORK PMT B V TE BOXMEER
Inventor(s): (std): ADORIANUS YOSEFUSU FUAN DEN N ; HENRIKUS FURANSHISUKUSU YAKOB ; VAN DE EERDEN HENRICUS F J M ; VAN DE EERDEN HENRICUS FRANCIS ; NIEUWELAAR ADRIANUS J VAN DEN ; VAN DEN NIEUWELAAR ADRIANUS J ; VAN DEN NIEUWELAAR ADRIANUS JO ; EERDEN HENRICUS FRANCIS VAN DE
Inventor(s): HENRIKUS FURANSHISUKUSU YAKOBUSU MARIA FUAN ; VAN DEN NIEUWELAAR ADRIANUS JOSEPHES ; VAN DEN NIEUWELAAR ADRIANUS JOSEPHES NL 5421 XG GE ; VAN DEN NIEUWELAAR ADRIANUS JOSEPHES NL 5421 ; VAN DE EERDEN HENRICUS FRANCISCUS JACOBUS ; VAN DE EERDEN HENRICUS FRANCISCUS JACOBUS MARIA ; VAN DE EERDEN HENRICUS FRANCISCUS JACOBUS MARIA NL ; HENRIKUS FURANSHISUKUSU YAKOBUSU MARIA FUAN DE EE ; ADORIANUS YOSEFUSU FUAN DEN NIYUUUERAARU
Designated states: DE DK ES FR GB IT NL

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE69019660 D1	19960620	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE69019660 D1	20040826	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE69019660 T2	19960118	LSGT	+	granted / extensions (spc, cpc, pte)	

DK0421551 T3	19950918	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0421551 A1	19910410	LSPB	+	published / reissued	
EP0421551 A1	19910410	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19901211
EP0421551 A1	19920527	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19920415
EP0421551 A1	19950916	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2074526 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 FORMAT OF REF DOCUMENT (F/P) : P
EP0421551 A1	19950927	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 19950927 YEAR OF FEE PAYMENT : 06
EP0421551 A1	19951004	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB EFFECTIVE DATE : 19951004
EP0421551 A1	19951010	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 19951010 YEAR OF FEE PAYMENT : 06
EP0421551 A1	19960515	LSGT	+26N	NO OPPOSITION FILED	
EP0421551 A1	19960529	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 19951004
EP0421551 A1	19961005	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF THE APPLICANT RENOUNCES EFFECTIVE DATE : 19961005
EP0421551 A1	19970630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR EFFECTIVE DATE : 19970630
EP0421551 A1	19970829	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST
EP0421551 A1	19991201	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 19991007
EP0421551 A1	20021018	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20021018 YEAR OF FEE PAYMENT : 13
EP0421551 A1	20021018	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20021018 YEAR OF FEE PAYMENT : 13
EP0421551 A1	20021031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20021031 YEAR OF FEE PAYMENT : 13
EP0421551 A1	20040430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20040430
EP0421551 A1	20040501	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20040501
EP0421551 A1	20040501	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20040501

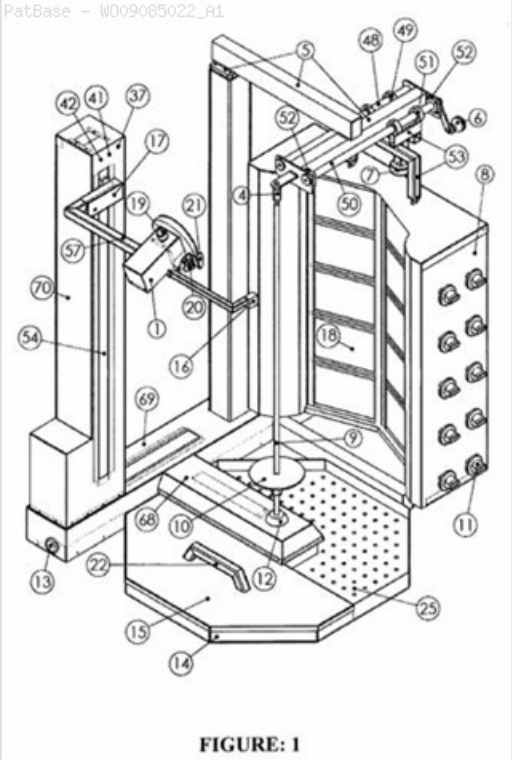
EP0421551 A1	20040601	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP
EP0421551 A1	20040701	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE	EFFECTIVE DATE : 20040501
EP0421551 A1	20051004	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20051004
EP0421551 B1	19950524	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2074526 T3	19950916	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2074526 T3	19950916	LSGT	+FG2A	DEFINITIVE PROTECTION	REF DOCUMENT NUMBER : 421551 COUNTRY OF REF DOCUMENT : ES
JP3244341 A2	19911031	LSPB	+	published / reissued	
NL8902493 A	19910501	LSPB	+	published / reissued	
NL8902493 A	19910501	LSES	+A1B	A SEARCH REPORT HAS BEEN DRAWN UP	
NL8902493 A	19960603	LSLE	-BV	THE PATENT APPLICATION HAS LAPSED	
US5104351 A	19920414	LSGT	+	granted / extensions (spc, cpc, pte)	
US5104351 A	19901002	LSAS	AS	ASSIGNMENT	OWNER NAME : STORK PMT B.V., HANDELSTRAAT 3, 5831 AV BOXMEER, T DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNORS:VAN DEN NIEUWELAAR, ADRIANUS J.; VAN DE EERDEN, HENRICUSF. J. M.; REEL/FRAME:005469/0631 EFFECTIVE DATE : 19900917
US5104351 A	19920402	LSGT	PAT1	Patented Case	
US5104351 A	19951027	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5104351 A	19951114	LSRE	CC	CERTIFICATE OF CORRECTION	
US5104351 A	19991014	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5104351 A	20031014	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

10) Family number: 43489432 (WO09085022A1)

Title: MICROCONTROLLER CONTROLLED DONER MEAT BROILER AND CUTTER MACHINE, OPERATED BY INDIVIDUAL MOTION FORMS, WITH STEPPER MOTORS AND OPTICAL SCANNERS MACHINE DE COUPE ET ROTISSOIRE A VIANDE DONER COMMANDE PAR MICROCONTROLEUR, ACTIONNES PAR FORMES DE MOUVEMENT INDIVIDUELLES, AVEC MOTEURS PAS-A-PAS ET LECTEURS OPTIQUES

Abstract:

Source: WO09085022A1 This invention subject to the descriptions above is a machine that recognizes the formed doner **meat** (24) using optical scanners, achieves individual- forms of motions in terms of linear and angular position-speed-acceleration vector properties using microcontroller controlled stepper motors, broils- the doner **meat** in time defined by the software, **cuts** the **meat** in less time than a man at ideal thickness and eliminates the necessity for an operator by means of its specially designed software and electro-mechanical hardware. La presente invention concerne une machine qui reconnait la viande doner formee (24) en utilisant des lecteurs optiques, qui atteint des formes individuelles de mouvements en termes de proprietes de vecteur position-vitesse-acceleration lineaire et angulaire en utilisant des moteurs pas-a-pas commandes par microcontrôleur, qui rotit la viande doner en un temps defini par le logiciel, qui coupe la viande a une epaisseur ideale en moins de temps qu'une personne et qui elimine le besoin d'avoir un operateur grace a son logiciel concu specifiquement et a son materiel electromecanique.



International class (IPC 8-9): A22C 17/00 A47J37/04 (Advanced/Invention);
A22C 17/00 A47J37/04 (Core/Invention)
CPC: A22C 17/0066 A47J37/043
Family:

Publication number	Pub. date	Application number	App. date
EP2237709 A1	20101013	EP20070866975	20071231
WO09085022 A1	20090709	WO2007TR00154	20071231

Priority: WO2007TR00154 20071231;

Cited documents: WO9951135 A1, WO06122342 A1, US5357853 A, GB2271274 A1, EP1348366 A1, EP0153148 A1, DE19545699 C1, DE19513636 C1, DE10158071 A1,
Assignee(s): (std): ALTUN AYHAN ; GUECTEK MUEHENDISLIK MAKINA IN ; KABAKYER DURAN
Assignee(s): GUECTEK MUEHENDISLIK MAKINA INSAAT ELEKTRONIK BILGISAYAR SANAYI TICARET LIMITED SIRKETI
Inventor(s): (std): ALTUN AYHAN ; KABAKYER DURAN
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

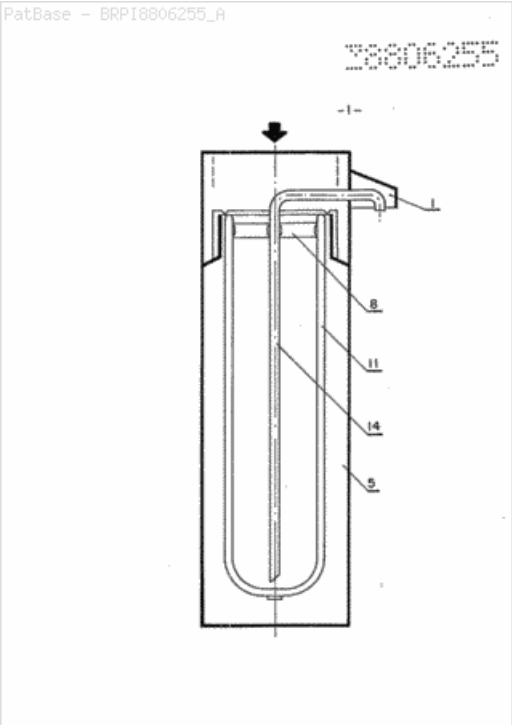
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Patent	Date recorded	Event group	Code	Event	Details
EP2237709 A1	20101013	LSPB	+	published / reissued	
EP2237709 A1	20101013	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090905
EP2237709 A1	20101222	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20101118
EP2237709 A1	20110202	LSES	+R17C	DATE OF DESPATCH OF FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20110105
EP2237709 A1	20110817	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : ALTUN, AYHAN
EP2237709 A1	20120222	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20110701

WO09085022 A1	20090709	LSPB	+	published / reissued		
WO09085022 A1	20100701	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE	

11) Family number: 211610 (BRPI8806255A)
Title: RECIPIENTE COM DISPOSITIVOS PARA A PROTECAO TERMICA DE SUBSTANCIAS CONTAINER WITH DEVICES FOR THERMAL PROTECTION OF SUBSTANCES (Machine translation)

Abstract:
Source: BRPI8806255A [Source: Claim 1] 1 - "Recipiente com dispositivos para a protecao termica de substancias" caracterizado por ser constituído de um, dois ou mais frascos. Os frascos tem parede interna e externa, que unem-se de forma a delimitar um espaco fechado entre elas; este espaco e denominado espaco intermediario. Estes frascos sao denominados ampolas. A parede interna das ampolas tem o formato de um vaso com paredes continuando-se e unindo-se ao longo de um perimetro e originando a maior dimensao do vaso, a altura, formando as paredes laterais; e uma de suas extremidades continua-se com as paredes laterais de forma a ocluir esta extremidade, chamando-se fundo; a parede interna da ampola assim constituída, origina um espaco circundado pelas paredes laterais e ocluido pelo fundo, chamado interior da ampola. A extremidade oposta ao fundo e aberta, interligando o meio ambiente com o interior da ampola, e e chamada boca da ampola. A parede externa, maior em todas as dimensoes, constitui-se tambem como um vaso aos moldes da parede interna. As ampolas sao interligadas por condutos tubulares chamados de cano. 1-1- Os canos podem ser continuos ou sofrerem emendas por encaixe ou rosqueamento, como duas extremidades de igual diametro, serem encaixadas ou rosquearem-se com luva de maior diametro interna. No interior de uma ou mais ampolas existe uma estrutura que adapta-se a face interna da parede interna da ampola de tal forma a instituir uma vedacao entre esta estrutura e a ampola e separar o interior da ampola em dois espacos; esta estrutura chama-se embulo. As ampolas, canos e imbulos formam um conjunto que fica contido numa embalagem para a sua protecao; chamada de embalagem, e que possui uma tampa acoplada a ela que permite assim a oclusao reversivel da abertura superior da ampola, chamada de tampa da embalagem. O espaco intermediario, entre as paredes interna e externa da ampola, pode ter vacuo ou ser total ou parcialmente preenchido por substancia qualquer. [Source: Claim 1] 1-"container with thermal protection devices of" characterized by being a tuido pose, two or more bottles. The bottles have internal and external wall, to unite in order to delimit a closed space between them; This space and named intermediate space. These bottles are called light bulbs. The inner wall of amps is shaped like a vase with walls continuing and joining along a perimeter and resulting in the largest dimension of the vessel, the height, forming the side walls; and one of its ends is still with the side walls in order to occlude this extremidade, calling themselves; the inner wall of the bulb so constituted, gives rise to a space surrounded by the side walls and ocluido by the Fund, called integrated led light bulb. The opposite end to the bottom and open, linking the environment with the inside of the bulb, and called bulb's mouth. The outer wall, bigger in all dimensions, it is also as a vase to templates of the inner wall. The vials are interconnected by tubular conduits called pipe. 1-1- Pipes can be continuous or suffer seams for fit or threading, as two ends of the same diameter, being docked or rosquearem with larger internal diameter sleeve. Within one or more light bulbs there is a structure that adapts to the inner surface of the inner wall of the bulb in such a way as to establish a seal between this structure and the bulb and separate the inside of the bulb in two spaces; This structure is called embulo. The vials, pipes and imbulos form a set that is contained in a package for your protection; call, and that has a lid attached to it that allows so the oclusao reversible the top opening of the bulb, called the packing lid. O intermediary space between the inner and outer walls of the bulb, may have vacuum or be totally or partially filled by substance.



International class (IPC 8-9): B65D81/38 (Advanced/Invention);
B65D81/38 (Core/Invention)
International class (IPC 1-7): B65D81/38
Family:

Publication number	Pub. date	Application number	App. date
BRPI8806255 A	19900724	BR1988PI06255	19881123

Priority: BR1988PI06255 19881123;

Assignee(s): (std): ALEXANDRE AIQUEL VAZ COSTA ; MARIUSZ NIEDZIOŁKO
Inventor(s): (std): COSTA ALEXANDRE AIQUEL VAZ ; NIEDZIOŁKO MARIUSZ
Inventor(s): ALEXANDRE AIQUEL VAZ COSTA ; MARIUSZ NIEDZIOŁKO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BRPI8806255 A	19900724	LSPB	+	published / reissued	

12) Family number: 43685201 (CO4180428A)

Title: METODOS Y SISTEMAS PARA LA FABRICACION DE MATERIALES DE EM- PAQUE, RECIPIENTES Y OTROS PRODUCTOS DE MEZCLAS QUE FRAGUAN HIDRAULICAMENTE COMPUESTOS CON ALTO RELLENO INORGANICO. METHODS AND SYSTEMS FOR MAKING MATERIALS PARKS EM, VESSELS AND OTHER PRODUCTS hydraulically setting MIXING WITH HIGH FILLING INORGANIC COMPOUNDS. (Machine translation)

Abstract:

Source: CO4180428A UN ARTICULO DE FABRICACION QUE TIENE UNA MATRIZ ESTRUCTURAL CONRELLENO INORGANICO QUE COMPRENDE UN AGLUTINANTE ORGANICO DISPERSABLE EN AGUA; UN AGREGADO INORGANICO QUE TIENE UNA CONCENTRACION DENTRO DEL RANGO DE ENTRE 40 percent Y 98 percent EN VOLUMEN DEL TOTAL DE SOLIDOS EN LA MATRIZ ESTRUCTURAL CON RELLENO INORGANICO; Y UN MATERIAL FIBROSO, TENIENDO DICHA MATRIZ ESTRUCTURAL CON RELLENO INORGANICO UN GROSOR DENTRO DEL RANGO DE ENTRE 0.01 nm Y 20 nm.7UN METODO PARA FABRICAR UN ARTICULO COMPRENDIENDO EL METODO LOS PASOS DE: MEZCLAR UN AGLUTINANTE DE POLIMERO ORGANICO, UN AGREGADO INORGANICO, AGUA Y FIBRAS CON EL FIN DE FORMAR UNA MEZCLA MOLDEABLE, ESTANDO INCLUIDO EL AGREGADO INORGANICO EN UNA CANTIDAD DENTRO DEL RANGO ENTRE 40 percent Y 98 percent EN VOLUMEN DEL TOTAL DE SOLIDOS EN LA MEZCLA; MOLDEAR LA MEZCLA EN LA FORMA ESTABLE DEL ARTICULO Y ENDURECER LA MEZCLA EN UNA FORMA ESTABLE DEL ARTICULO, TENIENDO EL ARTICULO UNA MATRIZ ESTRUCTURAL.18UN SISTEMA PARA FABRICAR UN ARTICULO, QUE COMPRENDE: UNA MEZCLADORA ESTRUCTURADA PARA PREPARAR UNA MEZCLA MOLDEABLE QUE INCLUYA UN AGLUTINANTE DE POLIMERO ORGANICO, UN AGREGADO INORGANICO QUE TIENE UNA CONCENTRACION EN EL RANGO ENTRE 40 percent Y 98 percent EN VOLUMEN DEL TOTAL DE SOLIDOS EN LA MEZCLA, AGUA Y FIBRAS; MEDIOS PARA MOLDEAR LA MEZCLA MOLDEABLE EN LA FORMA DESEADA Y LOGRAR ESTABILIDAD DE FORMA EN MENOS DE UN MINUTO Y MEDIOS PARA ENDURECER LA MEZCLA EN LA FORMA DESEADA DEL ARTICULO. An article of manufacture having a structural CONRELLENO MATRIX INORGANIC ORGANIC comprising a binder dispersible in water; INORGANIC an aggregate having a concentration in the range between 40 percent and 98 percent by volume of the total solids in MATRIX FILLED STRUCTURAL INORGANIC; And a fibrous material, said structural matrix STUFFED WITH INORGANIC a thickness in the range between 0.01 nm and 20 nm.7UN method for making an article the method comprising the steps of: mixing an organic polymer binder, an aggregate inorganic WATER And fibers in order to form a moldable mixture, BEING INCLUDED IN THE AGGREGATE INORGANIC an amount within the range of between 40 percent and 98 percent by volume of the total solids in the mixture; Molding the mixture in stable shape of the article and curing the mixture into a stable form of the article, the article having MATRIX SYSTEM ESTRUCTURAL.18UN making an article, comprising: a STRUCTURED MIXER FOR PREPARING A moldable mixture including a binder ORGANIC POLYMER, INORGANIC an aggregate having a concentration in a range between 40 percent and 98 percent by volume of the total solids in the mixture, water and fibers; MEDIA MOLDEABLE molding the mixture into desired shape and form stability ACHIEVE IN LESS THAN ONE MINUTE AND MEANS FOR HARD MIX IN ARTICLE desired shape.

International class (IPC 8-9): A47G19/12 (Advanced/Invention);
A47G19/00 (Core/Invention)

International class (IPC 1-7): A47G19/12
Family:

Publication number	Pub. date	Application number	App. date
CO4180428 A1	19950607	CO19940005882	19940216

Priority: CO19940005882 19940216;

Assignee(s): (std): E KHASHOGGI IND
Assignee(s): E KHASHOGGI INDUSTRIES
Inventor(s): (std): ANDERSEN PER JUST ; HODSON SIMON K
Inventor(s): JUST ANDERSEN PER ; SIMON K HODSON

Legal status (INPADOC)

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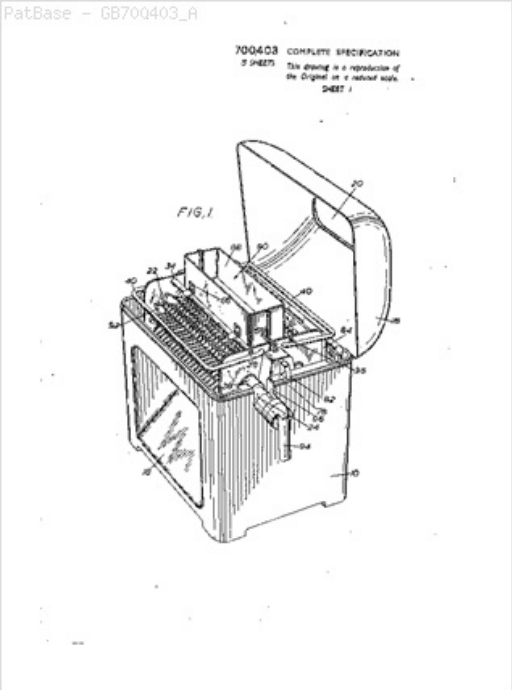
Patent	Date recorded	Event group	Code	Event	Details
CO4180428 A1	19950607	LSPB	+	published / reissued	

13) Family number: 20590181 (GB700403A)

Title: Improvements in and relating to meat tenderizing machines

Abstract:

Source: GB700403A 700,403. Meat, tenderizing. LAN-ELEC, Ltd., READ, D. M., STAPLES, J., and ANECKI, J. L. May 15, 1951 [June 8, 1950], No. 14324/50. Class 28(2) In tendering meat between a pair of rolls of toothed discs on a shaft, each roll assembly can be lifted from and replaced in the machine housing, the assembly including a frame 32, 32 carrying the bearing 38 for its roll. To assemble the removable knife rolls, Fig. 4, in the casing the stripper 42, Fig. 6, is clipped on to its knife roll the U-bend hook 50 engaging a lower cross rod 34 while clips 56 engage on top of the upper cross rod 34. The whole assembly is then lifted by its handle 40 and lowered into the casing, the bearings 38 being guided and received in U-shaped recesses 62, Fig. 5, of brackets 60 on the inside of the casing. When both of the roll assemblies are thus located, with their upper parts 46 interengaging at their edges 54 these parts form an inlet shoot 90, Fig. 1. The flanges 58 are received in vertical end-slots 68 and locked therein by spring-pressed latches 78 entering cutaway portions 76. Alternatively such latching may be done by the closing of a lid 18 which acting on slopes 82 of the plungers force them over the tops of the side plates 32. The lower parts 48 of the strippers co-operate together to form a delivery shoot 16.



International class (IPC 8-9): A22C9/00 (Advanced/Invention);
A22C9/00 (Core/Invention)
International class (IPC 1-7): A22C9/00
CPC: A22C9/008
European class: A22C9/00F
Family:

Publication number	Pub. date	Application number	App. date
GB700403 A	19531202	GB19500014324	19500608

Priority: GB19500014324 19500608;

Assignee(s): (std) DOUGLAS MELVILLE READ ; JOHN STAPLES ; JOZEF LONGIN ANECKI ; LAN ELEC LTD
Assignee(s): LAN ELEC LIMITED

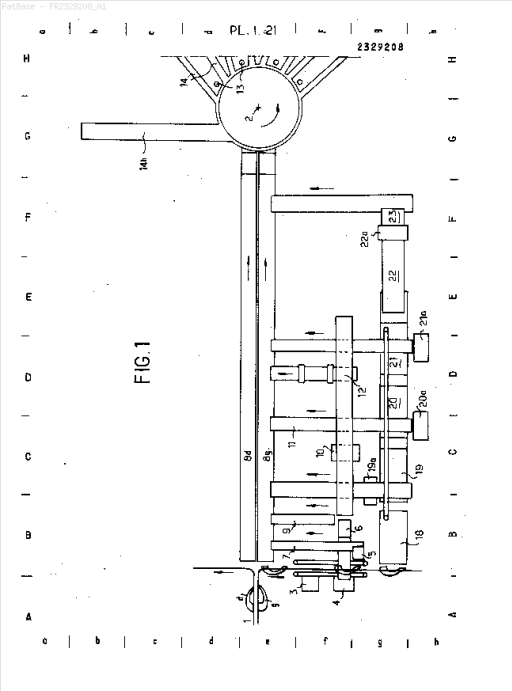
Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
GB700403 A	19531202	LSGT	+	granted / extensions (spc, cpc, pte)	

14) Family number: 1160040 (GB1448940A)
Title: METHOD OF AN INSTALLATION FOR BONING BEEF AND FOR SHAPING THE MEAT

Abstract:
Source: GB1448940A 1448940 Processing meat carcasses AGENCE NATIONALE DE VALORISATION DE LA RECHERCHE 26 April 1974 [3 May 1973] 18363/74 Heading A2U A plant, for boning the meat of the halfcarcass of a skinned beast, comprises, for each half-carcass, a rail 1 provided with suspension hooks on which to suspend the half-carcass by its rear knuckle, means for propulsion of the half-carcass, whilst warm and still supple, on a first track between two pairs of belts 31, rotatable about vertical axes, which provide for its translatory movement, cutting means at a first station 3 on said first track for removing the shoulder during movement of the half-carcass, cutting means at a second station 4-5 on said first track for cutting the neck, and means at said second station for removing the fillet, top, top flank, thin flank, membrane, filet mignon and tail; on a second track, a, substantially perpendicular to the first track and to which the portions detached on the first track are carried by a conveyor belt, means 6 for boning the neck, means 10 for boning the leg and marrow bone, the latter means including a lathe adapted to receive a plurality of rotary cutters which are resiliently applied around the bone, means 12 for boning the shoulder blade originating from removal of the shoulder including a conveyor belt for carrying the shoulder blade flat to two successive stations where one set of cutters detaches the lower meat and the top meat; on a third track b, parallel with the second and to which the residual halfcarcass is carried by its suspension hook on an inclined plane 18, a spring and a guide for straightening the vertebral column, a driving chain having elastic hooks for thereafter carrying the residual half-carcass to first 19, second 20 and third 21 stations, a semi-automatic tool disposed at said first station and comprising cutters associated with cutting blades for cutting off the breast, another set of cutters disposed at said second station to penetrate between the ribs and between the projections on the vertebral column for removal of the ribs, a blade at said second station for cutting off the thigh to permit it to be carried away and processed later, a set of cutters at said third station identical to that of the second station and operatable in a similar manner; a conveyor belt 11 with a friction gear drive for driving the said cutoff thigh supported by a hook in the bone hole, a curvilinear set of cutters for detaching the chump end bone, a knife for detaching the rump to permit the rest of the thigh to be carried away, a curved set of cutters for cutting off the top rump, rollers for lifting the bone and engaging it in an arc of cutters adapted to clamp resiliently around the thigh and having an oscillating rotary movement adapted to detach the meat from the bone.



International class (IPC 8-9): A22B5/00 A22C17/00 A22C18/00 (Advanced/Invention);
A22B5/00 A22C17/00 A22C18/00 (Core/Invention)
International class (IPC 1-7): A22B5/00 A22B7/00 A22C17/00 A22C17/04 A22C18/00
CPC: A22B5/0029 A22B5/0035 A22C17/004
European class: A22B5/00B2 A22B5/00B3 A22C17/00C
Family:

Publication number	Pub. date	Application number	App. date
AR200317 A1	19741031	AR19740253515	19740429
AU197468465 A1	19751106	AU19740068465	19740501
BR7403489 A0	19741126	BR19740003489	19740429
CA1028108 A1	19780321	CA19740198705	19740502
DE2421339 A1	19741114	DE19742421339	19740502
FR2329208 A1	19770527	FR19730015804	19730503
FR2329208 B1	19780414	FR19730015804	19730503
GB1448940 A	19760908	GB19740018363	19740426
ZA7402827 A	19750625	ZA19740002827	19740503

Priority: FR19730015804 19730503;

Assignee(s): (std): ANVAR ; CHIRON GABRIEL AND CIE ETS SA ; CHIRON GABRIEL AND CIE SA ETS
Assignee(s): FRADIN MAURICE ; CHIRON GABRIEL ET CIE SA ETS ; CHIRON GABRIEL ; AGENCE NAT DE VALORISATION DE LA RECHERCHE ; AGENCE NAT DE VALORISATION DE LA RECH ; AGENCE NATIONALE DE VALORISATION DE LA RECHERCHE ; AGENCE NATIONALE DE VALORISATION DE LA RECHERCHE ANVAR NEULLY SUR SEINE FRANKREICH ; AGENCE NATIONALE DE VALORISATION DELA RECHERCHE
Inventor(s): (std): CHIRON GABRIEL ; FRADIN M ; FRADIN MAURICE ; CHIRON G ; CHIRON GABIREL
Inventor(s): CHIRON GABIREL LA GAUBRETIERE ; FRADIN MAURICE SAINT JEAN DE MONTS ; GABRIEL CHIRON ; GABRIEL CHIRON AND MAURICE FRADIN ; MAURICE FRADIN

Legal status (INPADOC)

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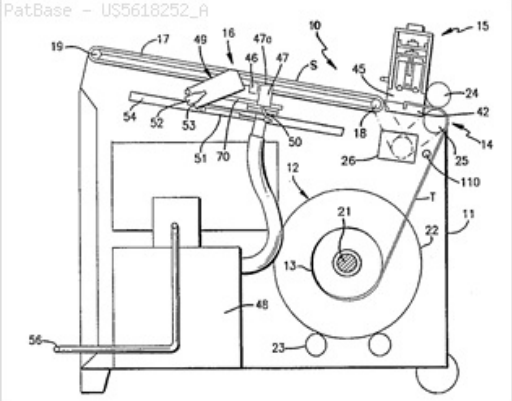
Patent	Date recorded	Event group	Code	Event	Details
AR200317 A1	19741031	LSGT	+	granted / extensions (spc, cpc, pte)	
AU197468465 A1	19751106	LSPB	+	published / reissued	
CA1028108 A1	19780321	LSPB	+	published / reissued	

DE2421339 A1	19741114	LSPB	+	published / reissued
DE2421339 A1	19811029	LSLE	-8141	DISPOSAL/NO REQUEST FOR EXAMINATION
FR2329208 A1	19770527	LSPB	+	published / reissued
FR2329208 A1	19870327	LSLE	-ST	NOTIFICATION OF LAPSE
FR2329208 B1	19780414	LSGT	+	granted / extensions (spc, cpc, pte)
GB1448940 A	19760908	LSGT	+	granted / extensions (spc, cpc, pte)
GB1448940 A	19770119	LSGT	+PS	PATENT SEALED
GB1448940 A	19861217	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
ZA7402827 A	19750625	LSGT	+	granted / extensions (spc, cpc, pte)

15) Family number: 20188958 (US5618252A)
Title: Packaging apparatus

Abstract:

Source: US5618252A Apparatus is disclosed for producing discrete packages which can be individually varied in length so that they can be used for packaging articles such as **cuts** of **meat** which vary in length. The apparatus comprises drive **rolls** for feeding a flat tube of plastics packaging material through a **cut** off device. The apparatus may also comprise a heat sealing device (to form the tube into a bag) and a blower head combined with a suction device which opens the leading portion of the bag to facilitate the placing of an article in the bag. A proximity sensor is provided adjacent the **cut** off device and immobilizes the drive **rolls** when it detects the arrival of a loading portion. In one form of the apparatus the sensor is mounted on a movable carriage which can be quickly moved by hand or by a ram. In another form of the apparatus electronic controls are provided which can vary the number of revolutions of the drive **rolls**, the rotational speed thereof or the period of rotation thereof to preset the length of each leading portion. These controls can be adjusted by hand or by a device which measures the length of an article which is about to be packaged.



International class (IPC 8-9): B65B41/12 B65B43/04 B65B43/36 B65B57/04 B65B59/00 B65B9/13 (Advanced/Invention); B65B41/00 B65B43/00 B65B43/26 B65B57/02 B65B9/10 (Core/Invention)
International class (IPC 1-7): B31B1/00 B65B43/00 B65B43/36 B65B57/04 B65B67/04 B65B9/10 B65B9/13
CPC: B65B9/13 B65B43/36 B65B41/12 B65B57/04 B65B59/00
European class: B65B41/12 B65B43/36 B65B57/04 B65B59/00 B65B9/13
US class: 493/10 493/194 493/201 493/212 493/22 493/24 493/27 493/341
Family:

Publication number	Pub. date	Application number	App. date
AT125220 E	19950815	AT19920915712T	19920720
AU199223269 A1	19930302	AU19920023269	19920720
AU199463872 A1	19941024	AU19940063872	19940324
AU672952 B2	19961024	AU19920023269	19920720
AU686608 B2	19980212	AU19940063872	19940324
AU686608 C	19941024	AU19940063872	19940324
DE69203604 D1	19950824	DE19926003604	19920720
DE69203604 T2	19960425	DE19926003604T	19920720
DE69430908 D1	20020808	DE19946030908	19940324
DE69430908 T2	20030227	DE19946030908T	19940324
EP0595905 A1	19940511	EP19920915712	19920720
EP0595905 B1	19950719	EP19920915712	19920720
EP0687238 A1	19951220	EP19940911322	19940324
EP0687238 A4	19980422	EP19940911322	19940324
EP0687238 B1	20020703	EP19940911322	19940324
NZ239153 A	19931223	NZ19910239153	19910726
NZ263260 A	19970324	NZ19940263260	19940324
US5618252 A	19970408	US19940198092	19940217
US5816990 A	19981006	US19960743220	19961105
WO9302924 A1	19930218	WO1992EP01624	19920720
WO9422723 A1	19941013	WO1994NZ00024	19940324

Priority: NZ19910239153 19910726; NZ19930247267 19930326; NZ19940263260 19940324; US19960743220 19961105; US19940198092 19940217; US19920920418 19920727; WO1992EP01624 19920720; WO1994NZ00024 19940324;

Cited documents: WO9302924 A1, US5376219 A, US5139151 A, US5094061 A, US5041070 A, US5027583 A, US5024042 A, US4945714 A, US4938007 A, US4898327 A, US4854109 A, US4800708 A, US4779400 A, US4694638 A, US4674268 A, US4586318 A, US4557102 A, US4553376 A, US4510731 A, US4494364 A, US4425988 A, US4406251 A, US4346546 A, US4202153 A, US4061329 A, US4005970 A, US3908343 A, US3774367 A, US3557526 A, US3553934 A, US3527633 A, US3492783 A, US3449887 A, US3448555 A, US3161002 A, US2195740 A, GB1256729 A, GB1137057 A, FR2015385 A1, EP0092760 A2, EP0044820 A1, DE2603487 A1, DE2139470 A1,
Assignee(s): (std): JOHN ANTHONY BAILIE WHITEHEAD ; MACHINERY DEVELOPMENTS LIMITED ; MACHINERY DEVELOPMENTS LTD ; WHITEHEAD JOHN ANTONY B ; MELVILLE RICHARD ARCHER ; WHITEHEAD JOHN ANTHONY BAILIE ; MACHINERY DEVELOPMENTS LTD SUB ; WHITEHEAD JOHN ANTONY BAILIE
Assignee(s): MULTIBAGGER HOLDINGS ; MACHINERY DEVELOPMENTS LTD NEWMARKET AUCKLAND NZ ; WHITEHEAD JOHN ANTONY B TORBAY AUCKLAND NZ ; MACHINERY DEVELOPMENTS LTD NEWMARKET
Inventor(s): (std): MELVILLE RICHARD ARCHER ; MELVILLE RICHARD ; LEONARD STEPHEN KELLY ; KELLY LEONARD STEPHEN ; KELLY LEONARD ; MELVILLE RICHARD A ; MELVILLE ARCHER ; RICHARD ARCHER MELVILLE
Inventor(s): MELVILLE RICHARD ARCHER AUCKLAND NZ ; KELLY LEONARD STEPHEN COROMANDEL NZ
Designated states: AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK ES FI FR GA GB GE GN GR HU IE IT JP KG KP KR KZ LI LK LU LV MC MD MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SI SK SN TD TG TJ TT UA US UZ VN

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Patent	Date recorded	Event group	Code	Event	Details
AT125220 E	19950815	LSGT	+	granted / extensions (spc, cpc, pte)	
AT125220 E	19960115	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU199223269 A1	19930302	LSPB	+	published / reissued	
AU199463872 A1	19941024	LSPB	+	published / reissued	

AU672952 B2	19961024	LSGT	+	granted / extensions (spc, cpc, pte)	
AU686608 B2	19980212	LSGT	+	granted / extensions (spc, cpc, pte)	
DE69203604 D1	19960725	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
DE69203604 D1	20000907	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE69203604 T2	19960425	LSGT	+	granted / extensions (spc, cpc, pte)	
DE69430908 D1	20030703	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
DE69430908 D1	20050728	LSRV	-8331	COMPLETE REVOCATION	
DE69430908 T2	20030227	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0595905 A1	19940511	LSPB	+	published / reissued	
EP0595905 A1	19940511	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19940214
EP0595905 A1	19940629	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19940513
EP0595905 A1	19950719	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 19950719
EP0595905 A1	19950719	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 19950719
EP0595905 A1	19950719	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE EFFECTIVE DATE : 19950719
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EP0595905 A1	19950719	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK EFFECTIVE DATE : 19950719
EP0595905 A1	19950731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19950731
EP0595905 A1	19950731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19950731
EP0595905 A1	19951019	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE EFFECTIVE DATE : 19951019
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EP0595905 A1	19960102	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF	

				ART. 29P AND 29M OF THE PATENTS ACT	
EP0595905 A1	19960619	LSOP	-26	OPPOSITION FILED	OPPONENT NAME : W.R. GRACE AND CO.-CONN. EFFECTIVE DATE : 19960419
EP0595905 A1	19980713	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 19980713 YEAR OF FEE PAYMENT : 07
EP0595905 A1	19980729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 19980729 YEAR OF FEE PAYMENT : 07
EP0595905 A1	19980828	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 19980828 YEAR OF FEE PAYMENT : 07
EP0595905 A1	19980907	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 19980907 YEAR OF FEE PAYMENT : 07
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EP0595905 A1	20000308	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 19990720
EP0595905 A1	20000315	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0595905 A1	20000419	LSRV	-27W	REVOKED	EFFECTIVE DATE : 19991129
EP0595905 A1	20000721	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST
EP0595905 A1	20080102	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 19950719
EP0595905 B1	19950719	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0687238 A1	19951220	LSPB	+	published / reissued	
EP0687238 A1	19951220	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19951020
EP0687238 A1	19980422	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 19980306
EP0687238 A1	19980819	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19980703
EP0687238 A1	20030528	LSOP	-26	OPPOSITION FILED	OPPONENT NAME : CRYOVAC, INC. EFFECTIVE DATE : 20030403
EP0687238 A1	20030806	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : 7725
EP0687238 A1	20040430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20040430 YEAR OF FEE PAYMENT : 11
EP0687238 A1	20050316	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20050316 YEAR OF FEE PAYMENT : 12

EP0687238 A1	20050324	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20050324 YEAR OF FEE PAYMENT : 12
EP0687238 A1	20050622	LSRV	-27W	REVOKED	EFFECTIVE DATE : 20041116
EP0687238 A1	20050622	LSRV	-GBPR	GB: PATENT REVOKED UNDER ART. 102 OF THE EP CONVENTION DESIGNATING THE UK AS CONTRACTING STATE	DESCRIPTION : 20041116
EP0687238 B1	20020703	LSGT	+	granted / extensions (spc, cpc, pte)	
NZ239153 A	19931223	LSPB	+	published / reissued	
NZ239153 A	20071026	LSGT	+PSEA	PATENT SEALED	
NZ239153 A	20071130	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	
NZ239153 A	20111125	LSAS	ASS	CHANGE OF OWNERSHIP	OWNER NAME : MULTIBAGGER HOLDINGS, NZ DESCRIPTION : OLD OWNER(S): MACHINERY DEVELOPMENTS LIMITED
NZ263260 A	19970324	LSPB	+	published / reissued	
NZ263260 A	20071026	LSGT	+PSEA	PATENT SEALED	
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US5618252 A	19970408	LSGT	+	granted / extensions (spc, cpc, pte)	
US5618252 A	19970328	LSGT	PAT1	Patented Case	
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US5618252 A	20041008	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5618252 A	20080922	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5618252 A	20111102	LSAS	AS	ASSIGNMENT	OWNER NAME : MULTIBAGGER HOLDINGS, NEW ZEALAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MACHINERY DEVELOPMENTS LIMITED; REEL/FRAME:027159/0922 EFFECTIVE DATE : 20111013
US5816990 A	19981006	LSGT	+	granted / extensions (spc, cpc, pte)	
US5816990 A	19980831	LSGT	PAT1	Patented Case	
US5816990 A	20020315	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5816990 A	20060313	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5816990 A	20100331	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5816990 A	20111102	LSAS	AS	ASSIGNMENT	OWNER NAME : MULTIBAGGER HOLDINGS, NEW ZEALAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MACHINERY DEVELOPMENTS LIMITED; REEL/FRAME:027159/0922 EFFECTIVE DATE : 20111013
WO9302924 A1	19930218	LSPB	+	published / reissued	
WO9302924 A1	19940212	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1992915712 COUNTRY OF REF DOCUMENT : EP
WO9302924 A1	19940511	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1992915712 COUNTRY OF REF DOCUMENT : EP

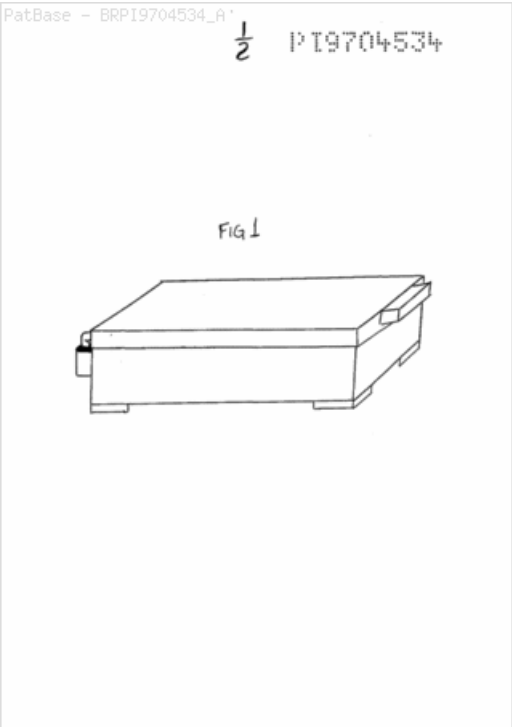
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WO9302924 A1	20000225	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1992915712 COUNTRY OF REF DOCUMENT : EP
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WO9422723 A1	19951024	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 263260 COUNTRY OF REF DOCUMENT : NZ
WO9422723 A1	19951220	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1994911322 COUNTRY OF REF DOCUMENT : EP
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WO9422723 A1	19961126	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA
WO9422723 A1	20020703	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1994911322 COUNTRY OF REF DOCUMENT : EP
WO9422723 A1	20050504	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1994911322 COUNTRY OF REF DOCUMENT : EP

16) Family number: 31656821 (BRPI9704534A)

Title: Beneficiador automatico eletroeletronico magnetico para tornar macios e amoldados cortes de carnes classicos Automatic magnetic eletroeletronico Gin to make soft and amoldados classic meat cuts (Machine translation)

Abstract:

Source: BRPI9704534A [Source: Claim 1] f ** # ? # # ss • • • • # t « • • I » #ss#ss ? I ss## # « I ? • « 4 « « » • REIVINDICACOES 0 aparelho "beneficiador automatico eleroeletronico magnetico para tornar macios e amoldados cortes de carnes classicos" e caracterizado por uma tampa (2,1) com dobradicas elevadoras de altura a variacao 05 dos cortes de carnes (2.2) e base eletromagnetica (2.5.) onde se afixam seus componentes electronicos magneticos juntamente com a superficie onde se depositam a carne, verificando-se de tal forma, que o aparelho "beneficiador automatico eletroeletronico magnetico para tornar macios e amoldados cortes de carnes classicos" foi projetado, estudado, xperimentado, em fontes da especialidade de sua eficiencia e aplicacao para obtencao de funcionamento perfeito, permitindo estas conclusoes; o "beneficiador automatico eletroeletronico magnetico para tornar macios e amoldados cortes de carnes classicos, possui uma exclusividade de tecnica de amoldar carnes em cortes diversos, inexistentes ainda no 15 estado da tecnica e inexplorado no campo da preparacao do alimento que vem sendo beneficiado no sistema de amoldagem, de forma artesanal; assim sendo, trata-se de sistema simples, com capacidade de funcionamento a atender seguranca e higiene no trato de carnes de origem animal, tratando-se de inovadora opcao ao usuario que dispora 20 de recurso capaz de atender necessidade a teor do trato com os diversos cortes de carne classicos, a justificar o presente pedido de Carta Patente, que os requerentes ora depositam. I ••:. # •••ss./: RESUMO "beneficiador automatico eletroeletronico magnetico para tornar macios e amoldados cortes de carnes classicos constituido por tampa e base magnetica juntamente com componentes electronicos dotado de 05 superficie onde se deposita cortes de carnes que se desejam amaciar e amoldar, vindo a trazer inovacao no estado da tecnica onde se manipulam carnes, empregando o sistema de rolos, furadores, martelos manuais, marteletes movido por eixo excentrico, enzinas dentre outros, trazendo o "beneficiador automatico eletroeletronico magnetico para io tornar macios e amoidados cortes de carnes dassicos a dar facilidade de higienizacao e seguranca, com o esperado desempenho da especie, sem as inconveniencias conhecidas, tais como, dificuldade de limpeza de residuos e acidentes, porque a simplicidade do invento e sua utilidade sao corolarios de sua inovacao e carater genuino. [Source: Claim 1] f ** # ? # # ss • • • • # t « • • I » #ss#ss? I ss## # « I ? • « 4 « » • CLAIMS 0 appliance "automatic magnetic eleroeletronico Gin to make soft and amoldados classic meat cuts" and characterized by a cover (2.1) with hinges to height variation 05 booster of the cuts of meat (2.2) and flat lock base (2.5) where they post their solving system electronics magnets along with the surface where you lay the meat, so that the appliance "automatic magnetic eletroeletronico Gin to make soft and amoldados classic meat cuts" has been designed, studied, xperienced in specialty sources of their efficiency and application to achieve perfect functioning, allowing these conclusions; the "automatic magnetic eletroeletronico Gin to make soft and classic meat cuts, amoldados has an exclusive technique of shape meat into various non-existent cuts still in 15 State of the coping technique and unexplored in the field of preparation of food that has been processed in the amoldagem system, by hand; Therefore, it is a simple system, with working capacity to meet seguranca and hygiene in animal meat, in the case of innovative option to the user to dispora resource capable of meeting 20 need the content of the deal with the various cuts of meat classics, to justify the present Charter application, applicants now lay. I ••:. • • • ss./Summary: "automatic magnetic eletroeletronico Gin to make soft and amoidados meat classicos cuts consists of lid and magnetic base along with electronic components with 05 surface where collects meat cuts that want to soften and shape, coming to bring innovation in State of the coping technique where you handle meat, using the system of rollers, punches, hand-held, hammers powered by eccentric shaft enzinas, among others, bringing the "automatic eletroeletronico magnetic hold to it become soft and amoidados meat dassicos cuts to give ease of higienizacao and security, with the expected performance of the kind, without the inconveniencias known, such as difficulty of cleaning waste and accidents, because the simplicity of the invention and its usefulness are corolarios of their innovation and genuine character.



International class (IPC 8-9): A22C9/00 (Advanced/Invention);
A22C9/00 (Core/Invention)
International class (IPC 1-7): A22C9/00
Family:

Publication number Pub. date Application number App. date
BRPI9704534 A 19990706 BR1997PI04534 19971119

Priority: BR1997PI04534 19971119;

Assignee(s): (std): FERREIRA MARCOS ANTONIO
Inventor(s): (std): FERREIRA MARCOS ANTONIO
Inventor(s): MARCOS ANTONIO FERREIRA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BRPI9704534 A	19990706	LSPB	+	published / reissued	

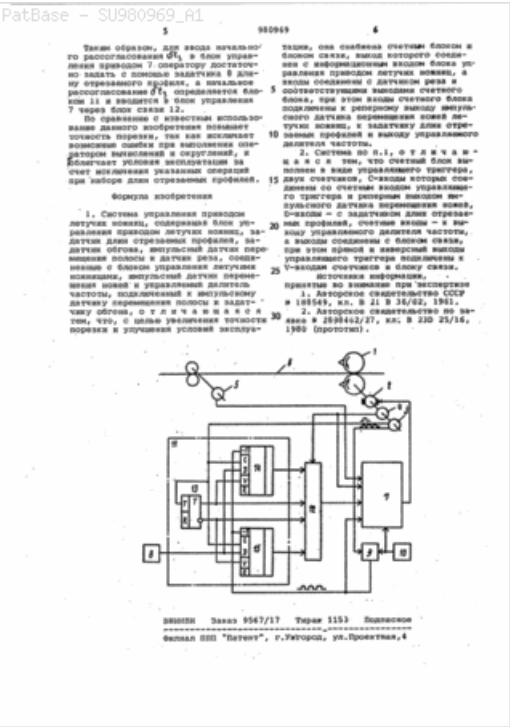
BRPI9704534 A	20031014	LSRV	-FA10	DISMISSAL: DISMISSAL - ARTICLE 33 OF INDUSTRIAL PROPERTY LAW
BRPI9704534 A	20040601	LSRV	-B11Y	DEFINITIVE DISMISSAL ACC. ARTICLE 33 OF IPL - EXTENSION OF TIME LIMIT FOR REQUEST OF EXAMINATION EXPIRED

17) Family number: 2727515 (SU980969A)

Title: FLYING SHEARS DRIVE CONTROL SYSTEM

Abstract:

Source: SU980969A Invention relates to automation of **rolling** mills, and can be used for controlling the flying shears-forming units, and **rolling** mills. known system, a well-known method of controlling realizuyuscha follower drive flying shears comprising 5lok drive control volatile knife prostrate with speed regulator and position knives pulser moving knives flying shears, **cut** sensor, speed sensor strip, the strip pulse generator and setpoint **cut** length profiles 1. disadvantage of this system is that it does not provide the possibility of an adjustable-overtaking lane in the flying shears knives **cutting** zone, which worsens the **cutting** quality profiles. closest to the invention, the control system operated flying shears comprising a control unit driven flying shears, **cut** length RAMP profiles dial overtaking pulse sensor movement sensor strip and **cut** connected to the control unit flying shears, knives moving pulse generator and controls emy frequency divider connected to the pulse encoder blades and moving to Overtake RAMP 2. disadvantage of this system is that any errors in the calculation and rounding errors can give the total error, which leads to an incorrect input error value f in the control system, which in turn, vyzy10 Vaeth systematic error in the lengths of the **cut** profiles. Also, performing arithmetic operations makes it difficult to work the operator when specifying the lengths of the **cut** profiles. This 15 skazyvaets especially when the length compensation is performed without stopping the machine. Tse.p invention - improving the accuracy of **cutting** and improving conditions 20 operation. The goal is achieved in that the control system operated flying shears comprising a control unit driven flying shears snip zadat25 **cut** length profiles dial overtaking impu.psnv sensor movement sensor strip and **cut** connected to the control unit flying shears, impu. Isnyy.datchik pereme30 scheni knives and-controllable frequency divider connected to the pulse encoder strip and moving to zadat Chiku overtaking, provided with a countable-unit and the communication unit, whose output is connected to the data input nen block yn poisonings drive flying shears, and inputs connected to the sensor and **cut** outs s.sootvetstvuyuschimi countable, block, the inputs are connected to the counting unit fiducial pulse output sensor movement **meat** knives fly sneeze scissors to **cut** length RAMP Mykh profiles and output controlled frequency divider.. This counter unit can be configured as a control knsego trigger, two counters, C - whose input is connected to the counting input control th present and trigger output with a reference encoder movement knife D inputs - with setpoint **cut** length profiles, counter inputs - with access controlled by a frequency divider and the outputs are connected to the communication unit, wherein the forward and inverse outputs of the control flip-flop connected to the Y-input of the counter and bloku.sv bond. The figure shows a functional diagram of a system for controlling the drive of flying shears. The system comprises a flying shear drive 1 2 3 pulser moving knives flying shears, **cut** 4 sensor, pulse sensor 5 b of the strip, the control unit 7 or drive flying shears zadatchi lengths 8-**cut** the profile controlling my e frequency divider 9 KSR for overtaking 10, counting block II and section 12 bond. Output block 12 is connected to the data input unit 7, and sensor inputs are connected to respective outputs 4 and counting unit 11 with the first, second and third WMOs dy counting unit 11 are connected, respectively, and three fiducial sensor output, the length setter 8 and a controlled divider output Frequency 9 WMOs dy impulsnvch which are connected to the output of the sensor 3 and the output setpoint overtaking 10. Counting unit 11 includes a control flip-flop 13 and two counters 14 and 1.5 N - whose inputs are connected to the first input unit 11 and the counting counting trigger input 13, D - input-connected to a second, counting input unit 11 counting inputs - the third input counting unit 11 and outputs connected with the outputs counting unit 11, the forward and inverted outputs of the control flip-flop 13 are connected to Vvhodam counters 14 and 15 and counting the outputs of block 11. system operates as follows: Each initial misalignment Reza tf6-b is introduced in the block 7, which reduces the **cutting** speed after the flying shears. Before the next rezom speed flying shear is increased to a value of unit 7 where V - speed knives; V - speed strip; K.. Coefficient, which is known frequency divider x is determined by the formula w WT. where n - number selected by an operator of; n - counter capacity controlled frequency divider. **Cut**-to Reza unit 7, commits the current mismatch between the position-knives flying shears and **cut** metem on the strip, controls the speed of change of knives so that before rezom rassoglasovanie.bylo worked out to zero, and the rate would be consistent with knives Mr. V. RAMP 8 operator specifies the length of the **cut** profile 0h.V time when sensor 3 vschaet regular pulse with a reference output, trigger 13 changes its state. Suppose that at its output forward INSTALLING In this **case**, a signal with a reference signal of the sensor output at the C-3 counter input. 14 Length Ri is introduced into this counter. As the motion of flying shears or knife 1 to a subtracting input of the counter 14 receives pulses from the controlled frequency divider 9. The time of occurrence of the second output pulse with a reference sensor 3, which means that the blades of scissors made of volatile full turn, the output of the frequency divider 9 the subtracting input of counter 14 receives pulses whose number matched to Pu, where 19, the circumference of rotation of the blades. Consequently, the counter 14 is fixed according to the value cf FD rmule SGW-g.. The second pulse with a reference sensor output 3 also translates the control flip-flop 13c opposite state. When this work is prohibited counter 14 and counter 15 is permitted to work, which is incorporated in length PVI-,, and pulses will come from controlled frequency divider 9. When convergence knives flying shears has a pulse from the sensor to the input of the **cutting** unit 4, and 12 in communication takes input number recorded in the counter 14c control unit driven through his 7 infoE tatsionny entrance. In sledun cem cycle operation of the system is similar, only the entry cTf the control unit 7 is derived from the counter 15 Thus, for the initial entry of a mismatch in tf drive control unit 7 is sufficient to define the operator using setpoint 8 length to **cut** the profile and the initial misalignment of f defined com is block 11 and is introduced into the control unit 7 via the communication unit 12.Compared with the prior use of the invention tion improves **cutting** accuracy, as it excludes any errors when performing calculations and rounding operator, and rblegchaet operating conditions by eliminating these transactions at a set length to **cut** profiles. The claims 1, drive control flying shears comprising a control unit driven flying shears for yes tchik **cut** length profiles dial overtaking lane substituted pulser sensor strip and **cut** connected to the control unit flying shears, knives moving pulse generator and the control frequency divider connected to the pulse encoder strip movement and RAMP overtaking, characterized in that, in order to increase and improve the accuracy of **cutting** conditions, it is equipped with schetnvi block and communication, the output of which is connected to the control unit informadionnm drive flying shears and sensor inputs connected to respective **cut** and vyxodetsvi counting unit, the counting unit inputs connected to the output of the encoder fiducial moving blades flying shears to **cut** length setpoint profiles and controllable divider output frequency. 2. Pop.1 system, featuring a fact that the counting unit is configured as a control trigger, the two counters C whose inputs are connected to the counting input of the control flip-flop output and reference encoder moving knives, D-inputs - with the setter Length of **cut** profiles, counter inputs - to the output of the frequency divider controlled and outputs are connected to the communication unit / with the forward and inverse outputs of the control flip-flop connected to the inputs of the V-block counters and communication. infoEilatsii sources, received into account in the examination 1. USSR Author's Certificate 188549, cl. In 21 In 36/02, 1961. 2. Copyright certificate on the application of 2898462/27, cl; B 23D 25/16,. 1980 (prototype).



International class (IPC 8-9): B23D25/00 (Advanced/Invention)
International class (IPC 1-7): B23D25/16
Family:

Publication number Pub. date Application number App. date
SU980969 A1 19821215 SU19813243009 19810205

Priority: SU19813243009 19810205;

Assignee(s): (std): G PI ELEKTROTYAZHKHIMPROEKT
Inventor(s): (std): FERLUDIN VLADIMIR M ; PRUDKOV MARK L ; PRUZHANSKIY DAVID I ; SOSEDKA VILIJ L ; TKALENKO VIKTOR G
Inventor(s): TKALENKO VIKTOR G SU ; SOSEDKA VILIJ L SU ; PRUZHANSKIY DAVID I SU ; PRUDKOV MARK L SU ; FERLUDIN VLADIMIR M SU

Legal status (INPADOC)

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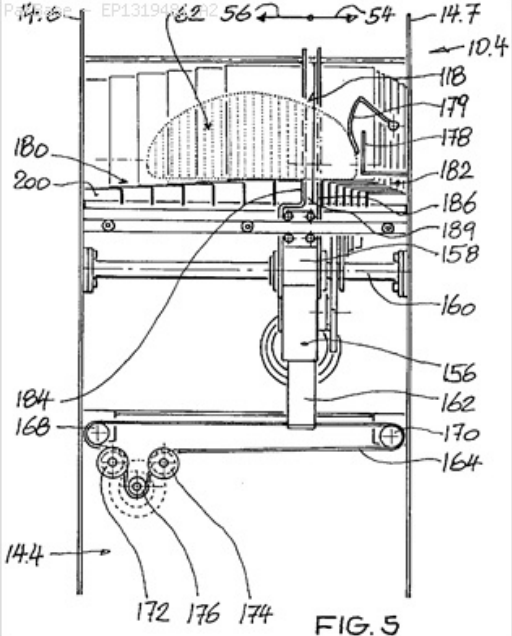
Patent	Date recorded	Event group	Code	Event	Details
SU980969 A1	19821215	LSGT	+	granted / extensions (spc, cpc, pte)	

18) Family number: 28580169 (EP1319481A2)

Title: CUTTING MACHINE FOR BREAD AND SIMILAR EDIBLE PRODUCTS MASCHINE ZUM SCHNEIDEN VON BROT UND VERGLEICHBAREN NHRUNGSMITTELN DISPOSITIF DE COUPE POUR PAIN ET PRODUITS ALIMENTAIRES SIMILAIRES

Abstract:

Source: EP1319481A2 The **cutting** machine (10) can slice the food into a large number of slices of uniform thickness. It has an outer housing (14) which stands on **rollers** (12) for mobility, and contains a frame (16) which can pivot about an axis (18). <??>The movable frame can pivot through 45 degrees from a top position (16a) to a bottom position at a slight angle to the horizontal. There is a **cutting** table with a **cutting** groove and the **cutting** knife consists of an endless band passing round **rollers**. Eine Maschine (10.4) zum Schneiden von Brot (62), Fleisch, Wurst, Kaese und dergleichen Nahrungsmittel mittels eines Schneidmittels in beliebig dicke Scheiben besitzt einen Schneidisch zum Auflagern des Nahrungsmittels, wobei am Schneidisch eine Schneidnut oder ein Schneidschlitz (189) vorhanden ist zum Eintauchen des in Querrichtung vollstaendig durch das Nahrungsmittel hindurch bewegbaren Schneidmittels. Eine Vorschubeinrichtung ist vorhanden zum - in jeweils gleicher Richtung - synchronen, taktweisen Verschieben der Schneidnut oder des Schneidschlitzes (189) sowie des Schneidmittels.



International class (IPC 8-9): B26D1/46 B26D7/06 B26D7/20 B26D7/26 (Advanced/Invention); B26D1/01 B26D7/00 B26D7/06 B26D7/26 (Core/Invention)
International class (IPC 1-7): B26D1/46 B26D5/02 B26D7/01 B26D7/06 B26D7/20 B26D7/26 B26D7/32
CPC: B26D2007/327 B26D2210/06 B26D1/46 B26D7/0625 B26D7/20
European class: B26D1/46 B26D7/06D B26D7/20
Family:

Publication number	Pub. date	Application number	App. date
AT369947 E	20070915	AT20020027232T	20021206
DE20120234 U1	20020321	DE20012020234U	20011214
DE20212853 U1	20021017	DE20022012853U	20020816
DE50210691 D1	20070927	DE20025010691	20021206
EP1319481 A2	20030618	EP20020027232	20021206
EP1319481 A3	20050105	EP20020027232	20021206
EP1319481 B1	20070815	EP20020027232	20021206

Priority: DE20012020234U 20011214; DE20022012853U 20020816;

Cited documents: WO9427793 A1, US4915000 A, US3262348 A, EP0612593 A1, EP0315601 A2, DE69410502 T, DE4211082 A1, DE3706485 A1,
Assignee(s): (std): SILLER RUDI
Inventor(s): (std): BERTSCH MATTHIAS ; SILLER RUDI
Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SI SK TR

Legal status (INPADOC)

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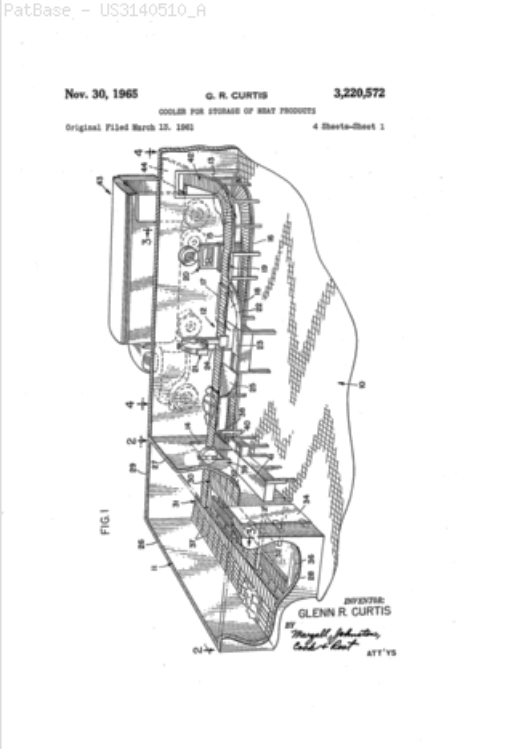
Patent	Date recorded	Event group	Code	Event	Details
AT369947 E	20070915	LSGT	+	granted / extensions (spc, cpc, pte)	
AT369947 E	20090315	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
DE20120234 U1	20020321	LSGT	+	granted / extensions (spc, cpc, pte)	
DE20120234 U1	20020425	LSGT	R207	UTILITY MODEL SPECIFICATION	EFFECTIVE DATE : 20020425
DE20120234 U1	20051013	LSLE	-R156	LAPSE OF IP RIGHT AFTER 3 YEARS	EFFECTIVE DATE : 20050701
DE20212853 U1	20021017	LSGT	+	granted / extensions (spc, cpc, pte)	
DE20212853 U1	20021121	LSGT	R207	UTILITY MODEL SPECIFICATION	EFFECTIVE DATE : 20021121
DE20212853 U1	20051117	LSGT	+R150	TERM OF PROTECTION EXTENDED TO 6 YEARS	EFFECTIVE DATE : 20050909

DE20212853 U1	20081106	LSGT	+R151	TERM OF PROTECTION EXTENDED TO 8 YEARS	EFFECTIVE DATE : 20080829
DE20212853 U1	20101111	LSGT	+R152	TERM OF PROTECTION EXTENDED TO 10 YEARS	EFFECTIVE DATE : 20100908
DE20212853 U1	20120901	LSLE	-R071	EXPIRY OF RIGHT	
DE50210691 D1	20080904	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
EP1319481 A2	20030618	LSPB	+	published / reissued	
EP1319481 A2	20050105	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : 7B 26D 7/26 A
EP1319481 A2	20050105	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : 7B 26D 1/46 B
EP1319481 A2	20050105	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : 7B 26D 7/06 B
EP1319481 A2	20050105	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : 7B 26D 7/20 B
EP1319481 A2	20050810	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050609
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EP1319481 A2	20070831	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP1319481 A2	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20161215 YEAR OF FEE PAYMENT : 15
EP1319481 B1	20070815	LSGT	+	granted / extensions (spc, cpc, pte)	

19) Family number: 22914370 (US3140510A)
Title: METHOD FOR HANDLING MEAT PRODUCTS

Abstract:
Source: US3140510A (Claim 1) 1. A method of handling meat products between a transporting vehicle and a meat cooler including the weighing and cutting thereof in a meat handling room, said method comprising the continuous and uninterrupted handling of the meat products between the vehicle and the cooler including the steps of, conveying the meat from the vehicle and into the meat handling room, weighing the meat, cutting the meat into primal cuts, and conveying the cut meat from the meat handling room and into the cooler for storage therein.



International class (IPC 8-9): A22C18/00 B65G41/00 B65G67/04 F25D25/00 (Advanced/Invention);
A22C18/00 B65G41/00 B65G67/02 F25D25/00 (Core/Invention)
International class (IPC 1-7): B65G13/08 F25D13/06
CPC: B65G41/002 F25D25/00 A22C18/00 B65G67/04
European class: A22C18/00 B65G41/00A2 B65G67/04 F25D25/00
US class: 193/35R 414/285 452/149 452/177
Family:

Publication number	Pub. date	Application number	App. date
US3140510 A	19640714	US19610095178	19610313
US3220527 A	19651130	US19640381685	19640710
US3220572 A	19651130	US19640381686	19640710

Priority: US19610095178 19610313; US19640381685 19640710; US19640381686 19640710;

Cited documents: US427459 A, US3118549 A, US3059747 A, US3002635 A, US2970682 A, US2969099 A, US2964155 A, US2866533 A, US2864516 A, US2815871 A, US2812792 A, US2584628 A, US2199097 A, US2114365 A, US2096958 A, US2096256 A, US1837514 A, US1050478 A, NO63766 A, DK65883 A,
Assignee(s): (std): INDEPENDENT GROCERS ALLIANCE D
Assignee(s): INDEPENDENT GROCERS ALLIANCE DISTRIBUTING CO
Inventor(s): (std): CURTIS GLENN R

Legal status (INPADOC)

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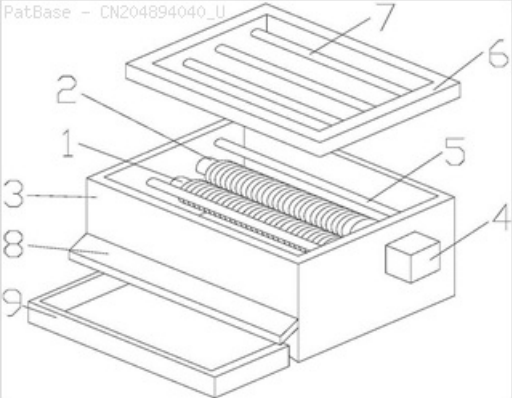
Patent	Date recorded	Event group	Code	Event	Details
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US3220527 A	19651130	LSGT	+	granted / extensions (spc, cpc, pte)	
US3220572 A	19651130	LSGT	+	granted / extensions (spc, cpc, pte)	

20) Family number: 61231506 (CN204894040U)

Title: BRIGHT MEAT SECTION DEVICE CONVENIENT TO UNLOAD

Abstract:

Source: CN204894040U The utility model provides a bright meat section device convenient to unload, include: first cutting roller, second cutting roller, box, drive arrangement, bracing piece, feeding case and stock guide, first cutting roller and second cutting roller rotate to be connected in the box to the level is arranged around being, and drive arrangement passes through the gear drive first cutting roller of drive and second cutting roller rotates, is equipped with an at least spinal branch vaulting pole in the box, and the bracing piece is located first cutting roller and second cutting roller, and its axis is parallel with first cutting roller and second cutting roller line, and the feeding case passes through the bracing piece sets up in the box, its both ends opening, and just the middle part is equipped with two piece at least guide poles, and the stock guide slope sets up in the box, and the box is stretched out to its part to be located first cutting roller and second cutting roller below, the stock guide below is equipped with the case that gathers materials. The utility model provides a bright meat section device convenient to unload, slicing efficiency is high, cut meat slices thickness homogeneous, and convenient the collection.



International class (IPC 8-9): B26D1/24 B26D3/28 B26D5/08 B26D7/18 (Advanced/Invention)
Family:

Publication number	Pub. date	Application number	App. date
CN204894040 U	20151223	CN201520629107U	20150820

Priority: CN201520629107U 20150820;

Assignee(s): (std): ZHANG WEIXIN
Inventor(s): (std): ZHANG WEIXIN

Legal status (INPADOC)

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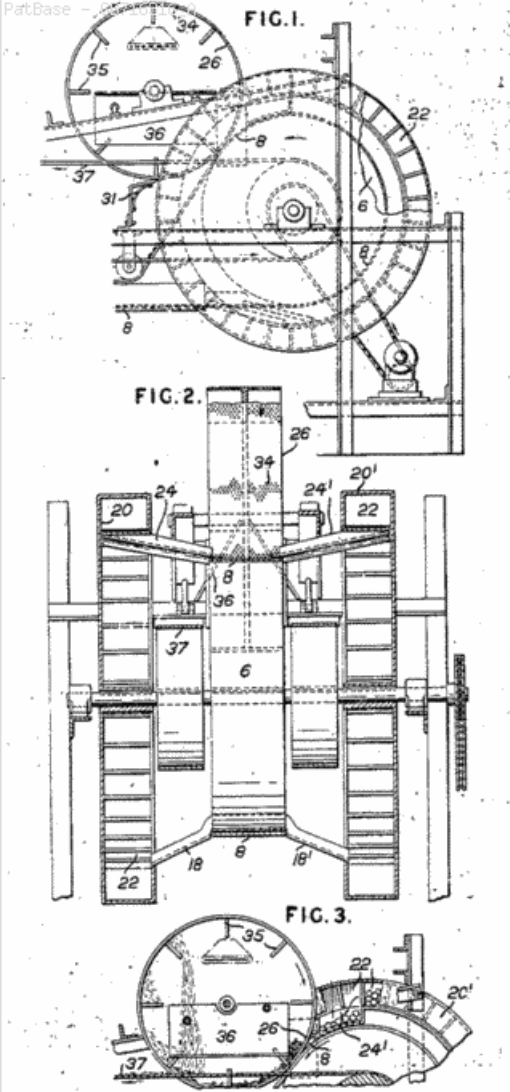
Patent	Date recorded	Event group	Code	Event	Details
CN204894040 U	20151223	LSGT	+	granted / extensions (spc, cpc, pte)	
CN204894040 U	20151223	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN204894040 U	20161123	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	

21) Family number: 19468540 (GB716316A)

Title: Improvements in or relating to the separation of the skin or peel from the flesh of fruits and vegetables

Abstract:

Source: GB716316A 716,316. Potatoes mashing and skinning. TEMPLETON. R. A. S. May 1, 1952 [May 4, 1951], No. 10588/51. Class 28(2)
Cooked potatoes are freed from their skins by passing them into the nip between two **rolls** or two adjacent converging surfaces 8 and 26 at least one of which is moving and at least one of which has perforations 34 through which passes the shredded flesh but little of the skin. The skin separating surfaces forming the nip comprise a freely mounted perforated **roll** 26 and a driven endless steel belt 8, the freed skins passing down between them. A scraper blade 31 bears on the **roll** 26. The potatoes cooked (but not baked) in a tunnel are delivered to the lower run of the belt 8 driven by a pulley 6. From the belt 8 they run down inclined guides 18, 18¹ into the radial pockets 20, 20¹. Other guides 24, 24¹ feed the potatoes from the top pockets to the V nip between 26 and 8. The 'shreds of potato flesh which have passed through the perforations of the **roll** 26 are carried up by radial vanes 35 and drop on to ridge plates 36 which deflect them on to conveyer belts 37 for delivery. Instead of, or additional to, the perforations 34, gaps may be provided at the side walls of the nip to allow exit of the potato and narrow enough to trap the skin. The surfaces 8 and 26 may be roughened to increase the grip on the potato.



International class (IPC 8-9): A23N7/02 (Advanced/Invention);
A23N7/00 (Core/Invention)
International class (IPC 1-7): A23N7/08
CPC: A23N7/02
European class: A23N7/02
Family:

Publication number	Pub. date	Application number	App. date
GB716316 A	19541006	GB19510010588	19510504

Priority: GB19510010588 19510504;

Assignee(s): (std): ROBERT ALEXANDER SPENCER TEMPL
Assignee(s): ROBERT ALEXANDER SPENCER TEMPLETON

Legal status (INPADOC)

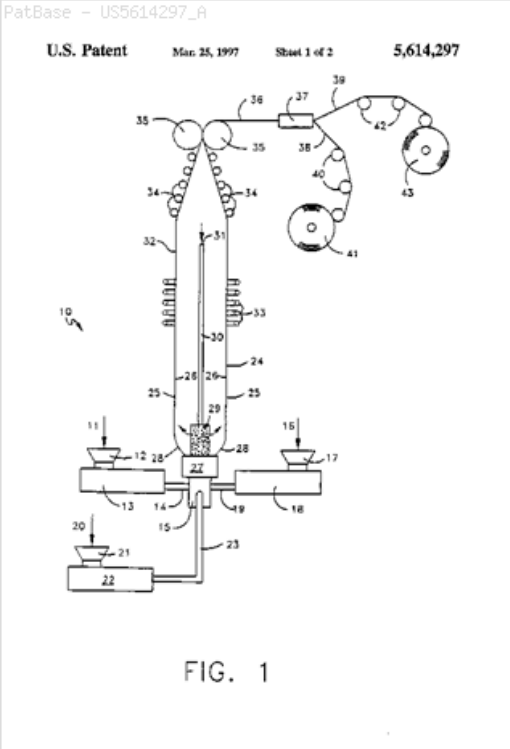
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Patent	Date recorded	Event group	Code	Event	Details
GB716316 A	19541006	LSGT	+	granted / extensions (spc, cpc, pte)	

22) Family number: 15142579 (US5614297A)
Title: POLYOLEFIN STRETCH FILM

Abstract:

Source: US5614297A A polyolefin blown or slot cast monolayer or multilayer stretch film useful as a trayed overwrap e.g. for fresh red meat includes at least three layers in the multilayer embodiment each of which contains an ethylene alpha-olefin copolymer having a density below 0.915 grams per cubic centimetre and having a melting point of at least 90 DEG C. with at least one outer layer and preferably also the first outer layer or the core layer having a second ethylene alpha olefin copolymer having a melting point less than 80 DEG C. blended therein.



International class (IPC 8-9): B29C55/22 B29C55/28 B32B27/08 B32B27/32 B65D65/40 C08J5/18 C08L23/00 C08L23/04 C08L23/16 C08L23/18 (Advanced/Invention);

B29C55/28 B29K23/00 B29L7/00 B29L9/00 B32B27/32 B32B7/02 C08J5/18 C08L23/04 (Advanced/Non-invention);
B29C55/00 B29C55/28 B32B27/08 B32B27/32 B65D65/40 C08J5/18 C08L23/00 (Core/Invention)

International class (IPC 1-7): B29C55/22 B29C55/28 B29K23/00 B29L7/00 B29L9/00 B32B27/00 B32B27/06 B32B27/32 B32B7/02 B65D65/40 C08J5/18 C08L23/04 C08L23/10 C08L23/16 C08L23/18

CPC: Y10T428/24942 B32B27/32 B32B27/08

European class: B32B27/08 B32B27/32

US class: 428/212 428/218 428/343 428/469 428/472 428/516 428/697 428/699 428/701 428/702 526/127 526/160 526/348.5

Family:

Publication number	Pub. date	Application number	App. date
AT175704 E	19990115	AT19950107440T	19950517
AT198446 E	20010115	AT19950106240T	19950517
AT237471 E	20030515	AT19950106241T	19950517
AT276105 E	20041015	AT19950106242T	19950517
AU199520109 A1	19951130	AU19950020109	19950517
AU689239 B2	19980326	AU19950020109	19950517
BRPT9502480 A	19960430	BR1995PI02480	19950519
CA2149252 AA	19951120	CA19952149252	19950512
CA2149252 C	20011016	CA19952149252	19950512
CZ289965 B6	20020515	CZ19950001275	19950517
CZ9501275 A3	19960117	CZ19950001275	19950517
DE69507204 D1	19990225	DE19956007204	19950517
DE69507204 T2	19990708	DE19956007204T	19950517
DE69519810 D1	20010208	DE19956019810	19950517
DE69519810 T2	20010503	DE19956019810T	19950517
DE69530430 D1	20030522	DE19956030430	19950517
DE69530430 T2	20040318	DE19956030430T	19950517
DE69533522 D1	20041021	DE19956033522	19950517
DE69533522 T2	20050818	DE19956033522T	19950517
DK0875372 T3	20010129	DK19950106240T	19950517
EP0687558 A2	19951220	EP19950107440	19950517
EP0687558 A3	19960313	EP19950107440	19950517
EP0687558 B1	19990113	EP19950107440	19950517
EP0872337 A1	19981021	EP19980106242	19950517
EP0872337 B1	20040915	EP19980106242	19950517
EP0875372 A1	19981104	EP19980106240	19950517
EP0875372 B1	20010103	EP19980106240	19950517
EP0875373 A1	19981104	EP19980106241	19950517
EP0875373 B1	20030416	EP19980106241	19950517
ES2153220 T3	20010216	ES19980106240T	19950517
GR3035409 T3	20010531	GR20010400239T	20010214
HU73205 A2	19960628	HU19950001486	19950519
HU9501486 A0	19950728	HU19950001486	19950519
IL113762 A0	19950831	IL19950113762	19950517
IL113762 A1	19990620	IL19950113762	19950517
JP8066992 A2	19960312	JP19950144228	19950519
KR100331701 B1	20021101	KR19950012544	19950519
KR19950031503 A	19951218	KR19950012544	19950519
NZ272128 A	19960227	NZ19950272128	19950516
PT875372 T	20010531	PT19980106240T	19950517
RU95107891 A	19970320	RU19950107891	19950518
RU95107891 A1	19970320	RU19950107891	19950518
US5614297 A	19970325	US19950426188	19950427

Priority: CA19952149252 19950512; EP19950107440 19950517; US19940245992 19940519; US19950426188 19950427; US19950245992 19950427;

Cited documents: WO9510566 A1, WO9504761 A1, WO9500333 A1, WO9426816 A1, WO9425271 A1, WO9409060 A1, WO9407954 A1, WO9313143 A1, WO9308221 A2, WO9214784 A2, WO9117944 A1, US5431284 A, US5427807 A, US5419934 A, US5415905 A, US5407732 A, US5403668 A, US5399426 A, US5399401 A, US5397640 A, US5397613 A, US5387470 A, US5376439 A, US5364486 A, US5360648 A, US5358792 A, US5334428 A, US5332616 A, US5332615 A, US5326627 A, US5326602 A, US5322720 A, US5300353 A, US5296580 A, US5296304 A, US5292560 A, US5283128 A, US5281679 A, US5279872 A, US5273809 A, US5272236 A, US5272016 A, US5261536 A, US5219666 A, US5175049 A, US5173343 A, US5158836 A, US5147709 A, US5114763 A, US5059481 A, US5051481 A, US5032463 A, US5030506 A, US5023143 A, US5019315 A, US5006398 A, US4927708 A, US4891253 A, US4885119 A, US4851272 A, US4833024 A, US4737391 A, US4671987 A, US4501780 A, US3456044 A, US24599294, JP63010639 A2, JP5318682 A2, GB2216845 A1, GB2152515 A1, EP0634443 A2, EP0605952 A2, EP0600425 A1, EP0597502 A2, EP0580377 A1, EP0552911 A1, EP0508165 A1, EP0374783 A2, EP0351744 A2, EP0285444 A2, EP0214945 A2, EP0120503 A1, **Assignee(s):** (std): CURWOOD INC ; CURWOOD ; VISKASE CORP ; VISKEJZ CORP **Assignee(s):** VISKEJZ KORPOREJSHN ; VELAZQUEZ ALBERTO ; GENERAL MOTORS EMPLOYEE GLOBAL GROUP PENSION TRUST DEPARTMENT OF PENSIONS CITY OF LOS ANGELES NAVY EXCHANGE SERVICE COMMAND RETIREMENT TRUST RAYTHEON ; VISKASE CORP CHICAGO ; VISKASE CORP CHICAGO ILL US ; CIT GROUP BUSINESS CREDIT INC ; GENERAL MOTORS EMPLOYEE GLOBAL GROUP PENSION TRUST ; DP KELLY AND ASSOCIATES ; BISKASE CORP ; BT COMMERCIAL COLLATERAL AGENT AS CORP ; BT COMMERCIAL COLLATERAL AGENT CORP AS ; BT COMMERCIAL CORP **Inventor(s):** (std): VELAZQUEZ ALBERTO ; ARUBERUTOO BERASUKESU ; ALBERTO VELAZQUEZ ; AL BERTO VELAZKEZ **Inventor(s):** VELAZQUEZ ALBERTO CHICAGO ILLINOIS 60613 US ; AL'BERTO VELAZKEZ[CA] **Designated states:** AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT175704 E	19990115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT175704 E	19990715	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT198446 E	20010115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT198446 E	20010415	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	
AT198446 E	20011215	LSAS	EEIH	CHANGE IN THE PERSON OF PATENT OWNER	
AT198446 E	20070215	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AT237471 E	20030515	LSGT	+	granted / extensions (spc, cpc, pte)	
AT237471 E	20031015	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT276105 E	20041015	LSGT	+	granted / extensions (spc, cpc, pte)	
AT276105 E	20050315	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
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AU689239 B2	20010301	LSAS	PC	ASSIGNMENT REGISTERED	OWNER NAME : CURWOOD, INC. DESCRIPTION : FORMER OWNER WAS: VISKASE CORPORATION
BRPI9502480 A	19960430	LSPB	+	published / reissued	
BRPI9502480 A	20020219	LSGT	+FF	DECISION: INTENTION TO GRANT	
BRPI9502480 A	20020226	LSAS	PC	TRANSFER	TEXT : CURWOOD, INC (US)
BRPI9502480 A	20020723	LSGT	+FG9A	PATENT OR CERTIFICATE OF ADDITION GRANTED	
BRPI9502480 A	20040824	LSAS	B25G	REQUESTED CHANGE OF HEADQUARTER APPROVED	
BRPI9502480 A	20150407	LSLE	-B21F	LAPSE ACC. ART. 78, ITEM IV - ON NON-PAYMENT OF THE ANNUAL FEES IN TIME	TEXT : REFERENTE A 20A ANUIDADE.
BRPI9502480 A	20170124	LSLE	-B24J	LAPSE BECAUSE OF NON-PAYMENT OF ANNUAL FEES (DEFINITIVELY: ART 78 IV LPI, RESOLUTION 113/2013 ART. 12)	TEXT : EM VIRTUDE DA EXTINCAO PUBLICADA NA RPI 2309 DE 07-04-2015 E CONSIDERANDO AUSENCIA DE MANIFESTACAO DENTRO DOS PRAZOS LEGAIS, INFORMO QUE CABE SER

					MANTIDA A EXTINCAO DA PATENTE E SEUS CERTIFICADOS, CONFORME O DISPOSTO NO ARTIGO 12, DA RESOLUCAO 113/2013.
CA2149252 AA	19951120	LSPB	+	published / reissued	
CA2149252 AA	19950512	LSES	+EEER	EXAMINATION REQUEST	
CA2149252 AA	20070514	LSLE	-MKLA	LAPSED	
CA2149252 C	20011016	LSGT	+	granted / extensions (spc, cpc, pte)	
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CZ9501275 A3	19960117	LSPB	+	published / reissued	
DE69507204 D1	20000210	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE69507204 D1	20011206	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : CURWOOD, INC., OSHKOSH, WIS., US
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EP0687558 A2	19960522	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19960323
EP0687558 A2	19970409	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19970225
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EP0687558 A2	19990224	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
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EP0687558 A2	19990701	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	

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EP0687558 A2	19991130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19991130
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EP0687558 A2	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120525 YEAR OF FEE PAYMENT : 18
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EP0687558 A2	20150529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140517
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EP0872337 A1	19981021	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19980424
EP0872337 A1	20010919	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : CURWOOD, INC.
EP0872337 A1	20031015	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20030828
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EP0872337 A1	20040915	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP0872337 A1	20040915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP0872337 A1	20041020	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP0872337 A1	20041215	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041215
EP0872337 A1	20041215	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041215
EP0872337 A1	20041215	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041215
EP0872337 A1	20041226	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041226
EP0872337 A1	20050331	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0872337 A1	20050401	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	
EP0872337 A1	20050414	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20050414 YEAR OF FEE PAYMENT : 11
EP0872337 A1	20050517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050517
EP0872337 A1	20050527	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20050527 YEAR OF FEE PAYMENT : 11
EP0872337 A1	20050531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050531

EP0872337 A1	20050907	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20050616
EP0872337 A1	20051031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20051031 YEAR OF FEE PAYMENT : 11
EP0872337 A1	20060517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060517
EP0872337 A1	20060531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060531
EP0872337 A1	20060531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20060531 YEAR OF FEE PAYMENT : 12
EP0872337 A1	20061201	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20061201
EP0872337 A1	20070221	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP0872337 A1	20071231	LSLE	-BERE	BE: LAPSED	OWNER NAME : *CURWOOD INC. EFFECTIVE DATE : 20060531
EP0872337 A1	20080229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050215
EP0872337 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090518 YEAR OF FEE PAYMENT : 15
EP0872337 A1	20090930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20070517
EP0872337 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090528 YEAR OF FEE PAYMENT : 15
EP0872337 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100601 YEAR OF FEE PAYMENT : 16
EP0872337 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100525 YEAR OF FEE PAYMENT : 16
EP0872337 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110607 YEAR OF FEE PAYMENT : 17
EP0872337 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110525 YEAR OF FEE PAYMENT : 17
EP0872337 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120607 YEAR OF FEE PAYMENT : 18
EP0872337 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120525 YEAR OF FEE PAYMENT : 18
EP0872337 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120607 YEAR OF FEE PAYMENT : 18
EP0872337 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130528 YEAR OF FEE PAYMENT : 19

EP0872337 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130606 YEAR OF FEE PAYMENT : 19
EP0872337 A1	20150128	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20140517
EP0872337 A1	20150227	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20150130
EP0872337 A1	20150529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140602
EP0872337 A1	20150529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140517
EP0872337 B1	20040915	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0875372 A1	19981104	LSPB	+	published / reissued	
EP0875372 A1	19981104	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19980424
EP0875372 A1	19990721	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19990607
EP0875372 A1	20010115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP0875372 A1	20010207	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP0875372 A1	20010216	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2153220 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 FORMAT OF REF DOCUMENT (F/P) : P
EP0875372 A1	20010531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010531
EP0875372 A1	20011031	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	OWNER NAME : CURWOOD, INC.
EP0875372 A1	20011115	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PUE OWNER NAME : VISKASE CORPORATION TRANSFER-CURWOOD, INC.
EP0875372 A1	20020102	LSGT	+26N	NO OPPOSITION FILED	
EP0875372 A1	20020301	LSAS	NLS	NL: ASSIGNMENTS OF EP-PATENTS	OWNER NAME : CURWOOD, INC. A DELAWARE CORPORATION
EP0875372 A1	20020328	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : PT REF LEGAL EVENT CODE : PC4A DESCRIPTION : CURWOOD, INC. US EFFECTIVE DATE : 20011213
EP0875372 A1	20050329	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : LU PAYMENT DATE : 20050329 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050406	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20050406 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050407	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO	REF COUNTRY CODE : NL PAYMENT DATE : 20050407

				NATIONAL OFFICE	YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050407	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20050407 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050411	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20050411 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050414	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20050414 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050421	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20050421 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050503	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20050503 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050519	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20050519 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050527	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20050527 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20050531 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20050613	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20050613 YEAR OF FEE PAYMENT : 11
EP0875372 A1	20060517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060517
EP0875372 A1	20060517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060517
EP0875372 A1	20060518	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060518
EP0875372 A1	20060518	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060518
EP0875372 A1	20060531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060531
EP0875372 A1	20060531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060531
EP0875372 A1	20060531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060531
EP0875372 A1	20060531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060531
EP0875372 A1	20060531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20060531 YEAR OF FEE PAYMENT : 12

EP0875372 A1	20061117	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20061117
EP0875372 A1	20061201	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20061201
EP0875372 A1	20061201	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20061201
EP0875372 A1	20070115	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0875372 A1	20070115	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP
EP0875372 A1	20070116	LSLE	-EUG	SE: EUROPEAN PATENT HAS LAPSED	
EP0875372 A1	20070131	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : PT REF LEGAL EVENT CODE : MM4A DESCRIPTION : LAPSE DUE TO NON-PAYMENT OF FEES EFFECTIVE DATE : 20061117
EP0875372 A1	20070201	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE	EFFECTIVE DATE : 20061201
EP0875372 A1	20070221	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP0875372 A1	20070816	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20060518
EP0875372 A1	20071231	LSLE	-BERE	BE: LAPSED	OWNER NAME : *CURWOOD INC. UNE SOC. DE L'ETAT DE DELAWARE EFFECTIVE DATE : 20060531
EP0875372 A1	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060517
EP0875372 A1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20061205
EP0875372 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090518 YEAR OF FEE PAYMENT : 15
EP0875372 A1	20090930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20070517
EP0875372 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090528 YEAR OF FEE PAYMENT : 15
EP0875372 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100601 YEAR OF FEE PAYMENT : 16
EP0875372 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100525 YEAR OF FEE PAYMENT : 16
EP0875372 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110607 YEAR OF FEE PAYMENT : 17

EP0875372 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110525 YEAR OF FEE PAYMENT : 17
EP0875372 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120607 YEAR OF FEE PAYMENT : 18
EP0875372 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120525 YEAR OF FEE PAYMENT : 18
EP0875372 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120607 YEAR OF FEE PAYMENT : 18
EP0875372 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130528 YEAR OF FEE PAYMENT : 19
EP0875372 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130606 YEAR OF FEE PAYMENT : 19
EP0875372 A1	20150128	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20140517
EP0875372 A1	20150227	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20150130
EP0875372 A1	20150529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140517
EP0875372 A1	20150529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140602
EP0875372 B1	20010103	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0875373 A1	19981104	LSPB	+	published / reissued	
EP0875373 A1	19981104	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19980424
EP0875373 A1	20010919	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : CURWOOD, INC.
EP0875373 A1	20011004	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20010820
EP0875373 A1	20030416	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030416
EP0875373 A1	20030416	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030416
EP0875373 A1	20030416	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030416
EP0875373 A1	20030416	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030416

EP0875373 A1	20030416	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP0875373 A1	20030430	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP0875373 A1	20030517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20030517
EP0875373 A1	20030528	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP0875373 A1	20030531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20030531
EP0875373 A1	20030716	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030716
EP0875373 A1	20030716	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030716
EP0875373 A1	20030716	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030716
EP0875373 A1	20030716	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20030716
EP0875373 A1	20031001	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	
EP0875373 A1	20031030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20031030
EP0875373 A1	20031031	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0875373 A1	20040407	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20040119
EP0875373 A1	20050414	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IE PAYMENT DATE : 20050414 YEAR OF FEE PAYMENT : 11
EP0875373 A1	20050527	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20050527 YEAR OF FEE PAYMENT : 11
EP0875373 A1	20050531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20050531 YEAR OF FEE PAYMENT : 11

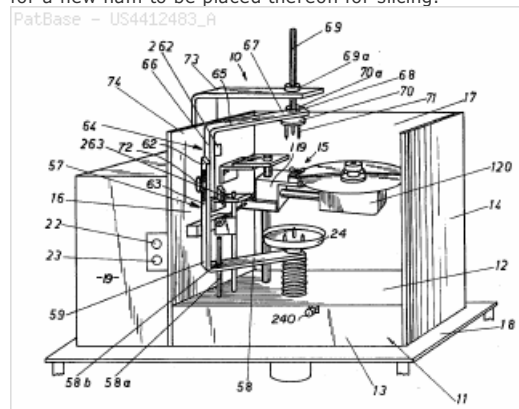
EP0875373 A1	20060517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060517
EP0875373 A1	20060531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20060531
EP0875373 A1	20060531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20060531 YEAR OF FEE PAYMENT : 12
EP0875373 A1	20061201	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20061201
EP0875373 A1	20070221	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP0875373 A1	20071231	LSLE	-BERE	BE: LAPSED	OWNER NAME : *CURWOOD INC. EFFECTIVE DATE : 20060531
EP0875373 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090518 YEAR OF FEE PAYMENT : 15
EP0875373 A1	20090930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20070517
EP0875373 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090528 YEAR OF FEE PAYMENT : 15
EP0875373 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100601 YEAR OF FEE PAYMENT : 16
EP0875373 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100525 YEAR OF FEE PAYMENT : 16
EP0875373 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110607 YEAR OF FEE PAYMENT : 17
EP0875373 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110525 YEAR OF FEE PAYMENT : 17
EP0875373 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120607 YEAR OF FEE PAYMENT : 18
EP0875373 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120525 YEAR OF FEE PAYMENT : 18
EP0875373 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120607 YEAR OF FEE PAYMENT : 18
EP0875373 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20130528 YEAR OF FEE PAYMENT : 19
EP0875373 A1	20130830	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130606 YEAR OF FEE PAYMENT : 19
EP0875373 A1	20150128	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20140517
EP0875373 A1	20150227	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20150130

EP0875373 A1	20150529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140517
EP0875373 A1	20150529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140602
EP0875373 B1	20030416	LSGT	+	granted / extensions (spc, cpc, pte)	REF DOCUMENT NUMBER : 875372 COUNTRY OF REF DOCUMENT : ES
ES2153220 T3	20010216	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2153220 T3	20010216	LSGT	+FG2A	DEFINITIVE PROTECTION	
GR3035409 T3	20010531	LSGT	+	granted / extensions (spc, cpc, pte)	
GR3035409 T3	20061205	LSLE	-ML	LAPSE DUE TO NON-PAYMENT OF FEES	
HU73205 A2	19960628	LSPB	+	published / reissued	
HU73205 A2	19970228	LSRV	DFC4	CANCELLATION OF TEMPORARY PROT. DUE TO REFUSAL	
IL113762 A0	20000716	LSGT	+FF	PATENT GRANTED	
IL113762 A0	20050725	LSFE	+KB	PATENT RENEWED	
IL113762 A0	20101031	LSLE	-MM9K	PATENT NOT IN FORCE DUE TO NON-PAYMENT OF RENEWAL FEES	
IL113762 A1	19990620	LSPB	+	published / reissued	
JP8066992 A2	19960312	LSPB	+	published / reissued	
JP8066992 A2	20040817	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20040817
KR100331701 B1	20021101	LSGT	+	granted / extensions (spc, cpc, pte)	
KR19950031503 A	19951218	LSPB	+	published / reissued	
NZ272128 A	19960227	LSPB	+	published / reissued	
NZ272128 A	20050429	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	
PT875372 T	20010531	LSGT	+	granted / extensions (spc, cpc, pte)	
RU95107891 A	19970320	LSPB	+	published / reissued	
US5614297 A	19970325	LSGT	+	granted / extensions (spc, cpc, pte)	
US5614297 A	19950628	LSAS	AS	ASSIGNMENT	OWNER NAME : BT COMMERCIAL CORPORATION, AS COLLATERAL AGENT, IL DESCRIPTION : SECURITY INTEREST; ASSIGNOR:VISKASE CORPORATION; REEL/FRAME:007526/0584 EFFECTIVE DATE : 19950620
US5614297 A	19970218	LSGT	PAT1	Patented Case	
US5614297 A	19990623	LSAS	AS	ASSIGNMENT	OWNER NAME : CIT GROUP/BUSINESS CREDIT, INC., THE, ILLINOIS DESCRIPTION : SECURITY INTEREST IN INTELLECTUAL PROPERTY; ASSIGNOR:VISKASE CORPORATION; REEL/FRAME:010226/0287 EFFECTIVE DATE : 19990614
US5614297 A	19990623	LSAS	AS	ASSIGNMENT	OWNER NAME : D.P. KELLY AND ASSOCIATES, ILLINOIS DESCRIPTION : SECURITY INTEREST IN INTELLECTUAL PROPERTY; ASSIGNOR:VISKASE CORPORATION; REEL/FRAME:010226/0287

US5614297 A	19990623	LSAS	AS	ASSIGNMENT	EFFECTIVE DATE : 19990614 OWNER NAME : GENERAL MOTORS EMPLOYEE GLOBAL GROUP PENSION TRUST DESCRIPTION : SECURITY INTEREST IN INTELLECTUAL PROPERTY; ASSIGNOR:VISKASE CORPORATION; REEL/FRAME:010226/0287 EFFECTIVE DATE : 19990614
US5614297 A	19990702	LSAS	AS	ASSIGNMENT	OWNER NAME : VISKASE CORPORATION, ILLINOIS DESCRIPTION : RELEASE OF SECURITY INTEREST; ASSIGNOR:BT COMMERCIAL CORPORATION; REEL/FRAME:010238/0701 EFFECTIVE DATE : 19990614
US5614297 A	19990702	LSAS	AS	ASSIGNMENT	OWNER NAME : VISKASE CORPORATION, ILLINOIS DESCRIPTION : RELEASE OF SECURITY INTEREST; ASSIGNOR:BT COMMERCIAL CORPORATION; REEL/FRAME:010238/0701 EFFECTIVE DATE : 19990614
US5614297 A	20000922	LSAS	AS	ASSIGNMENT	OWNER NAME : VISKASE CORPORATION, ILLINOIS DESCRIPTION : RELEASE OF SECURITY INTEREST; ASSIGNORS:CIT GROUP/BUSINESS CREDIT, INC., THE; GENERAL MOTORS EMPLOYEEGLOBAL GROUP PENSION TRUST; DEPARTMENT OF PENSIONS- CITY OF LOS ANGELES; AND OTHERS; REEL/FRAME:011089/0725 EFFECTIVE DATE : 20000830
US5614297 A	20000922	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5614297 A	20000925	LSAS	AS	ASSIGNMENT	OWNER NAME : CURWOOD, INC., WISCONSIN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:VISKASE CORPORATION; REEL/FRAME:011137/0055 EFFECTIVE DATE : 20000831
US5614297 A	20040825	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5614297 A	20080925	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

23) Family number: 3866514 (US4412483A)**Title:** Spiral meat slicer**Abstract:**

Source: US4412483A A spiral **meat** slicer is provided particularly for slicing ham, wherein a ham is mounted vertically on a slowly rotating spiked platform. A rotating, substantially horizontal disk blade is pivotally mounted on the **meat** slicer to permit the blade to be biased by spring means toward and into the ham to spirally **cut** the ham to the bone. A non-rotating arm is carried in bearings below the spiked platform, this arm reaching up above the ham and containing a spiked, rotatable top support that is pressed into the top portion of the ham to steady the ham against pressure of the **cutting** blade. The spiked platform is mounted on a vertical lead screw, that causes the ham to be lowered steadily as the ham rotates to produce a spiral **cut** around the ham bone. The weight of the ham aids in moving the ham down steadily, permitting the ham to be automatically sliced substantially from one end to the other, including around the aitch bone without requiring manual manipulation. Means are provided to keep the blade from entering the ham until a fractional nut has engaged into the lead screw thread and to disengage the blade from the ham and return the blade to start position upon the spiral having reached the top portion of the ham. Short or long hams are automatically gauged by the machine and only one motor is required to drive all the mechanisms in the spiral **meat** slicer. Upon the spiral **cut** ham being removed from the spiked platform, a release button may be pushed, causing the spiked platform to automatically move to its top position ready for a new ham to be placed thereon for slicing.



International class (IPC 8-9): B26D3/11 (Advanced/Invention);
B26D3/00 (Core/Invention)

International class (IPC 1-7): A23N7/00 A47J17/00

CPC: B26D3/11

European class: B26D3/11

US class: 99/537 99/538 99/593 99/594 99/597

Family:

Publication number	Pub. date	Application number	App. date
US4412483 A	19831101	US19800209197	19801120

Priority: US19800209197 19801120;

Cited documents: US4287820 A, US2599328 A,

Assignee(s): (std): COUNTRY BAKED HAMS INC

Assignee(s): SHINNER WILLIAM G

Inventor(s): (std): HOEGH POUL E

Legal status (INPADOC)

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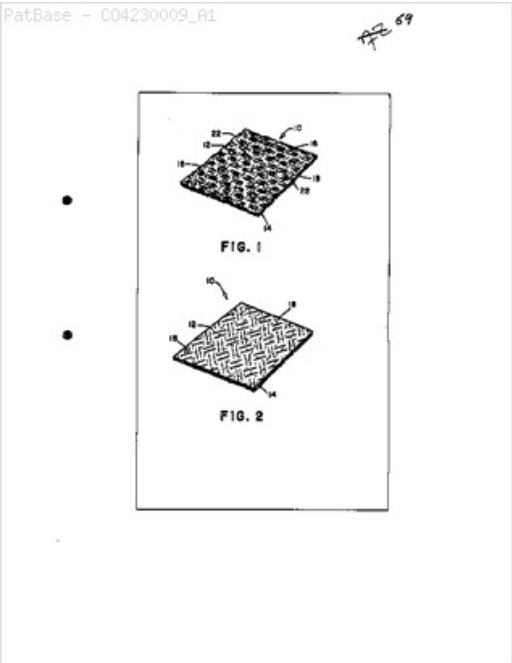
Patent	Date recorded	Event group	Code	Event	Details
US4412483 A	19831101	LSGT	+	granted / extensions (spc, cpc, pte)	
US4412483 A	19811116	LSAS	AS	ASSIGNMENT	OWNER NAME : SHINNER, WILLIAM G.; 18576 TURN CREEK RD., MONTE S DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:HOEGH, POUL E.; REEL/FRAME:003926/0932 EFFECTIVE DATE : 19811027
US4412483 A	19830509	LSAS	AS	ASSIGNMENT	OWNER NAME : COUNTRY BAKED HAMS, INC., 1091 SARATOGA-SUNNYVALE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:SHINNER, WILLIAM G.; REEL/FRAME:004124/0958 EFFECTIVE DATE : 19830506
US4412483 A	19830831	LSGT	PAT1	Patented Case	

24) Family number: 43685164 (CO4230009A)

Title: PROCESO PARA LA FORMACION DE LAMINADOS ACOLCHADOS DE PELICULA, EL LAMINADO ASI PRODUCIDO, Y EL ARTICULO ABSORBENTE QUE LO UTILIZA PROCESS FOR THE FORMATION OF FILM ROLLED ACOLCHADOS, laminate thus produced, and the absorbent article that uses it (Machine translation)

Abstract:

Source: CO4230009A 1.- UN PROCESO PARA FORMAR UN LAMINADO DE PELICULA ACOLCHADO QUE COMPRENDE: COLOCAR UNA CAPA DE PELICULA QUE DEFINE UNA PLURALIDAD DE CORTES GENERALMENTE PARALELOS EN UNA RELACION GENERALMENTE DE CARA A CARA CON UNA CAPA DE SUSTRATO, UNIR DICHA CAPA DE PELICULA A DICHA CAPADE SUSTRATO PARA FORMAR UN COMPUESTO, HACER QUE POR LO MENOS UNA DE LA CAPA DE PELICULA Y DE DICHA CAPA DE SUSTRATO SE RETRAIGA PARA FORMAR UNA PLURALIDAD DE PLIEGUES EN DICHA CAPA DE PELICULA CON UNA PLURALIDAD DE DICHOS CORTES DEFINIENDO ABERTURAS LAS CUALES RESIDEN EN, ARRIBA Y ABAJO DE UN PLANO CENTRAL DEFINIDO POR DICHA CAPA DE PELICULA. 8.- UNA LAMINA DE PELICULA ACOLCHADO QUE COMPRENDE: UNA CAPA DE PELICULA QUE DEFINE UNA PLURALIDAD DE CORTES GENERALMENTE PARALELOS, DICHA CAPA DE PELICULA ADEMAS DEFINE UN PLANO CENTRAL, UNA CAPA DE SUSTRATO UNIDA A DICHA CAPA DE PELICULA PARA FORMAR UN COMPUESTO, DICHO COMPUESTO TIENE UNA PLURALIDAD DE PLIEGUES, DICHOS CORTES DEFINEN UNA PLURALIDAD DE ABERTURAS EN DICHA CAPA DE PELICULA LOS CUALES RESIDEN EN, ARRIBA Y ABAJO DE DICHO PLANO CENTRAL. 15.- UN ARTICULO ABSORBENTE PARA EL CUIDADOPERSONAL QUE COMPRENDE UN FORRO DEL LADO AL CUERPOY UN FORRO DEL LADO DE ESPALDA CON UN NUCLEO ABSORBENTE COLOCADO ENTRE LOS MISMOS, DICHO FORRODEL LADO AL CUERPO COMPRENDE EL LAMINADO DE PELICULA ACOLCHADO TAL Y COMO SE REIVINDICA EN LA CLAUSULA 8. 1. A process for forming a film laminate PADDING comprising: placing a film layer defining a plurality of generally parallel **cuts** IN A RELATIONSHIP usually face to face with a substrate layer, said film layer JOIN TO THIS capade substrate to form a composite, DO THAT AT LEAST ONE film layer and said substrate layer to retract to form a plurality of folds in said film layer having a plurality of said **cuts** DEFINING THE OPENINGS whom reside in, UP AND DOWN A DEFINED CENTRAL MAP said film layer. 8. PADDING a sheet of film comprising: a film layer defining a plurality of generally parallel **cuts**, said film layer further defines a central plane, a substrate layer bonded to said film layer to form a compound, SAID compound has a plurality of folds, said **cuts** defining a plurality of openings in said film layer which reside in, above and below said central plane. 15. An absorbent article Cuidadopersonal FOR INCLUDING A cuerpoy LINING A SIDE TO SIDE BACK LINING with an absorbent core positioned therebetween FORRODEL THAT BODY SIDE TO UNDERSTAND THE PADDING film laminate AS CLAIMED IN THE SECTION 8.



International class (IPC 8-9): A61F13/15 (Advanced/Invention);
A61F13/15 (Core/Invention)
International class (IPC 1-7): A61F13/15
Family:

Publication number Pub. date Application number App. date
CO4230009 A1 19951019 CO19940056082 19941212

Priority: CO19940056082 19941212;

Assignee(s): (std): KIMBERLY CLARK CO
Assignee(s): KIMBERLY CLARK WORLDWIDE INC
Inventor(s): (std): GEORGER WILLIAM ANTHONY ; PERKINS CHERYL ANNE ; ZELAZOSKI GREGORY ALAN
Inventor(s): CHERYL ANNE PERKINS ; WILLIAM ANTHONY GEORGER ; GREGORY ALAN ZELAZOSKI

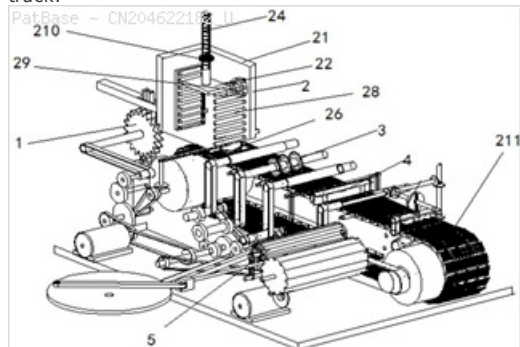
Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CO4230009 A1	19951019	LSPB	+	published / reissued	

Title: FROM MOVING PLATE MEAT DEVICE WITH IMPULSE TYPE AUTOMATIC LOCKING MEAT CASE

Source: CN204622182U The utility model relates to a from moving plate **meat** device with **impulse** type automatic locking **meat case**, press cube **meat**, guide passage rack, stroke bolt, fillet dispatch board, piece **meat** saw sword, piece **meat** buffer strip and lock **meat** ware including impulse type automatic locking **meat case**, buffering, wherein, the buffering is pressed the cube **meat** and is connected and lies in the upper end of impulse type automatic locking **meat case** with the top of stroke bolt, and the buffering presses the cube **meat** pushing down the **meat** motion in the promotion of stroke bolt, lock the **meat** ware and install in impulse type automatic locking **meat** incasement portion, by a series of vertical layout's **roller** and one admittedly **meat** adjusting bolt form, nut gear engagement on guide passage rack and the stroke bolt, fillet dispatch board, piece **meat** saw sword, a piece **meat** buffer strip are provided impulse type automatic locking **meat case** lower part, and fillet dispatch board is installed and is sawed between the sword in track and piece **meat** to the thickness of the adjustment fillet of **cutting**, piece **meat** saw sword is installed in the upper portion of fillet dispatch board, piece **meat** buffer strip is installed between fillet dispatch board and track.



Family:

Priority: CN201520339823U 20150522;

Inventor(s): (std): HE ZHICHENG ; YU JIANLONG ; ZHANG FUQIANG ; ZHANG LEI ; ZHANG SHI ; ZHUANG WENHUA

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Patent	Date recorded	Event group	Code	Event	Details
CN204622182 U	20150909	LSGT	+	granted / extensions (spc, cpc, pte)	
CN204622182 U	20150909	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN204622182 U	20170714	LSLE	-CF01	TERMINATION OF PATENT RIGHT DUE TO NON-PAYMENT OF ANNUAL FEE	

26) Family number: 22766541 (US5422135A)
Title: PROCESS FOR PREPARING A GELLED FOOD PRODUCT SHEET
Abstract:

Source: US5422135A A gelled sheet of food product is prepared by passing a wet dough of edible substance, such as **meat** or **meat** by-product, having food value and comprising a gellable substance, such as sodium alginate, onto a rotating **roller** to form a sheet and initiating gelation of the gellable material, for example, in the **case** of sodium alginate, by spraying the material with calcium ions. The sheet can subsequently be processed, for example by being folded and **cut** to form chunks, which may be useful in a petfood product.

International class (IPC 8-9): A23L1/052 A23L1/0532 A23L1/06 A23L1/212 A23L1/314 A23L1/315 A23L1/317 A23L13/40 A23L13/50 A23L13/60 A23L19/00 A23L21/10 A23L29/256 (Advanced/Invention);
A23L1/06 A23L1/315 A23L1/317 (Advanced/Non-invention);
A23L1/052 A23L1/06 A23L1/212 A23L1/314 A23L1/315 A23L1/317 (Core/Invention);
A23L (Subclass/Invention)
International class (IPC 1-7): A23L1/05 A23L1/052 A23L1/0532 A23L1/06 A23L1/212 A23L1/312 A23L1/314 A23L1/315 A23L1/317 A23L1/325
CPC: A23L13/422 A23L19/09 A23L29/256
European class: A23L1/0532 A23L1/212E A23L1/314B1
US class: 426/513 426/517 426/574 426/575 426/576
Family:

Publication number	Pub. date	Application number	App. date
AT108981 E	19940815	AT19900908262T	19900517
AU199057404 A1	19901218	AU19900057404	19900517
AU638463 B2	19930701	AU19900057404	19900517
CA2053260 AA	19911018	CA19902053260	19900517
CA2053260 C	19971202	CA19902053260	19900517
DE69011111 D1	19940901	DE19906011111	19900517
DE69011111 T2	19941201	DE19906011111T	19900517
EP0472609 A1	19920304	EP19900908262	19900517
EP0472609 B1	19940727	EP19900908262	19900517
GB8911300 A0	19890705	GB19890011300	19890517
JP4505255 T2	19920917	JP19900507982T	19900517
NO914492 A	19911115	NO19910004492	19911115
NO914492 A0	19911115	NO19910004492	19911115
US5422135 A	19950606	US19940231891	19940422
WO9014019 A1	19901129	WO1990GB00763	19900517

Priority: GB19890011300 19890517; US19910773962 19911112; US19940231891 19940422; US19930087023 19930702; WO1990GB00763 19900517;

Cited documents: US5071665 A, US4897278 A, US4880654 A, US4868002 A, US4852477 A, US4735817 A, US4450183 A, US4427704 A, US4347261 A, US4337627 A, US4239785 A, US2563996 A, SU1472021 T, GB2170092 A1, GB1432278 A, EP0328349 A1, EP0050006 A1, DE3728155 A1, DE3248692 A1, AU621339 B2, AU480921 B2,
Assignee(s): (std): NADREPH LIMITED ; NADREPH LTD ; EFFEMEX LIMITED ; EFFEMEX LTD
Assignee(s): MALIN JOHN ; NADREPH LTD SLOUGH BERKSHIRE GB ; SPEIRS CHARLES
Inventor(s): (std): CHARLES SPEIRS ; JOHN MALIN ; MALIN JOHN ; SPEIRS CHARLES ; SPEIRS CHARLES DOBNEYS COTTAGE
Inventor(s): SPEIRS CHARLES DOBNEYS COTTAGE RUTLAND LE15 7HF GB ; MALIN JOHN NORTHANTS NN17 3AH GB
Designated states: AT AU BE CA CH DE DK ES FR GB IT JP LI LU NL NO SE US

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT108981 E	19940815	LSGT	+	granted / extensions (spc, cpc, pte)	
AT108981 E	19950215	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	
AT108981 E	19970415	LSAS	EEFA	CHANGE OF THE COMPANY NAME	
AT108981 E	19990215	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AU199057404 A1	19901218	LSPB	+	published / reissued	
AU638463 B2	19930701	LSGT	+	granted / extensions (spc, cpc, pte)	
AU638463 B2	20021219	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
CA2053260 AA	19911018	LSPB	+	published / reissued	
CA2053260 AA	19911018	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2053260 AA	19911018	LSES	+EEER	EXAMINATION REQUEST	
CA2053260 AA	19990517	LSLE	-MKLA	LAPSED	
CA2053260 C	19971202	LSGT	+	granted / extensions (spc, cpc, pte)	
DE69011111 D1	19950824	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE69011111 D1	19970814	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : EFFEMEX LTD., SLOUGH, BERKSHIRE, GB
DE69011111 D1	20030313	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	

DE69011111 T2	19941201	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0472609 A1	19920304	LSPB	+	published / reissued	
EP0472609 A1	19920304	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19911010
EP0472609 A1	19921209	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19921023
EP0472609 A1	19940727	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI EFFECTIVE DATE : 19940727
EP0472609 A1	19940727	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE EFFECTIVE DATE : 19940727
EP0472609 A1	19940727	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK EFFECTIVE DATE : 19940727
EP0472609 A1	19940727	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : THE PATENT HAS BEEN ANNULLED BY A DECISION OF A NATIONAL AUTHORITY EFFECTIVE DATE : 19940727
EP0472609 A1	19940727	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH EFFECTIVE DATE : 19940727
EP0472609 A1	19941027	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE EFFECTIVE DATE : 19941027
EP0472609 A1	19941031	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0472609 A1	19950531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19950531
EP0472609 A1	19950719	LSGT	+26N	NO OPPOSITION FILED	
EP0472609 A1	19970221	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : CD
EP0472609 A1	19970515	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 19970515 YEAR OF FEE PAYMENT : 08
EP0472609 A1	19970529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 19970529 YEAR OF FEE PAYMENT : 08
EP0472609 A1	19980517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19980517
EP0472609 A1	19981201	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19981201
EP0472609 A1	19990201	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE	EFFECTIVE DATE : 19981201
EP0472609 A1	20010508	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20010508 YEAR OF FEE PAYMENT : 12

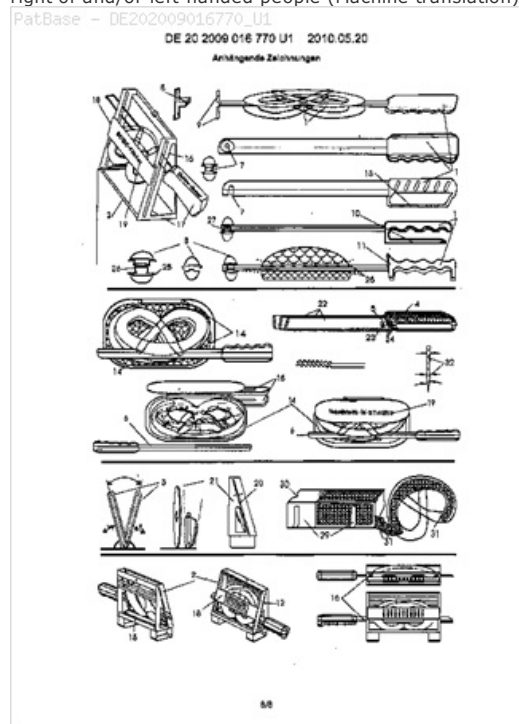
EP0472609 A1	20010516	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20010516 YEAR OF FEE PAYMENT : 12
EP0472609 A1	20010518	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20010518 YEAR OF FEE PAYMENT : 12
EP0472609 A1	20020517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20020517
EP0472609 A1	20021203	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20021203
EP0472609 A1	20030108	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20020517
EP0472609 A1	20030131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20030131
EP0472609 A1	20030228	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST
EP0472609 A1	20050517	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050517
EP0472609 B1	19940727	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4505255 T2	19920917	LSPB	+	published / reissued	
NO914492 A	19911115	LSPB	+	published / reissued	
US5422135 A	19950606	LSGT	+	granted / extensions (spc, cpc, pte)	
US5422135 A	19960903	LSAS	AS	ASSIGNMENT	OWNER NAME : EFFEMEX LIMITED, ENGLAND DESCRIPTION : CHANGE OF NAME; ASSIGNOR:NADREPH LIMITED; REEL/FRAME:008113/0242 EFFECTIVE DATE : 19941027
US5422135 A	19981130	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5422135 A	20030606	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5422135 A	20030709	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5422135 A	20030805	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20030606
WO9014019 A1	19901129	LSPB	+	published / reissued	
WO9014019 A1	19911003	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1990908262 COUNTRY OF REF DOCUMENT : EP
WO9014019 A1	19911018	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2053260 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F

WO9014019 A1	19911018	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2053260 COUNTRY OF REF DOCUMENT : CA
WO9014019 A1	19920304	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1990908262 COUNTRY OF REF DOCUMENT : EP
WO9014019 A1	19940727	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1990908262 COUNTRY OF REF DOCUMENT : EP

27) Family number: 44934317 (DE202009016770U1)

Title: Brezen-Schneidmesser, Schneidgeraet-Vorrichtung fuer Rechts- bzw. Linkshaender Brezen Schneidmesser, cutting tool device for on the right of and/or left-handed people (Machine translation)

PatBase - DE202009016770_U1



International class (IPC 8-9): B26B3/02 (Advanced/Invention)

CPC: B26B3/02 B26B29/063

European class: B26B29/06 B26B29/06A B26B3/02

Family:

Publication number Pub. date **Application number** App. date
DE202009016770 U1 20100415 DE200920016770U 20091210

Priority: DE200920012256U 20090910;

Assignee(s): (std): LUTZENBERGER HELMUT

Legal status (INPADOC)

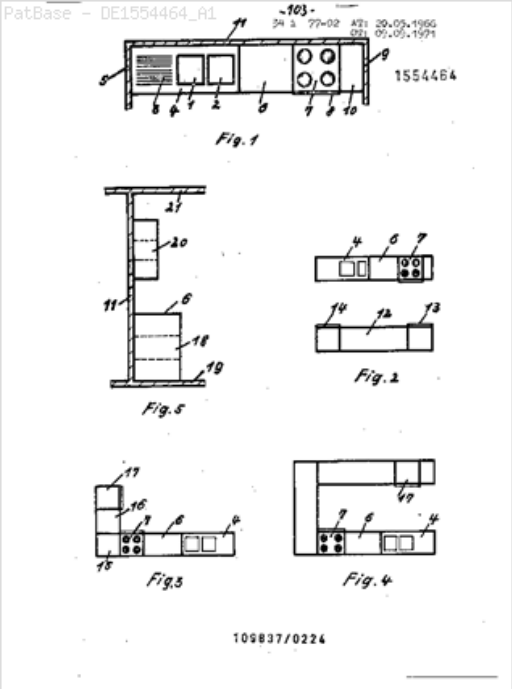
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Patent	Date recorded	Event group	Code	Event	Details
DE202009016770 U1	20100415	LSGT	+	granted / extensions (spc, cpc, pte)	
DE202009016770 U1	20091210	LSLI	R086	NON-BINDING DECLARATION OF LICENSING INTEREST	
DE202009016770 U1	20100520	LSGT	R207	UTILITY MODEL SPECIFICATION	EFFECTIVE DATE : 20100520
DE202009016770 U1	20131017	LSLE	-R156	LAPSE OF IP RIGHT AFTER 3 YEARS	EFFECTIVE DATE : 20130702

28) Family number: 536541 (DE1554464A1)
Title: KUECHENEINRICHTUNG Kitchen equipment (Machine translation)

Abstract:
Source: DE1554464A1 (Claim 1) Patentan 9 pr Ue o'h e l) KÜcheneinrichtung, bei welcher entlang einer oder mehrerer KÜchenwaende neben Unterschraenken zssB. eine Spuele, ein Bord, ein Kuehlschrank und vielleicht noch eine Geschirr spuelmaschine und eine Waschmaschine aufgestellt sind und darilber Oberrahraenke haengen@ dadurch gekennzeichnet, normaler Unterschraenke und daso mindestens in einem Teil den dadurch entstehenden Zwischenra=ea mit Faechern versehene" auf - und abschiebbare Regale unterge bracht sind fuer die Aufnahme von zesse elektrischen Kuechen- maschineng Elektrogeraeteng KÜchengeratentp Toepfen# Geschirr, Vorraeten1.

Machine translation: (Claim 1) Patentan 9 Ue O'H el pr) cake facility, along with which one or more KÜchenwaende next Unterschraenken z ss B. one sink, one board, a fridge and maybe dishwasher one dish and a washing machine are set up and Waymarked darilber Oberrahraenke hang @ by normal Unterschraenke and Daso at least in part the resulting Zwischenra = ea with shelves bearing "on - and be deported Shelves accommodated are introduced for the admission processes of electric cooking pots maschineng Elektrogeraeteng KÜchengeratentp # crockery, Vorraeten1.



International class (IPC 8-9): A47B77/00 B25G3/14 B25G3/28 E06B3/38 E06B5/00 E06B9/11 (Advanced/Invention); A47B77/00 B25G3/00 E06B3/32 E06B5/00 E06B9/11 (Core/Invention)
International class (IPC 1-7): A47B77/02 B25G3/28 E05D15/16 E06B3/48
CPC: E06B3/482 A47B49/004 A47B51/00 B25G3/28 A47B77/00 B25G3/14 E06B3/385 E06B5/006 E06B9/115
European class: A47B77/00 B25G3/14 B25G3/28 E06B3/38F E06B5/00F E06B9/11F P06B9/11F
Family:

Publication number	Pub. date	Application number	App. date
CH440174 A	19670715	CH19660012605	19660831
DE1554464 A1	19710909	DE1965SC39013	19650925
DE1554464 B2	19780223	DE1965SC39013	19650925
DE1554464 C3	19781026	DE1965SC39013	19650925
DE1654722 A1	19720615	DE19681654722	19680213

Priority: DE1965SC39013 19650925; DE1965SC39013U 19650925; DE1966SC39013 19660520; DE1968SC41968 19680213;

Assignee(s): (std): SCHAFFITZEL HELMUT ; SCHLENK GEORG DIPL ING ; SCHWARTZ AND CO G
Assignee(s): SCHAFFITZEL HELMUT 7170 SCHWABISCH HALL ; G SCHWARTZ AND CO
Inventor(s): (std): ALBRECHT PEIFFER ; SCHLENK GEORG DIPL ING
Inventor(s): PEIFFER ALBRECHT

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
CH440174 A	19670715	LSGT	+	granted / extensions (spc, cpc, pte)	
DE1554464 A1	19710909	LSPB	+	published / reissued	
DE1554464 A1	19781026	LSGT	+C3	GRANT AFTER TWO PUBLICATION STEPS (3RD PUBLICATION)	
DE1554464 A1	19830630	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE1554464 B2	19780223	LSPB	+	published / reissued	
DE1554464 C3	19781026	LSGT	+	granted / extensions (spc, cpc, pte)	
DE1654722 A1	19720615	LSPB	+	published / reissued	

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PUBLICATION)				
DE2653571 B1	19781221	LSAS	EGA	NEW PERSON/NAME/ADDRESS OF THE APPLICANT
DE2653571 B1	19851107	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE
DE2653571 C2	19780824	LSGT	+	granted / extensions (spc, cpc, pte)
DK89177 A	19780526	LSPB	+	published / reissued
DK89177 A	19851202	LSWD	-AHB	APPLICATION SHELVED DUE TO NON-PAYMENT
GB1518266 A	19780719	LSGT	+	granted / extensions (spc, cpc, pte)
GB1518266 A	19781115	LSGT	+PS	PATENT SEALED
GB1518266 A	19851016	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
JP1133957 C3	19830214	LSGT	+	granted / extensions (spc, cpc, pte)
JP53069199 A2	19780620	LSPB	+	published / reissued
JP57001206 B4	19820109	LSPB	+	published / reissued
PL106094 B1	19791130	LSGT	+	granted / extensions (spc, cpc, pte)
PL202381 O	19780605	LSPB	+	published / reissued
SU677630 D	19790730	LSGT	+	granted / extensions (spc, cpc, pte)

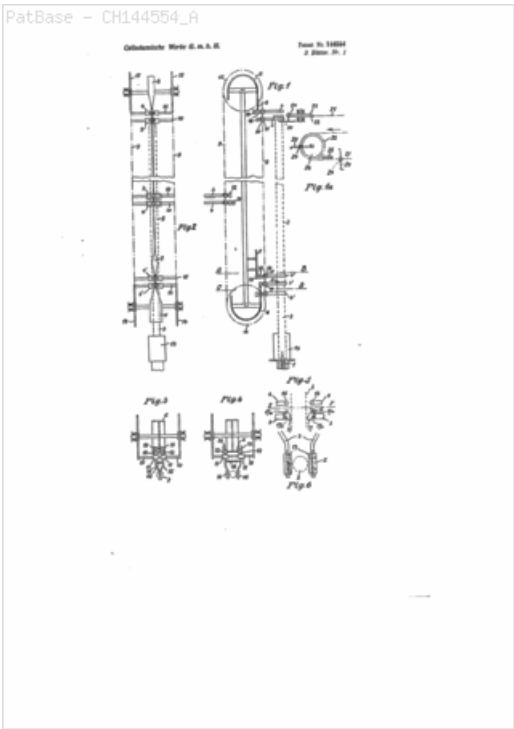
30) Family number: 38728594 (CH144554A)

Title: HUELLE FUER WUERSTE, FLEISCHWAREN UND DERGLEICHEN UND VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG DERSELBEN. HUELLE for sausages, MEAT PRODUCTS, AND THE LIKE AND METHOD AND DEVICE FOR PRODUCING THE SAME. (Machine translation)

Abstract:

Source: CH144554A and It;B and gt;PATENTANSPRUECHE: and It;B and gt; I. kuenstliche Huelle fuer Wuerste, Fleisch waren und dergleichen als Ersatz natuer licher Daerme, dadurch gekennzeichnet, dass sie aus Loesungen von Zellulosenitra- ten hergestellt ist. II. Verfahren zur Herstellung von kuenst lichen HuelLEN nach Patentanspruch I, dadurch gekennzeichnet, dass man LOE sungen von Zellulosenitrat aus einer ringfoermigen oeffnung in ein Faellmittel herauspresst und aus den so gebildeten Schlaechen das Loesungsmittel entfernt. 11I. Vorrichtung zur Ausuebung des Verfah rens nach Patentanspruch II, dadurch gekennzeichnet, dass hinter einem Faell mittelbehaelter, in welchen die Nitro- zelluloseloesung aus einer Ringduese in Schlauchform eintritt, zwei Paare von Klemmbacken in einem der gewuenschten Schlauchstuecklae;nge entsprechenden Ab stand an einer umlaufenden endlosen Foerderbahn angebracht und Mittel zum selbsttaetigen oeffnen und Schliessen der Klemmbackenpaare an zwei um die Schlauchstuecklaenge voneinander entfernten Stellen der Foerderbahn vorgesehen sind. UENTERANSPRtrCHE 1. Huelle nach Patentanspruch I, dadurch gekennzeichnet, dass sie aus mit Weich- machungsmitteln versetztem Zellulose nitrat besteht. and It;B and gt;2 and It;B and gt;. Huelle nach Patentanspruch I, dadurch gekennzeichnet, dass sie aus mit die Ent flammbarkeit vermindern den Stoffen versetztem Zellulosenitrat besteht. 3. quelle nach Patentanspruch I, dadurch gekennzeichnet, dass sie aus mindestens teilweise denitriertem Zellulosenitrat be steht. 4. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass man den Zellulosenitratloesungen vor der Form gebung Weichmachungsmittel zusetzt. 5. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass man den Zellulosenitratloesungen vor der Form gebung die Entflammbarkeit herabsetzende Stoffe zugibt. 6. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass man als Faell mittel eine koagulierend wirkende Flues sigkeit verwendet. 7. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass man als Faell mittel ein koagulierend wirkendes Gas verwendet. B. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass man den ge bildeten Schlauch nach der Behandlung mit dem Faellmittel mindestens einseitig der Einwirkung eines warmen Gasstro mes aussetzt. 9. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass man den sich bildenden Schlauch von unten nach oben durch Faellmittel fuehrt. 10. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass man in das Innere des sich bildenden Schlauche Gas einblaest. and It;B and gt;11. and It;B and gt; Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass der gebildete Schlauch unter gleichzeitiger Fortfueh rung in den Schlauchstuecklaengen ent sprechenden Abstaenden seiner Bahn ab geschnitten wird. 12. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass der Schlauch (2) fortlaufend jeweils in den ge wuenschten Schlauchlaengen entsprechen den Abstaenden von einem in der Aus trittsrichtung des Schlauches fortbeweg ten Klemmorgan erfasst, zusammenge quetscht und weitergefuehrt, ausserdem vor oder nach dem Angriff dieser Klemme an einer Stelle kurz oberhalb der Klemmstelle durch eine zweite Klemme voruebergehend zusammenge quetscht und schliesslich zwischen den beiden Quetschstellen durch ein zwang laeufig gesteuertes Schneidorgan durch geschnitten wird, worauf das unterhalb der Schneidstelle eingeklemmte Schlauch stueck von der Klemme in gerader Rich tung so weit fortgefuehrt wird, bis es durch die erneute Betaetigung der Schneidvorrichtung nach dem Angreifen der nachstfolgenden Klemmen auch am untern Ende oberhalb dieser Klemme von dem folgenden Schlauchstueck ge trennt wird, worauf schliesslich sein oberes Ende durch selbsttaetiges oeffnen der es fuehrenden Klemme freigegeben wird, wobei durch besondere Vorrich tungen fuer laufende selbsttaetige Abfueh rung der freigegebenen Schlauchstuecke. Sorge getragen wird. 1:3. Verfahren nach Patentanspruch II, da durch gekennzeichnet, dass der Schlauch nach dem Durchgang durch das Faellmit tel (13) von einem Paar von mit fla chen Klemmbacken (16 und 17) ver sehenen Klemmen (4, 3) erfasst, alsdann zwischen diesen Klemmbacken vermit telst eines mit der einen Klemme (3) verbundenen, von der Bewegung die ser Klemme zwanglaeufig gesteuerten Schneidorgans (5) durchgeschnitten, kurz darnach von der obern Klemme (4) freigegeben, von der untern Klemme (3) dagegen so weit mitgenommen wird, bis das naechste Klemmenpaar (3', 4') den Schlauch oberhalb der Duese erfasst hat, worauf auch das obere Ende des Schlauchstueckes durch die untere Klemme (3) ungefaehr im gleichen Au genblick freigegeben wird, in welchem auch die Freigabe des untern, inzwi schen durch die Schneidvorrichtung von dem nachfolgenden Schlauchstueck ge trennten Schlauchendes durch die Klemme (4') des naechsten Klemmen paares (3', 4') erfolgt. 14. Verfahren nach Patentanspruch II und Unteranspruch 1t), dadurch gekennzeichnet, dass beim Hindurchziehen des Schlauches durch ein Faellbad auch in das Innere des Schlauches Faellfluessig keit eingeleitet und clie Hoehe der ausser halb des Schlauches befindlichen Faell fluessigkeit durch Anordnung von ueber laeufen um so viel groesser als die Hoehe der innerhalb des Schlauches befind lichen Fluessigkeit gehalten wird, wie noetig ist, um den durch das in den Schlauch eingeblasene Gas im Innern des Schlauches erzeugten ueberdruck in genuegendem Masse auszugleichen, wobei der Gasdruck im Innern des Schlauches auf gleicher Hoehe gehalten wird. 15. Verfahren nach Patentanspruch II und Unteranspruch 14, dadurch gekennzeich net, dass die Zu- und Abfuehrung der in nern und aeussern Faellfluessigkeit und auch die des dem Schlauchinnern zuge fuehrten Gases im Gegensatz zu der Schlauchbewegung erfolgt. 16. Vorrichtung nach Patentanspruch III, dadurch gekennzeichnet, dass das Schlie ssen und oeffnen der Klemmen (16, and It;B and gt;17) and It;B and gt; dadurch geschieht, dass an clen Klem men Federn vorgesehen sind, die be strebt sind, die gegenueberliegenden Bati ken (16 bzw. 17) der Klemmen einan der anzunaehnern oder voneinander zu entfernen, waehrend in der Bahn der be wegten Klemmen Fuehrungsflaeen ange ordnet sind, durch welche die Klemm backen entgegengesetzt der Wirkung der Federn derart verstellt werden, dass auf zwischen zwei parallel gefuehrten Foerderbaendern angeordneten, mit diesen umlaufenden Staeben (10) Teile (11) verschieblich angebracht sind, die einer seits die Klemmbacken (16 bzw.#. 17), durch eine Zugfeder (18) miteinander verbunden. tragen und anderseits Ansatzstuecke mit Roellchen (12 bzw. 19), mit welchen diese Ansatzstuecke zwecks Steuerung der Klemmbetaetigung ueber fest angebrachte Schraeg- oder Kurven flaechen (6, 7 und 8) im gewuenschten Sinne hinweggefuehrt werden. 17. Vorrichtung nach Patentanspruch III, dadurch gekennzeichnet, dass die obern Klemmen (4 bzw. 4') eines jeden Klemmenpaares auf jeder Seite mit zwei Roellchen versehen sind, von denen das eine (1.2) in gleicher Weise betaetigt wird wie die entsprechenden Roellchen der untern Klemmen (3 bzw. 3'), waeh rend das andere Roellchen (19) durch ein festes Fuehrungsstueck (7) mit Schraeg flaechen in dem Sinne betaetigt wird, da ss es die Klemme (4 bzw. 4') oeffnet, wenn der Schlauch innerhalb dieser Klemme durchschnitten ist. 18. Vorrichtung nach Patentanspruch IIT, dadurch gekennzeichnet, dass an einem um eine drehbare horizontale Scheibe (?3) umlaufenden Bande (21) in geeig neten Abstaenden 1-foermige, um ihre Vertikalachse drehbare, unten mit hori zontalen, an den Enden rechtwinklig umgebogenen und zugespitzten Greif haken (20) und oben mit einem Ring ansatz (?4) versehene Transportorgane angebracht sind und auf der Scheibe (23) eine andere Scheibe (22) von um die Dicke des Ringes (24) geringerem Durchmesser lose aufgelegt ist, auf wel che sich die Ringe der Transportorgane beim Umlauf auf die Scheibe (23) auf legen, so dass sich die Greifhaken (20) radial zur Scheibe einstellen und mit ihren Spitzen das obere Ende eines je den Schlauchstueckes ungefaehr im Au genblick seiner Freigabe aufspies sen, waehrend eine Friktionsflaeche (25) im weiteren Wege der Ringe (24) derart angeordnet ist, dass der Ring samt Trans portorgan beim Darueberlaufen um 180 gedreht wird, so dass das vom Greif haken weitergefuehrte Schlauchstueck von diesem nunmehr durch einen in seiner Bahn angeordneten Dorn abgestreift werden kann. B and gt;; and claims It: and It; / B and gt; I. artificial **Case** for sausages, **meat** and the like were natuer as a substitute Licher intestines, characterized in that it is made from solutions of Zellulosenitra- th. II. Procedure for the preparation of artificial union **Cases** according to claim I, characterized in that solutions of cellulose nitrates LOE from an annular orifice into a precipitant pressed out and removed from the suppression diseases thus formed the solvent. 11I. Apparatus for carrying out of the proceedings according to claim II, characterized in that behind a feller mittelbehaelter in which cellulose spoon nitro enters from an annular die in a tubular form, two pairs of jaws in the desired Schlauchstuecklae; length corresponding Ab stood on a revolving endless and means for conveying track mounted selbsttaetigen oeffnen and closing of the jaw pairs to two to each other Schlauchstuecklaenge eliminator ten points of the conveying track are provided. UENTERANSPRtrCHE 1. **Cases** of claim I, characterized in that it machungsmitteln from cellulose nitrate is made with soft offset. and It; B and gt; 2 and It; / B and gt;. **Case** according to claim I, characterized in that it consists of an offset with the de-reducing flammability materials cellulose nitrate. 3. quelle according to claim I, characterized in that it consists at least partly be denitriertem cellulose nitrate. 4. The method according to claim II, characterized in that cellulose nitrate is added to the solutions prior to mold environment softener. 5. The method according to claim II, characterized in that the cellulose nitrate solutions before the form is forgiveness admits the flammability herabset corrosive ingredients. 6. The method according to claim II, characterized in that a coagulating agent acting Flues used as felling fluid. 7. The method according to claim II, characterized in that a coagulating agent is used as felling acting gas. B. A method according to claim II as. Characterized in that at least one side exposing the GE formed hose after the treatment with the precipitating agent to the action of a warm Gasstro mes 9. The method according to claim II, characterized in that it leads to the forming tube from the bottom up through the precipitating agent. 10. The method according to claim II, characterized in that is blown into the interior of the forming gas hoses. and It; B and gt; 11th and It; / B and gt; A method according to claim II, as ent-speaking intervals its orbit is **cut** off by in that the tube formed under simultaneous continuation of the Schlauchstuecklaengen. 12. The method according to claim II, characterized in that the tube (2) continuously in each of the ge wished Schlauchlaengen correspond to the distances from one occurs direction in the off the hose fortbeweg th clamp member recorded together crowd, squeezed and continued, also before or after the attack this terminal at a position slightly squeezed above the terminal point of a second terminal temporarily together quantitative and finally between the two crushing by a forced provisionally controlled **cutting** member is **cut** through, and then the trapped below the **cutting** point hose stueck from the terminal in a straight Rich tion so far is continued until it is resolved by re Actuation of the **cutter** after attacking the nachstfolgenden terminals also at the lower end above this terminal ge of the following Schlauchstueck what finally oeffnen its upper end by selbsttaetiges of it is released leading terminal, with particular by Vorrich commitments for ongoing selbsttaetige Abfueh tion of shared Schlauchstuecke. Care is taken. 1: 3. A method according to claim II, as detected by in that the tube after the passage through the Faellmit tel (13) by a pair of surfaces with fla clamping jaws (16 and 17) of the designated terminals (4, 3), then between these jaws Transfer on telst one to one terminal (3) connected, positively controlled by the movement of the water terminal **cutting** member (5) **cut** short after that of the upper clamp (4) released, on the other hand taken so far by the under clamp (3) until the next terminal pair (3 ', 4') has acquired the hose above the Duese, whereupon, the upper end of the Schlauchstueckes through the lower clamp (3) is released genblick about the same Au, in which the

release of the nether, inzwi rule by the **cutter** of the following Schlauchstueck ge severed end of the hose through the clamp (4 ') of the couple's next clamps (3', 4 ') takes place. 14Method according to claim II and dependent claim 1t), characterized in that initiated when being drawn of the tube through a precipitation bath into the interior of the tube Faellfluessig- speed and clie height of except half of the tube located felling fluessigkeit by arranging overflows so much larger than the height By locating union within the tube Liquid is kept as is necessary to compensate for the over pressure generated by the injected into the tube gas inside the tube to a sufficient degree, the gas pressure inside the tube kept at the same height will. 15. The method according to claim II and dependent claim 14, characterized in that the supply and discharge of domestic partners and to express his precipitating liquid and also that of the tubing inside the supplied gas occurs in the opposite direction to the hose movement. 16. The apparatus according to claim III, characterized in that the closing and opening of the Shen terminals (16, and lt; B and gt; 17) and lt; / B and gt; thus happens that on clen terminals mean springs are provided which are sought be the opposite lying Bati ken (16 BEZW. 17) of the terminals Einan the anzunaehern or away from each other, while being in the path of be wegten terminals Fuehrungsflaeehen are arranged, by means of which jaws the clamping opposed be adjusted in such a way the action of the springs that are arranged on between two parallel conveyor belts, with these circumferential rods (10) parts (11) are mounted displaceably on the one hand the clamping jaws (16 bezv #. 17) connected by a tension spring (18) with each other. carry and be carried away on the other hand satzstuecke with **rolls** (12 BEZW. 19), with which these Ansatzstuecke purpose of controlling the Klemmbetaetigung by permanently attached oblique or curves surfaces (6, 7 and 8) in the desired direction. 17. The apparatus according to claim III, characterized in that the upper terminals (4 BEZW. 4 ') of each pair of terminals are provided on each side with two **rolls**, one of which is operated one (1.2) in the same way as the corresponding **rolls** of untern terminals (3 BEZW. 3 '), currency rend the other **roller** (19) by a fixed Fuehrungsstueck (7) with inclined surfaces is operated in the sense that it da.ss the terminal (4 BEZW. 4') opens when the hose is **cut** within this terminal. 18. The apparatus according to claim IIT, characterized in that outstanding on any around a rotatable horizontal disk (? 3) band (21) in appro Neten intervals 1-shaped, about its vertical axis rotatable zontal below with hori, at the ends bent at right angles and pointed gripping hook (20) and top with a ring approach (? 4) provided transport members are attached and on the disc (23) has a different disk (22) of the thickness of the ring (24) smaller diameter is loosely placed on wel the rings of the transport organs surface during rotation of the disk (23) on top, so that the grapple hook (20) radially set to disk and impaled with their tops the upper end of each of the Schlauchstueckes, about Au genblick its release, while a friction surface (25) is arranged in another way of the Rings (24) such that the ring including trans port organ is rotated while walking over 180, so that the hook from the gripping further guided Schlauchstueck of this are stripped now by a arranged in its orbit mandrel can.



International class (IPC 8-9): B29C47/00 (Advanced/Invention);
B29C47/00 (Core/Invention)
CPC: B29C47/8895 B29C47/0026
European class: B29C47/88G
Family:

Publication number **Pub. date** **Application number** **App. date**
CH144554 A 19310115 00000000

Assignee(s): (std): CELLOCHEMISCHE WERKE G M B H ; CELLOCHEMISCHE WERKE GMBH
Inventor(s): (std): CELLOCHEMISCHE WERKE G M B H ; CELLOCHEMISCHE WERKE GMBH

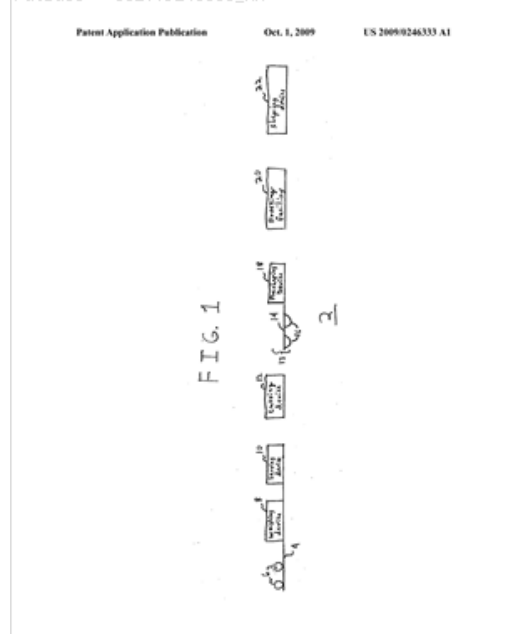
Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
CH144554 A	19310115	LSGT	+	granted / extensions (spc, cpc, pte)	

31) Family number: 35871724 (US2009246333A)**Title:** METHOD AND DEVICE FOR PRODUCING SHAPED MEAT PORTIONS FROM WHOLE NATURAL MEAT PIECES**Abstract:**

Source: US2009246333A A device for producing shaped **meat** portions, the device including a sorting device for sorting **meat** into a first set of pieces having a weight which is below a desired weight, a second set of pieces having a weight which corresponds to a desired weight, and a third set of pieces having a weight which is above a desired weight. The device further includes a **cutting** device which **cuts** each of the third set of pieces to a desired weight so that the **cut** pieces having a desired weight define a set of selected **meat** pieces. A transport device transports the set of selected **meat** pieces and a freezing facility through which the transport device conveys the set of selected **meat** pieces and which freezes the set of selected **meat** pieces. The device further including a shaping device which presses or presses and punches the frozen set of selected **meat** pieces in a mold and thus transforms the frozen set of selected **meat** pieces into a final shape or a plurality of final shapes, wherein the shaping device produces in a controlled manner **meat** portions having a predefined weight and a predefined three-dimensional shape.

PatBase - US2009246333_AA



International class (IPC 8-9): A22C25/00 A22C7/00 A23G3/02 A23L1/00 A23L1/01 A23L1/212 A23L1/216 A23L1/31 A23L1/314 A23L19/00 A23L19/12 A23L3/36 A23L5/00 A23P1/08 A23P1/10 A23P30/10 A47J43/20 C12N5/079 C12N5/0793 (Advanced/Invention); A22C25/00 A22C7/00 A23L1/00 A23L1/01 A23L1/212 A23L1/214 A23L1/31 A23L1/314 A23L3/36 A23P1/08 A23P1/10 A47J43/00 C12N5/079 C12N5/0793 (Core/Invention)

International class (IPC 1-7): A22C7/00

CPC: C12N5/0619 C12N5/0622 C12N2502/02 C12N2506/02 G01N33/5058 G01N33/5073 G01N2800/2835 A22C7/003 A23L3/36 A23L13/40 A23P30/10 A61K38/1709

European class: A22C7/00D2 A23L1/00P10 A23L1/314 A23L3/36 A61K38/17A2 C12N5/06B8A C12N5/06B8G G01N33/50D2F14 G01N33/50D2F4 M12N502/02 M12N506/02 S01N800/28C

US class: 425/412 425/412S 426/295 426/295P 426/388 426/388S 426/389 426/413 426/442 426/506 426/512 426/513 426/515 426/518 426/524 426/641 426/641S

Family:

Publication number	Pub. date	Application number	App. date
AU2007217530 AA	20070830	AU20070217530	20070220
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BRPI0706832 A2	20110405	BR2007PI06832	20070220
BRPI0706832 B1	20170131	BR2007PI06832	20070220
BRPI0706970 A2	20110412	BR2007PI06970	20070220
BRPI0706970 B1	20160920	BR2007PI06970	20070220
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CA2633598 C	20140128	CA20072633598	20070220
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CN101384178 A	20090311	CN200780005904	20070220
CN101384178 B	20160907	CN200780005904	20070220
DE502007014140 D1	20150924	DE200750014140T	20070220
DK1988783 T3	20151005	DK20070726450T	20070220
EP1988781 A1	20081112	EP20070726448	20070220
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EP1988783 A1	20081112	EP20070726450	20070220
EP1988783 B1	20150812	EP20070726450	20070220
ES2548434 T3	20151016	ES20070726450T	20070220
HU025667 T2	20160628	HU20070726450T	20070220
IN03751KN2008 A	20090220	IN2008KN03751	20080915
JP2009527224 T2	20090730	JP20080554790T	20070220
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JP4982504 B2	20120725	JP20080554789T	20070220
RU2008133812 A	20100327	RU20080133812	20070220
RU2008133813 A	20100327	RU20080133813	20070220
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TR201511951 T4	20151021	TR20150011951T	20070220
US2009246333 AA	20091001	US20070280064	20070220
US2009280227 AA	20091112	US20070280056	20070220
US8668947 BB	20140311	US20070280056	20070220
US8916222 BB	20141223	US20070280064	20070220
WO07096363 A1	20070830	WO2007EP51627	20070220
WO07096365 A1	20070830	WO2007EP51629	20070220

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Cited documents: WO9710717 A1, WO07085773 A1, WO06105821 A1, WO06053601 A1, WO03077662 A1, US6826989 BA, US6826989, US5690989 A, US5518746 A, US5223297 A, US4973492 A, US4868951 A, US4626436 A, US4276314 A, US4036997 A, US3892988 A, US3728136 A, US3726136 A,

US2798814 A, US2521995 A, US2009246333 AA, US2009220660 AA, US2009029027 AA, US2008038426 AA, US2005282482 AA, US2005181099 AA, US2004231480 AA, US2003113422 AA, US2003113422, US2003044501 AA, JP7213255 A2, JP7213255, JP61025462 A2, GB2280869 A1, FR2847427 A1, EP1595456 A2, EP1595456 A1, EP1470754 A1, EP1156720 B1, EP0288592 A1, EP0168909 A2, DE2235517 A1, DE19806391 A1, DE10220006 A1, DE102005016159 A1

DE10164637 A1, DE10141989 A1,

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Inventor(s): PETRA GRONEBERG NIENSTEDT ; GUTMANN MIKHEL' ; GUTMANN MICHAELDE ; GRONEBERG NIENSTEDT PETRADE ; GRONBERG-NINSHTEDT PETRA

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2007217530 AA	20070830	LSPB	+	published / reissued	
AU2007217530 AA	20130404	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS: AMEND THE INVENTION TITLE TO READ METHOD AND SYSTEM FOR PRODUCING SHAPED MEAT PORTIONS FROM WHOLE NATURAL MEAT PIECES
AU2007217530 AA	20130815	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2007217530 BB	20130418	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0706832 A2	20110405	LSPB	+	published / reissued	
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BRPI0706832 A2	20160816	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0706832 A2	20161206	LSGT	B09A	DECISION: INTENTION TO GRANT	
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BRPI0706832 B1	20170131	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0706970 A2	20110412	LSPB	+	published / reissued	
BRPI0706970 A2	20160405	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
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CN101378661 A	20090304	LSPB	+C06	PUBLICATION	
CN101378661 A	20140730	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CN101384178 A	20090311	LSPB	+	published / reissued	
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CN101384178 B	20160907	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP1988783 A1	20160628	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HU REF LEGAL EVENT CODE : AG4A REF DOCUMENT NUMBER : E025667 COUNTRY OF REF DOCUMENT : HU
EP1988783 A1	20160720	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160513
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EP1988783 A1	20160930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20150812
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EP1988783 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160220
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EP1988783 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20170221 YEAR OF FEE PAYMENT : 11

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EP1988783 A1	20170531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160220
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EP1988783 A1	20170531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20170222 YEAR OF FEE PAYMENT : 11
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ES2548434 T3	20151016	LSGT	+	granted / extensions (spc, cpc, pte)	
HU025667 T2	20160628	LSPB	+	published / reissued	
IN03751KN2008 A	20090220	LSPB	+	published / reissued	

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JP2009527224 T2	20100220	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20100219
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JP2009527224 T2	20110712	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110712
JP2009527224 T2	20111013	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111012
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JP2009528026 T2	20090806	LSPB	+	published / reissued	
JP4982504 B2	20120725	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4982504 B2	20100220	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20100219
JP4982504 B2	20110329	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110329
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JP4982504 B2	20110802	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110802
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JP4982504 B2	20111129	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20111129
JP4982504 B2	20120225	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120224
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JP4982504 B2	20120327	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120327
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JP4982504 B2	20120426	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120423
JP4982504 B2	20120427	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS	YEAR OF FEE PAYMENT : 3

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JP4982504 B2	20160510	LSFE	+R250	RECEIPT OF ANNUAL FEES	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4982504 B2	20170509	LSFE	+R250	RECEIPT OF ANNUAL FEES	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
RU2008133812 A	20100327	LSPB	+	published / reissued	published / reissued	
RU2008133813 A	20100327	LSPB	+	published / reissued	published / reissued	
RU2441389 C2	20120210	LSGT	+	granted / extensions (spc, cpc, pte)	granted / extensions (spc, cpc, pte)	
RU2454867 C2	20120710	LSGT	+	granted / extensions (spc, cpc, pte)	granted / extensions (spc, cpc, pte)	
TR201511951 T4	20151021	LSGT	+	granted / extensions (spc, cpc, pte)	granted / extensions (spc, cpc, pte)	
US2009246333 AA	20091001	LSPB	+	published / reissued	published / reissued	
US2009246333 AA	20090513	LSAS	AS	ASSIGNMENT	OWNER NAME : NIENSTEDT GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GRONEBERG- NIENSTEDT, PETRA; GUTMANN, MICHAEL; REEL/FRAME:022713/0170 EFFECTIVE DATE : 20090513	
US2009280227 AA	20091112	LSPB	+	published / reissued	published / reissued	
US2009280227 AA	20090527	LSAS	AS	ASSIGNMENT	OWNER NAME : NIENSTEDT GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GRONEBERG- NIENSTEDT, PETRA; GUTMANN, MICHAEL; REEL/FRAME:022749/0005 EFFECTIVE DATE : 20090513	
US8668947 BB	20140311	LSGT	+	granted / extensions (spc, cpc, pte)	granted / extensions (spc, cpc, pte)	
US8668947 BB	20140219	LSGT	PAT1	Patented Case	Patented Case	
US8916222 BB	20141223	LSGT	+	granted / extensions (spc, cpc, pte)	granted / extensions (spc, cpc, pte)	
US8916222 BB	20141203	LSGT	PAT1	Patented Case	Patented Case	
WO07096363 A1	20070830	LSPB	+	published / reissued	published / reissued	
WO07096363 A1	20080603	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008554789 COUNTRY OF REF DOCUMENT : JP	
WO07096363 A1	20080625	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2635140 COUNTRY OF REF DOCUMENT : CA	
WO07096363 A1	20080630	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007217530 COUNTRY OF REF DOCUMENT : AU	
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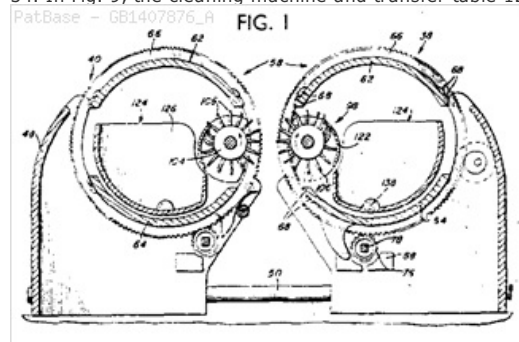
WO07096363 A1	20080731	LSNP	+WWE	NATIONAL OFFICE WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200780004073.6 COUNTRY OF REF DOCUMENT : CN
WO07096363 A1	20080821	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO07096363 A1	20080920	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : A200806721 COUNTRY OF REF DOCUMENT : UA
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WO07096363 A1	20090513	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12280064 COUNTRY OF REF DOCUMENT : US
WO07096363 A1	20110405	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0706832 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20080626
WO07096365 A1	20070830	LSPB	+	published / reissued	
WO07096365 A1	20080616	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2633598 COUNTRY OF REF DOCUMENT : CA
WO07096365 A1	20080714	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008554790 COUNTRY OF REF DOCUMENT : JP
WO07096365 A1	20080815	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007726450 COUNTRY OF REF DOCUMENT : EP
WO07096365 A1	20080818	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200780005904.1 COUNTRY OF REF DOCUMENT : CN
WO07096365 A1	20080821	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO07096365 A1	20080922	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2008133812 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO07096365 A1	20090526	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12280056 COUNTRY OF REF DOCUMENT : US
WO07096365 A1	20110412	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0706970 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20080806

32) Family number: 3882451 (GB1407875A)

Title: MEAT HANDLING EQUIPMENT

Abstract:

Source: GB1407875A 1407875 Conveying **meat** pieces; cleaning **meat** HOBART CORP 19 Feb 1973 8136/73 Heading A2U A cylinder 38-Figs. 1 and 4, for engaging and moving pieces of **meat**, comprises (a) at least two mounting members 62 and 64-Fig. 4, (b) a plurality of coaxial gripping rings 66 rotatable about the mounting members and (c) guide means 68 on the mounting members, the arrangement being such that each ring contacts the mounting member at at least three points and is thereby, prevented from radial movement, and guide means 68 retain the rings spaced from each other. The embodiment shown is a cleaning machine wherein **meat** pieces fed between two such cylinders 38 and 40 are cleaned by rotating brushes 98-Fig. 4, mounted within the hollow cylinders. Matter picked up by the brushes is removed by scrapers 122 and collected in containers 124. The treated **meat** pieces drop from the gap between the cylinders on to one of the trays 34 mounted on rotating table 12. Chute 166 is provided for pieces of **meat** which are to by-pass the cleaning machine and are thereby deposited directly on to one of the trays 34. In Fig. 9, the cleaning machine and transfer table 12 are incorporated in a continuous **meat** processing line.



International class (IPC 8-9): A22C 17/08 (Advanced/Invention);
A22C 17/00 (Core/Invention)

International class (IPC 1-7): A22C 17/08

CPC: A22C 17/08

European class: A22C 17/08

Family:

Publication number	Pub. date	Application number	App. date
GB1407875 A	19751001	GB19730008136	19730219
GB1407876 A	19751001	GB19750007037	19730219

Priority: GB19730008136 19730219; GB19750007037 19730219;

Assignee(s): (std): HOBART CORP

Legal status (INPADOC)

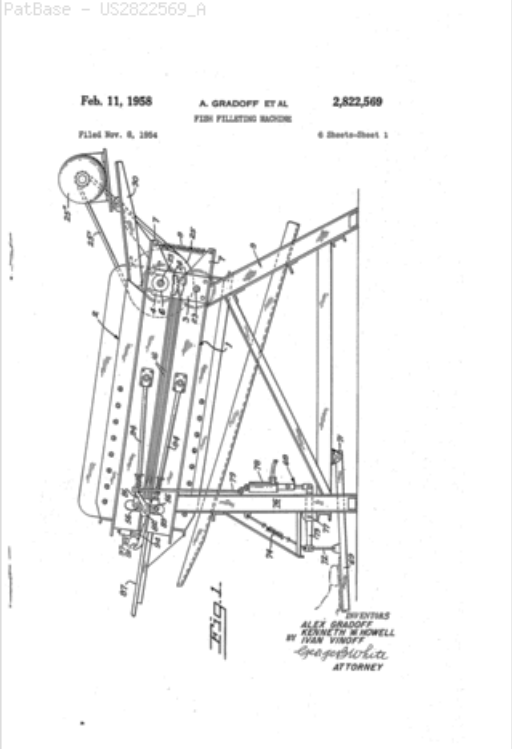
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Patent	Date recorded	Event group	Code	Event	Details
GB1407875 A	19751001	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1407875 A	19760211	LSGT	+PS	PATENT SEALED	
GB1407875 A	19891011	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	
GB1407876 A	19751001	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1407876 A	19760211	LSGT	+PS	PATENT SEALED	
GB1407876 A	19891011	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	

33) Family number: 22222736 (US2822569A)
Title: FISH FILLETING MACHINE

Abstract:

Source: US2822569A (Claim 1) In a fish filleting machine, a pair of complementary hollow casings, a filleting blade on each casing extend longitudinally of the casings generally along the line where the casings meet, said casings forming an inlet at one end and an outlet at the other end thereof, filleting edges on each blade converging toward said inlet, a piercing point at the convergence of said filleting edges pointing toward said inlet, and conveyor means for moving said fish against said filleting points and then along said blades, each blade including a pair of resilient legs diverging from said point toward said outlet, said filleting edges being formed on the outer edges of said legs, means to anchor the ends of said legs on the adjacent casing so that said blades rigidly conform to the bone structure of the fish pulled along the blades, each piercing point being elongated and having a longitudinal slot therethrough open to the space between said legs.



International class (IPC 8-9): A22C25/16 (Advanced/Invention);
A22C25/00 (Core/Invention)
International class (IPC 1-7): A22C25/16
CPC: A22C25/16
European class: A22C25/16
US class: 452/135 452/161
Family:

Publication number	Pub. date	Application number	App. date
US2822569 A	19580211	US19540467327	19541108

Priority: US19540467327 19541108;

Cited documents: US2714221 A, US2669269 A, US2659930 A, US2612652 A, US2466614 A, US2292696 A, US2031856 A, IT250784 A,
Assignee(s): (std): CLARENCE BROWN ; CLARENCE TERRY ; CURTIS PENROD ; FRED A MEAD JR ; HARRY KING ; JAMES R TOWNSEND ; LESLIE MUSANTE ; MARJORIE WEST
Inventor(s): (std): ALEX GRADOFF ; HOWELL KENNETH W ; IVAN VINOFF
Inventor(s): VINOFF IVAN ; GRADOFF ALEX

Legal status (INPADOC)

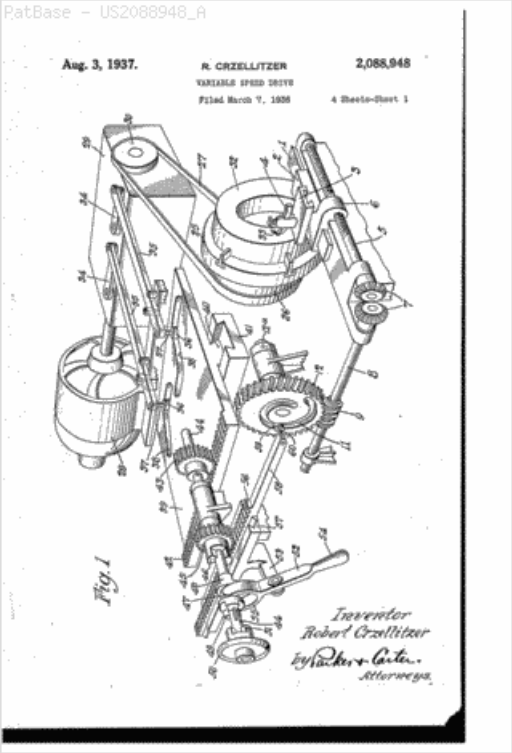
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Patent	Date recorded	Event group	Code	Event	Details
US2822569 A	19580211	LSGT	+	granted / extensions (spc, cpc, pte)	

34) Family number: 21131193 (US2088948A)
Title: VARIABLE SPEED DRIVE

Abstract:

Source: US2088948A 1. The movement of the tool and tool carrier to the initial position mmt be carried out with the servomotor power applied IO that the relative movement at the tool carrier md the cam II is maintained throughout, even during this adjustment period. The tool carrier 'Itself 1| moved with the typical or usual means provided with any standard lathe. With the tool let in the desired Initial position, the hand wheel 'II is rotated and through the (curing shown rotstm the gear II 'which is slidable un the spline: otithe shaft II. The shaft I3 is thus rotated nnd through its threaded enllment with the extendon II of the cam plate I3 the latter Is moved to move the variable speed control levers to the necessary position to effect the desired setting for the initial **cutting** speed which is to be given to the chuck. This rata.- tion of the Ihift I3 is possible because the mounting of the member 'II on the end of the shaft is such as to permit relative rotation of the Darts.. With the initial setting of the tool and of the elm disc II Above described. any constant speed power source. such as the motor shown in Fig'- uné 1, driving through the variable speed transmission device, is ready to deliver the proper initial rotltlni speed to the chuck 2| carrying the work piece II. Any rotation of the worm leur II is identical mth the resulting rotation of the cam carrier II which is driven through the servomotor X. Thus crosswlse movement of the **cutting** tool and head automatically moves the cum pllte II nt I. speed and in an amount predetermined by the shape and location of the elm IIot or Iroove II and the path of thiscam it so desimcd I8 to vary the position of the cam pllte II to muntaln constant the **cutting** speed for which that plate was originally set. This V n,oea,o4s speed Is, of course, maintained constant even though the tool I and the tool carrier 3 are constantly changing their position, that is to say, their **cutting** radius, and thus if the tool 4 is moving toward the center of the work piece 32 the **cutting** radius is reduced and the R. P. M. of the chuck 25 increases to compensate for this radial reduction. Should the parts be moving in the opposite direction, the relationship is maintained similarly so that the **cutting** speed remains constant during movement at the tool irrespective of the direction of that movement. To return the mechanism to Itsoriginal position to begin another cycle, the lathe Is reversed by the gearing usually provided to move the tool carrier and all parts, including the servomotor, will follow and will return to their original, Initial position and this will be repeated with successive cycles until a new initial setting of the tool or of the cam plate I9 is desired and accomplshd. As in the **case** of the form shown In Figure 1, an automatic disengaglng means may be provided. It might comprise an end stop for the control cam plate 38 to operate a stop valve or by-pass valve to **cut** off' hydraulic power from the servomotor. _ The operation of the forms of the device shown in Figures 4 and 5 are in one respect at least similar because each of these formsembodied fa ratchet and pawl mechanism. Thus the variation in the speed of the chuck drive In response to movements of the tool and the tool carrier is, in these forms. not truly stepless as in the **case** of the earlier forms because the speed accomplished by the mechanisms of Figures 4 and is in a sense astep by step change. The steps are such that for many purposes the speed change might almost be considered as being stepless but as a matter of accurate description it cannot be so described and must be considered as being accomplished by a series of steps. ` In the form of the device shown In Figure 4, instead of the speed control cam plate I9 shown in Figures 1 and



International class (IPC 8-9): B23Q15/10 (Advanced/Invention);
B23Q15/007 (Core/Invention)
International class (IPC 1-7): B23Q5/16
CPC: B23Q15/10 Y10T82/2535 Y10T82/2556
European class: B23Q15/10
US class: 82/134 82/144
Family:

Publication number	Pub. date	Application number	App. date
US2088948 A	19370803	US19360067637	19360307

Priority: US19360067637 19360307;

Assignee(s): (std): LINK BELT CO
Assignee(s): LINK BELT COMPANY
Inventor(s): (std): ROBERT CRZELLITZER
Inventor(s): CRZELLITZER ROBERT

Legal status (INPADOC)

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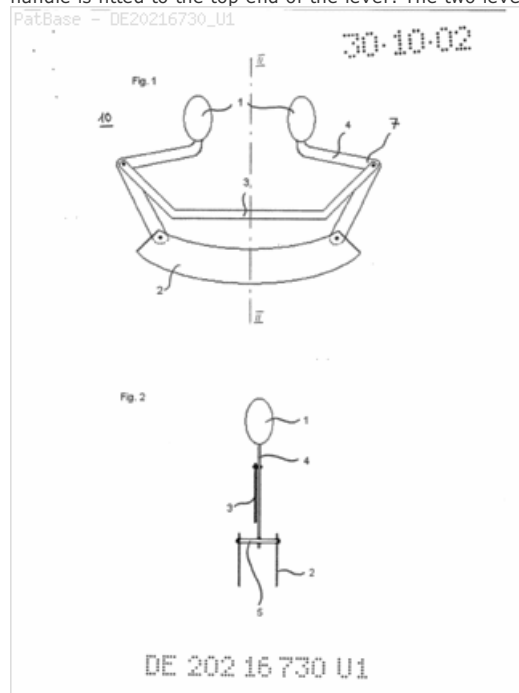
Patent	Date recorded	Event group	Code	Event	Details
US2088948 A	19370803	LSGT	+	granted / extensions (spc, cpc, pte)	

35) Family number: 28402208 (DE20216730U1)

Title: CHOPPER KNIFE FOR CHOPPING MEAT, VEGETABLES ETC. HAS HANDLE LINKED TO CUTTER BY PIVOTED CONNECTING ELEMENTS
WIEGEMESSER

Abstract:

Source: DE20216730U1 The chopper knife has at least one outwardly curved **cutter** (2) and at least one pivoted handle (1). The handle is linked to the **cutter** by pivoted connecting elements. There is at least one connecting lever (4) pivoted to each outer end region of the **cutter**. The handle is fitted to the top end of the lever. The two levers are pivoted to each other by a connecting part (3).



International class (IPC 8-9): B26B3/04 (Advanced/Invention);

B26B3/00 (Core/Invention)

International class (IPC 1-7): A47J17/00 B26B3/04

CPC: B26B3/04

European class: B26B3/04

Family:

Publication number	Pub. date	Application number	App. date
DE20216730 U1	20030306	DE20022016730U	20021029

Priority: DE20022016730U 20021029;

Assignee(s): (std): FOERNER MICHAEL

Legal status (INPADOC)

[View legal status timeline](#)

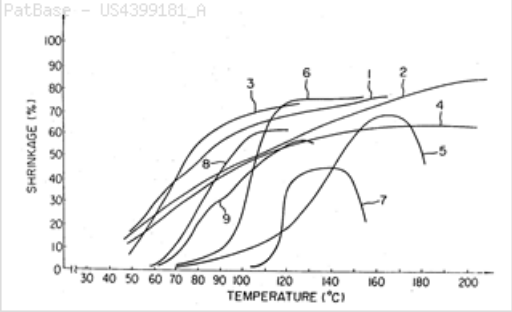
Patent	Date recorded	Event group	Code	Event	Details
DE20216730 U1	20030306	LSGT	+	granted / extensions (spc, cpc, pte)	
DE20216730 U1	20030410	LSGT	R207	UTILITY MODEL SPECIFICATION	EFFECTIVE DATE : 20030410
DE20216730 U1	20060817	LSLE	-R156	LAPSE OF IP RIGHT AFTER 3 YEARS	EFFECTIVE DATE : 20060503

36) Family number: 29320505 (US4399181A)

Title: COLD DRAWN HIGH-ORIENTATION MULTILAYERED FILM AND PROCESS FOR MANUFACTURE OF SAID FILM

Abstract:

Source: US4399181A A high-orientation multilayered film incorporates at least one cold drawn, highly oriented resin layer excellent in mechanical strength and suitable mainly for use as packaging material. Because of its specific stratal construction which is highly adaptable to afford a wide variety of specific functions, the composite film is suitable for manufacture of thermally shrinkable films which excel in transparency and in ability to shrink rapidly particularly at low temperatures. Also disclosed is a process for drawing at specific low temperatures at high expansion ratios the aforementioned multiplicity of resin layers either all by themselves or in conjunction with layers of other resins by utilizing the cold drawability of the aforementioned resin layers excelling in mechanical strength.



International class (IPC 8-9): B29C49/00 B29C55/00 B29C55/02 B29C55/12 B29C55/26 B32B27/08 B32B27/28 B32B27/30 B32B27/32 C08J7/04 (Advanced/Invention); B29K105/02 B29K23/00 B29L9/00 (Advanced/Non-invention); B29C49/00 B29C55/00 B29C55/02 B29C55/12 B32B27/08 B32B27/28 B32B27/30 B32B27/32 C08J7/00 (Core/Invention)
International class (IPC 1-7): B29C55/12 B29C55/26 B29D7/20 B29D7/24 B29D9/00 B29D9/02 B29K105/02 B29K23/00 B29L9/00 B32B1/08 B32B27/08 B32B27/28 B32B27/30 B32B27/32 B65D65/40 B65D75/20 C08L23/08
CPC: Y10S428/91 B29K2023/083 C08J7/042 C08J2323/06 B32B27/08 B29C55/023 B29K2023/06 B29K2096/005 C08J2323/02 C08J2467/02 Y10T428/2495 Y10T428/26 Y10T428/269 Y10T428/31725 Y10T428/31743 Y10T428/31746 Y10T428/31797 Y10T428/31801 Y10T428/31855 Y10T428/31909 Y10T428/3192
European class: B29C55/02B B32B27/08 C08J7/04 L29K23/06 L29K23/08B L29K96/00B
US class: 156/244.24 428/213 428/332 428/339 428/474.4 428/475.8 428/476.1 428/483 428/484 428/484.1 428/500 428/515 428/518 428/910
Family:

Publication number	Pub. date	Application number	App. date
AU197953911 A1	19800626	AU19790053911	19791217
AU533447 B2	19831124	AU19790053911	19791217
DE2950953 A1	19800703	DE19792950953	19791218
DE2950953 C2	19930506	DE19792950953	19791218
DE2954467 A1	19850711	DE19792954467	19791218
DE2954467 C2	19910801	DE19792954467	19791218
FR2444552 A1	19800718	FR19790030940	19791218
FR2444552 B1	19840309	FR19790030940	19791218
GB2037660 A1	19800716	GB19790043474	19791218
GB2037660 B2	19830216	GB19790043474	19791218
IT1126583 A	19860521	IT19790028092	19791218
IT7928092 A0	19791218	IT19790028092	19791218
JP1020136 A2	19890124	JP19880067080	19880323
JP1047311 B4	19891013	JP19790025642	19790307
JP1528129 C3	19891030	JP19780154966	19781218
JP1665223 C3	19920519	JP19790025642	19790307
JP1673117 C3	19920612	JP19880067080	19880323
JP3041347 B4	19910621	JP19880067080	19880323
JP55082648 A2	19800621	JP19780154966	19781218
JP55118859 A2	19800912	JP19790025642	19790307
JP62027981 B4	19870617	JP19780154966	19781218
JP64020136 A2	19890124	JP19880067080	19880323
NL189499 B	19921201	NL19790009097	19791217
NL189499 C	19930503	NL19790009097	19791217
NL7909097 A	19800620	NL19790009097	19791217
US4399181 A	19830816	US19810326062	19811130
US4430377 A	19840207	US19830459985	19830121
US4430378 A	19840207	US19830460012	19830121
US4469752 A	19840904	US19830559462	19831208
US4469753 A	19840904	US19830559463	19831208
US4472228 A	19840918	US19830559461	19831208
US4501634 A	19850226	US19830548018	19831101

Priority: DE19792950953 19791218; JP19780154966 19781218; JP19790025642 19790307; JP19880067080 19880323; US19810326062 19811130; US19790103949 19791214; US19810316101 19811028; US19790103944 19791214; JP20030496678 19781218; US19830548018 19831101;

Cited documents: US4161562 A, US4112181 A, US4082877 A, US3908070 A, US3847728 A, US3682767 A, US3579416 A, US3524795 A, US3375126 A, JP52132994 A2, JP52104585 A2, JP51150560 A2, JP51020969 A2, JP50096671 A2, JP50065585 A2, JP50010371 A2, JP43026111 A2, GB1070514 A, FR2375984 A1, FR2314212 A1, FR2295840 A1, FR2265540 A1, FR2256203 A1, DE2608112 A1, DE2223720 A1, DE2129358 A1, DE2049226 A1, **Assignee(s):** (std): ASAHI CHEMICAL IND ; ASAHI DOW LTD ; ASAHI KASEI CORP ; KANEKO TAKESHI ; ASAHI KASEI KOGYO K K OSAKA JP **Assignee(s):** ASAHI KASEI KOGYO KABUSHIKI KAISHA TE OSAKA JAPAN ; ASAHI KASEI KOGYO TE OSAKA JAPAN KK ; ASAHI CHEM IND CO LTD ; ASAHI KASEI KOGYO KK ; ASAHI KASEI KOGYO K K ; ASAHI DOW TE TOKIO LTD ; ASAHI DOW LIMITED ; ASAHI DOW LIMITED TE TOKIO **Inventor(s):** (std): HIDEO HATA ; ISAO YOSHIMURA ; JUNICHI KAGEYAMA ; KAGEYAMA JUNICHI KAWASAKI KANAGAWA JP ; OSAMU MIZUKAMI ; TAKESHI KANEKO ; YOSHIMURA ISAO ; YOSHIMURA ISAOH ; MIZUKAMI OSAMU ; KANEKO TAKESHI ; KANEKO TAKASHI ; KANEKO KOUJI ; KANEKO KOJI ; KAGEYAMA JUNICHI ; KAGEYAMA JIYUNICHI ; ISAO YOSHIMURA ; HATAKE HIDEO ; HATA HIDEO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU197953911 A1	19800626	LSPB	+	published / reissued	
AU533447 B2	19831124	LSGT	+	granted / extensions (spc, cpc, pte)	
DE2950953 A1	19800703	LSPB	+	published / reissued	

DE2950953 A1	19820902	LSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE2950953 A1	19840216	LSAS	8127	NEW PERSON/NAME/ADDRESS OF THE APPLICANT	OWNER NAME : ASAHI KASEI KOGYO K.K., OSAKA, JP
DE2950953 A1	19930506	LSGT	+D2	GRANT AFTER EXAMINATION	
DE2950953 A1	19931104	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE2950953 A1	20000210	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE2950953 C2	19930506	LSGT	+	granted / extensions (spc, cpc, pte)	
DE2954467 A1	19850711	LSPB	+	published / reissued	
DE2954467 C2	19910801	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2444552 A1	19800718	LSPB	+	published / reissued	
FR2444552 A1	19840127	LSAS	TP	TRANSMISSION OF PROPERTY	
FR2444552 A1	19990924	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2444552 B1	19840309	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2037660 A1	19800716	LSPB	+	published / reissued	
GB2037660 A1	19830216	LSGT	+PG	PATENT GRANTED	
GB2037660 A1	19990811	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 19981218
GB2037660 B2	19830216	LSGT	+	granted / extensions (spc, cpc, pte)	
IT1126583 A	19860521	LSGT	+	granted / extensions (spc, cpc, pte)	
IT1126583 A	19991027	LSFE	TA	FEE PAYMENT DATE (SITUATION AS OF PRS-DATE), DATA COLLECTED SINCE 19931001	EFFECTIVE DATE : 19961227
JP1020136 A2	19890124	LSPB	+	published / reissued	
JP1047311 B4	19891013	LSPB	+	published / reissued	
JP1528129 C3	19891030	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1665223 C3	19920519	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1673117 C3	19920612	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3041347 B4	19910621	LSPB	+	published / reissued	
JP55082648 A2	19800621	LSPB	+	published / reissued	
JP55118859 A2	19800912	LSPB	+	published / reissued	
JP62027981 B4	19870617	LSPB	+	published / reissued	
JP64020136 A2	19890124	LSPB	+	published / reissued	
NL189499 B	19921201	LSPB	+	published / reissued	
NL189499 B	19820901	LSES	+BA	A REQUEST FOR SEARCH OR AN INTERNATIONAL-TYPE SEARCH HAS BEEN FILED	
NL189499 B	19830601	LSES	BB	A SEARCH REPORT HAS BEEN DRAWN UP	
NL189499 B	19830801	LSES	+BC	A REQUEST FOR EXAMINATION HAS BEEN FILED	
NL189499 B	19831216	LSAS	CNR	TRANSFER OF RIGHTS (PATENT APPLICATION AFTER ITS LAYING OPEN FOR PUBLIC INSPECTION)	DESCRIPTION : ASAHI KASEI KOGYO KABUSHIKI KAISHA
NL189499 B	19990901	LSLE	-V1	LAPSED BECAUSE OF NON-PAYMENT OF THE ANNUAL FEE	EFFECTIVE DATE : 19990701
NL189499 C	19930503	LSGT	+	granted / extensions (spc, cpc, pte)	
NL7909097 A	19800620	LSPB	+	published / reissued	
US4399181 A	19830816	LSGT	+	granted / extensions (spc, cpc, pte)	

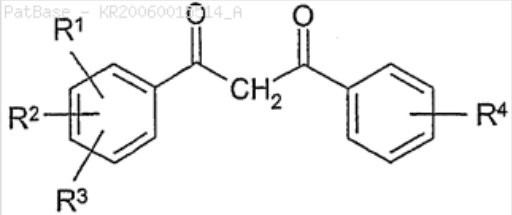
US4399181 A	19830616	LSGT	PAT1	Patented Case	
US4399181 A	19830919	LSAS	AS	ASSIGNMENT	OWNER NAME : ASAHI KASEI KOGYO KABUSHIKI KAISHA, 2-6, DOJIMAHAM DESCRIPTION : MERGER; ASSIGNOR:ASAHI -DOW LIMITED; REEL/FRAME:004194/0862 EFFECTIVE DATE : 19830804
US4399181 A	19840410	LSRE	CC	CERTIFICATE OF CORRECTION	
US4399181 A	19870205	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4399181 A	19901029	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4399181 A	19950130	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4430377 A	19840207	LSGT	+	granted / extensions (spc, cpc, pte)	
US4430377 A	19830919	LSAS	AS	ASSIGNMENT	OWNER NAME : ASAHI KASEI KOGYO KABUSHIKI KAISHA, 2-6, DOJIMAHAM DESCRIPTION : MERGER; ASSIGNOR:ASAHI -DOW LIMITED; REEL/FRAME:004194/0862 EFFECTIVE DATE : 19830804
US4430377 A	19831208	LSGT	PAT1	Patented Case	
US4430377 A	19870803	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4430377 A	19910731	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4430377 A	19950724	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4430378 A	19840207	LSGT	+	granted / extensions (spc, cpc, pte)	
US4430378 A	19830919	LSAS	AS	ASSIGNMENT	OWNER NAME : ASAHI KASEI KOGYO KABUSHIKI KAISHA, 2-6, DOJIMAHAM DESCRIPTION : MERGER; ASSIGNOR:ASAHI -DOW LIMITED; REEL/FRAME:004194/0862 EFFECTIVE DATE : 19830804
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US4430378 A	19870803	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4430378 A	19910731	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4430378 A	19950724	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4469752 A	19840904	LSGT	+	granted / extensions (spc, cpc, pte)	
US4469752 A	19840706	LSGT	PAT1	Patented Case	
US4469752 A	19880216	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4469752 A	19920218	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4469752 A	19960220	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4469753 A	19840904	LSGT	+	granted / extensions (spc, cpc, pte)	
US4469753 A	19840706	LSGT	PAT1	Patented Case	
US4469753 A	19880216	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4469753 A	19920218	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4469753 A	19960220	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

US4472228 A	19840918	LSGT	+	granted / extensions (spc, cpc, pte)	
US4472228 A	19840718	LSGT	PAT1	Patented Case	
US4472228 A	19880216	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4472228 A	19920304	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4472228 A	19960304	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4501634 A	19850226	LSGT	+	granted / extensions (spc, cpc, pte)	
US4501634 A	19841221	LSGT	PAT1	Patented Case	
US4501634 A	19880721	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4501634 A	19920812	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4501634 A	19960815	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

37) Family number: 31169433 (US2006210500A)
Title: FORMULATIONS

Abstract:

Source: US2006210500A The present invention relates to formulations for topical applications comprising pigments obtainable by agitating a suspension comprising one or more inorganic pigments and silver oxide, in order to reduce undesirable side effects caused by microorganisms.



International class (IPC 8-9): A01N59/16 A61K33/30 A61K33/32 A61K33/34 A61K33/38 A61K33/42 A61K47/02 A61K47/04 A61K8/04 A61K8/19 A61P1/02 A61P31/04 A61P31/22 A61Q1/02 A61Q11/00 A61Q15/00 A61Q17/00 A61Q19/00 A61Q5/00 C09B67/22 C09C1/00 C09C3/06 C09D11/00 C09D11/02 C09D201/00 C09D5/14 (Advanced/Invention); C09B67/22 (Advanced/Non-invention); A61K33/32 A61K33/38 A61K33/42 A61K8/19 (Core/Invention)
International class (IPC 1-7): A01N59/16 A61K7/48 A61K8/18 C09C0/00 C09C1/00 C09C3/06 C09D11/00 C09D11/02
CPC: A61K8/0241 A61K45/06 A61K2800/43 A61K2800/621 A61Q1/02 C01P2004/20 C01P2006/62 C01P2006/63 C01P2006/64 C09C1/0015 C09C1/3054 C09C3/06 C09C3/063 C09C2200/1004 C09C2200/102 C09C2200/1087 C09C2200/302 C09C2200/303 C09C2200/304 C09C2200/505 C09D5/14 C09D11/037 A61Q5/006 A61K8/19 A61K9/0014 A61K9/1611 A61K33/30 A61K33/34 A61K33/38 A61Q15/00 A61Q17/005 C09B67/006
European class: A61K33/30 A61K33/34 A61K33/38 A61K45/06 A61K8/02A A61K8/02N A61K8/04H A61K8/19 A61K9/00M3 A61K9/16H2 A61Q1/02 A61Q15/00 A61Q17/00 A61Q17/00F A61Q19/00 A61Q5/00 A61Q5/00F C09C1/00F C09C1/30D6B C09C3/06 C09C3/06B C09D11/037 C09D5/14 K61K201/021 K61K800/43 K61K800/621 M01P4/20 M01P6/62 M01P6/63 M01P6/64 M09C200/10B M09C200/10D M09C200/10N M09C200/30D M09C200/30F M09C200/30H M09C200/50D
US class: 424/603 424/603P 424/618 424/618S 424/63 424/638 424/638S 424/63P 424/641 424/641S
Family:

Publication number	Pub. date	Application number	App. date
AU2004230567 AA	20041028	AU20040230567	20040324
BRPI0409420 A	20060425	BR2004PI09420	20040324
CN1777653 A	20060524	CN200480010427	20040324
CO5660298 A2	20060731	CO20050105366	20051014
ECSPO56163 A	20060419	EC2005SP06163	20051115
EP1633818 A2	20060315	EP20040722815	20040324
EP1635771 A2	20060322	EP20040722810	20040324
JP2006523628 T2	20061019	JP20060504828T	20040324
JP2006523735 T2	20061019	JP20060504829T	20040324
KR20060015514 A	20060217	KR20057019840	20040324
MXPA05011104 A1	20051212	MX2005PA11104	20040324
TW200427788 A	20041216	TW20040110530	20040415
US2006210500 AA	20060921	US20040553671	20040324
US2006246149 AA	20061102	US20040553668	20040324
WO04091567 A2	20041028	WO2004EP03090	20040324
WO04091567 A3	20050120	WO2004EP03090	20040324
WO04092283 A2	20041028	WO2004EP03091	20040324
WO04092283 A3	20050120	WO2004EP03091	20040324

Priority: US20030463726P 20030418; US20050553668 20051017; US20050553671 20051017; WO2004EP03090 20040324; WO2004EP03091 20040324;

Cited documents: WO9415462 A1, WO9304665 A1, WO0072806 A2, WO0071084 A1, WO0009652 A2, US7250174 BB, US7045007 BB, US6489018 BB, US6482397 BA, US6372236 BA, US6274124 BA, US6030627 A, US5503840 A, US5503640 A, US5180585 A, US4906466 A, US4375373 A, US2885366 A, US2004177788 AA, US2003157138 AA, JPH01268764, JP8040830 A2, JP7109217 A2, JP60174707 A2, JP2268104 A2, JP2268103 A2, JP2006213735 A2, JP2004161632 A2, JP2003136054 A2, JP2003089758 A2, JP1268764, JP10045562 A2, FR2440933 A1, FR2326405 A1, EP0677989 A1, EP0665004 A2, EP0487404 A1, EP0427858 A1, EP0251783 A2, EP0190504 A2, EP0114607 A1, DE10232595 A1,
Assignee(s): (std): BICARD BENHAMOU VALERIE ; BRUNNER MARCUS ; BRUNNER MARKUS ; BUCHHOLZ HERWIG ; MEDUSKI JERZY ; MERCK PATENT GMBH
Assignee(s): MERCK PATENT GES MIT BESCHRANKTER HAFTUNG ; MERCK PATENT GESELLSCHAFT MIT BESCHRANKTER HAFTUNG ; MERCK PATENT GESELLSCHAFT MIT BESCHRAENKTER HAFTUNG ; MERCK PATENT GES MIT BESCHRAENKTER HAFTUNG ; MERCK PATENT G M B H
Inventor(s): (std): BICARD BENHAMOU VALERIE ; BRUNNER MARCUS ; BRUNNER MARKUS ; BUCHHOLZ HERWIG ; HERWIG BUCHHOLZ ; JERZY MEDUSKI ; MARCUS BRUNNER ; MEDUSKI JERZY ; VALERIE BICARD BENHAMOU
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2004230567 AA	20041028	LSPB	+	published / reissued	
AU2004230567 AA	20080103	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
BRPI0409420 A	20060425	LSPB	+	published / reissued	
BRPI0409420 A	20080902	LSRV	-B11A	DISMISSAL ACC. ART.33 OF IPL - EXAMINATION NOT REQUESTED WITHIN 36 MONTHS OF FILING	
BRPI0409420 A	20090414	LSRV	-B11Y	DEFINITIVE DISMISSAL ACC.	

				ARTICLE 33 OF IPL - EXTENSION OF TIME LIMIT FOR REQUEST OF EXAMINATION EXPIRED	
CN1777653 A	20060524	LSPB	+	published / reissued	
CN1777653 A	20060524	LSPB	+C06	PUBLICATION	
CN1777653 A	20120627	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CO5660298 A2	20060731	LSPB	+	published / reissued	
CO5660298 A2	20070226	LSWD	-FA	APPLICATION WITHDRAWN	
ECSP056163 A	20060419	LSPB	+	published / reissued	
EP1633818 A2	20060315	LSPB	+	published / reissued	
EP1633818 A2	20060315	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050817
EP1633818 A2	20060920	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20060818
EP1633818 A2	20120328	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20111001
EP1635771 A2	20060322	LSPB	+	published / reissued	
EP1635771 A2	20060322	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050817
EP1635771 A2	20060913	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20060406
EP1635771 A2	20120523	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20111001
JP2006523628 T2	20061019	LSPB	+	published / reissued	
JP2006523628 T2	20070323	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070322
JP2006523628 T2	20070323	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070322
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US2006246149 AA	20051017	LSAS	AS	ASSIGNMENT	OWNER NAME : MERCK PATENT GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BUCHHOLZ, HERWIG; BICARD-BENHAMOU, VALERIE; BRUNNER, MARCUS; AND OTHERS; REEL/FRAME:017885/0776 EFFECTIVE DATE : 20050926
US2006246149 AA	20110620	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
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38) Family number: 39295659 (FI6023A)

Title: Tagskyddsapparater

Abstract:

Source: FI6023A mikä oh »»,sisua laita kaikissa laadintamuodoissa paitsi kuv- XV ja XVI osoitetuissa, aikaansaadaan tämä. varustamalla raidekoskettimet tarpeeksi pitkillä laiteilla päitä varten, joiden avulla tangon lo2 nostaminen ta- pahtuu, ja käyttämällä raideaitteita, joilla on vastaava sopiva herkkyys. Jos tahtfbtaan käyttää keksintö sähköön avulla käytettävien junien yhte- ydessä saattaa tämä tapahtua käyttämällä kiskoja varm.uusliitt.ee» toimin- nassa samalla tavalla kuin yllä on selitetty, samalla kun sähköliikevoima Jjjhileiaan junaan tunnettuun tapaani, jolloin niitä kiskoja, jotka muodos- tavat raiteen toisen sivun, käytetään yhteisenä takaisin vievänä johtona liikevoimaa ja varmuuslaitetta varten käytettäviä virtaa varten, kun 'sitä vastoin ne kiskot, jotka muodostavat raiteen toisen sivun, jaetaan tois- taan eristettyihin kiskopituuksii» eristävien yhdisteiden avulla, kuten yllä.on selitetty. Yhteisen takaisin vievän johdon asemesta käyttövoimaa ja varauuslalten virtaa varten voidaan käyttää erityistä takaisin vievää johtoa käyttövoimaa varten. Virtapiirin junassa oleva osa käyttövoiman virtaa varten sovitetaan kaikissa tapauksissa sitea että sen saattaa kat- kaista jokin liikkuva orgaani, kuten esim. salpa 99* Jolloin ju»a pysähtyy, lienee selvää, että kuv. II, III, IX ja X osoitettujen laitelde» avul- la ja kuvassa VIII osoitetun muunnetun laadint-muodon avulla käy junalle *ahdolliseksi tullessaan merkinantovälyksee», mikä saattaa olla paljon pi- sempi kuin mikä aikaisemmin on osoittautunut tarkoituksenmukaiseksi, tar- kistaa merkinantovälyksen. varmuutta yksinkertaisen raidekoskettimen avulla raideroleessi tapahtuvan lyhytsulkemuksen takia, jos raiteella on liikku- vaa kalustoa. Tämä aikaansaadaan käyttämällä alaostastoja, joista kuki» on varustettu omalla raideroleelli, ja käyttämäni semmoista laitetta, että raiderel-eessä tapahtuva lyhyt sulk emu s aikaansaa sen, että virta tulee kulkemaan laitteiden kautta junassa, joka on raidekoskettimen yhteydessä merkinantovälyksee»-päässä. Kaikissa rakenmemuodoissa poikkeuksella kuiten- kin mitä niihin muunnettuihin muotoihin tulee, mitkä ovat merkityt pilku- tetuilla viivoilla kuvassa Vili ja X, päättyy lyhytsulkemuks riittämättö- män virran synnyttämiseen, ja sanotuissa laadiatamuodoissa siihen että määrätty virta jää muodostumatta. Patenttivaatimus. 1. Junanvaraarüsiaitos, johon kuuluu junassa ja raiteella käytettäviä laitteita, joide» avulla Juna itsetoimivasti ja sähköiteitse saattaa itse suojata itseään, tunnettu siitä, että.juna saa varoittavan merkin tai py- säytettäfi, saa varoittavan merkin ja senjälkeen pysäytetään tai saa va- roittavan merkin ja pysäytetään samaan aitaan, tai että sanottu jünan- varmuuslaite ohjaa jarruja,.ja vaaran sattuessa panee ne toimintaan, mitä kaikki tapahtuu automaattisesti Milloin tahansa junan edessä olevassa radan merkinantovälykessä on pallooiltaan siirtynyt tai katkennut kisko, tai jos tällä välimatkalla löytyy muu juna tai muuta liikkuvaa kalustoa »itä laatuja tahansa, tai jos siinä on raiteevaihteita, joita juna ei saa- ta kulkea,..Aal junan nopeus on liian suuri eräissä radan kohdissa; jol- loin Junan varmuuilaif(R) toimii virheellisistä ohjauksitta tai joissakin. laitteen osissa esiintyvistä puutteellisuuksista huolimatta. 2. Junanvarmuuslaite patenttivaatimuksessa 1 mainittua lajia, jossa va- roittava tai pysäyttävä laite joutuu toimintaan, milloin tahansa junassa olevaan orgaaniin vaikuttaa raidekosketin siten,että sanottu varoittava tai pysäyttävä laite, mikä säännöllisesti oloista pidetään teljetynä, pääsee vapaaksi, jos ei tätä estä junasta olevan tarkistavan laitteen kautta kulkevan vahvan virran muodostuminen, tunnettu siitä, et- tä varoittava tai pysäyttävä vaikutus tulee Junassa ehkäittyksi, kun tämä tulee raidekoskettimen 1 tai 2 yhteyteen, junan kautta kulkevan~tarpeek- si vahvan virran avulla, jota virtaa tarkistaa koeaähkömagneettina vai- kuttava laite 1210, 210 tai 380 itse raiteella, ja minkä virtapiiri sul- keutuu junaa raiteella olevan generaattorin 32, 212 tai 377 kautta,, kun tämä juna on raidekoskettimen yhteydessä, jolloin lyhytsulkemu» sanotus- sa laitteessa 1210, 210 XII tai 380, minkä raiteella oleva rautatievaunu tai sentapainen aikaansaa, estää sanotun tarpeeki vahvan virran muodos- tumisen (kuv. II, III, Vili, IX ja X). 3. Junanvarmuuslaite patenttivaatimuksessa 2 mainittua lajia, tunnet- tu siitä, että juna, kun se tulee raidekoskettimen 1 tai 2 yhteyteen, aluksi synnyttää virran, Joka ei ole tarpeeksi vahva ehkäisemään varoit- tavaa tai pysäyttävää toimintaa ja luikä menee junassa olevan tarkistavan laitteen sekä r*ideroleen (25.26 tai 223 tai 371 tai 393) kautta, minkä jälkeen tarkistavan laitteen kautta kulkeva virta vahvistuu, jo» se mer- kinantovälyys (B,C,D,E,P tai B,C,E,F tai X), johon raiderolee kuuluu, ei ole toimessa, tarvittavaan vahvuuteen koesähkömagneettina vaikuttavan raiteella olevan laitteen 1210, 210 tai 380 ollessa yhteistoiminnassa; jos sitä vastoin tämä viiiceisiaainittu laite ei tule aagnetisoiduksi syys- tä että se on joutunut lyhytsulkemuksen alaiseksi raiteella olevan rauta- tievaunun tai sentapaisen tai johdoissa olevien katkelmien takia, jää sa- nottu virta alkuperäiseen riittämättömään vahvuuteensa. 4. Junanvarmuuslaite patenttivaatimuksissa 1-3 mainittua lajia, jossa varoittava tai pysäyttävä laite joutuu toimintaan, milloin tahansa junas- sa olevaan orgaaniin vaikuttaa raidekosketin siten, että sanottu varoit- tava tai pysäyttävä lait*, mitä säännöllisesti pidetään teljetynä, jIIIS pääsee vapaaksi, Jos ei tätä estä junassa olevaa tarkistavan laitteen kautta kulkevan tarpeeksi vahvan tarkistavan virran muodostuminen, tun- nettu siltä.* että juna, kun se tulee merkinantovälyksen edessä olevan rai- -leXoskettimen 1 tai 2 yhteyteen, muodostaa virran määrättyyn suuntaan po- larisoida releen 16 tai 216 kautta, mikä aikaansaa »en, että tarkista- van virran vahvuus riippuu siltä, josko merkinatovälykessä on rautatie- vaunu tai sentapainen, mikä aiheuttaa lyhytsulkemuksen virrantarkistus- laitteessa 1210 tai 210, jolloin juna, kun se matkallaan vastakkaiseen suuntaan tules jonkun samotuista raiaekoskettinistä yhteyteen, sittenkun se on jättänyt merkinantovälyksen, synnyttää virran vastakkaiseen suun- taan polarisoidun raideroleen kautta, jolloin tarkistava virta saavuttaa oikean vahvuuden riippumatta sanotun merkinantovälyksen tilasta /kuu. II ja HI/. 5. Junanvarmuuslaite patenttivaatimuksessa 4 mainittua lajia, tunnet- tu siitä, että, kun juna ajaa merkinantovälyksee raidekoskettimen 1 tai 2 yli, polarisoidun raideroleen 16 tai 216 ankuri 15 17 tai 217 »lirtyy eemmoiseen asentoon, että virta menee erään toisen raideroleen 25, 26 tai 223 kautta jolloin tarkistavan virran vahvuus tulee riippuvaksi siltä, josko merkinantovälykessä on rautatievaunu tai sentapainen, joka saattaa synnyttää lyhytsulkemuksen virtaa tarkistavassa laitteessa 2 1210 tai 210, jolloin polarisoidun raideroleen 16 tai 216 ankuri 17 tai 217 katkaisee toisen releen 25, 26 tai 223 virtapiiriin, kun Juna matkallaan vastakkaiseen suuntaan tulee jonkun sanotuista raidekoskettimista yhtyhteen, sittenkun se on jättänyt merkinantovälyksen, mikä katkaisu aikaansaa sen, että tar- kistava(saavuttaa oikeaa vahvuutensa riippumatta sanotun merkinantovälyk- sen tilasta. 6. Junanvarmuuslaite patenttivaatimuksissa 3 Ja 4 tai 3 Ja 5 mainit- tua lajia, tunnettu siitä, että Juna, kun se kulkee raidekoskettimen kautta »erkinantovälykseen päin, synnyttää riittämättömän virran polari- soidun raideroleen 16 tai 216 kautta määrättyyn suuntaan, minkä jälkeen junassa olevan tarkistavan laitteen kautta kulkeva virta lisääntyy vah- vuudessa siksi kunnes se tulee riittävän vahvaksi, jos vain virtaatar- kistava, sähkömagneettina vaikuttava laite 1210 tai 210 raiteella on tullut »agnetisoiduksi, samalla kun alkuperäinea, riittäBä,t.öa virta kul- kee raideroleen 16 tai 216 kautta vastakkaiseen suuntaan, kun juna mat- kallaan vastakkaiseen suuntaan jättii merkinantovälyksen samaa raidekos- kettimen kautta, Ja junassa olevan tarkistavan laitteen kautta kulkeva virta kasvaa*tämän takia tarpeelliseen vahvuuteen riippumatta »anotusta raiteella olevasta, sähkömagneettina vaikuttavasta laitteesta. ,7. -Junsdivarmuuslaite* pateattivaatimuksessa 3 tai 6 mainittua lajia, tukittu siitä, «ttä virranvoiman suureneminen aikaansaadaan raideroleen 25, 26 tai 223 tai 371 avulla, joka kytkee virtapiiriin raiteella olevan generaattoria 32, 212 tai 383, »itä seaj ilkeea toimii sarjassa tea gene- raattoria 5, 303, 370 tai 610 kanssa, joka synnyttää alkuperäisen, riit- tämättömin virran (kuv. I, 11, Hi, IV, Vili ja XVI). 8. Junanvarmuuslaite patenttivaatimuksissa 6 ja 7 mainittua lajia, tunnettu siitä, että, jos virta myöhemmin virtapiiriin kytketystä gene- raattorista 32 tai 212 menee vastakkaiseen suuntaan alkuperäiseen, riit- tämättömään virtaan aalidea, automaattisesti vaikuttavissa laitteissa »iiiatyvlea virheellisyyksien takia, muodostunut virta ei saata junassa olevan tarkistavan laitteen avulla ehkäistä varoittavaa tai pysäyttävää vaikutusta, kun juna on raidekoskettimen yhteydessä. 9. Junanvarmuuslaite patenttivaatimuksessa 3 tai 6 mainittua lajia, tunnettu siitä, että raidegeneraattoria 32 tai 212,jota käytetään toimi- »aan ss generaattoria 5 tai 303 yhteydessä, joka synnyttää alkuperäisen, riittämättömän virran, samalla käytetään raiteella olevaa, sähkömagneet- tina vaikuttavan laitteen 1210 tai 210 magnetisointia. 10. Junanvarmuuslaite patenttivaatimuksessa 3 tai 6 mainittua lajia, tunnettu siitä että virranvoiman suureneminen aikaansaadaan yhdistämällä se osa vastuksista virtapiiriin junassa olevan tarkistavan laitteen kaut- ta kulkevaa virtaa varten, mikä on raiteella, mikä vähennys aikaansaadaan koe-sähkömagneettina vaikuttavan laitteen 380 (kuv. IX ja x) avulla. 11. Junanvarmuuslaite patenttivaatimuksessa lo mainittua lajia, tun- nettu siitä, että vastuksen vähennys aikaansaadaan ko e s ahkomagne et1laa vaikuttavan laitteen avulla vaihtamalla se osa alkuperäistä riittämätön- tä virtaa varten 15 ajiotusta virtapiiristä, mikä on raiteella (kuv. IX ja X). 12. Junanvarmuuslaite patenttivaatimuksessa l mainittua lajia, jos- sa varoittava tai pysäyttävä vaikutus Joutuu toimialaan, milloin tahan- sa junassa olevaan orgaaniin vaikuttaa raidekosketin siten, että sanottu varoittava tai pysäyttävä ialt«, aika säännöllisesti pidetään teljetynä, pääsee vapaaksi, joi ti tätä estä Junassa olevan tarkistavan laitteen kautta kulkevan virran muodostumina», tunnettu siitä, »ttä varoittava tai pysäyttävä vaikutu* junassa tule« ehkäistyksi raiteella olevan gene- raattorin 392 kautta kulkevan virran avulla, kun juna öä raidekosketti- aen yhteydessä, jota generaattoria myöskin käytetään yksinoanaan ralteel- la olevaa virtapiiriä kautta magnetisoinaan koesähköaagneettiaa vaikutta- vää laitetta. 380, jos lyhytsulkeaus raiteella olevan rautatievaunun tai sentapaista avulla estää sanotun, ehkäisevää, virraa läpikulua, aika seu- raan koesähkömagneetin kanssa yhdensuuntaisesti sisääkakytkettyä virta- piiriä (kuv. i). 13. Junanvarauuslaite patenttivaatimuksessa 12 mainittua lajia, tun- nettu siitä, että raiteella olevan generaattoria 392 II ja koesähköaajf- neetin 380 kautta kulkeva virtapiiri oa tavallisesti suljettu (kuv. x). 1*+. Junanvarmuuslaite patenttivaatimuksissa 1-3 mainittusi lajia, tun- nettu siitä, että, samalla kun ma kiskot 19, jotka muodostavat merkinanto- välyksen toisen sivun, ovat johtavasti yhdistetyt toisiinsa sen toisesta päästä toiseen, ae kiskot, jotka muodostavat aerkinantovälyksen toisen sivun, ovat eristävien yhdisteiden 95 avjrila erotetut pituuksiin, jotka kukin puolestaan ovat läpäensä johtavia, niin että aerkinantovälyys Jaka- utuu alaostastoihin, joilla kullakin on oma virtaa tarkistava tai koesih- köffiagneettiaa vaikuttava laitteensa 1210 ja 210 tai 380. 15* Junaavaruuslaite patenttivaatimuksessa 14 mainittua lajia, tun- nettu siitä, että ne kiskot 19, jotka muodostavat raiteen toisen sivun merkinantovälykessä, ovat johtavasti yhdistetyt toisiinsa sen toisesta päästä toiseen, samalla kun ne kiskot, jotka muodostavat raiteen toisen sivun, eristävien yhdisteiden 95 avulla ovat erotetut pituuksiin, jotka kukin erikseen ovat läpäensä johtavia, niin että aerkinatovklyys jakau- tuu alaostastoihin, joilla kullakin oa oma virtaartarkistava tai tutkiva laitteensa 1210, 210 tai 350, jolloin lyhytsulkemua tässä laitteessa rau- tievaunun tai sentapaisen avulla vastaavassa alaostastossa, kun juna on raidekoskettimen 1, 2, 3 tai 4 yhteydessä lähellä merkinantovälyksen päitä, vaikuttaa tämän raidekoskettimen ja junassa olevien laitteiden kautta kulkevaan virtaan siten, että varoittava tai pysäyttävä teho saa- taan toimintaan tässä junassa, niin että Juna sanotun raidekoskettiaen avulla saattaa tarkistaa merkinantovälyksen iXXXXXXXZSXZXXtaB kaikkien alaostastojen tilaa. üÜ. ____ 2i>. "> 16. Yhdistelmä Junalaitelista, joita käytetään vaikuttamaan raldelait- teiden yhteydessä, Joista on mainittu patenttivaatimuksissa 3, 6, 7, g, 9, lo, 11, 12, 13, 14- tai 15, ja raidevaihteiden tilaa tarkastavilta lait- teista, joiden avulla, kun juna tulee raidekoskettimen 521, 56 tai 569 yhteyteen ja raldevahdhe on oikein autettu junana, lähetetään virta, mikä on riittämätön ehkäisemään

varoittavaa ja pysäyttävää tehoa junassa, liina, olevaa tarkistavan laitteen ja raiderieleen 531 kautta, minkä avul- la junassa olevan tarkistavan laitteen kautta kulkevan virran vahvuus lisääntyy siihen.arvoon, mikä on välttämätöntä varoittavan ja pysäyttä- vän vaikutuksen ehkäisemistä varten (kuv. I, IV ja XIV). 17. Yhdistelmä junalaitteista, joita käytetään toimimaan raidelait- teiden yhteydessä, Joista on mainittu 5XX patenttivaatimuksissa 3, 6, 7, 8, 9, lo, 11, 12, 13, 11*- t'ai 15, Ja nopeutta rajoittavista laitteista, joiden avulla, kun juna tulee raidekoskettimen 602, 603 yhteyteen ja tä- mä juna ajaa nopeudella, mikä on pienempi kuin tätä raidekoskettinta var- ten edeltäkäsin määrätty nopeus,lähetetään virta, mikä on riittämätön ehkäisemään varoittavaa ja pyiäyttävää vaikutusta junassa, tässä olevan tarkistavaa laitteen Ja raiderieleen 622 kautta, jonka avulla junassa ole- van tarkistavan laitteen kautta kulkevaa virran vahvuus lisääntyy siihen arvoon, mikä on välttämätöntä varoittavan tai pysäyttävän tehon ehkäise- mistä varten (kuv. XV ja XVI). 13. Junanvarmuuslaite patenttivaatimuksessa 16 tai 17 mainittua la- jia, tunnettu siltä, että raideriele 531 tai 622 on polarisoitu, niin et- tä se, kun siihen vaikuttaa virta, minkä suunta vastaa Junan kulkusuun- ta, voidaan kytkeä raidegeneraattoriin siten, että tämä toimii sarjas- sa sen generaattorin kanssa, joka synnyttää alkuperäisen, riittämättömän vahvan virran (kuv. XIV ja XV). 19* Junanvarmuuslaite patenttivaatimuksissa 3, 6, 7, 3, 9, lo, 11, 12, 13, 14- tai 15 mainittua lajia, tunnettu siltä, «ttä se generaattori 5, 303 tai 610, joka synnyttää enslmäisen, riittämättömän vahvan virran, on sovitettu junaan, ja että yastuksien suuruus raiteessa olevaassa vir- tapiiriin osassa ensimmäistä, riittämättömän vahvaa virtaa varten on sem- moinen, että lyhytsulkemus, joka estää virran sanotusta generatorista kulkemasta raidelaitteiden kautta oikealla tavalla (se on kosketinkengän 14- ja veturin konetelineen välinen lyhytsulkemus) ei aikaansaa, että sa- notun generaattorin synnyttämän virran voima saisi semmoisen arvön, että varoittava tai pysäyttävä vaikutus semkautta tulisi estetyksi. 20. Junanvarmuuslaite patenttivaatimuksissa 1-19 mainittua lajia, tunnettu liiti, että molempien kulkusuuntia» raidekoskettimet vaikuttavat junassa olevaan yksinkertaistui orgaaniin, niin että kaikissa tapauksissa syntyy varoittava tai pysäyttävä vaikutus junasta, jos ei tämmöistä, vai- kutusta ehkäisi tarpeeksi vahvan virran muodostuminen raidekoskettimen kautta suuntaan, jotta kävitä mahdolliseksi virtapiiriin,varoittavan Ja pysäyttävän vaikutuksen ehkäisemistä varten sulkeutua. (kuv. I). 22. Junanvarmuuslaite patenttivaatimuksesta 21 mainittua lajia, tun- nettu siltä, että liikkuvien orgaanien 4-3 ja 44 asennot vastaavat valh- delatteen 8, 8 ja 55 asentoa, »ikä vaihdelaite siirtyä samaan aikaan kuin suunnanvaihtokoneistd», tai vastaavat erään toisen vaihdelaatteen 6, 7 56, 6o asentoa, jota käytetään, kun veturi muuttaa kulkusuuntaa kääntölavalla, kolmiolla, »llaalisiiilaati sentapaitelia, tai, jos molem- pia laitteita käytetään samaan aikaan, vastaavat niiden suhteellista asetelua (kuv. X). 23. Junanvarmuuslaite patenttivaatimuksena 1 mainittua lajia, jossa raidelaitteiden ja junasta olevien laitteiden oikea yhteistoiminta ta- pahtuu ainoastaan silloin kun Juna, samalla kun se tulee raidekosketti- men yhteyteen, lähettää virran raidekoskettlmen kautta kulkusuuntaa vas- taavaan tuuntaan ja valintaun kautta, joka on sovitettu veturiin ja jo- ka tekee mahdolliseksi veturinkuljettajalle »uuttaa vllrransuuntaa, tun- nettu siitä, että, tiinä tarkoitutetta, että veturinkuljettaja tulisi pakotetuksi toimittamaan tarpeellinen vaihto ennenkuin veturi ajaa vas- takkaiseen suuntaan sittenkun se on käännetty kääntölavalla, koiniolla, tai sentapaisella, näiden läheisyyteen oa sovitettu generaat- tori 703, Joka toisella navallaan on yhdistetty raidekoskettimeen 701 ja toisella navallaan raiteen kiskoihin, niin että raiteella oleva ge- neraattori 703 ei joudu junasta olevien ehkäisevien laitteiden yhteyteen varoittavan tai pysäyttävän vaikutuksen ehkäisemistä varten junasta, kun täcä tulee raidekoskettinen 701 yhteyteen, joi veturinkuljettaja ei ole oikeen toimittanut suunnanv-Ahtoa ennenkuin juna puu t# i,ilIÄ a./.. raidekoskettimeen 701 (kuv. XVII). 2H-. Junanvarmuuslaite pTxiIII patenttivaatimuksessa 23 mainittua lajia, tunnettu siltä, «ttä junassa olevia laitt*ita käytetään toimimaan patenttivaatimuksissa 3j 6» J, S, 9, lo, li, 12, 13, 1 tai 15 mainitun- * lajistien laitteiden yhteydessä, ja että raiteilla olevaa generaattoria 703 käytetään toimimaan sarjassa sen generaattorin kanssa, joka synnyt- Jt- tää ensimmäisen, riittämättömän vauvan virran, Eikä tapahtuu ainoastaan, jos'''äünnasvaihto junassa on tapahtunut oikealla tavalla (kuv. XVII). 25- Junanvarmuuslaite patenttivaatimuksissa 1-24 mainittua lajia, tun- nettu siitä, että siinä käytetään laitteita 300 tai 301 ja 30-34-3, joi- den avulla laite 51, 331, H-26 tai 64-6,, joka saattaa antaa junassa merkin siitä, että rata on kunnossa, voidaan panna toimintaan, kun raide jälleen on käyttökunnossa, sittenkun varoittava tai pysäyttävä vaikutus on tapah- tunut junassa varoitus- tai pysähdyskoskettimen vaikutuksesta ja juna on kulkenut sanotun raidekoskettimen kautta (kuv. III ja IV). 26. Junanvarmuuslaite patenttivaatimuksessa 1 mainittua lajia, jossa varoittavan tai pysäyttävän tehon aikaansaamissa veturissa tarkistaa or- gaani, mikä, riippumatta siitä, miten veturi kääntyneekään, voidaan siir- tää raidekoskettimen avulla, tuinettu siitä,, että siinä, tarkoituksessa että siihen orgaaniin lo2, mikä on ajottu siirrettäväksi raidekoakettimi- en avulla, saattaisi vaikuttaa semmoiset koskettimet, jotka eivät ole so- vitetut raiteen keskikohtaan, käytetään kahta kosketinkenkä IH- ja 350, jotka saattavat siirtää sanottua orgaania io2, ja Joista toinen 14 tulee johtavaan yhteyteen XSiIKII raidekoskettimien kanssa ja siirretään näiden avulla, kun veturi kulkee niiden yli, käännettynä määrättyllä tavalla, min- kä ohessa toinen 350 tulee johtavaan yhteyteen raidekoskettimien kanssa ja siirretään näiden avulla, kun veturi kulkee niiden yli käännettynä vastak- kaiseen suuntaan (kuv. VI). 27. Junanvarmuuslaite patenttivaatimuksessa 1 mainittua lajia, jossa kosketinkenkä, kun se tulee raidekoskettimen yhteyteen, joutuu tämän rai- dekoskettimen kautta kulkevaan virtapiiriin ja tällöin siirretään saman koskettimen avulla, jolloin varoittava tai pysäyttävä vaikutus saatetaan toimintaan, tunnettu siltä, että kosketinkenkä 14 on eristetty veturin konetelineestä ja että se siirtämällä orgaania, josta se myöskin on eris- tetty, saattaa, panna varoittavan tai pysäyttävän tehon toimintaan- 28. Junanvarmuuslaite patenttivaatimuksessa 27 mainittua lajia, tunnet- tu siitä, että sanottu orgaani lo2 säännöllisesti ehkäisee varoittavan JI tai pysäyttävän Taituissa ja «ttä'''*. «aattoa siirtyä ehkäisevästä a»«»-;:»:: Aostaan'kosketinkengän 14 liikkeen johdosta. 29. Ju and anvarmuuslaite patenttivaatimuksessa 27 tai 28 mainittua lajia tunnettu siitä, «ttä kosketinkenkä 14 oa yhdistetty sanottuun orgaaniin lo2 ei-»joIyt avast i johdetut yMiit*«» avulla, niin että kosketinkenkä 14 vetää orgaaniin lo2 mukaansa, jos se putoai»i poi» taivsiirtyiai paikaltaan jolloin varoittava tai. pysäyttävä vaikutus syntyy junassa.;;»- 30.-* Junanvarmuuslaite patenttivaatimuksessa 1 mainittua lajia, jossa aikaansaadaan varoittava tai pysäyttävä vaikutu* junaan, kun tämä kulkee jollakin raiteen osalla nopeudella, joka on sanottua osaa varten edeltä- käsin määrättyä suurinta kulkunopeutta suurempi, tunnettu siitä, «ttä suurin kulkunopeus raiteen määrättyyn osaan nähden käy ilmi siitä tavasta, jolla junaan kiinnitety kosketinorgaaai 601 siirtyy raidekoskettlmen 602, 603 vaikutuksesta (kuv. XV ja XVI). 31. Junanvarmuuslaite patenttivaatimuksessa 30 mainittua lajia, tunnet- tu siitä, että varoittava tai pysäyttävä vaikutus tule« ehkäistyksi, kun se nopeus, jolla juna kulkee raidekoskettlmen yli, ei ole liilaa suuri, 18 kosketinorgaanin 601 ja sen laitteen 618 välisen yhteistoiminnan kautta, jonka asento riippuu junan nopeudesta, jotavastoin varoittava tai pysä- yttävä vaikutus junassa saatetaan toimintaan, kun tämä kulkee raidekos- kettimen kautta liian juurella nopeudella, syystä että sanotun laitteen 618 asento nyt on semmoinen, a vaikuttaa koskstinorgaanin 601 yhteydessä siten, että sanottu vaikutus tulisi »hkälstykxi. 32* Jujsanvarmuuslait« patenttivaatimuksessa 31 mainittua lajia, tun- nettu siitä, että, jos laite 618, jonka asento riippuu junan nopeudesta, ei seuraa tätä oikealla tavalla ja sentakia ei siirry nolla-asennosta siihen asentoon tai sen yli, joka vastaa edeltäkäsin määrättyä pienintä nopeutta, varoittava tai pysäyttävä syntyy.Junassa, kun tämä kulkee rai- dekoskettimien 602, 603 yli. 33* Junanvarmuuslaite patenttivaatimuksessa 31 tai 32 mainittua lajia tunnettu.; siitä, että ehkäisy tapahtuu sähköitetä ja aikaansaadaan vir- ran avulla, joka kulkee virtapiiriin kautta, mikä sulkeutuu kosketinoreaa- nin 601 ja sen laitteen 61S välisen yhteistoiminnan avulla, jonka aten- to riippuu juna» nopeudesta. 3* Junanvarmuuslaite patenttivaatimuksessa 33 mainittua lajia, tun- nettu silti, että tässä vaatimuksessa mainittua ehkäisytolmlntaa käyte- tään korvaamaan sitä ehkäisytolmlntaa, Eikä säännöllisesti pysytetään voi- massa»n träärn toisen kosket inorgaaj* in IH- avulla, mikä, kun se tulee vastaavan räidekoskettimen 603 yhteyteen, tämän avulla liikkuu »1 ti», et- tä se menettää ehkäisevän vaikutuksensa varoittavaan tai pysäyttävään laitteeseen». 35. Junanvarmuuslaite patenttivaatimuksessa 3 mainittua lajia, tunnet- tu siitä, «ttä käännöillä«» »hkäI»ytoi*»ta pidetään voimassaan sähkötto- rnilla tavalla. 3E. Jua#avarmuusiilait« patenttivaatimuksessa JM- tai 35 mainittua lajia, rtunnsttu siitä että ehkäitevä virtapiiri sulkeutuu kosketi»orgaanin 601 - w- ** avulla Ilman sen laitteen SIS apua, jonka asento riippuu Junan nopeudes- ta, jolloin Juna saattaa kulkea raidekoskettime» yli rajattomalla nopeu- della. 37. Junanvarmuuslaite patenttivaatimuksessa 33, 3-, 35 tai 36 mai- nittua lajia, tunnettu siitä, etti ehkäisevä virta menee raidekosketti- men 602 kautta, jonka kanssa juna ok johtavassa yhdistyksessä. 38. Jvinaavarmuuslaite patenttivaatimuksessa 30, 31, 32, 33, 3, 35, 36 tai 37 mainittua lajia, tunnettu »iitä, että, samalla kun kosketinor- gaani 601 Junassa, Joka kulkee määrättyyn suuntaan raidekoskettlmen 602, 603 yli,siirtyy asentoon, joka vastaa ennen määrättyä suurinta kulkuno- peutta, saattaa juna, joka kulkee vastakkaiseen suuntaan saman raidekos- kettiKen 6o2, 603 yli, kulkea rajattomalla nopeudella ilman että varoit- sentakia tava tai pysäyttävä vaikutus siinäTéa»tetaa» toimintaan. 39» Junaavarmuusilait« patenttivaatimuksissa 1-38 mainittua lajia, tun- nettu siitä että pulttien tai ruuvien 5o8 tai 512 päät tai mutterit es- tetään. siirtymästä tai polsrepeytymästä junasta alesiirrupvien irtolais- ten kytkinkoukkujea tai ketjujen vaikutuksesta satuloini» 5o4 sovitettu- jen viistoitetttu en laippojen 511 tai rampinmuotoisten pelteiaattoje» 51 avulla (kuv. II, XII ja Tin). 4o. Ju»a»varmuuslaite patenttivaatimuksissa 1-39 mainittua lajia, tun- nettu siitä, että siinä käytetään laitteita 126, 35, Jotka estävät ve- turinkuljettajaa panemasta juna uudelleen liikkeesen, sittenku» pysäyt- tävä vaikutus o» tapahtunut, ilma» Jonkun muun JunavirkamieJie* apua, jos el merkinantovälys, jonka tila aiheutti tuon pysähdynksen, jälleen ole saatettu käyttökuntoon Ja siten päästänyt sanotut laitteet sähköiteitse vapaiksi (kuv. IV). 4l. Junanvarmuuslaite patenttivaatimuksessa 4o mainittua lajia tai iitä lajia, jossa löytyy laitteita, jotka saattavat estää veturinkuljet- taja» saatamasta pysäyttävä laite jälleen asentoon, sittenkun pysäyttä- v», toimilta oa tapahtunut junassa, ilma» joakua muuä virkamiehe» apua, tunnettu siltä, että juna »stetää» kulkemasta raidekoskettime»a yli, sittenkuin pysäyttävä lait« 99 oa saatettu säännölliseen asentoonsa, il- maa «ttä »yatyy mitään varoittavaa tai pysäyttävää JIellaitUty vaikutusta, jos ei Haaotut laitteet 126, 35 ole viety takaisla sääääoölliisia asen- toihinsa. 42. Jua#avarmuusiilait* patenttivaatimuksissa 1-41 maiIattua lajia, jos- aa Baiaellmallaa vaikuttava jarru junassa automaattisesti saatetaan toi- mintaan sillola kua junan oa vaarallista ajaa edelleea, tuaaettu siltä, että jarrua automaattlnea käyntilapao» samalla aiheuttaa sea, «ttä jar- rusilinteri Z tulee eroitetuksi voimalähteestä V (kuv. V). föZZ Arthur Reginald Angus, Sakförare, west Sommerset England Tågskyydsapparater Uppfinningen afae tågskyydsapparater, medelst hvilka tågen skola kunna skyyda sig sjåliYa automatiskt och elektriskt, sa ir till ånda- mål att åstadkomma apparater, med hvilkas tillhjälp ett ia3 eller staiinas, varnas och därpå stannas eller varnas och samtidigt stannas, eller hvilka styra bromsarna och 1 fall af fara sätta dem i funktion, hvilket sker automatiskt, så snart å en rakt framför tåget liggande signalstråcka af »banan finnes en rubbad eller brusten skena eller om på denna stråcka befinner sig ett annat tåg eller annan rörlig materiel af hvilket slag som helst eller om där finnas växlar, som icke kunna befa- ras af tåget eller tågets hastighet är för stor för ett bestämt ställe, och apparaten fungerar trots felaktiga manövrar eller fel i enskilda delar af apparaten på sätt, som nedan beskrifves. Uppfinningen har flere kännetecken, som nedan skola närmare beskrif- vas och hvilka äro ÅMäsåIäÅI åndamålsenliga för ernående af nu ifråga- varande resultat. Uppfinningen åskådliggöras af ritningarna, som framställa en kon- struktions form för apparater, gjorda och sammanställda 1 öfverensstäm- melse härmed, Sig. I ar en schematisk framställning af apparater i tåget.- Fig. II visar schematiskt apparater vid banan, afsedda för ett system af

den art, att ett tåg kan fara i hvardera riktningen på samma spår och vid hvilket användas polariserade releer. Flg. m är en schematisk framställning lik den i flg. II visade af apparaterna för en bana, KAX vid hvilken användas icke-polariserade releer 1 stallet för polariserade. Flg. IV är en schematisk framställning af en modifikation af apparaterna i tåget. Flg. V är en MBJRifiii schematisk framställning af en apparat, afsedd att automatiskt sätta bromspumpen ur funktion. Flg. VI är en schematisk framställning af en utföringsform för en kontaktapparat på ett lokomotiv. Flg. VII är en schematisk framställning af apparater på ett lokomotiv, afsedda att användas på spår, där tågen fara uteslutande 1 en riktning. . ui Mut. ' . - - - - , - 1; jjiij; i, |, , m.. *M Pig. VIII, IX och X äro schematiska framställningar af utföringsformer af apparater för sådana spår, hvarest tågen uteslutande fara i en riktning. Pig* xi, XII och XIII visa anordningar, som skola förhindra, att Kopplingskrokar eller kettlingar, som hänga ned från tåget fastna i eller rubba en spårkontakt. Pig* XIV framställa schematiskt apparater på spåret, afsedda att RIKO hindra ett tåg att passera öfver växlar, ifall de icke stå 4å, att det ena eller det andra spåret är fritt. Pig. XV är en schematisk framställning af en vid spåret anbragt apparat, afsedd att hindra tåget från att passera en sträcka af banlinjen med en hastighet, som kan vara förenad med fara. Pig. XVI är en schematisk framställning af lokomotivapparater, afsedda att samarbeta med apparater af i fig. XV framställt slag, och Pig* XVII är en schematisk framställning af en apparat, som användes i förbindelse med en slejf, vändskifva, triangel eller dylikt för att tvinga lokomotivföraren att omställa apparaterna på lokomotivet för färd 1 motsatt riktning. Järnvägsspåret (fig. II,III,VIII,II och X) är indeladt 1 ett antal afdelningar, hvilka hvar för sig i det följande benämnas XXXgKXXXfXKKX "signalintervall". Längden af hvarje signalintervall väljes med hänsyn till trafikens beskaffenhet. Skenorna, som bilda den ena sidan af spåret, äro elektriskt förbundna längs hela banlinjen. De skenot, som bilda den andra sidan af spåret, äro i elektriskt afseende Indelade i lämpliga sträckor med isolerade skarrvar 95 så, att signalintervaller af lämplig längd uppstå. Där detta är nödvändigt på grund af en sådan signalintervalls längd (fig. II,III,IX och X) eller emedan på samma spår skola gå tåg i hvardera riktningen (fig. II och III) är en Intervall med en eller flere isolerade skarvar 95 delad i underafdelningar. Längden af en signalintervall eller där derna är delade i underafdelningar, längden af en underafdelning, må icke öfverskrida hvad som är lämpligt för en säker funktion af en sjifett spårrelee, som står i förbindelse med en spårsträcka, innanför hvilken de enskilda skenorna äro elektriskt förbundna* De enskilda skenlängderna mellan hvarje par på hvarandra följande skarvar 95 äro elektriskt förbundna med hvarandra. I de apparater, som visas i flg. II, är hvarje underafdelning, t. ex. A, B, C, L, E eller S försedd med ett polariseradt spårrelee i2lo på be- tant sätt inskjutna mellan de två slitenoma. Underafdelningarnas spårreleer 121o magnétiseras, såsom nedan beskrifves, af en ström, som tillföres genom lämpliga motstånd 35 rrän en generator 32. Denna ström slutas emellertid endast när ett tåg påverkar de spårkontakter, som höra till en signalintervall, på hvilken det skall inlöpa. } ' i V/d underafdelningar såsom A och E äro anbragta spårkontakter 1 och 2 och vid underafdelningar såsom S och B finnas spårkontakter 3 och 4-. Spårkontakterna 1 och 3 äro varningskontakter, d.v.s. de äro afsedda att förskjuta ett kontaktorgan på tåget sålunda, att ää£KI det förorsakar en varningssignal, såvida icke den senare på ett eller annat sätt hålles tillhaka, spårkontakterna 2 och M- äro stoppkontakter, d.v.s. de äro afsedda att förskjuta nämnda kontaktorgan sålunda, att det Dringar tåget att stanna, såvida detta icke på annat sätt hindras. Stoppkontakterna anbringas så långt från isoleringen, som åtskiljer underafdelningarna, att tåget kan stanna på underafdelningen A,E,? eller B innan någon del af detsamma inkommer på nästa underafdelning. färd tillhaka Har ett tåg på SXXXXXXXB (i 11 betecknad med ordet "Tillhaka"1 samt en pil) kommer i förbindelse med spårkontakt em a 1 och 2 på underafdelningen A undersöker det hela signalintervallen, innehållande underafdelningarna B,C,D och F samt mottager signal om att hanan är fri, såvida å densamma icke befinner sig annan rörlig materiel samt allt är i ordning, t. ex. alla skarvar oskadade och alla skenor hela. I motsatt fall. varnas det af spårkontakten 1, och om lokomotivföraren ej beaktar varningen stannas det af spårkontakt 2. När ett tåg under färd framåt (fig. II betecknad med ordet "fram" och en pil) råkar i förbindelse med spårkontakterna 3 och på underafdelningen F, gör det en undersökning för hela signalintervallen, omfattande underafdelningarna e,d,C,B och A samt undersöker om på dessa befinner sig någon annan rörlig materiel och om allt är som sig bör. Om detta icke vore fallet, varnas tåget af spårkontakten 3 och om lokomotivföraren icke lägger märke till varningen, stoppas det automatiskt med tillhjälp af spårkontakten Lokomotivet (fig. I) är försedd med ett lämpligt kontaktorgan eller en kontaktsko 14-, hvilken, då den förskjutes, motverkad af fjädrarna llo och ill, försätter den med utskärningar försedda stängan lo2 i rörelse längs en lämplig förmlng 103 sålunda, att dess tillbakahållande verkan på riglarna 98 och 99 upphör. När skon passerar en varningskontakt såsom l eller 3 är stängens 102 rörelse sådan, att den endast upphör att verka tillbakahållande på rigeln 98. Denna rigel tryckes, IX ifall den ej hålles tillbaka på grund af att ankaret 112 tilldrages af den me<1 en spole 52 försedda elektromagneten, genast i i utskärningen loo till följd af någon vätskas tryck på en kdlif 113, som med tillhjälp af en kolfstång 123 öppnar en ventil 124-, hvilken är fäst vid rigeln 98, och tillika på grund af trycket från en vikt lo, hvilket öfverföres till den därmed fast förbundna armen 202, som kan vrida sig kring bulten lo4. Kolfven 112> som af vätskans tryck drifves ut, släpper vätskan under tryck till ett rör 114- och därifrån till en lämplig varningssignalpla 115, som sålunda blåses och glifer varningssignal. Samtidigt kommer E and gir tågets vakuumledning 4-oo genom små öppningar 500 i förbindelse med yttre luften och bromsarna trada helt och hållet eller delvis i funktion. När kontaktskon 14 passerar en stoppkontakt, såsom 2 eller 4-, förskjutes stängan lo2 ett längre stycke så, att dess tillbakahållande verkan på både rigeln 98 och rigeln 99 upphör på grund af att den normalt till rigeln 99 gränsande delen af stängan lo2 (den del, som ligger ofvanom utskärningen lo1) är längre än den normalt till rigeln 98 stödjande delen däraf (den del, som ligger XX ofvanom utskärningen loo), såvida den icke hålles tillbaka till följd af att ankaret lié tilldrages af elektromagneten, som uppbär spolen 53r föres äfven rigeln 99 nu fram påverkad ar 3 trycket af något fluidum på en kolf 117, som med tillhjälp ar kolfstängan 118 öppnar ventilen 119j hvilken sitter fast på rigeln 99, samt på grund af viktens 109 tryck, hvilket öfverföres till den därmed fast förbundna armen 203, som är vridbar kring bulten 105. Om kolfven 117 föres fram på grund af trycket på densamma, så passerar fluidumet under tryck genom röret 12o till cylindern 121 och lokomotivförarens regleringshauddag 122 tvingas öfver i afspärmningsläget. sam- tidigt öppnas tågets vakuumledning fullständigt för yttre luften, i det att ventilen 119 frigör den stora öppningen, som den normalt tillsluter, och bromsarna på tåget trada sålunda i full verksamhet, d.v.s. nödbromsning äger rum. Då riglarna 98 oc and 99 stå i sina normala lägen, såsom visats, hållas kolfvarna 113 och 11f 1 de antydda lägena med tillhjälp af kolfstängarna 123 och 118 samt ventilierna 124- och 119. Såsom antydt, kunna på kolfstängarna 123 och 118 anbringas lämpliga fjädrar, som i normala fall sträfva att öppna ventilierna 124- och 119- Stängens lo2 nedre ända trycker, såsom synes, emot skons 1 öfre ända Skon 14- är isolerad från stängan lo2 och från hela lokomotivets maskinställning* Ehuru skon 14- och stängan io2 äro åtskilda, "böra de stå i lös, icke ledande förbindelse med en ledkoppling så, att skon 14-, om den skulle fölla ne<y eller afvika från sitt normala läge, tager stängan lo2 med sig ' f B | och genom att sålunda frigöra riglarna 98 och 99 förorsakar, att tåget varnas och stannas. Anordningarna för att ånyo bringa varnings- och stopppapparaterna i normalt läge äro inneslutna i en lämplig, låst låda 126, genom hvars sida eller lock en lämplig viktstång utskjuter (hvilken, såsom synes, kan vara en förlängning af armen 2o2), hvilken kan återföra rigeln 98 i det å figuren synliga läget sedan den skjutits fram för att få varningssignalpian att upphöra att ljuda; roen viktstången (hvilken såsom synes kan vara en förlängning af armen 2o3) för rigelns 99 återförande i stngifvet läge sedan den förts fram, kan icke vridas förrän lådans 126 läås upplåses och lådan öppnas eller, om detta föredrages, kan viktstången till lådan rigelns 99 återförande skjuta ut genom och fastlåsas utanför denna. I hvarje händelse kan nyckeln till rigelns 99 viktstång fås endast hos tågföraren eller någon lämplig tågtjänsteman så, att ett tåg som stoppats automatiskt, icke kan fortsätta färden utan hjälp af tågföraren eller någon annan från lokomotivföraren skild tågtjänsteman- Då ett lokomotiv under färden tillbaka paäserar en spårkontakt i ei- af 1er 2, slutas strömmen från en generator 5 (fig* I) genom armen 6 om- skiftare X1TSX1saX 6,7,56 och 6o (som skola omkastas samtidigt, som ett lokomotiv ändrar körriktning med tillhjälp af en vändskifva, triangelslejf eller dylikt) och armen 8 af omkastarena 8,9 och 55 till vändailigMinrättade att samtidigt omställas vid lokomotivets omstyrrning), motståndet lo, llnndningarna på de polariserade releerna. 11 och 12 (hvilkas ankare normalt står midt emellan releekontaktarea) ledningen 13, kontaktskon 14-, XX till spårkontakten 1 eller 2 (fig. II), ledningen 15, elektromagnetens 9o ankare 9oo, kontakten 9o2, ledningen 9o3, llnndningarna på den polariserade releen 16, dennas ankare 17 (som normalt berör kontakten 15) till skenorna 19 och tillbaka till generatorn 5 genom lokomotivets maskinställning" ning, ledningen 2o (fig. I) och armarna 9 och 7 ar ofvannämnda omkastare. Strömmens riktning genom llnndningarna på den polariserade relaisen 16 är sådan, att ankaret 17 laggar sig mot kontakten 21 och afbryter förbindelsen med Kontakten 18, och det är så ordnat, att ankaret 17 Kommer i beröring med Kontakten 21 förrän det lämnar kontakten 18. Strömmen passerar då genom en ledning 22 till elektromagneten 23, ledningen 2, elektro- magneternas 25 och 26 llnndingar, ledningen 27 till 3kenorna 19 och tillbaka till generatorn 5 såsom ofvan beskrifves. - Ströioens riktning genom magneternas 25 och 26 llnndingar är sådan, att ankaren 28 och 29, 30m äro polariserade, lägga sig mot resp. kon- takter 3o och 31, hvarvid den positiva polen af en lokal generator 32 genom ankaret 29, kontakten 31 och ledningen 27 föres till skenorna 19 och den negativa polen genom ankaret 28, kontakten 30, ledningen 33 forbindes med hufvudledningen 34- så, att de sex underafdelningarna A,B,C,H,E och P genom lämpliga motstånd förses med ström, i det att anslutningen till underafdelningarna A,B försiggår öfver kontakten 36 och elektromagnetens 23 ankare 37, som nu magnétiseras, rå tåget befinner sig på underafdelningen A, tilldrager dennas spårrelais icke sitt ankare 173, men re- laiserna, hörande till underafdelningarna B,C,D,E och F tilldraga sina ankare så, att en parallell ström slutas från ledningen 3 genom ankaret 37 (som visas af fig. II, i underafdelningen D), kontakten 15> ledningen 4-1, elektromagneten 295, motståndet 4o, kontakten 181, ankaret 182 1 underafdelningens F polariserade relais, leanningen IS3, kontakten 151, ankaret 152 i underafdelningens E polariserade relais, ledningen 153, kon- takten 154, ankaret 155 i underafdelningens D polariserade relais, ledningen 156, kontakten 157, ankaret 158 i underafdelningens C polariserade relais, ledningen 159, kontakten 16o, ankaret 161 i underafdelningens B polariserade relais, kontakten 162, ledningen 42, kontakten 297, ankarena llnndingen af elektromagneten 905, ledningen 92o ret 296, ledningen 906, elektromagnetens 9o4 ena llnnding, ledningen 907, elektromagnetens 905 ena llnnding, ledningen 909 samt elektromagnetens 9ol till ledningen 15* På grund af den speciella anordningen af llnndningarna på magneterna 9(R)5 och 9o4 samt af den genom dessa gående strömmens riktning fasthållas ankarena 29 och 28 med de respektive kontaktarna 31 och 3* Medan elektromagneten 9ol magnétiseras drager den ankaret 900 bort från kontakten 9o2 och afbryter sålunda det kretslopp, som den polariserade relaisens 16 llnndingar, elektromagneten 23 samt elektromagneterna 25 och 26 förorsakat. Då emellertid elektromagneterna 9o4, 905 och 908 magnétiseras samtidigt med elektromagneten 901 fasthållas respektive ankare 28,29 och 37 i beröring med kontaktarna 3o,31 och 36- Denna strömkrets motstånd ar så stort, att strömmen (reglerad af motståndet 4o), som går genom motståndet 4o och genom de polariserade relaiserna 11 och 12 (fig. I), anbragta på lokomotivet, är betydligt starkare än den ström, som rörst gick genom relaiserna 11 och 12 från generatorn 5, och den resulterande strömmen genom de polariserade relaiserna 11 o(R)h 12 är sådan, att ankarena 4-3 och 44 röras så, att ankaret 43 laggar sig mot kontakten 45 och den isolerade plåten 4-7 mot kontakten 46. Varningssignalerna på lokomotivet och tågets stoppande hindras då af en ström, som går från generatorn 5o genom en klocka eller 51, llnndningarna på magneterna 52 och 53, ledningen 54, omkastningsmekanismens strömvändares arm 55, de andra strömvändarnas arm 56, kontakten 4-6, den isolerade kontaktplåten 47 på ankaret 44, ledningen 57> kontakten 45, ankaret 43, ledningen 53

tillbaka till generatorm.50. Sålunda får tåget signalen: "banan klar" med tillhjälp af spårkontakterna 1 och 2, men om på en af underafdelningarna B,C,D,E och i1 skulle befinna sig ett tåg eller en dressin eller 1 en af dessa underafdelningar finnas en brusten skena, så kan den ifråæavande underafdelningens spårrelais icke bringa sitt ankare att sluta ofvannämnda parallela kretslopp genom motstånden 4o, och begynnelseströmmen genom de polariserade relaiserna 11 och 12 (hvilken ström lean regleras med tillhjälp af motstånden lo) blir Ei icke tillräckligt stark att bringa ankarena 43 och 44 att sluta spärrningsströmkretsen från generatorm 50, och tåget skulle sålunda mot- taga varningssignal af spårkontakten 1 SSK samt stoppas af spärrkon- takten 2. Iå lokomotivet kör fram, hafva armarna 8,9 och 55 (fig* X) and omkast- ningsmekanismens strömvändare (eller om lokomotivet ändrat riktning på en vändskifva, triangel, slejff eller dylikt, armarna 6,7,56 och 60 på de andra strömvändarena) bytt plats så, att generatorms 5 negativa pol är förbunden med skon 14 genom armen 7, arraaen 8 (eller armen 6 och armen g) motstånden lo, lndningarna å de polariserade relaiserna 11 och 12 samt ledningen 13, och den positiva polen genom armarna 6 och 9 (eller armar- na 7 och 9)* Då lokomotivet passerar 3påkontakten 3 eller 4 på underaf- delningen F, går en någativ 3tröm från generatorm 5 till spårkontakten 3 eller 4 vid P, genom ledningen 02, ankaret 910, kontakten 911» led- ningen 912, lndningarna å en polariserad relais 63, dettas ankare 64, som normalt står i förbindelse med kontakten 65, till skenorna 19, och ankaret 64 svänges så, att det kommer i förbindelse med Kontakten 66 samt förrän det afbryter förbindelsen med kontakten 65* Strömmen går så genom ledningen 68, genom elektromagneten 23 vid signalintervallens mest aflågsna anda, ledningen H4, elektromagnet,erna 25 och 26 till ske- t norna 19, och, då strömmen går i motsatt riktning till den ström, som går genom elektromagneterna 25 och 26, när ett tåg under återfärden pas- serar en af kontakterna 1 eller 2 å underafdelningen A, läggas ankarena 28 och 29 in mot kontakterna 70 och 71, och generatorms 32 positiva pol tillslutes sålunda genom ankaret 29, kontakten 71 och ledningen 33 till hufvudledningen 34 samt den negativa polen å generatorm 32 genom anka- ret 28, kontakten 70 och ledningen 27 till skenorna 19- Ankaret 37 till- drages sålunda till kontakten 36 och underafdelningarna A,B,C,E och S' sammanbinda» genom motstånden 35 med generatorms 32 positiva pol i stål- let för med dess negativa pol, hvilket sistnämnda ägde rum, när tåget under återfärden passerade spårkontakterna 1 och 2 i underafdelningen A, Spårrelaiserna i underafdelningarna A,B,C,D och E påverkas sålunda, att de gifva upphof åt en parallel 3tröm från hufvudledningen 34 genom an- kare 37, elektromagneten 908 (denna har dubbla lndningar och ström- men går nu genom den lndning, som icke begagnas, då ett tåg under åter- färden stöter mot en spårkontakt 1 eller 2 i underafdelningen A), genom ledningen 913» den isolerade kontakten 914, som uppbares af ankaret 910 med anslutning till underafdelningen B, kontakten 915, ledningen 916, kontakterna 170, som synas alldeles invid underafdelningen C (af hvilka den ena är en fjäderkontakt och den andra uppbares af, men är isolerad från ankaret 64), ledningen 917, elektromagneten 905, ledningen 921, elektromagneten 9o4 (hvardera af elektromagneterna 9o4 och 905 har dubbla lndningar och strömmen går nu genom de lndningar, som icke an- vändas, då ett tåg under återfärden stöter mot en af spårkontakterna 1 eller 2 i underafdelningen A), ledningen 918, motståndet So, ledningen 171, kontakten 172, det till underafdelningens A polariserade relais hö- rande ankaret 173, kontakten 174, ledningen 175, det till underafdel- ningens B polariserade relais hörande ankaret 161, kontakten 160a, led- ningen 159» det till underafdelningens C polariserade relais hörande an- kare 155, kontakten 157»» ledningen 156, det till underafdelningens D polariserade relais hörande ankaret 155, kontakten 154-a, ledningen 153, det till underafdelningens E polariserade relais hörande ankaret 152, kontakten 190, två grenar af en ledning 191 (som är förbundna med till- hjälp af två Kontakter 298, af hvilka aen ena uppbares af, men är isolerad från ankaret 37, hörande till den på fi- ruren i närheten af under- afdelningen D synliga magneten 23) och genom elektromagneten 919 till- ledningen 62, som är förbunden med spårkontakterna 3 och 4. På grund af de nu genomströmmade lndningarnas å magneterna 905 och 9o4 3peciella anordning samt på grund af strömmens riktning fasthållas ankarena 29 och 23 i'beröring med respektive kontakter 71 och 7». 79* Medan elektromag- * neten 919 magnetiseras drar den ankaret 91o bort från kontakten 911 och aforyter därigenom den strömkrets, som rörsakat3 af lndningarna på den polariserade relaisen 63, elektromagneten 23 och elektromagneterna ' 25 och 26. Då emellertid elektromagneterna 9o4, 9o5 och 9o8 magnetiseras samtidigt med elektromagneten 919, fasthållas ankarena 23,29 och 37 i beröring med resp. kontakter 7°, 71 och 36. Den genom motstånden 8o gå- ende strömmen passerar äfven genom lndningarna på de polariserade re- laiserna 11 och 12 på lokomotivet (I motsatt riktning mot den, i hvilken strömmen gick, då lokomotivet kom i förbindelse med underafdelningens A spårkontakter 1 och 2) och är oetydligt starkare än den ström, som först passerar Igenom (i samma riktning) från generatorm 5* Den resultat- rande strömmen genom lndningarna å relaiserna 11 och 12 afser att flyt- ta ankarena 43 och 44 så, att 43 kommer i beröring med kontakten 85 och den isolerade plåten 86 med kontakten 87* Därigenom slutes den tillbaka- hållande strömkretsen från gneratorm 5o genom klockan eller hvisslan 51, lndningarna 53 och 52, ledningen 54, armarna 55 och 60 (eller ar- marna 55 och 56), kontakterna 87 och 86, ledningen 88, kontakten 85, an- kare 43 och ledningen 58 sålunda, att den varnande och stoppande effek- ten tillbakahålles. Om någon af underafdelningarna A,B,C,D och E varit upptagen, så skulle strömkretsen från generatorm 32 genom motstånden 8o 3 icke blifvit sluten genom relaiserna 11 och 12 lndningar, ankarena 43 och 44 hade icke blifvit flyttade så, att de kunnat sluta nämnda tillba- kahållande strömkreta, och tåget hade varnats af spårkontakten 3 samt stoppats af spårkontakten 4. Då ett tåg under färd i en viss riktning stöter mot spårkontakter, som kontrollera tågets säkerhet för den motsatta körriktningen, är det endast nödvändigt att skaffa fri passage öfver dessa kontakter utan att derför undersöka spårets tillstånd. Då ett tåg t. ex. under återfärden under3ökt3j spårets tillstånd på underafdelningarna B,C,D,E och E med tillhjälp af underafdelningens A spårkontakter 1 och 2, återstår endast att skaffa fri passage öfver spårkontakterna 4 och 3 vid B, hvilka Kontrollera tågets säkerhet under färden framåt, rå generatorms 5 posi- tiva pol förbindes med kontakt ston 14 och därigenom med spårkontakterna 4 eller 3, slutes en strömkrets från generatorm 5 genom lokomotivets apparater, därefter genom spårkontakten 4 eller 3, ledningen 62, anka- rat 91o, Kontakten 911, ledningen 912, lndningarna på den polariserade relaisen 63, ankaret 64, kontakten 65 till skenorna 19. Riktningen af denna ström genom lndningarna på relaisen 63 är sådan, att ankaret 64 föres öfver mot kontakterna 195 och 4o2, som förbindas sinsemellan, in- nan förbindelsen vid 65 fullständigt afbrutits, och samtidigt slutes förbindelsen mellan kontakterna 196 (af hvilka den ena uppbares af, men är isolerad från ankaret 64). På detta sätt slutes förbindelsen mellan ankaret 64 och skenorna genom kontakten 195, ledningen 197, generatorms 32 negativa pol, ledningen 198, motståndet 199» kontakterna 196 och led- ningen 2oo. Generatorerna 5 och 32 arbeta sålunda i serie, och den ström som går genom relaiserr11 och 12 lndningar på lokomotivet, är till- räckligt stark och har den riktiga riktningen för att tillbakahålla de varnande och stoppande verksaiihetema. Hela denna ström går likväl icke genom lndningarna på relaisen 63» då dessa shuntas af motstånden 176, hvars strömkrets slutes af kontakten 4o2. På liknande sätt föres på ett tåg, som under färden framåt stöter emot spårkontakterna 1 och 2 vid A, ankaret 17 mot kontakterna 2ol och 4o4 och slutes likaledes förbindelsen mellan kontakterna 2o8 (af hvilka den ena uppbares af, men är isolerad från ankaret 17), nvarvid lndningarna på relaisen 16 shuntas genom mot- stånden 4o3, hvarvid ankaret 17 förbindes med gSÅäSiitKÄÄJX generatorms 32 positiva pol och motstånden 203 inskjutas, hvilket tillsammans åstad- kommer, att genom lokomotivapparaterna kommer att gå en ström af till- räcklig styrka och i rätt riktning för att tillbakahålla de varnande och stoppande verkningarna. Storleken af motstånden lo, fig. I. är sådan att, om kontaktskon 14 skulle kortslutas direkt till maskinställningen, den ström, som från generatorm 5 gar genom relaisernas 11 och 12 lndningar, blefve så svag, att den ej kunde föra ankarena 43 och 44 bort från deras neutrala midt- läge och därigenom sluta de förbindelser, som, såsom ofvan nämnts, be- höfvas att tillbakahålla de varnande och stoppande verkningarna. Ehuru man på ett lokomotiv kan åtnöja sig med en polariserad relais 11 eller 12 med ankare 43 eller 44, är det likväl att föredraga att, så- som fig. I visar, använda två polariserade relaiser 11 och 12 med resp. ankare 43 och 44 eller ett polariseradt relais 11 eller 12 med två anka- re, som anordnas sålunda, att strömmen slutes endast om bägge ankarena påverkas riktigt, då en spårkontakt passeras, i afsigt att tillbakahål- la de varnande och stoppande verkningarna. Då ett tåg far 1 en viss riktning och strömmen från generatorm 32 på grund af oriktig omkastning af spårapparaterna, gar i orätt riktning, med afsffenda å den bestämda färdriktningen, genom relaiserna 11 och Xt b 12 lndningar på lokomotivet, slutes icke nämnda tillbakahållande ström, enär ankarena 43 och 44 icke bringas i det läge, som motsvarar omställ- ningen af armen 55 på omkastningsmekanismen eller af armarna 55 och 6o på de andra atömvändarena eller af alla samtidigt; till följd häraf sätts de varnande och stoppande verkningarna på tåget i funktion, såsom ofvan nämnts. På ledningarna 15 och 62 kunna anbringas lämpliga afbrytare, res- pektive 4o6 och 4o7, eller kunna liknande afbrytare anbringas på hvilka som helst andra, därtill egnade ledningar i afsigt att sätta en signale- rare (tågvak) i stånd att hindra ett tåg att passera spåret genom att afbryta förbindelsen mellan spårkontakterna 1,2 och 3»4 med skenorna 19. I det å fig. XII visade konstruktionsexemplet är spåret äfven lnde- ladt i signalintervaller och underafdelningar på liknande sätt, som 1 fig. IX, menmed undantag af relaiserna 216 och 261, som motsvara re- laiserna 16 och 63 å fig. II, användas här icke-polariserade relaiser i stället för polariserade. Figuren visar en signalintervall sammansatt af underafdelningar B,C,E och P eller E,C,B och A motsvarande motsatta färdriktningar, men en signalintervall kan naturligtvis sammansättas af ett godtyckligt antal underafdelningar. Vid ena änden af hvarje underafdelning förbindas skenorna med till- hjälp af en icke-polariserad spårrelais 21o. Hvar och en af dessa relais** magnetiseras med ström från en lämplig generator 211 och 212, som sänder strömmen genom hufvudledningen 213, lämpliga motstånd 214 och underafdel- ningens skenor till spårrelaiserna 210. Spårkontakternas verkningssätt kan t. ex. vara detsamma som visas å fig. II, i det att underafdelningens A spårkontakter 1 och 2,af hvilka 1 är en varningskontakt och 2 en stopp- kontakt, kontrollera infarten af ett tåg, som är på återvägen (aritydt å figuren med ordet "tillbaka" och en pil), på den signalintervall, som består af underafdelningarna B,C,E och j?, och på sanana sätt kontrollerar underafdelningens P spårkontakter 3 och 4 infarten af ett framåtkörande tåg (antydtt å figuren m«d ordet "Fram" och en pil) på den iignalintervail som består af underafdelningarna 3S,C,B och A. Ett exempel på lokomotivapparater, afsedda att samverka med de å fig. III visad* apparaterna, beskrifvas nedan med hänvisning till fig. IV, »huru*den ofvan b*3krifna å fig- I visade apparaten naturligtvis godt kan användas. Då kontaktskon 14, fig. IV. stöter mot en spårkontakt, går en ström från (R)n generator 3°3 genom en afbrytare 3°4, motståndet 35, lndning*-r- na på elektromagneten 306, armen 3°7 till en strömvändare, som omkastas hvar gång ett lokomotiv vändes på en vandskifva, triangel eller dylikt, armen 3o8 till en omkastningsströmvändare, som rör sig samtidigt, som omkastningen äger rum, ledningen 3°9, de isolerade kontakterna 310 och 311 (som är sinsemellan ledande förbundna med tillhjälp af ett isoleradt U-formigt organ 312, då lådan 126 är låst), till kontaktskon 14 och där- efter genom spårapparaterna, som beskrifvas nedan, tillbaka till genera- torn 303 genom skenorna, lokomotivets hjul och maskinställning, ledningen 313, ledningen 314, omkastningsströmvändarens arm 315, den andra ström- v,indårens arm 316 och ledningen 317* Motståndet 3o5 hafva en »ådan stor- lek, att t.o.m. om kontaktskon 14 skulle kortslutas till maskinställninge/J den ström, som går genom elektromagneten 306, icke blir tillräckligt MJLX stark attdraga ankaret 318 emot tyngdkraften och fjädern 319, hvilken, såsom synes anbragt» för detta ändamål. Då emellertid en tillräckligt stark ström från en utanför anbragt generator går i samma riktning som den ofvan nämnda strömmen, tilldrages ankaret 318 så starkt, att det sluter förbindelsen mellan kontakterna 320 och 321, och en ström går då från generatorm 322 genom afbrytaren 323, ledningen 324, lndningarna på elektromagneterna 52 och 53, ledningen 325, kontakten 320, ankaret 31g, ledningen 313, tillbaka till generatorm 322, och som följd häraf tillba- kahållas de varnande och stoppande verkningarna på tåget. Samtidigt går en ström från generatorm

327 genom en afbrytare 32g, ledningen 329, elek- tromagneten 330, solenoiden 332 (samt äfven genom sn parallellt inkopplad ledning, i hvilken finnes en elektrisk klocka 331), ledningen 333, kon- takten 321, ankaret 313, ledningen 313 och tillbaka till generatort 327. lå klockan 331 ringer, antydes härmed, att banan är klar, och ankaret 334 tilldrages då mot kontakten 335 sålunda, att strömmen genom det nämnda, parallellt inkopplade kretsloppet, hvari klockan 331 befinner sig, fort- far att vara sluten genom kontakten 335 och ledningen 336, t.o.m. sedan' ankaret 318 rallit och afbrutit förbindelsen med kontakt sn 321. Då kon- takterna 4-22 och 423, af hvilka den senar* uppbäres af, man är isolerad från ankaret 334, nu kommer 1 förbindelse med iivarandra, slutet en lokal strömkrets från generatort 420 genom ledningen 421, kontaktarna 422 och 423, ledningen 424 och solenoiden 425. Miniätyrsignaleringen 426 svanger då ned och gifver därigenom på synligt sätt tillkänna, att banan är klar, medan kltfckan 331 ger en hörbar signal. KIMIIFI Klockan 331 rort far så- t. lunda att ringa, signaleringen 426 förblir sänkt och solenoiden 332 fort- far att vara magnetiserad tills strömmen afbrytes med tillhjälp af af- brytaren 323, som ändamålsenligt är af allmän trycktyp och anordnas så- lunda, att den normalt är sluten och afbrytes endast, då det tryckes på densamma. I det att solenoiden 332 magnetiseras, drar den tillbaka den rigel 337, som normalt blåser lådan 126 i det visade läget. I ändamål att sätta lokomotivföraren i stånd att förvissa sig därom, huruvida en framför liggande signalintervall blifvit farbar, sedan på tåget en varningssignal eller stoppning ägt rum, äro på spåret anbragta. lämpliga ledningar 3°o och 3ol, såsom fig. III visar, på så sätt, att en speciell kontaktanordning 340, fig. IV, kan komma i förbindelse med en ledning 300 eller 30l i hvilket läge som helst, räknadt rrån den ända af en varningsspårkontakt, som är vänd mot början af nämnda, framförliggan- de ilgili blockintervall (signalintervall). Denna kontaktanordning 340 upphänges på och isoleras från lokomotivställningen samt anbringas så, att den kan sänkas ned till att beröra ledningen 300 eller 30l med an- vändande af en lämplig viktstång eller, såsom fig. iv utviear, med till- hjälp af en lämplig pedal 341, som med foten kan tryckas ned mot de där- på verkande fjädrarna 342 och 343. Hvardera af ledningarna 300 och 30l är förbunden med närmaste par spårkontakter och verkar som en förlängning af dessa. Då lokomotivföraren trampar med kontaktanordningen 340 och den framförliggande blockintervallen är klar, går genom elektromagnetens 306 lndningar en ström, som är tillräckligt stark att draga ankaret 318 upp *mot kontaktarna 422 och 335, klockanjudgifvaren 331 ringer att banan är klar, miniätyrsignaiven 426 faller och i det att solenoiden 332 magnetiseras, drages rigeln 337 bort från anslaget 345 och därigenom upplåses lådan 126. Om lokomotivföraren stannat tåget mellan spårkontak- terna 1 och 2 eller 3 och 4, meddelar klockan 331 och signalvingen 426 att banan är klar, man om tåget stannat automatiskt Öfver en spårkontakt 2 eller 4, bör lokomotivföraren öppna lådan 126, aom nu är låst upp af solenoiden 332 samt skjuta rigeln 99 tillbaka med tillhjälp af vikt- stängens 203. Vid lådans 126 Öppnande upplyftes det U-formiga organet 312, som förbinder kontaktarna 310 och 311 sålunda, att lådan fi and sts låsas och förbindelsen mellan kontaktarna 3lo och 311 återupprättas förrän tåget percent tan gå fritt öfver nästa spårkontakt, ty annars slutet icke förbindelsen mellan generatort 303 och kontaktskon 14, då lokomotivet passerar öfver nästa spårkontakt. Om kontaktskon 14 är anbragt' mldt emellan skenorna, "bör antingen kontaktanordningen 340 eller ledningarna 3°o och 30I vara dubbla, då ju säkerhetsapparaterna skola verka, äfven när lokomotivet far i motsatt riktning. Om kontaktskon 14 af en eller annan anledning icke anbringas mldt emellan skenorna, kan den i fig. VI framställda an- ordningen användas, i hvilken en af starka fjädrar spänd lätt extra sko 350 kan samverka med spårkontakterna och lyfta stängens lo2 oberoende af kontaktskon 14. Ledningarna 300 och 30l hafva i den å figuren visade kon- struktionsformen icke fördubblats, hvarför speciella kontaktanordningar 3o och 360 måste användas, hvilka kunna nedtrampas med samma pedal 361. Kontaktskon 14, extra skon 350 och de speciella kontaktanordningarna 340 och 360 stå alla i ledande förbindelse med hvarandra. I afsigt att afskåra tillförseln af tryckfluidum till en bromspump 2, då på tåget användas luftbromsar, står kolfven II7, såsom fig. V visar normalt i ett sådant läge, att den tillåter tryckfluidum att gå från tryckbehållaren v genom kanalen S i den nämnda kolfven II7 till pumpen 2, men, då kolfven röres i afsigt att sätta bromsarna i verksamhet, afstängarf kanalerna S och tillförseln af tryckfluidum till pump»n 2 afspärras. Då ett tåg stöter på en spårkontakt 1 eller 2 i underafdelningen A, fig. ill, går en ström från generatort 303 på lokomotivet, fig. IV, ge- nom lokomotivapparaterna till kontaktskon 14, därpå genom ledningen 215, elektromagnetens Soo ankare So2, kontakten 804, ledningen S06, lind- ningarna på den polariserade relaisen 216 (hvars ankare 217 på bekant sätt normalt hålles bort från armen 213 och kontakten 4lo, t. ex. på grund af tyngdkraften eller under inverkan af en magnet eller bågge), kontaktarna 219,(af hvilka den ena uppbäres af, men är isolerad från ar- men 218) till elektromagnetens 221 ena lindning och därpå genom ledningen 222 till elektromagneten 223 vid den mest aflägsna delen af blockinter- vailen, vidare genom ledningen 224 till skenorna 19 och tillbaka till ge- neratort 303 på lokomotivet genom detta hjul och maskinställning. Ström- men* riktning genom den polariserad* relaisen 216 är sådan, att ankaret 2X7 drag*» öfver mot d«n isolerad(R) stopparen 220 utom *beröring med armen 2X3 och kontakten 4lo. Till följd af elektromagnetens 221 och elektromagnetens 223 vid den **meat** aflägsna änden af blockintervallen magnetisering, föras ankarena 430 och 225 öfvar mot kontaktarna 226 ocn 227 och en negativ ström går från generatort 212 vid d«n bortre ändan af blockintervallen genom ankaret 225 Jcoitaktarna-227, ledningen 223, ledningen 230, ankaret 43a, som hör till "bortre ändan af blockintervallen, ledningen 213, genom alla underafdel- nin and arna A,B,C,E och i:1:a motstånd 214 (till de motstånd, som höra till A och B, genom kontakt 226 och det tillhörande ankaret 430) till underaf- delningarnas A,B,C,E och i spårrelais 21o och tillbaka till generatort 212 genom ledningen 224. rå tåget befinner sig på underafdelningen A, tilldrager denna underafdelnings spårrelais 21o icke; sitt ankar* 276, men om underafdeiningarna B,C,E och F ej äro upptagna och deras skenor samt de nödvändiga skarfvarna icke äro skadade, tilldraga motsvarande relaiser sina respektive ankarna och en ström går då från generatort 212 genom det slutna, parallellt kopplade kretsloppet, som bildas af kontakten 231, hvilken synes 1 närheten af underafdelningen E, ledningen 232, elektro- magneten 824, ledningen 3o3, motståndet 253, kontaktarna 233 (af hvilka den ena uppbäres af, men är isolerad från ankaret 235), ledningen SoS, kontakten 236, ankaret 237 på underafdelningen* E spårrelais 21o, kontak- ten 233, ledningen 239, ankaret 24o på underafdelningens E spårrelais 21o kontakten 24l, ledningen 242, ankaret 243 på underafdelningena C spårre- lais 210, kontakten 244, ledningen 245» ankaret 246 på underafdelningens B spårrelais 21o, kontakten 247, det stycke af ledningen 24g, som når upp till kontaktarna 249 (af hvilka den ena uppbäres af, men är isolerad från ankaret 235), kontaktarna 250 (af hvilka den ena uppbäres af, men är isolerad från ankaret 225), elektromagnetens 822 ena lindning, ledningen 810, elektromagneten Soo och ledningen 215. I det att elektromagneten Soo magnetlaeras, upplyfter den ankaret 802 från kontakten 804 och afbryter sålunda den strömkrets, som bildas af lindningarna på den polariserad* relaisen 216, elektromagneten 221 och elektromagneten 223. Då emeelertii eletromagneterna 322 och 324 magnetiseras samtidigt med elektromagneten Soo, förblifva ankarena 430 och 235 i beröring med respektive kcontacter 226 och 227. Strömstyrkan rättar sig efter motståndens 253 storlek och dess riktning genom elektromagneten 306 på lokomotivet är densamma, som riktningen af den svaga ström, som till en början kom från generatort 303. Denna sistnämnda ström är icke stark nog att föra ankaret 318, fig. IV, mot kontaktarna 320 och JXI 321, men d«n resulterande ström, som går i samma riktning, som begynnelseströmmen genom elektromagneten 306, lyfter ankaret 318 till beröring med kontaktarna 320 och 321, hvarvid strömmen slutet Xör att tillbakahålla de varnande och stoppande verkningarna samt lkaledes den strömkrets, Inom hvilken klockan eller ljudgifvaren 331 för fri bana finnes och med hvars tillhjälp solenoiden 332 magnetiseras. Om någon af underafdeiningarna B,C,B och F hade varit upptagen eller om skendeiar eller nödvändiga förbindelser haae varit skadade, så hade ingen ström gått från generatort 212 vid blockintervallens rnest aflägsna ända genom elektromagnetens 306 lndningar och tåget hade varnats af spårkon- takten 1 samt stannats af spårkontakten 2. Då ett tåg under färden framåt stöter mot dessa underafdelningens A spårkontakter 2 och 1, går stromir.en från generatort 3°3 till att "börja med genom kontaktskon 14 och vidare genom samma kretslopp, som då tåget i motsatt riktning kominer 1 förbindelse med samma spårkontakter, men, då förbindelsen mellan generatort 303 och kontaktskon är omvänd, gå ström- men i motsatt fcktning genom relaisens 216 lndningar, hvarför ankaret 217 föres Öfver mot armen 218 och kontakten 41o, hvarvid kottakterna 219 åtskiljas. Strömmen tvingas sålunda att gå från relaisens 216 lndningar genom ankaret 217, armen 218, ledningen 255, motståndet 256 till genera- tortns 211 positiva pol och vidare genom ledningen 224 till skenorna 19 SS och tillbaka till generatort 3°3 genom lokomotivets hjul och maskinställ- ning. Motstånden 256 hafva en sådan storlek, att em tillräckligt stark ström går från generatort 211 genom lndningarna på elektromagneten 306 på lokomotivet, i det att generatorterna 211 och 303 arbeta i serie, och tåget erhåller sålunda signal att banan är klar öfver spårkontakt erna 2 och 1. Hela denna ström går likväl icke genom lndningarna 216, enär dessa shuntas af motstånden SX 409, då ankaret 217 står i förbindelse med kontakten 4lo. Då tåget under färden framåt stöter mot den varnande spårkontakten 3 eller den stoppande spårkontakten 4 å underafdelningen F, forbindes gene- ratortns 3o3 negativa pol iried knnakttskon 14 och en negativ ström går då från generatort 3°3 genom kontaktskon 14 till spårkontakterna 3 eller 4, därefter genom ledningen 260, genom elektromagnetens Sol ankare So3, kon- tattan 805» ledningen 307, lindninarna på den polariserade relaisen 261 {hvars ankare 264 1 normalt läge hvilat mot ett isolerat anslag utom beröring med armen 265 och kontakten 452, och detsamma rubbas icke af strömmen från detta läge på grund af den speciella riktning, i hvilken strömmen går genom relaisen 261}, ledningen 262, kontaktarna 263 (af hvilka den ena uppbäres af, man är isolerad från armen 265)* elektromag- neten 266, ledningen 267, elektromagneten 822 vid den mast aflägsna ändan af *T3locjfi,ntervallen (magneten 322 har dubbla lindningar och strömmen går nu genom den lindning, som icke begagnas, då att tåg under återfärden stöter mot en spårkontakt 1 eller 2 på underafdelningen A), elektromagneten 263, ledningen 224 till skenorna 19 och därpå tillbaka till generatort 3 and 3 genom lokomotivets hjul och maskinställning. Det närmaste ankaret 270 santt ankarena 430 och 235 vid blockintervallens mest aflägsna anda till- drages sålunda och strömmen går då från generatortns 211 positiva pol vid den mest aflägsna ändan af blockintervallen genom ankaret 2351 kontakten 1270 till hufvudiadningen 213 och därpå genom alla underafdeiningarna A,B,C,E och F:s motstånd 214 (till de till A och B hörande motstånden ge- nom kontakten 226 och ankaret 43o vid den mest aflägsna ändan af block- intervallen), till underafdelningarnas A,B,C,E ja F spårrelais 21o samt tillbaka till d«n negativa polen genom ledningen 224. Enär tåget befinner sig på underafdelningen S\ drager denna underafdelnings spårrelais 21o icke sitt ankare 237 till sig, men, om underafdeiningarna E,c,B och A förbindelserna icke äro upptagna och daras skenor och de nödiga ütIXSIKÄi icke ärd> ska- dade, draga motsvarande spårrelais 21o sina respektive ankaren till sig och en ström går då från generatort 211 genom det slutna, parallellt in- kopplade kretsloppet, som bildas af ledningen 809, elektromagneten 221 (denna har dubbla lindningar och strömmen går nu genom den lindning, som icke begagnas, då ett tåg under återfärden stöter mot en spårkontakt 1 eller 2 på underafdelningen A), ledningen 811, elektromagneten 869, led- ningen 271, motståndet 272, kontaktarna 273 (»f hvilka den ena uppbäres af, men är isolerad från ankaret 225), ankaret 276 på underafdelningens A spårrelais 21o, ledningen 277, kontakten 273, ankaret 246 på underaf- delningens B spårrelais 210, ledningen 245, kontakten 244, ankaret 243 på underafdelningens C spårrelais 21o, ledningen 242, kontakten 24l, an- kare 24q på underafdelningens E spårrelais 21o, kontakten 279 och det stycke af ledningen 28o, som sträcker sig till kontaktarna 281 (af hvilka den ena uppbäres af, men är isolerad från armen 235) samt kontaktarna 282 (af hvilka den ena uppbäras af, men är isolerad från ankaret 225), elektromagneten 867, ledningen 812, elektromagneten 801 och ledningen 260* I det att elektromagneten Sol magnétiseras, lyfter den ankaret 803 tort från kontakten 8o5 och afbryter sålunda den strömkrets, som Hildas af den polariserade relaisens 261 lindningar samt elektromagneterna 266,622 och 268.*Iå

emellertid elektromagneterna 867, 221 och 869 magnet 1seras sam- tidigt med elektromagneten Sol, förblir det till underafdelningen S' hö- rande ankaret 270 utom förbindelse med kontakten 1273-, och ankarena 430 och 235 förblifva i beröring med respektive kontakter 226 och 1270. Strömmens styrka rättar sig efter motståndens 272 storlek, och dess riktning genom elektromagnetens 306 på lokomotivet lindningar är densamma, som riktningen af den svaga ström, hvilken till att börja med kommer från generatör 303- Denna sistnämnda ström är icke stark nog att rubba anka- ret 318, fig. IV, mot kontakterna 320 och 321, men den resulterande ström som passerar elektromagnetens 306 lindningar i samma riktning, som den ursprungliga strömmen, lyfter ankaret 315 upp till beröring med kontak- terna 320 och 321 sluter sålunda strömmen för tilltöakåhållande af de varnande och stoppande verkningarna äfv*nsom den ström, inom hvilken klockan eller ljudgifvaren 331 för fri bana finnes ooh med hvars XIIIRJSI tillhjälp solenoiden 332 magnetiseras. Om någon af underafdelningarna E,C,B eller A hade varit upptagen eller skendalar eller nödiga förbind- ningar varit skadade, så hade ingen ström gått från generatör 211 vid den mest aflägsna ändan af blockintervallen genom elektromagnetens 306 lindningar och tåget hade varnats af spårkontakten 3 samt stannats af spårkontkten 4. Xå ett tåg under återfärdens stöter mot de till underafdelningen 3 hö- rande spårkontakterna 4 och 3 gäller det blott att skaffa fri passage Öfver dessa. Strömmen från generatör 303 går till en början genom kon- taktsskon 14 samt genom samma kretslopp, som då tåget under färd i motsatt riktning kommer i förbindelse med samma spårkontakter 3 och 4, men, då förbindelsen mellan generatör 303 och kontaktskon är omvänd, går ström- men nu i motsatt riktning genom relaisens 261 lindningar och till följd härar flyttas ankaret 264 öfver mot armen 265 och kontakten 4J2, hvarvid kontakterna 263 åtskiljas, strömmen tvingas då att gå från relaisens 261 lindningar genom ankaret 264, armen 265 och motstånden 455 till genera- tors 212 negativa pol samt genom ledningen 224 till skenor 19, KSKXX hvarifrån den återvänder till generatör 303 på lokomotivet. Motståndet 455 hafva en sådan storlek, att nu en tillräcklig star ström går från ge- neratör 212 genom elektromagneten 306 på lokomotivet lindningar, i det att generatorerna 212 och 303 arbeta i aerie, och tåget erhåller signal att "banan är klar öfver spårkontakterna 3 °ch 4. Hela denna ström går likväl icke genom den polariserade relaisens 261 lindningar, enär dessa glSSJLS äro shuntade af motståndet 4-53, då anka- ret 264 sluter förbindelsen med kontakten 4-52. I ledningarna till relaiserna 223 och 263 kunna inskjutas strömvända- re 4i5 ocif 4i6, som, då de afbryta dessa ledningar, kunna hindra relaiser- ha från att magnet iseras samt därigenom sluta strömloppet genom genera- torerna 211 och 212 sålunda, att man vid ut skjutning af relaisen 223, som synes i närheten af underafdelningen i\ kan hindra passagen af ett tåg genom underafdelningen A, och vid utskjutning af relaisen 268, som synes i närheten af underafdelningen A, kan hindra tåg att passera underafdel- ningen P. På liknande sätt kunna tåg hindras att passera underafdel- ningarna B eller E eller genom hvilken som helst annan med spårkontakt rörsedd underafdelning. I spårkontakt*rnas ledningar 215 och 260 kunna äfven inskjutas afbrytare 412 och 413, som, då de afbrytas, hindra tåg att mottaga signalen ""banan klar" öfver motsvarande spårkontakter respek- tive 1 och 2 samt 3 och 4. såsom fig. ill visar slutar järnvägsspåret till höger med en underaf- delning J och detsamma tänkes fortsatt obegränsadt i motsatt riktning. Till följd härar behöfvas ej spårkontakter på underafdelningen H och de vid J använda apparaterna hafva i likhet med apparaterna vid S' undergått förenklingar i tvänne hänseenden, nämligen: a) Den parallellt inkopplade strömkretsen genom elektromagneten 824 och spårrelaiserna 210 ankaren är permanent förbunden med ledningen 228 tätt invid kontakten 227, hvarigenom ledningen 228 är fast förbunden med underafdelningens G spårrelais 210 i anslutning till underafdelningarnas H och J relaiser 210, och i> I Elektromagnet erna 266 och 867 äro utelämnade, hvarhos ledningen 280 är fast förbunden med kontakten 282, som uppbäres af ankaret 225* Spåret afslutas på andra sidan af underafdelningens J varningskontakt 3» och den isolerande förbindningen 95 anbringas sålunda, att ett lokomo- tiv, då det kör fram, måste passera öfver denna förrän det stöter mot underafdelningens J varningskontakt 3* * Då järnvägsspåret endast skall passera i en riktning, karl spåret ut- rustas med de i fig. VIII,IX eller X visade apparaterna, medan appa- raterna på lokomotivet kunna förenklas såsom schematiskt visas i fig. VII Pig. VIII visar «n odelad blockintervall X mellan isolerande för- bindningar 95; infarten på blockintervallen kontrolleras af en varnings- spårkontakt 1 och en stoppspårkontakt 2. Afståndet mellan spårkontakter- na 1 och 2 är så stort, att en lokomotivförare, hvars tåg varnat» vid spårkontakten 1, har tid att stanna tåget förrän spårkontaktten 2 nås, och afståndet Y mellan spårkontakten 2 och den närmaste isolerande förbind- eningen 95;är så stort, att om SXX stannande verkan sättes i gång på ett tåg af spårkontakten 2, så stoppas tåget förrän det når den Isolerande förbindningen 95 vid blockintervallens X början. Saima är fallet med de i fig. IX och X visade anordningarna. Då ett lokomotiv, föAsedt med de i fig. VII visade apparaterna stö- ter mot en spårkontakt 1 eller 2, fig. VIII, går en ström från genera- tors 370 positiva pol genom lindningarna af en snabbt verkande elektro- magnet 371, ledningen 372 till spårkontakten 1 eller 2, kontaktskon 14, fig. VII, ledningen 3731 klockan 37» elektromagneterna 52 och 53, hvar- på strömmen går tiirbaka till generatör 370 genom lokomotivets maskin- ställning och hjul, de ledande förbundna skenor 19 och ledningen 375. Denna ström är sj tillräckligt stark att åstadkomma ringning i klockan 374 eller att tillbakahålla de varnande och stoppande verkningarna, men den är likväl så stark, att elektromagneten 371 kan draga sitt ankare 376 upp mot kontakten 379 sålunda, att den i normala fall afbrutna spår- strömkretsen, som bildas af generatör 377, motståndet 378, kontakten 379, ankaret 376, de ledande förbundna skenor 19 och blockintervallens X isolerande förbindningar 95, spårrelaisens 380 lindningar vid den mest aflägsna ändan af blockintervallen, skenor 19 och ledningen 381 slutes. Ankaret 382 drages plötsligt upp mot kontakten 386, hvarvid strömmen slutes genom följande delar; generatör 333 ledningen 384, ledningen 372, spårkontakterna 1 eller 2, ledningen 373, klockan 374, elektromag- neter 52 och 53, lokomotivets maskinställning och hjul, skenor 19, ledningen 335, kontakten 386, ankaret 332 och motståndet 387. Styrkan hos den resulterande ström, som nu går genom elektromagneterna 52 och 53, rättar sig efter motståndens 387 storlek (generatör 377 är vid den- na förbindelse utan betydelse) och är tillräcklig att åstadkomma ring- ning i klockan 374 samt att tillbakahålla de varnande och stoppande verkningarna sålunda, att tåget får fri passage- Om ISSX2 emellertid blockintervallen X hade varit upptagen eller om skenor eller nödiga för- bindningar hade varit afbrutna, så hade ingen ström gått från generatör 383 genom elektromagneternas 52 och 53 lindningar och tåget hade varnats vid spårkontakt 1 samt «toppat» vid spårkontakt 2. Fig. VIII visar en odelad blockintervall X, men de i figuren fram- ställda apparaternakunna modifieras sålunda, att de kunna användas vid underafdelningar af en "blookintervall. I detta fall förses hvarje under- afdelning med sin egen spårrelais 330 och ankaret 376 eller den med punk- terade linier antydda afbrytaren förbindes irted den tillståndet ändan af hvarje skenlängd mellan de isolerande förbindningarna 95» medan hvarje relais kontakt 336 förbindes med påföljande relais ankare, hvarjemte kon- takten 386, hörande till den från spårkontakterna 1 och 2 mest aflägsna relaisen, förbindes med ändan af de skenor 19, som likaledes ligga längst i borta fr åa spårkontakt erna. Fig. IX visar en spårsträcka, hvars ena sida utgöres af «kenor 19, som från den ena ändan af spåret till den andra äro ledande förbundna med hvarandra, medan skenor 19 på spårets andra sida äro.afdelade i lämp- liga underafdelningar med tillhjälp af isolerande förbindningar 95* Såsom synes, bilda fyra sådana underafdelningar en blockintervall; infarten på densamma kontrolleras af spårkontakterna 1 och 2. Hvarje underafdelning har en spårrelai» 380, hvars uppmagnetisering med tillhjälp af d«ss egen generator 377 åstadkommea genom magnetisering af en snabbt verkande elektromagnet 371» som kan draga upp sitt ankare 376 i förbindelse med en kontakt 379. Då ett tåg stöter mot en spårkontakt 1 eller 2 går en ström från generatör 370 genom alla elektromagneterna 371 (som äro kopp- lad* i serie), ledningen 372, spårkontakten 1 eller 2, apparaterna på lokomotivet, fig. VII, till skenor 19 och härifrån tillbaka genom led- ningen 375* E«nna ström är ej tillräckligt stark att åstadkomma ringning i klockan 374 eller att tillbakahålla lokomotivets varnande och stoppan- de verksamhet. Ankarene 376 dragas till och sluta kretsloppen genom de de särskilda underafdelningarnas relaiser 330, i det att strömmen går från generatör 377 E«nom motståndet 378, kontakten 379, ankaret 376, ge- nom underafdelningens ledande förbundna skenor mellan de isolerande för- bindningarna 95, spårrelaisen 380, skenor 19 och ledningen 381. Om in- gen af ifrågavarande underafdelningar är upptagen och om deras skenor och nödiga förbindningar icke äro afbrutna, draga spårrelaiserna 380 sina respektive ankaren 382 mot kontakterna 386 och en ström går då från generatör 370 genom ett parallellt inkoppladt kretslopp, som bildas af regleringsmotståndet 337 och huvudledningen 334 med spårrelaiserna» 330 kontakter 336 och ankare 332 som mellanlänk. Den resulterande strömmen, som går genom apparaterna på lokomotivet är nu på grund af minskningen af motståndet i den del af strömkretsen, som utgöres af spårapparaterna, tillräckligt stark att bringa klockan 374, fig. VII, att ringa och med tillhjälp af elektromagneterna 52,53 tillbakahålla da varnand* och stop- pande verkningarna, men, om fx någon af underafdelningarna hade varit upptagen eller deras skenor eller nödiga förbindningar varit afbrutna, hade nämnda, parallellt inkopplad* ström icke slutits och strömmen genom apparaterna på lokomotivet hade varit för svag att tillbakahålla en varningseffekt vid spårkontakten 1 och en stannande effekt vid spårkon- takten 2. Fig. X visar en blockintervall, som består af fyra underafdelningar, hvilka hvarje hafva en spårrelais 330, genom hvilken en ström kan sändas från en för de fyra underafdelningarna geruansam generator 392 genom en huvudledning 390 och SXX lämpligt motstånd 391- Då ett tåg stöt- r mot en spårkontakt 1 eller 2, går en ström-från generatör 392 genom elektro- magneten 393 lindningar, ledningen 394, spårkontakten 1 eller 2, appa- raterna på lokomotivet, fig. VII. skenor 19 samt ledningen 395* Anka- ret 396 drages upp mot kontakten 397 och strömmen går då från generatör 392 genom kontakten 397, huvudledningen 39», genom samtliga motstånd 391, de sinsemellan ledande förbundna skenor 19 mellan två och två af de isolerands förbindningarna 95, spårrelaiserna 330 och genom skenor 19 tillbaka till ledningen 395. Om underafdelningarna ej äro upptagna samt deras skenor och dessas nödvändiga förbindningar Ickr äro afbrutna, mag- net iseras spårrelaiserna 380 och draga sina respektiv* ankaren 382 upp mot kontakterna 386, och en ström går då från generatör 392 genom en parallellt inkopplad strömkrets, som bildas af motståndet 393 i förening med spårrelaiserna 380 kontakter 336 och ankaren 382. Den resulterande strömmen, som går genom apparaterna på lokomotivet, är nu tillräckligt stark att sätta klockan 37, fig- VII, att ringa samt att tillbakahålla de varnande och stoppande verkningarna, men, om någon af underafdelningar na hade varit upptagen eller om deras skenor eller nödiga förbindningar varit afbrutna, sa hade nämnda parallellt inkopplade strömkrets icke SIK slutits och strömmen genom apparaterna på lokomotivet hade till följd härar ej varit tillräckligt stark att hindra igångsättningen af en var- ningseffekt vid spårkontakten 1 och en stoppeffekt vid spårkontakten 2. Vid hvar och en af de i fig. II,III och X visade konstruktionsformer- att IÅXiiiXIXåaX kortslutas om eller fiar* järnvägsvagnar «ll*r dy- likt finnas på «n blockintervall genom skenor 19 och d«n generator, med hvars tillhjälp nämnda relaiser uppmagnetiseras, utförd på ett sådant sätt, att hvarje del af blockintervallens skenor 19 utgör ea gren af den strömkrets, hvarmed relaisen ell* en eller flere af relaiserna uppmagne- tiseras, så att i hvarje fall relaisen eller en eller flere af relaiser- na icke kan magnetiseras, såvida icke blockintervallens gkenor 19 ärd» sinsemellan ledande förbundna. Vid den af fig. VIII vis«de utföringsfor- men göra sig andra förhållanden gällande, ty äfven om på ritningen är an- gifven samma förbindelse, som den, hvilken nyss beskrifvits under hän- visning till fig. 11,111 och X, så verkar det faktum, att d* motsatta än- dorna af blockintervallens X skenor 19 äro förbundna med relaisen 330 och med den generator 377, hvarmed denna magnet iseras, att nämnda förbind- nlingssätt ick* blir absolut nödvändigt, *när alla till blockintervallen X hörande skenor 19 utgöra en del af den tillbakahållande strömmens ström krets, hvilken ström går från generatör 383 genpm ett tåg, som undersö- ker blockintervallens tillstånd. På liknande sätt går det med den i fig, IX framställda utföringsformen. Ty äfven om där är antydt *tt förbiad- ningssätt g fö* hvarje relais 380 i likhet med dat, som ofvan beskrifvits med hänvisning till

fig. II, m och X, verkar det faktum, att skenor 19 ändor i hvarje underafdelning äro förbundsna m*d motsvarande relais 380 och med en särskild generator 377 för att magnetisera den senare, att H5X detta förbindningssätt icke blir absolut nödvändigt, enar alla till block- intervallen hörande skenor 19 utgöra en del af den tillbakahållande strömmens strömkrets, hvilken från generatoren 37(R) passerar genom ett tåg, som undersöker blockintervallens tillstånd. Vid hvar och en af nämnda utföringsformer utgöra alla de skenor, som befinna sig mellan två isole- rande förbindningar 95 på en blockintervall eller underafdelning, ea del af magnetiseringsströmkretsens för motsvarande relais sålunda, att denna icke kan magnetiseras, med mindre än att de mellan de isolerande för- bindningarna befintliga skenor äro sinsemellan ledande förbundna. På samma sätt som vid de i fig. II och III framställda apparaterna kunna spårkontaktarna 1 och 2 vid de i fig. VIII, IX och X framställda utföringsformerna afbrytas från skenor med tillhjälp af en afbrytare, som anbringas i ledningen 372, fig. VIII och IX eller i ledningen 39, fig. X, så att man blir i stånd att hindra ett tåg att passera spårkon- takterna 1 och 2 oberoende därpå, i hvilket tillstånd den framför tåget befintliga blookintarvåilen befinna sig. I några fall kan man genom att använda afbrytaren i ledningen 372, välja mellan, den visade anordningen och den, »om uppkommer, då strömkretsens genom spårrelaisen 330» fig- VIII normalt hålles slutet genom en med prickade linier antydd afbrytare, 1 det att man då utelämnar generatoren 370, elektromagneten 371» ankar 376 och kontakten 379. Denna 1 normala fall slutna strömkrets kan afbry- tas med tillhjälp af den med prickade linier antydd afbrytaren sålunda, att ett lokomotiv, hvars apparater, fig. VII, komma i heröring med spår- kontakten 1 eller 2, varnas eller stannas till följd af att generators 333 strömkrets (hvars ström i detta fall, på grund af generators 370 utelämnande och på grund af att man i detta hänseende kan "bortse från ge- neratorn 377» ensam är tillräcklig att tillbakahålla de varnande och stan nande verkningarna) afbrytes, enar relaisen 350 magnet, is eras. Då den prickade afbrytaren är stängd och blockintertoallen X icke är upptagen samt ingen del af dess skenor eller nödiga förbindningar är afbruten, slutas på ett med de i fig. VIII visade apparaterna förse- d lokomotiv, som kominer i förbindelse med spårkontakten 1 eller 2, en tillbakahållande strömkrets genom generatoren 383 på grund af att relaisen 380 ar magneti- srad och därför håller sitt ankare 382 upp i "beröring med kontakten 386. Om blockintervallen emellertid är upptagen eller om skenor eller nödiga förbindningar äro afbrutna, slutas icke strömkretsens genom generatoren 383 och tåget varnas då vid spårkontakt 1 samt stannas vid spårkontakt 2. Vid den modifierade utföringsformen, som är antydd med prickade linier å fig. VIII, kan man nöja sig med en enkel generator 377, som ar så stark, att den kan leverera tillräcklig ström både till magnetisering af relai- sen 380 och till åstadkommande af hela den tillbakahållande strömmen, så att generatoren 383 kan utelämnas. På liknande sätt kan man i stället för afbrytaren i ledningen 394, fig. X, använda den mellan generators 392 positiva pol och elektromagne- ten antydd afbrytaren, med hvars tillhjälp relaiserna 380 kunna utsku- tas, i det att elektromagneten 393» ankar 396, kontakten 397 samt för- bindelsen mellan kontakten 397 och ledningen 394 utelämnas, hvarvid förbindelsen mellan generators 392 positiva pol och hufvudledningen 390 åstadkommes med tillhjälp af den prickade ledningen, så att generators 392 strömkrets genom spårrelaiserna 380 vanligtvis är slutet. Fig. XI, XII och XIII visa en anordning, som skall hindra från tåget nedhängande krok- ar eller kättingar att fastna i eller rubba en spårkon- takt. stålspårkontaktea 506, torn är af T-förmig genomskärning, är fast vid en träkloss 505, som upphäres af sadlar 504. sadlarna 704 fasthålla tråkstäl- sen 505 säkert på dess plats med tillhjälp af en lämplig hult 507, och denna tmls mutter eller hufvud 508 samt dessutom hufvudena på alla de träskrufvi- r 509, som fasthålla sadlarna vid sleep- ern 519» skyddas mot nedhängafde kättingar eller kopplingskrok- ar lämpliga afsnedda flän- äro sar* eller sluttande plsua 511 på motsvarande sadel 504 (soi is perspekti- viskt. framställda i fig. XIII), öfver hvilka flänsar eller sluttande plan en nedhängande kätting eller kopplingskrok lätt kan glida. Till yttermera skydd är den af flänsarna hildade fördjupningen, såsom fig. XIII visar, täkt af en järnplåt 864, hvilken "böjts så, att dess öfre sida löper jämnt med flänsarnas kanter. Spårkontakten 506 hvilat på lämpliga, isolerande underla och splattor 513 oapi är fast vid träklossen med träskruvur, hvilkas hufvud 512 skyddas med lämpliga järntäckplattor 514, som fastskruvas vid träklossen med skruvur 516 samt äro afsnedda vid ändorna, se fig. XI och XII. Meningen är, att alla hult- och skruvmutter och hufvud, i KIXi hvilka nedhängande kättingar och kopplingskrok- ar annars kunna fastna, skola skyddas såsom fig. XI, XII och XIII visa. Ändan af spårkontakten 506 skyddas med en lämplig näsa 517 af i fig. XII visad form, hvilken näsa hvilat på tvänne på hvarandra följande ned- sleepers 518 och 519- Säsans 517 andfläns 520 hringas* i jämnhöjd med och hål- st något under sleepers 513 öfre sida. En nedhängande kopplingskrok eller kätting kan då icke komma i hero- ring med stålkontaktens 506 ända eller fastna vid hufvudena till trä- skruvurna 513 eller hultarna 508 och 509. Pig. XIV visar en anordning, med hvars tillhjälp man kan hindra ett tåg att passera en spårväxel, såvida denna icke är helt och hållet om- ställt i riktigt läge och fasthålls häri på tillbörligt sätt. Ett tåg stöter under återfärden (som på figuren är antydd med ordet "tillbaka" ää och en pil) förrän det når växeln, mot spårkontakten 521, som lämpligen utgöres af en stoppkontakt, hvilket i det följande antages vara fallet, ehuru der äfven kan vara en varningskontakt. Spårväxeln kan installäs an- tingen på hufvudlinien I eller på sidolinien T, och, om den är helt och hållet omställdt samt fasthålls säkert i detta läge, går en ström* från generatoren 303, fig- IV, genom apparaterna på lokomotivet, kontaktskon 14, spårkontakten 521, ledningen 522 och, om hufvudlinien är klar, såsom antyd, genom de isolerade kontrollapparateriia 523 och 524 eller, om »idoliaien T är klar, geom d* i*ol*rade kontrollapparaterna 525 »en 526 till ledningen 527, kontaktarna 528 (af hvilka den ena uppbäres af, »en är isolerad från rigeln 529, hvilka kontakter stå i förbindelse ned hvar- andra, om rigela 529 är helt utskjuten), ledningen 530, den polariserade relaiseis 531 lindningar, ledningen 542, de isolerade kontaktarna 533 och 53V, ledningen 543, skenor och tillbaka till generatoren 3»3 på lo- komotivet genom dettas hjul och maskinställning. Nämnda relai* ankare 532 står vanligen i sitt mellanläge, *om figuren visar, oeh då det inta- ger detta läge, är förbindelsen slutet mellan de isolerade kontaktarna 533 och 53* Iå ankaret 532 flytta* till den ena eller andra sidan, bringas d* isolerade kontaktarna 536 och 537» med hvilka generatöra* 535 poler äro förbundna, -1 beröring ned respektive fjäderkontakter, antingen 50 och 51 eller 538 och 539 och »amtidigt flytta* en af de isolerade kontaktarna 533 och. 53-» hvrvid förbindelseja mellan dem afbrytes. Rikt- ningen af den ström, som går genom llnningarna 531» då tåget, under åter- färden stöter mot spårkontakten 521, är sådan, att ankaret 532 flyttas åt höger och sålunda bringar de isolerade kontaktarna 536 och 537 i be- röring ined r*»pektiv* fjäderkoatakter 50 och 51, hvarcid generatör» 535 negativa pol förbindes med kontakten 50 och de*s positiva pol med kontakten 51» och förbindelsen mellan kontaktarna 533 och 534- afbrytes. Generatoren 3»3 på lokomotivet och generatoren 535 vid »året äro nu koppla de 1 serie och »trommen går genom den »trömkret», aom bildas af genera- torn 303* fig. IV. apparaterna på lokomotivet, kontaktskon 14, spårkon- takten 521, ledningen 522, kontrollapparat erna 523 och 524 eller 525 och 526, ledningen 527» rigelkontaktarna 528, ledningen 530, den polariserade reiaaisens 531 lindningar, ledningen 52 542, kontakten 540, kontakten 540, generatoren 535, kontakten 537» kontakten 54i, ledningen 544, ledningen 53* skenor samt lokomotivet» hjul och maskln*ställning. D*n resulteran- de strömmen är tillräckligt *tark att draga ankaret 318, fig. IV, till beröring med kontaktarna 320 och 321, så att de varnande och stoppande verkningarna tillbakahålla och signalen "banan klar" angifves. Hela denna »tröm går likväl ej genoii llnningarna 531, ty, då anka- ret 532 rört sig åt höger, ahurits dessa lindningar 531 af ledningen 546, motståndet 57» kontaktarna 548 (af hvilka den ena uppbäres af, men är isolerad från ankaret 532) och ledningen 549. Tåget kan då undersöka, i hvilket tillstånd spårväxeln befinna sig och, om detta icke helt och hållet skjuts öfver eller låst riktigt MXZR eller on någon nödvändig förbindning brutit eller ankaret 532 ick* står riktigt, afbrytes strömmen genom spårkontakten 521 vid en af kontrollap- parateraa eller vid rigelkontakt erna, och tåget stannas vid stoppkon- takten 521. Då lokomotivet kör fram, vändes förbindelsen mellan generatoren 3»3 och kont*ktskon 14 och, då tåget står i beröring med spårkontakten 521, går'e». ström genom den polariserade reiaaisens 531 lindni and gar, hvarvid ankaret flyttas till vänster och sålunda sluter förbindelsen mellan kon- takterna 536 och 537 samt respektive fjäderkontakter 533 och 539 och sam- tidigt afbryter förbindelseja mellan kontaktarna 533 och 53* Generatoren 535 ar då son förr inkopplad i strömkretsens, men i omvänd riktning och en tillräckligt stark ström går genom lokomotivets apparater, hvarvid ankaret 313 tilldrag**, och de varnande och stoppande verkningarna till- bakahållas. llnningarna 531 shuntas i detta fall af den strömkrets, som bildas af ledningen 550, motståndet 560, kontaktarna 561 (af hvilka den ena uppbäres af, men är isolerad från ankaret 532) och ledningen 562. Då ett tåg under färd framåt (antyd med ordet "fram" och en pil) stöter mot spårkontakten 564, som lämpligen utgöres af en stoppkontakt, må ledningarna vara förbundna såsom figuren utvisar. Förbindelsen mellan spårkontakten och rigeln åvägabringas därför med tillhjälp af de isolera- de ISÄXäti kontrollapparaterna 566 och 567 samt ledningen 527. Strömmen går då till ledningen 527 och genou återstoden af strömkretsens såsom 34X21 ofvan beskrifvits, och tåget varnas eller stannas vid spårkontakten 564, om växeln icke är inställd på hufvudlinien eller om förbindelsen mellan rigelkoiitakterna 523 icke är slutet eller någon af de nödiga XSEIäMIÄH förbindningarna är afbruten eller ankaret 532 befinna sig i oriktigt läge. På liknande sätt undersöker ett tåg under färd framåt på sidolinien T i riktning mot spårväxeln om denna är rätt inställd och, då tåget stö- ter mot spårkontakten 569 (hvilken lämpligen är en stoppkontakt) går en ström genom ledningen 570, kontrollapparaterna 571 och 572, ledningen 527 och genom återstoden af strömkretsens 30m ofvan beskrifvits. Om spår- växeln icke är rätt inställd på sidolinien, om förbindelsen mellan rigel- kontaktarna 523 icke är slutet eller om nödiga förbindningar äro afbrut- na på ett eller annat ställe eller slutligen om ankaret 532 är ställdt orätt, stannas tåget vid spårkontakten 569; om aäremot allt är i ordning, går tåget klart öfver spårkontakten 569- Spårkontaktarna 521, 564 och. 569 kujna, o» så Önskas, vara försedda med «a red med förbunden varal»qsspårkontakt, så att ett tåg kan varnas, förrän det stannas, am aär vore någonting i vägen vid spårväxeln. Spårkontaktarna 521, 564 och 569 böra alla anbringas så långt från spårväxeln, att ett tåg, efter att hafva stött not en af nämnda spårkon- takter, kan stannas förrän det når växeln. Iå spåret stall passeras af tåg endast i en riktning, är det onödigt att använda relais vid spårväxeln, enär d* elektriska förbindelserna kun- na utföras sålunda, att en strömkrets slutes genom en generator, såsom t.ex. 535, då ett tåg, som närmar sig spårväxeln, stöter mot en spårkon- takt, hvilken strömkrets slutas endast, om växeln är i ordning. Fig. XV och XVI visa anordningar, som skola hindra ett tåg att passe- ra ea banaträcka, t.ex. en kurva, med större hastighet är lofligt. Ett tag stöter t. ex. under återfärden i riktning mot en JtOXIX kurva P (antyd på fig. XV med ordet "Tillbaka" och en pil) mot en dub- bel »pårkontakt 602,603 förrän det når nämnda kurva och , om tåget kör med större hastighet, än hvad aom i kurvan P kan tillåtas, varnas och stannas tåget vid nämnda spårkontakt, såsom nedan skall förklaras. I an- slutning till hufvudkontakt skon 14, som visas å fig. I ooh IV» finnes på lokomotivet, fig. XVI, ett åt sidan rörligt kontaktorgan 601, som kan vrida sig kring tappen 604 och som svänges ut åt sidan, som figuren utvisar, nar det stöter mot en spårkontakt. En dubbel spårkontakt består, såsom fig. XV och XVI visa, utom af en vanlig toppkontakt 603, »om tjänar till att upplyfta kontaktskon 14, hvarvid riglerna 93 och 99 blifva fria (hvilket åstadkommer en varnande och stannande verkan, ifall ej en tillbakahållande ström går genom elek- tromagneterna 52 och 53), af en sidokontakt 602, som är af sådan form, att den gradvis kan flytta kontaktorganet 601 ett visst, bestämt stycke D ut åt sidan. Styckets D storlek beror på den största hastighet, hvar- med tåget utan fara kan passera kurvan P. Iå t. ex. ett med de i fig. XVI visade apparaterna förse- dt tåg stöter mot spårkontakten 602,603, fig XV, evänges kontaktorganet 601 ut åt sidan, såsom fig. XVI utvisar, så. att det sluter förbindelsen mea en kontakt, som är märkt e, om den eéii maximala hastigheten i kurvan P är e kilometer i timen. På tåget finnes en speedometer eller någon annan lämplig hastighets- mätare, hvars visare 618 kan sluta förbindelse med lämpliga kontakter, som htar för sig hafva en mot en bestämd farhastighet svarande längd och alla äro ledande förbundna mad «H af de kontakter, mad hvilka kontaktor- ganet 60i kan kaarna 1 beröring.

Speedometers visare 613 atår icke i förbindelse med någon kontakt, då den står på 0 och, 1 nedan nämnd afsigt, ej haller, då den aager an hastighet, som ligger under en förut bestämd minimal farhastighet - J3a denna hastighet nålf, kommer visaren i förbindelse med alla på speedome- ter and s, frs/E and ida syUliga kontakter. Iå visaren t. ex. angar 3° kilometer i timmen, står den i förbindelse med alla kontakter, som motsvara en stör- re hastighet än 30 kilometer i timmen* man icke med de kontakter, som motsvara mindre hastigheter. Iå visaren anger en hastighet af 30 kilome- tsr i tinman, har den på liknande sätt afbrutit förbindelsen med alla de speedometerkontakter, aom svara mot. an mindre hastighet än 30 kilometer i timmen, men står däremot i förbindelse med alla de kontakter, som sva- ra mot större hastigheter 0.3.v. Iå ett tåg stöter mot en dubbelspårkontakt 602,603, som flyttar kon- taktorganet 601 att stycke D åt sidan, hvilket, såsom fig. XVI utvisar, motsvarar, a kilometer 1 timman, och då speedomsterns visare samtidigt an- ger en hastighet, som ej är större än e kilometer i timmea och ej håller mindre än ofvan nämnda minimala farhastighet, går an ström från an gane- rator 610, fig. XVI. genom lindniigarna till an elektromagnet 611, mot- ståndet 612, ledningen 613, armaa 611*- till en omkastnIngströmvändare, som kontrolleras af lokomotivets omkastningsmskanism, ladningen 615, ar- men 616 till an fctörmvändare (30m vändes om hvar gång lokomotivet ändrar färdriktning på en vändskifva, triangel, slinga eller liknande) ladningen 617, speedometerms visare 61S, speedometerkontakten 619, ledningen 620, kontakten e (med hvilken kontaktorganets 601 öfre ända st5.r i b*röring), kontaktorganet 601, sidokontakten 602, ledningen 621, fig. XV, lindningar na till an polariserad relais 622, ledningen 623, de isolerade kontakter- na 624 och 625 samt genom ledningen 626 till skanorna, hvarifrån dan åter väjalar till generator* 610 genom lokomotivets hjul och masinatällning, ledningen 62S, strömbrytarearnen 629, omkastningsströmbrytareas arm 630 och ledningen 631* Denna strömkrets slutes endast, om speedometersvisaren 31 618 ick« angifvsr en mindre hastighat, än nämnda minimifastighet al- ler mara än e 181 kilometer i timmen, hvilket är dan största farhaättig- het, hvarmed tåget utan fara kan passera spårkontakten 602,603 framför kurvan P, i det att äS sidokontakten 602 vändt kontaktorganet 601 så att detta kommer i förbindelse med den kontakt e, som motsvarar den maximala farhastighetea • kilometer i timmen. Om denna itrömkrete icke slute»,.sätter kontaktskon 14, som frigör riglarna 98 och 99, då dsn upplyftes af apårkontakten 603, de varnande och atopande verkningarna 1 gång. Den ström, som till en början går genom elektromagneten 611, är icke till- räckligt stark att draga ankaret 632 upp mot kontakten 633 för att på detta »ätt tillbakahålla de varnande och stoppande verkningarna. Den po- lariserade relaisens 622 ankare 63 står vanligen i «tt mittläge, såsom visadt, och, då detsamma befinner sig 1 detta läge, är förbindelsen slu- ten mellan de två isolerad* kontaktarna 624 och 625. Strömmens riktning genom den polariserade relaisens 622 lindningar är, då ett tåg under åter- färdn passerar öfver spårkontakten 602,603, «ådan, att ankaret flyttas åt höger och därvid bringar sia isolerade kontakt 635 (*om är förbunden med genratorna 637 negativa pol) och sin isolerade kontakt 636 (som är förbunden med generatorns 637 positiva pol) i förbindels* med respektive fjäderkontakter 63g och 639, hvarvid förbindelsen mellan kontaktarna 624 och 625 afbrytes. Generatorn 637 Inskjutes sålunda i strömkretsens i se- rie med generator* 610 och en ström går nu genom en strömkrets, som be- står af generatora 610 på lokomotivet, fig. XVI. apparaterna på lokomo- tivet, kontaktorga.net 601, kontakten 602, ledningen 621, den polariserade relaisens 622 lindningar, ledningen 623, sideledningen 640, kontaktea 633, kontakten 635; generatorn 637, ledningen 641, koaktaken 636, kon- taktan 639, ledniagen 642, ledningen 626, skenorna aamt lokomotivets hjul och maskinställning. Den r-sulterande strömmen är så stark, att elektromagneten. 611 drager sitt ankar* 632 mot tyagdkraften och »ot in- verkan af en lämplig fjäder 644 till beröring med kontakten 633 och en tillbakahållande ström går då från en lokal generator 645 på lokomotivet genom en klocka 646, aom sålunda gifver signal att banan är klar, ankaret Ö32, kontakten 633, ledningen 647, elektromagneternas 52 och 53 lind- niilar, aom, åå de uppmagnetiseras, tillbakahålla de varnande och stop- pande verkningarna. -, Hela den ström, som «.år genom elektromagnetens 611 lindningar, passe- rar likväl ej dea oalariserade relaisens 622 lindningar, 5S enär dessa, på grund af att ankaret 634 rört sig åt höger iJåitixix har shuntats af ledningen 633, motståndet 649, ledningen 650. den isolerade kontakten 651 som uppbäres af ardcaret 634, k ont aleten 652 och ledningen 653. Tåget erhåller sålunda fri passage öfver den dubbla spårkontakten 602,603, såvida deas E*rh*stighet, som angifves af speedometer», icke överskrider * kilometer i timmea. Da hastighetsn hos «tt tåg, som lä»nar kurvaa, på lmetet vis »bör in- skränkas af spårkontakten 602,603, är denna gjord så, att den flyttar Kontaktorganet 601 på ett tåg, som far i riktning bort från kurvan P, Öfver i ett lig«, i hvilket det'samea kommer i beröring med en af kontak- terna 655- Då tåiWts färdriktning är omvänd, åstadkommer flyttningen af omkastningsströmbrytaren eller den andra strömbrytaren att, då tåget står i förMndlse med-kontakten 602,603, en negativ ström får frå gene- ratorn 610 genom ledningen 617, ledningen 657 (i det att speedometers visare and kontakter nu äro utanför strömkretsens), kontaktn 655» med hvilken kon*ktorganet 601 står i förbindelse, kontaktorganet 601, den kant på sidokontakten 602, som är vänd bort från ledningsn 621, ledningen 621 (kontaktens 602 sidor äro ledande förbundna med hvarandra längs hela omkretsens), den polariserade relaisens 622 lindningar, ledningen 623» de isolerade kontaktarna 624 och 625, ledningen 626 och tillbaka till gene- ratorn 6 lo genom lokoøotivets hjul och mask inställning, ledningen 613, motståndet 612 och elektromagnetens 611 lindningar. Då strömmens riktning genom den polariserad* relaisens 622 lindningar nu är omvänd, flyttas an- karet 634 öfver till vänster och »bringar sålunda sina kontakter 635 och 636 i förbindelse med respektive fjäderkontakter 660 och 661, hvarvid förbindelsen mellan kontaktarna 624 och 625 afbrytes. Generatorn 637 in- skjut es sålunda i strömkretsens genom kontaktarna 660 och 661, i det att dess negativa pol genom ledningen 626 nu är förbunden med generatorns 610 positiva pol på lokomotivet och desa positiva pol med samma genera- tors ölo negativa pol genom ledningen 621. Generatorerna 610 och 637 äro sålunda kopplad» i serie och en tillräckligt stark strö» går genom elek- tromagnetens 611 lindningar, så att denna drar sitt ankare 632 upp mot kontakten 633, hvarvid den tillbakahållande strömmen för de varnande och stoppande verkningarna på tåget slutes, hvarvid med tillhjälp af klockan 646 gifves signal att »banan är klar. Hela den ström, som går genom elektromagnetens 611 lindningar, passe- rar ioke den polariserade relaisens 622 lindningar, enär dessa på æ2K grund af att ankaret 63 flyttats öfver till vänster shuntats af en strömkrets, som bildas af motståndet 662, den isolerad(R) kontakten 663 på ankaret 63*+ och kontakten 664. » Det torde framgå, att vid den träffad» anordnagen, aänligen att spee- dometersvisaren 618 icke kommer i förbindelse msd «n enda af spedoreter- kontaktarna förrän den anger en hastighet, eom är större än en viss, förut b*stäm d minimal farhaetighet, »am ka» vara säker om, att tåget stannas, o(R) speedometervisarsn vid färd öfver snårkontakten 602,603 icke inställer sig efter tågets hastighet och till rölj d dära f icke» anger en hastighet, som är större än nämnda minimala f arhastighet. Denna haatig- h*t sättas så lågt, »om med hänsyn till speedometers känslighet och den lägsta förut antagna maximala farhastigheten på järnvägslinien kräfvea. Det-är dar,för nödvändigt, att spårkontakter, såsom 602,603 anbringas på punkter, soa af tåget skola passeras med en hastighet, som icke är mindre än den nämnda minimalhastigete», enär det annars vore omöjligt att upp- nå en sådan hastighet. Då ett lokomotiv, som är utrustadt med den i fig. XVI visade apparaten till begränsande af farhastigheten, kör in på spår, försedda med d* appa- V" rater, som visas i fig. II,III,VIII,IX,X,XIV eller XVII, bör hvar och en af de i dessa figurer visade spår k ont akt erna ersättas af en dubbelkontakt m består dels af en toppkontakt i likhet med 603, som tjänar till att upplyfta kontaktskon IH-, och dels af en sidokontakt i likhet med 602, fig. XV, dock med den skillnaden, att, oberoende af i hvilken riktning tåget far, kontakt.orgonet 601 vrides sålunda, att det kommer i beröring med en af kontaktarna 655. Då ett lokomotiv ändrar färdriktning på en vändskifva, triangel, slinga eller liknande, begagnar man ej omkastningsmekanisuen. Det är där- för nödvändigt i afsigt att säkerställa ett riktigt samarbete mellan spår- apparaterna, att vända om förbindelsen mellan genratorn på lokomotivet och iSiüEiXJCiS kontaktskon, hvilket uppnås med tillhjälp af den eller de ofvannamnda andra omskiftarena..Fig. XVII visar en anordning, som tvingar lokomotivföaren att omställa omskiftaren eller omskiftarena förrän loko- motivet kör in på en slinga. Apparater af liknande konstruktion kunna an- vändas i förbindelse med en vändskifva, triangel eller liknande. Framför infarten till slingan äro på spåret anbragta stoppkontakter 700 och 701, af hvilka den senare befinner sig tätt vid infartsstället. Vid den i fig. XVII framställda i and K utföringsformen, som förändrar färd- riktningen från återfärd till färd framåt, är spårkontakten 700 förbunden med huvudliniens närmaste spårkontakter 1 och 2 (fig. II eller III). Ett lokomotiv kosuner under återfärden (som på figuren är antygd med or- det »tillbaka» och en pil) i förbindelse med spårkontakten 700 med äin IS kontaktsko 14, genom hvilken en ström I* t j. 1 IL 3pâi*apnarifj l> £ rma S 01S1 t*(R) *** nom loicnsfiotivapparaterna äro förbundna msä generatorns på lokomotivet positiva pol. Har spårkontakten 700 passerats, bör lokomotivföaren, in- na spårkontakten 701 nåa, omställa omskiftaren «lier omskiftarena, så att nämnda kontaktsko rörbimd»3 med generatorns på lokomotivet siagativa pol. Om lokomotivföaren forstagit nämnda omställning, då lokomotivet stöter mot spårkontakt en 701, kopplas generatora 703 på spåret 1 serie med generatorn på lokomotivet, i det att dess positiva pol forbindes med spa-rkontakten 701 genom ledning*n 7° och dess negativa pol »ed skenor- na genom regleringsmotstånden 705 och ledningen 706. Strömmen, som går genom apparaterna på lokomotivet, är då tillräckligt stark att tillbalca- hålla da varnande och stoppande verkningarna på detta, och lokomotivet kan såluada Tritt fara rundt i slingan. Iå lokomotivet lämnar slingan och åter kommer i förbindelse med spår- kontakten 701, sammankopplas generatorn på lokomotivet och gi and iKIX genera,, torn 703 vid spåret åter i serie, ocn lokomotivet får därför fri passa- ge, hvilket äfven uppnås, då det stöter mot spårkontakten 700. Cm lokomo- tivföaren emeåler tid glömt att företaga omställningen förrän spårkontak- ten 701 aås, arbetar generatorn på lokomotivet, då detta stöter mot spår- kontakten, emot generatorn 703 på spåret, och strömen genom lokomotiv- apparaterna blir då icke tillräckligt stark att tillbakahålla de varnan- de och stoppande verkningarna, och till följd häraf stannas tåget vid nämnda spårkontakt. I fall (R)n slinga eller liknande användes till att ändra färdriktningen för ett lokomotiv från framåt till tillbaka, kan en liknande anordning begagnas, som kan tvinga lokomotivföaren att företaga nödiga omställ- ningar 1 det att spårkontakten foo i detta fall förblades med huvudlliaii- ens närmaste spårkontakter 3 och 4, fig. 11 eller III, med hvilkas till- hjälp ett tåg under färd framåt undersöker det framför liggande spårets tillstånd, hvarvid generatorns 703 förbindelser »ed spårkontakten 701 och med skenorna vändas om. Ett huvfuddrag vid hvarje af de ofvaa nämnda utföringsformerna för tågapparater är, att de anordnats så, att ett tåg blir i »tånd att i sam- verkan med en spårkontakt sluta en strömkrets, hvarvid uppstår en till- bakahållande ström af tillräcklig styrka,förrän stängens 102 stoppande kant glider »oort från rigel» 98 och innan stängens lo2 andra stoppende kant glider bort från rigeln 99, ty annars varnas och stoppas tåget in- nan det undersökt järnvägsspåret. Hvarest spårkontakterna både upplyfta stängn 102 ooh tjäna som ledare för den elektriska strömmen, hvilket är fallet vid alla utföringformer, utom vid de i fig. XV oöii XVI visad», uppnås detta genom iES att försa spårkontakterna med tillräckligt långa ramper för ändorna, med hvilkas tillhjälp upplyftningen af stängn lo2 äger rum, och genom ÅJE att använda spårapparater af motsvarande lämplig känslighet. Om man önskar begagna upppifningen 1 komisi hat lon med elektriskt drif- na tåg, kam detta ske genom att använda skenorna i säkerhetsapparats tjänst på samma aått, som ofvan »beskrifvits, medan den elektriska drif- kraften tillföres tåget på »bekant sätt, hvarvid de skenor som bilda ena sidan af spåret, begagnas som en gemensam tillbakaledning för drifkraft- ten och för den till säkerhetsapparaten anlända strömmen, medan de ske- nor, som »bilda den andra sidan af spåret, delas i från hvarandra isolera- i de,skenlängder med tillhjälp af isolerande förbindningar, såsom ofvan »beskrifvits. I stället för »n gemensam tillbakaledning för drifkraften och för säkerhetsapparats stroa kan man »begagna en särskild tillbaka- ledning för drifkraften. Den på tåget befintliga delen af strömkretsens för drifkraftens ström anordnas i£ hvarje fall så, att den afbrytes af ett eller annat rörligt organ, såsom t. ex. rigela 99, hvarvid tåget stannas. Det

torde framgå, att med tillhjälp af de i fig. n,iii,ix och X visa- de anordningarna och med tillhjälp af den modifierade utförligaformen i flg. VIII, det är möjligt för ett tåg att under infarten på en blockinter- vall, som kan vara mycket längre än hvad som tidigare visat sig ändamåls- enligt, undersöka blockintervallens säkerhet med tillhjälp af en enkel spårkontakt på grund af kortslutning i en spårrelais», i fall spåret ar upptaget af rullande materiell. Detta ernås genom användande af underaf- delningar, som hvarje äro försedda med en egen spårrelais, och genom ävä- gabringandet af en sådan anordning, att kortslutning i en spårrelais åstadkommer, att en ström sändes genom apparaterna på ett tåg, som står i förbindelse med spårjontakten vid ändan af blockintervallen. Vid alla konstruktionsformer, med undantag af de modifierade, som antytts med prickade linier i fig. VIII och X, resulterar kortslutningen 1 alstrandet af en icke tillräckligt stark ström och vid nämnda modifikation er i ute- blifvandet af en viss ström. patentanspråk. 1. Iågsäkerhetsapparater, bestående af apparater på tåget och appa- ter på spåret, med hvilkas tillhjälp tåg autociakt och på elektrisk väg kunna skydda sig själfva, kännetecknad däraf, att ett tåg varnas eller eller stannas, varnas och därpå stannas eller varnas och stannas samti- digt, 'eller af att nämnda tågsäkerhetsapparat styr bromsarna och 1 fall af fara sätter dem 1 funktion, hvilket all utföres automat i slet när hälst en direkt framför tågst "belägen "bloc tint evvall af banan innehåller en rubbad eller brusten skena, eller på denna sträcka befinnes sii «tt an- nat tåg eller annan rullande material hvilket slag som hälst, eller eller därfinnas" spårväxlar, som icke kunna befaras af tåget, eller tågets hastighet är för stor för vissa sträckor af banan, hvarvid tågsäkarhets- apparaten funktionerar trots oriktiga manövrar eller brister vid delar af densamma. 2. Tågsäkerhetsapparat af 1 anspråk 1 angifvet slag, vid hvilken en varnande eller stoppande anordning verkar, när hälst ett organ på tåget påverkas af en spårkontakt på så sätt, att den nämnda varnande eller stoppande anordningen, »om i normala fall hålles tillbaka, frigöres, så- vida. detta icke hindras genom uppkomsten af en tillräckligt star ström genom en kontrollerande anordning på tåget, kännetecknad däraf, att deft varnande eller stoppande verksamheten på tåget hålles tillbaka, då detta kommer 1 förbindelse med en spårkontakt 1 eller 2, med tillhjälp af en genom tåget gående ström af tillräcklig styrka, hvilken ström kontrole- ras af en som en pröfvoelektromagnet verkande anordning 1210,21o eller 38o på spåret, och hvars strömkrets slutes genom en generator 32,212 eller 377 vid spåret af tåget, då detta står i förbindelse med spårkon- takten, hvarvid kortslutning af nämnda anordning 1210,21o eller 38o, som åstadkomies af en på spåret befintlig järnvägsvagn eller liknande, hindrar uppkomsten af nämnda tillräckligt starka ström (fig. II,III,VIII, IX och X). 3- Tågsäkerhetsapparat af 1 anspråk 2 angifvet slag, kännetecknad där- af, att tåget, då det konmer 1 förbindelse med spårkontakten 1 eller 2, till en början alstrar en ström, som icke är tillräckligt stark att till- bakahålla en varnande eller stoppand* verkan och hvilken går genom den kontrollerande anordningen på tåget samt genom en spårrelais (25,26 eller 223 eller 371 eller 393)> hvarpå strömmen genom den kontrollerande anord- ningen ökas, om den blockintervall (B,C,D,E,E eller B.Cj.E.ff eller X), till hvilken spårrelaisen hör, icke är upptagen, till nödig styrka*under medverkan af den som en pröfvo-elektromagnet verkande anordningen 121o, 21o eller 33o på spåret, om däremot denna sistnämnda anordning icke blif- vit uppmagnetiserad på grund af att den blifvlt kortsloten till följd af att en Järnvägsvagn eller liknande befinner lig på spåret eller till följd af ett brott 1 ledningarna, förblir dea aäsmda strömmen nere vid sin -ursprungliga otillräckliga styrka. 4. Tågsäkerhetsapparat af i anspråk 1-3 angifvet slag, hvid hvilken en varnaae eller stoppande anordning verkar, när hälst ett organ på tågei påverkas af en spårkontakt på så sätt, att nämnda varnande eller r/Enordaiag, soin normalt håll(R)< tillbaka. frigöres, såvida detta icke hiadras gaaom uppkomsten af en kontrollerande ström af tillräcklig styr- ka genom en kontrollerajade aordning på tåget, kännetecknad däraf, att tåget, då det kommer i förbindelse med en apårkontakt 1 eller 2 framför »a blockintervall, alstrar en ström i eu viss riktniag genom en polari- serad spårrelais 1o eller 216, hvilket åstadkommer, att den kontrolleran- de strömmens styrka beror därpå, om pa blockintervallen "befinnes sig en järnvägsvagn eller liknande, som förorsakar kortslutning ho» «a ström- kontrollanordning 121o eller 21o, hvarvid tåget, då det under färd i mot- satt riktning kommer 1 förbindelse med en af nämnda spårkontakter, sedan det lämnat blockintervallen, alstrar en ström i motsatt riktning genom den polariserad< spårrelaisen, hvarvid den kontrollerande strömmen uppnår den riktiga styrkan oberoende af tillståndet på aämnda blockintervall (fig. II och III). 5» Tågsäkerhetsapparat af 1 anspråk angifvet slag, kännetecknad Så af att, då tåget far ia på en blockintervall öfver spårkontakten 1 eller 2, den polariserade spårrelaisens 16 eller 216 ankare 17 eller 217 flyt- tas öfver i ett sådant läge, att en ström går genom ea annan spårrelais 25,26 «lier 223, hvarvid den kontrollerade strömmens styrka blir bero- ende af, om på blockint evallen befinnes sig en j ärnvä and svaga eller lik- nande, som kan kortsleta den strömkontrollerande anordningen 121o eller 21o, hvarvid den polariserade spårrelaisens 16 eller 216 ankare 17 eller 217 afbryter den andra reiaisens 25,26 eller 223 strömkrets, då taget un- der färd i motsatt riktning kommer i förbindelse med en af nämnda spår- kontakter, sedan det lämnat blockintervallen, hvilket afbrott åstadkommer att den koatrollerande strömmen uppnår rätt styrka oberoende af till- ståndet på nämnda blockintervall. 6. Tågsäkerhet sapparat af i anspråk 3 och k eller anspråk 3 och 5 an- gifvet »lag, kännetecknad däraf, att tåget, då det passerar en spårkon- takt 1 riktning mot blockintervallen, alstrar en otillräcklig ström ge- nom den polariserade spårrelaisen 16 eller 216 1 en viss riktning, hvar- efter strömmen genom den kontrollerande anordningen på tåget tilltager i såframt styrka tills la blir tillräckligt starlc, „IIII« den ströikontrollerande som en slÅltromagnet verkande anordningen 121o eller 21o på spåret blif- vit uppmagnetisrad, medan den ursprungliga otillräckliga strömmen passa- rar spårrelaisen 16 eller 216 i »ot satt riktning, då tåget under färd i motsatt riktning lämnar blockintervallen öfver samma spårkontakt och strömmen genom den kontrollerande anordningen på tåget växer till följd häraf tlu tillräcklig styrka oberoelid« af nämnda som en elektromagnet verkande anordningXÅ på spåret. 7. Tågsäkerhetsapparat af i anspråk 3 «Her 6 angifvet slag, känne- tecknad däraf, att tillväxten i strömstyrkan alstras med tillhjälp af spårrelaisen 25,26 eller 223 eller 371, som tillkoppiar on generator 32, 212 eller 333 på spåret, hvilken därpå arbetar ÅX i serie med den genera- t tor 5,303, 370 eller 610. som afger den ursprungliga, otillräckliga strömmen (fig. I,II,III,IV,VHI och XVI). g. Tågsäkerhetsapparat af 1 anspråk 6 och 7 angifvet slag, känneteck- nad af att, obi strömmen från den senare tillkopplade generatorm 32 eller 212 går i motsatt riktning mot den ursprungliga, otillräckliga strömmen till följd af felaktigheter i de automatiskt verkand* apparaterna, den resulterande strömmen icke är 1 stån att med tillhjälp af den kontrole- rande anordningen på tåget tillbakahålla dn varnande eller stoppande verkan, då tåget står i förbindelse med en spårkontakt. 9- Iågsäkerhetsapparat af i anspråk 3 «Her 6 angifvet slag, känneteck~ nad däraf, att spårgeneratorm 32 eller 212, som tjän*r till att arbeta 1 kombination ned d«n generator 5 eller 3«3, som afger den ursprungliga, otillräckliga strömmen, samtidigt tjänar till uppmagnetisering af d«n sobi en elektromagnet verkande anordningen 121o eller 21o på spåret. 10. Tågsäkerhetsapparat af i anspråk 3 eller 6 an and ifvet slag, känne- tecknad däraf, att ströffstyrkans tillväxt ävägabringas genou en förbiÅ- delse af den del af motstånden i strömkretsen för den genom den kontrol- lerande anordningen på tåget gående ström, som finnes vid spåret, hvilken XÅMiXXiS förminskning uppnås med tillhjälp af den som prörvo-elektromag- net verkande anordalngen 380 (fig. IX och X). Tåg 11. Säkerhetsapparat af i anspråk 1o angifvet slag, kännetecknad där- af, att motståndets »insnkning åataukommes med tillhjälp af den s«som en pröfvo-elektromagnet verkande anordningen genom shunting af deo. dal af strömkretsen för den ursprungliga, otillräckliga strömmen, som befinnes sig vid spåret (fig. IX och x). 12. Tågsäkerhetsapparat af i anspråk 1 angifvet slag, via hvilken en varnande eller stoppande anordning verkar, när hälst ett organ på tåget påverkas af en spårkontakt på sådanr sätt, att nämnda varnande el- ler stoppande anordning, som normalt hålles tillbaka, frigöres, såvida detta fcke hindras g enoa uppkomsten af en ström genou en kontrollerande anordning på tåget, kännetecknad däraf, att den varnande eller stoppande verkan på tåget tillbakahålles af ströme» från en generator 392 på spår- ret, då tåget står i förbindelse med en spårkontakt, hvilken generator äfven tjänar till att genom en uteslutande vid spåret belägen ströKkrets uppmagnetisera en som pröfvo-elektromagnet verkande anordning 38o, om kortslutning med tillhjälp af en på spåret befintlig järnvägsvagn eller liknande hindrar genoaigången af nämnda, tillbakahållande ström, som föl- jer en sied pröfvo-elektroBiagnetes parallellt inkopplad strömkrets (fig- X). 13- Tågsäkerhetsapparat ar i anspråk 12 angifvt slag, kännetecknad däraf, att strömkretsen genom generatorm. 392 vid spåret och pröfvo- elek- trosiagneten 3go vanligtvis är sluten (fig. X). 11, Iågiäkerhetsapparat af i anspråk 1-3 angifvet XXXgl slag, kärnie- tecknad däraf, att, nedan de skenor 19, sona utgåra blockintervallens*ida äro ledande förbundna med hvarandra från dess ena ända till den andra, de Bkenor, »o» bilda blockintervallea» andra sida, äro ned tillhjälp af isnierade förbindningar 95 afskilda i längder, sov. hvar för sig äro alltigenom ledande, så att blockintervallen delas i underafceiningar, hvilka hvar och en hafva sin egen »trömkontrollerandt eller som en pröfvo-elektromagne» verkande anordning 121o, 21o eller 3So. 15 Tågsäkerhetsapparat af i anspråk 14 agifvet slag, kännetecknad däraf, att de skenor 19, »om utgåra den ena sidan af spåret i en block- intervall, äro ledande förbundna med hvarandra från dess ena ända till den andra, medan de skenor, soai utgåra den andra sidan af spåret, med tillhjälp af isolerande förbindningar 95 äro afskilda i sträckor, som hvar för »ig äro alltjenom ledande, aå att blockintervallen delas i un- derafdelningar, som hvar och en hafva sin egen strömkontrollerande eller undersökande anordning 1210,21o eller 3So, hvarvid kortslutning hos den- na anordning oed tillhjälp af en järnvägsvagn eller liknande på mot»va- rande underafdelning, då ett tåg står i förbindelse med en spårkontakt 1, 2, 3 eller 4 nära blockintervallens ändor, inverkar på strömmen genom denna spårkontakt och apparaterna på tåget sålunda, att ett varnand< eller stoppande verkan sätt«s i gång på detta, så att tåget »ad tillhjälp af näenda spårkontakt blir i stånd att undersöka tillståndet på block- intervallens samtliga underafdelningar. 16. Kombination af tågapparater, som tjäna till att samverka med spår- apparater, som angifvits i anspråk 3, 6, 7, 8, 9, 10, 11, 12, 13, 14 el- ler 1. medspårväxelunder sökande apparater, med hvilkas tillhjälp sändes, då tåget jCö»mer i förbindelse med *» spårkontakt 521 eller 564 eller 569 och spårväxel* är rätt inställd för tåget, en ström, som är otillräcklig att tillbakahålla en varnande eller stoppande verkan på tåget, genom dan kontrolltrande anordningen på d*tta och genom en spårrelai* 531» «i(R)û hvars tillhjälp styrkan af strömen genom den kontrollerande anordningen på tåget ökas till det värde, som är nödvändigt för att tillbakahålla den varnande och stoppaa.de verkan (fig- I, IV och XIV). 17. Kombination. af tågapparater, som tjäna till att samverka med spår- apparater, som angifvits i anspråk 3, 6, 7, 8, 9, 10, 11, 12, 13, 1 «lier I, Bied hastighetsDegränsand* apparater, med hvilkas tillhjälp sändes, då ett tåg kommer i förbindel« med en spårkontakt 602, 603 och detta tåg kör med en hastighet, som är mindre än den för denna spårkontakt 1 förväg "bestämda hastigheten, en ström, som är otillräcklig att tillbakahålla en varnande och stannande verkan på tåget, genom den kontrollerande anord- ningen på detta genom en spårrelais 622, med hvars tillhjälp styrkan af ströinliien genom den kontrollerande anordningen på tåget ökas till det värde, som erfordras för att tillbakahålla den varnande eller stoppande effekten (fig. XV och XVI). 18. Tågsäkerhetsapparat af 1 anspråk 16 eller 17 an. g i fv et slag», kän- netecknad däraf, att spårrelaisen 531 eller 622 är polariserad, så att den, då den påverkas af en strö», hvars riktning motsvarar tåget* färd- riktning, kan tillkoppla en spårgenerator på sådant sätt, att denna ar- betar i serie med den generator, som afger den ursprungliga, otillräck- ligt starka strömmen (fig. XXV och XV). 19. Tågsäkerhetsapparat af i anspråk 3, 6, 7> 8, 9, 10, 11, 12, 13» 14 eller 15 angiiVet slag, kännetecknad däraf, att den generator 5» 33 il- ler 610, so» afger den första, otillräckligt starka strömmen, befinnes sig på tåget och att storleken af motstånden i den vid spåret befintliga delen af strömkretsen för den första, otillräckligt starka strömmen är såian, att en kortslutning, som hindrar ströimen från nämnda generator att passera spårapparaterna på rätt. sätt (d.v.s. kortslutningen mellan toat att «to» 14 och. lokomotivets maskinst åilj and iag), icke förorsakar att styrta* af den af näsmda generator afgifna strömmen stiger till ett så- dant värd*, att «a varnande eller «toppande vertan därigenom tillbaka- hålles. 2o. irågsäterhetsapparat af i anspråk 1-19 angifvet slag, kännetecknad däraf, att

spårtomt att erna för bågge färdriktningarna påverka ett enkelt organ på tåget, så att i hvarje fall alstras en varnande eller stoppande verkan på tåget, såvida en sådan verkan icke hindras genom uppkomsten af en tillräckligt stark ström genom spårkontakten i en riktning, som motsvarar tågets färdriktning. 21. Tågsäkerhetsapparat af 1 anspråk 1-20 angifvet slag, kännetecknad däraf, att den kontrollerande anordningens på tåget riktiga verkan ton-trolleras genom att denna är försedd med flere än ett, under inverkan af elektromagneter stående rörliga organ (43 och * and), som alla böra stå i riktigt inbördes läge för att tillåta, att strömkretsen för tilbaka-hållande af den varnande eller stoppande verkan slut.es (fig. 1). 22. Tågsäkerhetsapparat af 1 anspråk 21 angifvet slag, kännetecknad däraf, att de rörliga organens 43 och 44 lägen motsvara läget af en omväxlingsanordning g,? och 55, som flytta» samtidigt med oækastningsmekanismen, eller motsvara läget af en annan omväxlingsanordning 6, 7 och 56, 60, som begägaas, då lokomotivet indrar färdriktning på en vändskifva triangel, slinga eller liknande, eller, oh bågge anordningarna användas samtidigt, motsvara deras relativa inställning (fig. 1). 23. Tågsäkerhetsapparat af 1 anspråk 1 angifvet slag, vid hvilken det riktiga samarbetet mellan spårapparaterna och apparaterna på tåget äger rum endast då tåget, i det att det sarna tourner i förbindelse med *n spårkontakt, sänder »a ström» genom spårkoataktea i en mot färdriktningen svarande riktning och geno» ea omväxlare, »om ir anbragt på lokomotivet och som gör det möjligt för lokomotivföraren att förändra strömriktningen kännetecknad däraf, att fc. tVnw» i afsigt att tvinga lokomotivfö-raren att företaga den nödiga omväxlingen förrän lokomotivet far i mot-satt riktningen sedan det.sanana vänts på en vändskifva, triangel, slinga eller liknande, (anbragt s en generator 703, som med sia ena pol är för- så att generatorn 703 på spåret icke blir satt i förbindelse med de till- eller en stoppande verkan på tåget, då detta kosas er i förbindelse med bundfn med en spårkontakt 701 och med sin andra pol med spårets skenor, bakahållande apparaterna på tåget i afsigt att tillbakahålla ea varnande gpårkontatten 701j »isridta, lok- * omväxlingen är rätt utförd alLokomotiv- föraren förrän tåget mår denna spårkontakt 701 (fig- XVII). 24. lågsäkerhetsapparat af 1 anspråk 23 angifvet slag, kännetecknad däraf, att apparaterna på tåget tjäna till att »anvrskrka med spårappara- tsm a af i anspråk 3, 6, 7, 8, 9, lo» 11, 12, 13) 14 »Her 15 angifvet slag, och att generatorn 703 vid spåret tjänar till att arbeta i serie med »aen gferator, so* afger den första, otillräckligt starta strömmen hviltet sker endast, om omväxlinien på tåget försiggått på rätt aätt (flü. XVII). 25. Tågsäkerhetsapparat af i anspråk 1-24 angifvet slag, kännetecknad däraf, att vid densamma finnas anordningar 30a eller 301 och 30 till 33 med liVilta# tillhjälp en anordning 51, 331» 26 eller 646, som tan giilVa signal på tågst, att ftanan är ilar, tan sättas i verksaøhet, då spåret åter blifvit passabelt, »edan en varnande eller stoppande vertan igt rum på tåget under inverkan af »a varning»- eller stoppspårkontakt och tåget passerat nämnda spårkontakt (fig. III och IV). 26. Tågsäkerhet»apparat af i anspråk 1 angifvet »lag, vid hvilken al- strandet af en varnande eller stoppande effekt på ett lInko»otiv Kontrol- leras af ett organ, som, oberoende af huru lokomotivet än vänder tan flyttas sied tillhjälp af spårkontakter, kännetecknad däraf, att via den- samma finnas, 1 ändamål att möjliggöra för det organ lo2, som tjänar till _/som icke äro anbragta midt /på att flyttas »ed tillhjälp af *pårkontakter7~at't "påVerkas aisaiiñS KisM tvenne kontaktskor 14 och 350, som kunna flytta nämnda organ lo2, och af hvilka den ena 14 konsser i ledande förbindelse »ed och röres af spårkoa- takter, då lokomotivet far öfver den, vandt på ett visst »ätt, hvarvid den andra 350 kojn and er i ledande förbindelse med och röres af apårkontakter då lokomotivet far öfver dem vändt i Kotsatt riktning (fig. VI). 27. Tågsäterhetsapparat af i anspråk 1 angifvet slag, vid hvilken en kontaktsto, då den tommer i förbindelse med en spårontatt, instjutes i flyttas en elektrisk strömkrets genom denna spårkontakt och därvid XÄXIX af den- saijm», hvarvid en varnande eller »toppande verkan sitt«* i gång, känne- tecknad däraf, att kontaktskon i4 är isolerad från lokomotivets »astin- ställning och att den geno»! att förflytta ett organ, JX från hviltet den äfven är isolerad, kan sätta den varnande eller stoppande verkan*! i gång. 20. Tågsäkerhetsapparat af i anspråk 27 angifvet slag, kännetecknad däraf, att nämnda organ lo2 normalt tillbakahåller en varnande eller stoppande verkan och att detsamma kan rubbas från sitt tillbakahållande läge genom en rörelse af kontaktskon 14. 29. Tågsäkerhetsapparat af 1 anspråk 27 eller 28 angifvet slag, känne- tecknad däraf, att kontaktskon 14 är förbunden med nämnda organ lo2 med tillhjälp af »Ä icke-ledande, ledad förbindelse, så att kontaktskon 14 drager organet lo2 »ed sig, om den skulle falla af eller rubbas, hvarvid * en varnande eller atoppan.de verkan alstas på tåget. 30. Tågsäkerhetsapparat af 1 an*pråk 1 angifvet slag, vid hvilken alstras en varnande eller stoppande verkan på tåget, då detta passerar en sträcka af spåret med en hastighet, aom är större än en för nämnda sträcka förut bestämd maximal farhastighet, kännetecknad däraf, att den maximala farhastigheten för en viss sträcka af spåret anges genom det satt, på hvilket» ett vid tåget fäst kontaktorgan 60l förskjutes vid på- verkan af en spårkontakt 602, 603 (fig. XV och XVI). 31* Tågsäkerhet»apparat af i anspråk 30 angifvet slag, kännetecknad däraf, att den varnande eller stoppande verkan tillbakahålles, då den hastighet, hvarmed tåget passerar spårkontakten, ej är för stor, till följd af samverkan tr.ellan kontaktorganet 60l och en anordning 618, hvars läge beror af tagets hastighet, hvaremot den varnande eller stoppande vertan på tåget sätte* i gång, då detta passerar spårkontakten med en alltför stor hastighet, till följd af att nämnda laKMÄIÄEXSXÉ anordnings 618 läge nu är sådant, att densamma icke kan saaverka med kontaktorganet 60l så, att nämnda verkan tillbakahålles. 32. Tågsäkerhetsapparat af i anspråk 31 angifvet slag, kännetecknad däraf, att, om anordningen 61S, hvar* läge beror af tåget» hastighet, icke följer denna på rätt sätt och till följd deraf icke flyttar sig från sitt nolläge till eller öfver det läget, so» motsvarar en viss förut ue- stüiüd sjLiIEI miniaalhastighet, sätte* en varnande eller stoppande ver- Ican i gång på tåget, då d*tta far öfver »pårkontakter 602, 603. 33- Tågsäkerhet»apparat af i anspråk 31 eller 32 angifvet slag,kän- netecknad däraf, att tillbakahållaadet sker på elektrisk väg och XiiIX åstadkoEne* af en ström, »o» går genom en strömkrets, hvilken slutes ge- nom saøverkan mellan kontaktorganet 60I och den anordning 618, hvars läge beror af tåget» hastighet. 34. Tågsäkerhetsapparat af i anspråk 33 auagifvet slag, kännetecknad däraf, att det i detta anspråk nämnda tillbakahållandet tjänar till att ersätta ett tillbsxshållaade, som normalt upprätthålles med tillhjälp af ett annat kontaktorgan 14, som, då det kommer i förbindelse med en mot- svarande spårkontakt 603, af denna röres så, att detsamjra förölar sin tillbakahållande verkaa på d«» varaaade »llsr stoppaade anordningen. 35. Tågsäkerhetsapparat af 1 anspråk 34 angifvet slag, kännetecknad däraf, att dat noræala tillbakahållandet upprätthållas på icka-elektrisk vag. 36. Tågsäkerhetsapparat af i anspråk 3 eller 35 angifvet slag, kän- netecknad däraf, att den. jvillbakahållande strömkretsen slutas af kontakt- organet 60I ut an samverkan »ed den anordning XIX 618, hvars läge beror af tågets hastighet, då tåget kan fara öfvar en spårkontakt »ed obegrän- sad hastighet. 37. Tågsäkerhetsapparat af i anspråk 33» 31*-» 35 allar 36 angifvet slag, kännetecknad däraf, att dan tillbakahållande åtroåmen går genom en spårkontakt 602, m#d hvilken tågat står i ledanda förbindelse. 38. Tågsäksrhetsapparat af i anspråk 30i 31. 32, 33, 3» 35, 36 aller 37 angifvet slag, kinnetacknad diraf, att, »edan kontaktorganet 601 på ett tåg, som far i aa viss riktning öfvar ea spårkontakt 602, 603, för- skjut es till ett läge, som motsvarar aa förut bestimd »axiæal farhast ig- het, ar ett tåg, som far 1 motsatt riktning öfvar sama spårkontakt 602, 603 i ståad att fara ned obegränsad hastighet, utan att på datsaima dar- rör en varnande eller stoppande verkan sättes i gang. 39* lågsäkerhetsapparat af i anspråk 1-33 angifvet slag, kännetecknad däraf, att hufvude» ellar muttrar på bultar eller »krufvar?o8 eller 512 skyddas mot att rubbas eller bortfirvas af från tåget nedhängande lösa kopplingskrokal eller kättingar med tillhjälp af på sadlar 504 anbragta afsneddaa flinsar 511 ellar X »ed tillhjälp af rampformade tickplattor 51 (fig- II, XII och XIII). 40. Tågsäakarhettapparat af i anspråk 1-39 angifvet slag, kannsteck- naa däraf, att vid densamma finnes anordningar 126, 345, soa hindra loko- motivföraren att sitta tåget ånyo i gång, sedan en stoppande verkan igt rum, utan tillhjälp af en annan tåg funktionär, såvida icke blockinterval- len, iivars tillstånd försakade dsn stoppande verkan, åter blifvit pas- sabel och sålunda frlgiVlt »Sanda anordningar på elaktrisk vag (fig. IV) 41. Tågsäkerhetsapparat af i anspråk 40 angifvet slag ellar af det slag, vid hvilket finnas anordningar, so» kunna hindra lokomotivföraren att åter sätta den stoppaada apparat«» i ställning, sedan an stoppande effekt ågt rum på tåget, utan tillhjälp af sn annan tjänsteman, känne- tecknad däraf, att tåget hindras att fara öfvar en spårkontakt, efter det dan stoppande apparaten 99 bragts i sitt normala läge, utan att *a varnande eller stoppande verkaa alstras, såvida icke ninmda anordnlagar 126, 35 äro återförda till sina nornala ligen. 42. Tågsäkerhet»apparat af i anspråk 1-41 angifvet slag, vid hvilken en meå tryckfluidum verkande broms på tåget automatiskt sittes i verk- samhet, 8å det är farligt för tåget att köra vidare, kännetecknad diraf, att bromsens automatiska ingångsättning tillika medför att bro and scylindera 2 afskares från kraftkallaa W (fig. V). Which control *» gets the **case** in all forms of accounting not only ill-XV and XVI addressed, this is achieved. raidekoskettlmet by providing the device with long enough for the ends, to help raise the rod lo2 occurs, and using the raideiaiteita having a corresponding appropriate sensitivity. tahtfbtaan use the invention by means of electricity used in con-nection with the trains, this may be done by rails varm.uusliitt.ee »in operation in the same manner as described above, while the prior saekoeliikevoima Jjhileiaa train my way to the rails, which form the second side of the track, is used as a common back-consuming as the Supreme operating power and reliability of the device used for the stream, when 'the other hand, the rails forming the second side of the track, divided from each other by isolated kiskopituksii »insulating compounds such as yllae. on described. A joint return to take leadership in place of propulsion and power varauuslatteen can be used for a special back-consuming cable propulsion. The circuit part of the on-board propulsion power is adapted for all **cases** sitea that it may cleave a movable organ, such as the latch 99 * Allowing ju »a stop, it is clear that in Fig. II, III, IX and X are assigned to laittelde »by means of the figure and VIII addressed to the preparation of the modified" is the shape of the train * OSSIBLE usher merkinantovaelyksee », which may be much longer favorable than that in the past has proved to be appropriate, checks the nerkinantovaelyksen. certainty of a simple track using the contact raidereleessi lyhytsulkemuksen due to take place, if the track has movable equipment. This is achieved by using a subdivided, which blossoms "is provided with its own raidereleelli, and by using a device like that, the track circuit occurring short-In front of emu's rakerhen causes the current will pass through the equipment on the train, which is in connection with the contact rail merkinantovilykse» 'end. All of the rakenmemuodoissa exception, however, what those modified forms will be, which are indicated Pilku prosesses lines in FIG Vili and X, ends lyhytsulkemus of insufficient power generation, and in said laadiatamuodoissa determined that the ice formation without power. Claim. 1 Junanvarauaesiaitos, which includes the train and the track, the equipment used, all in powder form »Train yourself by means of effective and saehkoeteite may actually protect himself, characterized ettae.juna may be a warning sign or stop-saeytetaaefi, may be a warning sign and subsequently detained, or restriction, - dissuasive character and stop at the same fence, or that said the train-safety device to control the brakes., and in **case** of danger puts them into operation, the lime is done automatically Whenever the train in front of the track merkinantovaelykssesae is palloeiitaan moved or broken rails, or, if at a distance can be found in other trains or other **rolling** stock »East the quality of any, or if it is raittevaihteita that the train does not obtain the pass,... Aal train speed is too high in some sections of track; in which **case** the train varmuilait (R) is the incorrect ohjauksii or in some. occurring in parts of the device, despite the puutteellisuuksitta. 2 train-up device according to claim 1 mentioned kind, which warn of the dangers or arresting device comes into operation at any time from the on-board organic affect raidekosketin so 'that the said warning or stopping the machine, which is considered to be cooped regular conditions, is set free, if not for this prevent the train to check for the device through sufficiently strong current in, characterized in that, of the warning or blocking effect should train ehkaeityksi when this comes rail contact 1 or 2 in connection with a train passing through the ~tarpeek-si strong current, which flows check koeaaehkoemagneettina The active device 1210, 210 or 380 itself on a track, and the circuit closes the train track of the generator 32, 212 or 377 through, when the train is in the track contact,

whereby the lyhytsulkemu »from said same device 12lo, 2LO XII, 380, the track of the railway wagon or the like causes, to prevent the said tarpeekki strong current formation (Fig. II, III, Vili, IX and X). 3 Train Safety device according to claim 2, the said species, characterized in that the train when it comes to the rail contact one or two connection, first generates a stream of any el not strong enough to prevent the warning of spells or stopping operation and luikae goes to the onboard to check r * and the device idereleen (25.26 or 223 or 371 or 393), whereupon the device to check the current flowing through the reinforced already "it kinantovaelys-mer (B, C, D, E, P, or B, C, E, F, tal X), in which a track circuit, there is a transaction, the required strength of the track koesaeJikoemagneettina active device 1210, 210 or 380 cooperating with; If on the other hand, this device should not be viieicisiaainittu aagnetisoiduksi of September that it had lyhytsulkemuksen question the track of the railway vehicle or the like, or the clips on leads because of ice were said to insufficient power of the original strength. 4 train-up device according to claims 1-3 said Lajla, wherein the warning or stops the operation of the device is, at any time JUNAS wherein the organic affect raidekosketin so that said warning-be-blocking device or * which regularly piditaeen cooped, \$'s IIIs free, if not precluded by an on-board to check the device through strong enough to check the current formation, characterized in. * of the train when it comes to merkinantovaelyksen the front of the web-jLeXoskettimen 1 or 2 in connection forms a flow in the specified direction patient larisoida relay 16 or 216 through, which results in "no, check that the current, depends on the strength of so to see if merkinaatovaelyksessae is a railway carriage or the like, which causes lyhytsulkemuksen vlrantarklstus device 210 or 1210, when the train when it is on their way in the opposite direction of the Bone and Joint someone samotuista raiaekoskettinistae connection, after that it has failed to merkinantovaelyksen, generates a current in the opposite direction through the polarized Raider gesture, wherein the checking the current reaches the correct strength, regardless of the state of said merkinantovaelyksen / moon. II and HI /. 5 Train Safety device according to claim 4, said species, characterized in that, when the train to drive merkinantovaelyksesae raidekoskettimen 1 or 2 above, a polarized track relay 16 or 216 anchor 15 17 recovered 217 'lirttyy eemmoiseen position in which the current goes to a second track relay 25, 26, or 223 kauttar when to check the current strength comes from the hanging bridge to see if merkinantovaelyksessae is a railway carriage or the like, which may generate lyhytsulkemuksen current revisions of the device in February 1210 and 210 to the plane of polarized track relay 16 or 216 anchor 17 or 217 off the second relay 25, 26, or 223 circuit when the train journey in the opposite direction into someone called raidekoskettimista yhtyteen, after that it has left merkinantovaelyksen, which is **cut**-off, causes the tar source of complication (to achieve the correct strengths said merkinantovaelyk, regardless of the mode. 6 Train Safety device according to claims 3 and 4 or 3 and 5 of said species, characterized in that the train as it passes raidekoskettimen through the »erkinantovaelyksen feet, giving rise to insufficient power polarization-multiplexed track relay 16 or 216 to a specified direction, after which the onboard device to scan through the current increases, therefore, in a volume of strength until it becomes strong enough, if only source of complication in virtaatar, an electromagnet or the active device 1210 210 track has become the "agnetisoiduksi, while the original, riittaeBAE, t.oea current is passed through the gesture Raider 16 or 216 to the opposite direction when the train travel stationary in the opposite direction jaettiae merkinantovaelyksen the same raidekos contacts contacts through, and the onboard to check laitteea current flowing through the growing * therefore meet the needs strength regardless »anotusta track in, an electromagnet of the active device. , 7 -Junsdivarmuuslait * pateattlvaatimuksessa three or six species listed blocked on 'th power of power increase provided a track relay 25, 26 or 223 or 371 through which couples the circuit track of the generator 32, 212 or 383, "east seaj aelkeea operates in tea generator for generating the 5, 303, 370 or 6lo, which generates the original, to insufficient current (Fig. I, 11, Hi, IV, Vili and XVI). 8 Train Safety device according to claims 6 and 7 mentioned kind, characterized in that when the power to later circuit connected to the generator by 32 or 212 goes vastakkaisessa in the direction of the original, sufficient non-shown power aaelidea, automatically affecting devices • siiatyvlea errors due to the resulting power el available on the train to check for laitteea help prevent the warning or suspension effect, while the train is in connection raidekoskettimen. 9 Train Safety device according to claim 3 or 6-mentioned type, characterized in that the track generator 32 or 212, which is used for office "of at the generator 5 or 303 in connection with which generates the original, an insufficient current, while using a track on the, electro-tin 1210 active device or magnetisolemiseea 210. 10 Train Safety device according to claim 3 or 6-mentioned type, characterized in that the flow of force increase is obtained by combining resistances of the circuit on board the check for the device via the current flowing, which is the track, which reduction is achieved in laboratory electromagnet active device 380 (Fig. IX and X) form. 11 Train Safety device according to claim lo-mentioned type, characterized in that the drag reduction is achieved by co es ahkomagne etllaa the active device by exchanging the part of the original lack-of stream 15 the designed circuit on what is on the track (Fig. IX, and X). 12 Train Safety device claimed in claim l-mentioned species, in which the warning or the effect of suspending Gets on the industry, at any time, the on-board organic influence raidekosketin so that said warning or stops the ialt », the time on a regular basis is considered to be cooped up, gets out, drank ti precludes the train to check for the device current flowing through the formations, "characterized in that" a "th warning or stops the AFFECTS * train will« prevented track of the generator 392 via a current passing through the train OAE rail contacts aen program that the generator is also used to yksinoaaan raltee-lä of the circuit through the magnetisoinaan koesaehkoeaagneettlaa of the active device. 380 if lyhytsulkeas track of the railway wagon or along the lines of using the block-called pre-emptive, virraa passage of time followed by a koesaehkoemagneetin parallel sisaeaaekytettyae the power circuit (Fig. I). 13 Junanvarauslaite claimed in claim 12, said species, characterized in that the track generator 392 koesaehkoeaajf-II and magnet 380 passing through the circuit oa normally closed (Fig. x). 1 * . Train Safety device according to claims 1 to 3 of said species, characterized in that, while Mo rails 19, which form a signaling clearance between the second side are conductively connected toisiiasa its one end to the other, e rails, which form aerkinantovaelyksen a second side of the insulating compounds 95 avjrila partitioned into lengths, each of which are thoroughly conductive, so that the distributor aerkinantovaelys utuu subsections, each of which has its own flow-checking or koesih koeffiagneettiaa active equipment from 1210 and 2LO or 380. 15 * in claim 14 Junaavarauslaite said species, characterized in that the rails 19 which form a second side of the track merkinantovaelyksessae are conductively connected by its one end to the other, while the rails, forming a second side of the track, isolation of compounds The separated through 95 are lengths, each of which is thoroughly conductive, so that the aerkinaatovklys is divided into subsections, each having its own oa virtaatakistava or searching the equipment to 12lo, or 2LO 350, wherein this device lyhytsulkemua railway wag iron or the like by means of the corresponding sub-compartment when the train is raidekoskettimen 1, 2, 3, or 4 in connection near the merklantovaelyksen heads, the influence of this track contact and a description of the equipment passing through the flow so that a warning or stopping power is placed on the operation of this train, so the train without raidekoskettiaen help may check merkinantovaelyksen iXXXXXXXZSXZXXtoeX all subdivisions space. UU. _____ 2i>. "> 16 The combination of Junalaitelsta, which is used to influence raldelait-road connection with which one is stated in claims 3, 6, 7, g, 9, lo, 11, 12, 13, 14 -, or 15, and a track turn of the space Inspecting device ciples on the means of when the train comes to raidekoskettimen 521, 56 tal 569 connection and raldevalhde is properly helped a train, is sent to the power, which is insufficient to prevent warning and blocking the power train, bed, the check for the device and the track relay 531, through which by means of the on-board to check for device increasing the strength of the current flowing siihen.arvoon, which is necessary warning and stops the impact-ing for the prevention (Fig. I, IV and XIV). 17 junalaitesta combination that is used to operate the rail equip-ment in connection with which one has mentioned 5XX claims 3, 6, 7, 8, 9, lo, 11, 12, 13, I1 * - t'ai 15, and the speed of restrictive devices that allow the train into the raidekoskettimen 602, 603 connection and this train to run at a speed which is lower than that of raidekosketinta var as the predetermined speed, is sent to the power, which is insufficient to prevent the deterrent and pyiaeyttaevaeae effect on the train, in the revisions of And the track relay device 622 via the on-board that allows not-van to check the device passing through the strength of the current is increased to the value, which is necessary for a suspect or stop the power of prevention for the purpose (Fig. XV and XVI). 13 Train Safety device according to claim 16 or 17, said Ia-mers, characterized in that the track circuit 531 or 622 is polarized, such that upon it, the effect of current, which is the direction corresponding to the train running direction a, can be raidegeneraattoriin in such a way this works in series with the generator, which generates the original, an insufficient strong current (Fig. XIV and XV). 19 * Train Safety device according to claims 3, 6, 7, 3, 9, lo, 11, 12, 13, 14 - or 15-mentioned type, characterized as, "th the generator 5, 303 or 610, which generates a ensmaaisen, inadequate strong current, is adapted to the train, and that yastuksien the magnitude of the rail olevaasa the circuit part to first, inadequate strong stream is SEM, such that lyhytsulkemus, which prevents current from said generatorlsta passing track devices via the right way (that is the contact shoe 14 - to train the machine stand between lyhytsulkemus) does not provide that between said power generator is producing power should the value of such a one, that the deterrent effect of suspending or semkautta should be prevented. 20. Train Safety Device Claims 1 to 19 species listed, characterized enclosed a, that both flow directions »track contacts affect the on-board simplified the organic, so that in all **cases** a warning or the effect of suspending the junatta, if there is such issues, effect on inhibited sufficiently strong current in raidekoskettimen through direction, which the train for travel. -up device 21 of the train Pat «nttivaati« **cases** l-2o-mentioned kind, turmfettu in that the train of the device to check the correct effect on the II.KEIISIX checked through it is provided with more apertures than the one la, the electromagnets under the influence of the movement - an organic (4-3 and 44), all of which should be right in the middle position of the woman in order to kaeviti possible to the circuit, and a warning to stop the effect to prevent the closing. (Fig. I). 22 train-up device according to claim 21, said species, characterized in that the mobile organs and 4-3 corresponding to positions 44 and Installation accessories delaltteen-8, 8, and 55 positions, "age gear device moves at the same time as the suunnanvaihtokoneistd," or the like to a second vaihdelaaltteen 6, 7, 56, 60 position that is used when the locomotive to change the direction of movement of the back stage, a triangle, "ilaaisiilialtai sentapaitella or, if both syrup devices are used at the same time, corresponding to their relative placement (Fig. X). 23 Train Safety device according to claim 1 mentioned kind, wherein the rail equipment and junatsa of equipment straw in cooperation takes place only ones where the train, while it will raidekosketti-land connection, transmit power raidekoskettimen through the travel direction of the corresponding tuuntaan and valntajan through a is adapted to the locomotive and which is made possible engine driver »extracted vlrransuuntaa, characterized in that, Tiina tarkoituketta that a driver should be forced to provide the necessary replacement before the locomotive to run in the opposite direction sittenkun it has been translated into the back on the stage, koiniolla, or the like, these near the oa adapted to the generator 703, Every other hub, is connected to the rail touched the socket 701 and the second hub, track rails, so that the track of the ge-generator 703 does not have to train the control devices in connection with a suspect or stop the effect of the prevention of the train, the TACA will raidekoskettimen 701 connection, drank a train driver is not supplied oikeen suunnanv-boost, please before you train a tree t # i, Ilaa /. raidekoskettimeen 701 (Fig. XVII). 2H- . Train Safety Device ptXIIIII claim 23 species listed, well-known as, «th on the train equipment; * ita is used to operate the claims 3j 6» J, S, 9, lo, li, 12, 13, 1, or 15 to the-• * The class of devices connected, and that the on track with the generator 703 is used to operate the generator in series with a generating It a first: a baby due to insufficient power, and will only take place if the "aueunnasvaihto the train has been made in the right way (Fig. XVII). 25 - Train Safety device

according to claims 1 to 24 mentioned kind, characterized in that it is used for recording devices 300 and 301 30-34-3, which enable the device 51, 331, H-26 or 64-6., that could allow an on-board signal that the track is in good condition, can be put into operation when the track again is in working condition, after that warning, or the effect of suspending has occurred on the train warning or stop by the contact and the train has passed without rail service contact (Fig. III and IV). 26 Train Safety device according to claim 1 above kind, wherein the warning or stop providing power to obtain the locomotive check or manganese, which, regardless of how the engine would turn into either, can be moved in the track the contact means tuinettu the fact that, in the end that the organic lo2, which is the designed transferred raidekoakettimi-en means could affect the semmoiset contacts that are adapted to track the middle to the use of two contact shoes H and 35o, which may transmit the said organic io2, and in which one second 14 becomes conductive connection XSIKItI track contacts with the and transferring these means, when the locomotive passes over them, turned in a specific manner, whereafter by second 350 becomes conductive connection rail contact with and transferred to the means of the vetuti passes over rotated in the opposite direction (Fig. VI). 27 Train Safety device according to claim 1 above kind, wherein the contact shoes when it comes to track the contact link, are exposed to such track-dekoskettimen passing through the circuit and then transferred directly to the contact, wherein a warning or stops the effect of activating, characterized in that the kosketInkenkae 14 isolated from the locomotive engine cradle, and that it, by moving the organic, from where it also has been isolated, it may, to a suspect or stop the power of the operation, 28 of the train Backup device claimed in claim 27 species listed, characterized in that said organic lo2 on a regular basis to prevent a suspect II or stop now bottomed out and 'th' * ' . «Eve-emptive move to a» «» -;> :: aeostaan'kosketInkengaen I4 business management. and 29 Ju anvarmuuslaite in claim 27 or 28, characterized in that the kind mentioned, 'th contact shoes 14 OAE connected to said organic non lo2 ~ ¥ T whose Avast derived from yMiit i * «» means so that the contact shoes to pull organic film I4 lo2 view, if it putoai poi »taivsiirtyiai place when a warning or. -blocking effect generated on the train.;; the u-30 - * Train Safety device according to claim 1 above kind, wherein there is provided a warning or stops the AFFECTS * train when it passes in one of the track portion at a rate of said part of the pre-hand down the maximum delivery speed greater than, characterized by «th largest travel speed of the track relative to a specific part showing the manner in which the train moves 60I attached kosketinorgaai raldekoskettimen 602, 603 activity (Fig. XV and XVI). 31 train-up device according to claim 30 mentioned kind, characterized in that the deterrent effect of stopping or not «prevented when the speed at which the train passes over raldekoskettimen, there is a large purple, kosketinorgaanin 60I 18 and the device 618 between network, the position of which depends on the speed of the train, while a warning or a parking yttaevae effect on the train is operated when this runs raidekos contacts contacts through too at the foot speed, the reason that the said device 618 positions now have such a impact on kosketinorgaanin 60I of that organization, said the impact would be «hkaelstykxi. Jujsanvarmuuslait 32 * «claimed in claim 31 mentioned kind, characterized in that, if your« 618, the position of which depends on the speed of the train, this does not follow the right way and are, therefore do not transfer to the off position to the on position, or above, the corresponding the predetermined minimum speed, a warning or stops the syntyy.Junassa when this runs the web dekoskettimen 602, 603 over. 33 * train -up device according to claim 31 or 32, characterized mentioned species.; in that prevention is by electric path and providing a flow stream which passes through the circuit, which closes kosketinoreaa's 60I and 61S of the device by means of cooperation between the aten-to depend on the speed of the train. 3 * Train Safety device according to claim 33 mentioned kind, characterized, however, that this claim said ehkaeisytoImIntaa used to compensate for ehkaeisytoImIntaa, And regularly maintained may be in its traeearn second contact inorgaaj * in the H-means, which, when it comes to the corresponding raeidekoskettimen 603 connection, this allows moving »1 ti," you do not lose it, of its deterrent effect deterrent or stopping your device. " 35 Train Safety device according to claim 3 for the species, characterized, «th kaeaanoeillae» «» hkaei »ytoi * i" is considered to be in power electrical work, nilla way. £ 3. Chain # avarmuulite claim diff or 35 species listed rtunnsttu on the ehkaeltevae the circuit is closed contact Contact »organic film 601 - w ** allows air to the device SIS help, the position of which depends on the train rates the, when the train may pass through the rail contact time" over an unlimited speeds - period. 37 train-up device according to claim 33, the 3 -, 35 or 36 for said species, characterized in that the ETTI raidekoskettI prevention current flows through the 602-land, with the leading train OK association. 38 JVinaavarmuuslaite in claim 30, 31, 32, 33, 3, 35, 36 or 37 of said species, characterized »Paste that, while kosketinor manganese 60I train which runs in a particular direction raldekoskettimen 602, 603 over switches the position corresponding to the maximum before the traveling down the rate may train which runs in the opposite direction of the same raidekos kettiken-602, 603 over an unlimited pass rate, without warning, be remarkable, allowing or blocking effect siinaeTeaetetaa »activities. 39 »claims 1-38 Junaavarmuuslaite of said species, characterized in that the bolts or screws or 512 508 heads or nuts to prevent, for. moving or pölsrepeytymaestae train alesriippuvien vagrants, as kytinkoukkujee or chains saddled the effect of "504-adapted OF The inclined flange I-511 or rampinmuotoisten pelteaattoje» 51, (Fig. II, XII and Ii). 40. Ju "a" safety device mentioned in the claims 1-39 species, characterized in that it is used for devices 126, 35, (which turinkuljettajaa prevent water re-execute the train my revolution, after that "arrestable No effect" occurred, the air "to one another JunavirkamieJie * help if el merkinantovaelys, the status of which led to that arrest, again not been up and running and so-called let-free devices saehkoetitse (Fig. IV). 4I. Train Safety Device claim 40 species listed or Paste species, which can be found in devices that may prevent the locomotive drivers placing stops the device position again, after that stop-v «, ed to OAE happened on the train, the air» joakua MUEUEA official »help, the well-known, it appears that the train" stetaeaea raidekoskettimea passing over, then the stopping laws «99 oa been a regular position, the air is« th »yatyy any warning or suspension jEiliiitUty effect if the equipment is not Haootut 126, 35 have been retracted position saeaeaaeollisii their work. 42 Juaavarmuuslait * claims I-4I maiiittua species, if aa betaaiaellmalla impressive braking is automatically placed on the train's operations sillola kua train oa dangerous to drive edelleea, tuuaettu so that the brake automaattilinea kaeyntilapaa at the same time cause the sea, «th jar rusilinteri Z will be partitioned from the power source V (Fig. V). Fuzz Arthur Reginald Angus, Sakfoerare, Sommeret West of England Tagskyddsapparater The invention afaer tagskyddsapparater, by means of hvilka tagen skola kunna Skydda signal sjaeliYa automatiskt Science elektriskt, in ir till Anda mal att astadkomma apparater med hvilkas tillhjaelp ett eller staiinas IA3, varnas och eller daerpa stannas varnas and simultaneously stannas, eller hvilka styra brakes are 1 och fall af dem i fara Satta funktion, hvilket takes place automatiskt, sa a snart I RAKT In front of taget radial projection signalstraekka af 'banan finnes I rubbad eller brusten skena eller pa om Denna over a distance befinder sig ett giv tag eller giv for moving materiel af hvilket slag haelt eller som om daer Finnaes Vaexlare, som icke kunna befa-ras af taget eller tagets directed velocity AER for stor foer ett bestaemt staele, och telephone set fungerar trots felaktiga manoevrar eller fel i enskilda pa ett par af telephone set manner, som beskrives below. of the invention has one to several kaennetecken, som in more detail below skola och beskrif-response hvilka Aro AEMAESalaeael aendamalsenliga for ernaende af nu-ifraga Varanda resultat. The invention askadliggoeras af the drawings, som FRAMSTSI do not con-form strukturs for apparater, gjorda Science sammanstaellda I oefverensstaem-melse haermed, Sig. I is a diagrammatic framsttllning af apparater i taget. - Figure II shows schematically apparater at the banan, afsedda for in a system af the art, in that a national tag fara i hvardera on in the same direction grooves och vid hvilket anvandas polariserade releer. Fig. m is a schematic Preparation of liquidity in the Fig. II illustrated af apparaterna for I bana, Kaex at the hvilken anvandas Icke-polariserade releer one source instead of polariserade. Figure IV is a diagrammatic prepared at modifikation f I f appara-terna I taget. Fig. V ar en MBJRifiii schematic framsttllning af en apparat, afsedd att automatiskt Satta bromspumpen ur funktion. Fig VI is a diagrammatic framsttllning af one embodiment, for I do not kontaktpapparat pa ett Lokomotiv. Fig. VII is a diagrammatic framsttllning af apparater pa ett lokomo-Tiv, afsedda anvandas pa att grooves, fara tagen.fara utslutande one I rikt-ning. . But swim. ". • ----, - 1; jjiij i, |,, m. * M Fig. VIII, IX and X Aro schematic framstaellningar utfoerlingsfor af af-mer apparater for sadana grooves, hvarest tagen utslutande fara in one direction. Fig * xi, XII Science XIII visa anordningar, som skola foerhindra, eller att KoppihgskroKar kettlingar, som HAENGa ned from the taget fastna i eller rubba I sparkontakt. Fig * XIV FRAMSTScchematically apparater pa groove, afsedda att BREAK hindra ett tag att passera oefver Vaexlare, ifall de Icke Sta 4A, att det eller det ena second groove AER freely. Fig. XV is a diagrammatic f I prepared at the groove at the appa-anbragt rat, afsedd in that the hindra taget in that from the pass easily over a distance f banlinjen at a speed, which can be of Foerenade Fara med. Fig. XVI is a diagrammatic prepared at f lokomotivapparater, afsedda in that the samarbata apparater f med in Fig. XV framstaelldt slag, Science Fig * XVII is a diagrammatic framsttllning af en apparat, that used in communicates with the I slejf, vaendskifva, triangle eller foer att dylikt tvinga lokomotivfoeraren apparaterna pa att omstaella for the Lokomotiv fard I opposite direction. Jaernvaegsspar (Fig. II, III, Vill, II and X) is one of a plurality of indeladt afdelningar, for hvilka signal hvar below were benaemnas XXXgKXXftKXX "signalintervall". Laengden hvarje f med signalintervall Vaelj prevent taken consideration till the trafikens beskaffenhet. Skenorna, som bilda ena of the side af the groove, the ARO for the electrically-bundna along the whole banlinjen-De skenot, som bilda the second side af the groove, ARO i elektriskt afseende Indelade i laempliga straeckor med-large lerade skarrvar 95 sa, att signalintervaller af A suitable length uppsta. Daer this is in noedvaendigt pa grund af en sadan signalintervalls length (fig. II, III, IX, and X) or a emedan on in the same groove skola ga tag i hvardera rikt-Groningen (fig. II Science III) are not Interval med en eller one to several isolerade skarvar 95 delad i underafdelningar. Laengden af en eller signalintervall daer derra AER candelas i underafdeiningar, laengden af en underafdelning, the land Icke oefverskrida Hvad is suitable in som foer en saeker the function f I sjiffett sparreele, som star communicates with the I sparstraekka, innanfoer hvilken enskilda skenorna de Aro, are connected to the electrically * De enskilda skenlaengderna between hvarje par pa hvarandra foeljaende skarvar 95 Aro elektriskt for med-bundna hvarandra. in the apparatus, which is shown in Fig I. II, AR hvarje underafdelning, t ex. A, B, C, L, E eller S polariseradt provided with a sparreele Cards i2Io be-tant manner between the inskjutna de tva sitenoma. Underafdelningarnag sparreele-er 121o magnetiserad, As is below beskrifves, af, I stroom, dem som tilfoeres jastH laempliga By means of resistors 35 rran I'm generator 32 Denna stroom slutes emellertid endaat Naer ett tag, affects the de sparkontakter, som Hora till I signalintervall, hvilken pa det stall inloepa. | 'V i | d As is underafdelningar af A and E Aro anbragta sparkontakter 1 and 2 and at the underafdelningar As is S and B Finnaes sparkontakter 3 and 4 -. Sparkontakterna 1 and 3 Aro varningskontakter, dvs De Aro afsedda att displace pa ett kontaktorgan Thus was taget, att det VOTE £ KI foerorsakar I varningssignal, savida icke the senare pa ett eller Another way halles till beaten, sparkontakterna 2 and M-Aro stoppkontakter, dvs De Aro af-Sedda att displace said kontaktorgan Thus was, att det att Dringar taget stanna, savida ratio Icke pa Another way hindras. Stoppkontakterna anbringas sa on highly fran of insulation separating the underafdelningarna, att taget national stanna pa underafdelningen A, E,? eller B Innan about one millimeter del af detsamma inkommer pa Naesta underafdelning. fard, till the hook being provided with a tag SXXXXXXB Cards (denoted 11 in Ordet med "Tillhaka"1 och en pil) kommer is connected with the ema sparkontakt 1 and 2 Head-underaf delnIng undersoeker det A fitting signalintervallen, innehallande underaf delningarna, B, C, D, Science F receives the signal if the samt att tag AER fri, savida a Icke said device befinder I give the signal for moving materiel och allt is in the ord-ning, t ex. below skarvar oskadade och below skenor tip. I. opposite to fall. varnas det af sparkontakten 1, Science om lokomotivfoeraren ej beaktar var-Groningen stannas det af spaerkontakt 2 Naer

ett tag under fard forwards (fig. II betecknad med Ordet "fram" och en pil) rakar is connected with sparjrontakterna 3 and on a underafdelningen F, det goer en Undersoeeking for fitting signalintervallen, omfat underafdelningarna e-Tande, d, C, B and A undersoecker om och pa industry befin-ner will give the signal for moving one millimeter materiel och allt om are, as a signal of Bor. ratio Om Icke vore Fallet, varnas taget af sparkkontakten 3, and if the lokomotivfoera Sea Icke Lager maerke till Varning, is stopped automatiskt med det till-af sparkkontakten the aid of the Lokomotiv (fig. I) is foersedd med that an appropriate kontaktargan or is a kontaktsko 14 -, hvilken, da the foerskjutcs, motverkad the springs of the Town och ill, foersaetter the med utskaeringar means provided with the rod lo2 i ro- along relse provide a suitable foerning Thus was 103, att dess tillbakahallande Verkan pa riglarna 98 och 99 ceases. Naer Skon passes a varnings-eller kontakt As is l 3 are stangens lo2 roerelse sadan, in that it ceases endast tillbakahallande pa att cloth rigeln 98 Denna rigel tryckes, IX ifall the ej halles forth on grund af att Ankaret 112 tilldrages af den we <1 a coil 52 each provided the electro, genast in the loo till i utskaeringen foeljd af about one millimeter vaetskas printing pa en kdilf 113, which with tillhjaelp af en kolfstang 123 oepnar i ventil 124 -, hvilken is secured at the rigeln 98 tillikka och pa grund af the pressure from a vikt lo, hvilket oefverfoerae the till, thus, the fast, are connected to the arm 203, which can be of vrida signal kring bulten io4. Kolvfen 117> som af vaetskans printing drives ut, Slapper printing till the liquid is under a pipe 114 - och till daerifrån provide a suitable varningssignalpla 115, som Thus was blases Science gifver varningssignal. Simultaneously kommer E and gir tagets vakuumledning 4-oo Genome sma openings 500 is connected with the outer luften Science brakes are TRADA helt och hallet or partly in the function. Naer kontaktskon 14 passes a stoppkontakt, As is 2 or 4 -, foerskjutes the rod lo2 ett LANGRE stycke weather, dess att tillbakaehallande Verkan pa Bade rigeln 98 och 99 rigeln ceases pa grund af in that it normalt till ri-geln 99 graensande the rod-like part af lo2 (the del, som ligger ofvanom ut-skaeringen created) is LANGRE an den normalt till rigeln 98 stoedande like part daeraf (the del, som ligger XX ofvanom utskaeringen loo), savida the Icke halles tillbaka till foeljd af att Ankaret Lie tilldrages af electro-magnets as, the **roll** supporting rotor 53r Fores aefven rigeln 99 nu fram paverkad Article 3 in any one of the pressure af fluidum pa en Kolf 117, which with tillhjaelp ar kolfstangen 118 oepnar the valve 119j hvilken sitter fast pa rigeln 99, och pa grund af viktens I09 printing, hvilket oefverfoeres till thus, the fast, are connected to the arm 203, som AER pivotable around Bulten 105. Om kolvfen 117 Fores fram pa grund af the pressure pa said device, sa passe-rar fluidum By means of printing under the pipe till 120 cylinder 121 och lokomo-tivfoeraerens regleringshaudtag 122 tvingas oefver i afspaermingslaeget. sam-tidigt be opened tagets vakuumledning fullstaendigt for outer luften, i det att the valve 119 Frigor the opening of Stora, the som normalt tillsluter, och pa brakes are taget TRADA Thus was in full verksamhet, dvs noedbroms-ning aeger rum. DAA riglarna 98 oc och 99 Sta i Sina normala lagen, have been shown in As is, hallas kolfvarna 113 Iif 1 och de antydda Laguna med tillhjaelp af kolfstaengerna 123 och 118 samt the valves 124 - Science I19. As is antydt, kunna pa Kolf Stanger 123 och 118 anbringas laempliga Fjaedrar, which in normala fall straeftva att oepna the valves 124 - 119 Science - Stangens lo2 remain subjected to the lower Tryckeri, As is appears to be due, parents skons 1 oefre remain subjected to Skon 14 - AR isolerad the rod from the lo2 Science from the mask-fitting lokomotivets staelning * Ehuur Skon 14 - och the rod io2 Aro atskilda, "Bora de Sta dissolve the i, the non-conductive communicates with the I ledkopping weather, att Skon 14 -, owner of the skulle faila <y eller afvika from the sitt normala lage tager the rod lo2 med sig 'f b | and through att thus was frigor riglarna 98 och 99 foerorsakar, one at a time varnas och att stannas. Anordningarna foer att reevaporated bringa varnings Science stoppapparaterna in a normal laege Aro innesluta provide a suitable one, the locked lada 126, Genome hvars si-da eller lock provide a suitable viktstang utskjuter (hvilken, As is appears to be due, I can be of the foerlaengning af arm 202), hvilken national aterfoera rigeln 98 i det a synliga laget the figure, the sedan fram been pushed for att FAA varningssig-nalpipan att att ljuda ceases; roen viktstangen (hvilken As is appears to be due foerlaengning I can be of the af arm A1203) for the rigeln 99 aterfoerande i stngifvet laege sedan fram the forts, national Icke location between those two foerraen ladans 126 las uppla-ses of the box is opened och eller om ratio foerdrages, national viktstangen of the box till rigeln 99 extend into aterfoerande out through Science fastlasas outside your Denna. I hvarje Handels national of a key till rigeln 99 viktstang Faas endast hos tagfoeraren eller sa tagtjaensteman A suitable one millimeter, in that a tag som stoppats automatiskt, Icke national fortsatta Farden utan aid of af tagfoeraren eller give one millimeter from the "lokomotivfoeraren skild tagtjaensteman DAA-ett Lokomotiv under Farden tillbaka paaserar I sparkkontakt I can not af-1er 2, slutes for example the current from a generator 5 (fig * I) through the arm 6 om-skiftare XJT SXIisaX 6,7,56 Science 60 (som skola omkastas simultaneously, som ett Lokomotiv Modifies koerriktning med tillhjaelp I'm af vaendskifva, triangelslejf eller dylikt) and the arm 8 af omkastarena 8.9 och 55 till att vaendaiiigMinraettade simultaneously omstaelllas at the lokomotivets omstyrning), lo resistor, lndningarna pa de polariserade releerna. 11 and 12 (hvilkas Ankare normal malt star mltd emellan releekontaktaraa) the line 13, kontaktskon 14 -, XX sparkkontakten till 1 or 2 (fig. II), the conduit 15, elektromagnetens 9ol Ankare 9oo, business contacts, 9o2, 9o3 the line 11, lndningarna pa den polarization serade relay 16, dennas Ankare 17 (which are normally beroer Kontakten IS) till 19 skenorna and forth till the generator 5 through the lokomotivets maskinstael "ning, the line 2o (fig. I) and armarna 9 and 7 of ofvannaemnda omkastare. Stroemmens direction Genome lndningarna pa den polariserade Relais 16 is sadan, Attn Ankaret 17 Lager sig mot Kontakten 21 and afbryter foerbindel the med Kontakten 18, och det aer sa ordnat, att Ankaret 17 Kommer i be Roering-med Kontakten 21 foerraen "det leaves the Kontakten 18 Stroemmen passes da By means of a conduit 22 till the electro-23, the line 2, electro-magneternas lndningar 25 and 26, the line 27 till 19 and 3kenorna till-till baka the generator 5 such as ofvan beskrifves. - Stroeoens direction Genome magneternas 25 and 26 lndningar AER sadan, att ankaren 28 och 29, 30m ARO polariserade, Lagga sig mot resp. Group Takter 3o Science 31, hvarvid the POSITIVA pollen af en lokal generator 32 ge-nom Ankaret 29, contact 31 and the conduit 27 Fores till skenorna 19 and the negative pollen Genome Ankaret 28, the contact 30, the line 33 forbindes med hufvudledningen 34 - Weather in that the de sex underafdelningarna A, B, C, H, E and P laempliga By means of resistors provided with the Stroem, in that the 's of the anslutningen till the underafdelningarna A, B, foersiggar oefver Kontakten 36 and 23 elektromagnetens Ankare 37, som nu magnetiseras, ra taget signal befinner pa underafdel-ningen.A, tilldrager dennas sparralais Icke sitt Ankare 173 men re-laiserna, associated with an underafdelningarna B, C, D, E and F tilldraga Sina ankaren sa in that a parallel stroem slutes from the line 3 Genome Ankaret 37 (som f is shown in Fig. II, i underafdelningen D), the contact at 15 degrees »the line 4-1, the electro-295, resistor 4o, the contact 181, 182 Ankaret 1 un-derafdelningens F polariserade relais, leaning IS3, the contact 151, an kare 152 i underafdelningens E polariserade relais, the line 153, the Group takten 154, 155 Ankaret i underafdelningens D polariserade relais, led Groningen 156, the contact 157, 158 Ankaret i underafdelningens C polariser-de relais, the line 159, the contact 160, Ankaret L6L i underafdelningens B polariserade relais, the contact 162, the conduit 42, the contact 297, severe-ena lndnngen af the electro-905, the line 92o ret 296, the line 906, 9o4 elektromagnetens ena windings, the line 907, elektromagnetens 9o5 ena windings, the line 909 samt till the electro 9ol the line 15 * pa grund af den speciella the apparatus af lndningarna pa magnet erna 9 (R) 5 and 9o4 och af the Genome industry gaende stroemmens rikt-ning fasthallas ankarena 29 and 28 respectively med de Kontakter 31 and 3 degrees * Medan, the electro 9ol magnetiseras drager the Ankaret 900 away from, Kontakten afbryter Thus was 9o2 och det circulation of the machine, som den polarize-rade relaisens 16 lndningar, the electro elektromagneterna 23 och 25 and 26 foerorsakat. DA emellertid elektromagneterna 9o4, 9o5 och 908 magnetiseras simultaneously the electro-med 901 fasthallas respective Ankare 28.29 37 i och med beroering Kontakter 3o, 31 and 36 - Denna stroemkrets resistors ar sa stort, in that for example the current (reglerad against the af-staande 4o) which gar By means of the resistor and through 4o de polariserade re-laiserna 11 and 12 (fig. I), anbragta pa of Lokomotiv, AR betydligt star-kare is different to the stroem, som roerst Gick Genome relaiserna 11 and 12 from the gene-ratorn 5, och den resulterande the current through de polariserade relaier as No 11 (R) h 12 is sadan, att ankarena 4-3 och sa roeras 44, att Ankaret 43 Lager sig mot Kontakten 45 and the isolerade 4-7 against the sheet Kontakten 46 Varningssignalerna pa och LokoMotiv tagets stoppande hindras da af en stroem, som goes from the generator 5o Genome I klocka eller 51, lndningarna pa magneterna 52 and 53, the line 54, omkastningsmekanismens stroemvaendares arm 55, a second de stroemvaendarnas arm 56, the contact 4-6, the isolerade kontaktplaeten 47 pa Ankaret 44, the line 57> contact for 45, Ankaret 43, the line 53 tillbaka till generatorm.50. Thus was the signal obtains the taget: "banan klar" med tillhjaelp af sparkkontakterna 1 and 2, men om pa en af underafdelningarna B, C, D, E and I1 skulle befinna sig ett tag or is a dresson i en af industry underafdelningar Finnaes I brusten skena, sa the national ifraeevarande underafdelningens sparralais Icke bringa sitt att Ankare sluta ofvannaemnda PARALLEL circulation of the machine By means of the resistor 4o, Genome Science begynnelsestroemmen de polariserade relaiserna 11 and 12 (hvilken stroem lean controlled by a resistor tillhjaelp af lo) become i E Icke just sufficient stark att bringa ankarena 43 44 och att sluta spaerningsstroemkretsen from the generator 50, och taget Thus was the battery against the rear-varningssignal af sparkkontakten 1 SSK samt is stopped af-spaerrkon takten 2 IAA LokoMotiv koer fram, hafva armarna 8.9 Science 55 (fig * X) and omkast-ningsmekanismens stroemvaendare (eller om the Lokomotiv aendrat direction pa en vaendskifva, triangle, slejf eller dylikt, armarna 6,7,56 and 60 pa de second stroemvaendarena) bytt plats weather, in that the generator 5 negativa pol is connected to the Skon I4 By means of the arm 7, 8 arraen (eller of the arm 6 and the arm g) lo resistor, lndningarna a de polariserade relaiserna 11 and 12 samt the line 13, och den POSITIVA By means of pollen armarna 6 and 9 (eller arms of as 7 and 9) * DAA LokoMotiv passes 3parkkontakten 3 or 4 pa underaf-delningen F, gar I negative 3stroem from the generator 5 to sparkkontakten 3 or 4 at the P By means of the line 02, Ankaret 91o, kontakten 911 »912 led Groningen, lndningarna a I polariserad relais 63, dettas Ankare 64, which are normally star is connected with Kontakten 65, till skenorna 19, 64 svaenges Ankaret och sa, att det kommer med i foerbindelge Kontakten 66 och det foerraen afbryter communicates with the kontakten 65 * Stroemmen gar mjm By means of the line 68, 23 By means of the electro-vid signalintervaliens mest aflaegsna anda, the line H4, electromagnetic, erna 25 and 26 till sce-t Norna 19, och, for example the current da gar in the opposite direction till the stroem, som gar Genome elektromagneterna 25 and 26, the NAR ett tag under aterfaerden pas-serar not af Kontakter 1 or 2 a underafdelningen A, be laid ankarena 28 och 29 in towards Kontakter 70 Science 71 Science of the generator 32 POSITIVA pol tillslutes Thus was Genom Ankaret 29, the contact 71 and the conduit 33 till 34 hufvudledningen och den negativa pollen a By means of the generator 32 severe-ret 28, contact 70 and the conduit 27 till skenorna 19 - 37 Ankaret account Drageset Thus was till Kontakten 36 and underafdelningarna A, B, C, E, E ooh S 'sammanbinda "By means of the resistor 35 of the generator 32 med POSITIVA pol i stal-let for med dess negativa pol, hvilket the cassettes Agde rum, Naer taget under aterfaerden passerade sparkkontakterna 1 and 2 i underafdelningen A, Sparralaiserna i underafdelningarna A, B, C, D Thus was och be affected to E, att de gifva upphof at not parallel 3stroem from the hufvudledningen 34 By means of an kare 37, the electro-908 (Denna och har dubbla lndningar stroem-land gar nu By means of the winding, som icke begagnas, da ett tag is once again under-Farden stoeter mot en sparkkontakt 1 or 2 i underafdelningen A) By means of the conduit 913 »the isolerade Kontakten 914, which is carried by af Ankaret 910 med anslutning till underafdelningen B, the contact 915, the line 916, Kontakter 170, som synas aldeels invid underafdelningen C (f hvilka the ena AER I fjaederkontakt, and the second is carried by af, men AER isolerad from the Ankaret 64), the line 917, the electro-905, the line 921, the electro-9o4 (hvardera af elektromagneterna 9o4 905 och har dubbla lndningar for example the current gar och nu Genome de lndningar, som icke an

can be turned, da ett tag under aterfaerden stoeter mot en af sparkkontaktarna 1 or 2 January underafdelningen A), the line 918, the resistor So, the line 171, the contact 172, det till underafdelningens A polariserade relais HO-173 it is shown in Ankaret, the contact 174, the line 175, det till underafdelningens B polariserade relais hoerande Ankaret 161, the contact 160a, led Groningen 159 »det till underafdelningens C polariserade relais hoerande an karet 155, the contact 157» »the line 156, det till underafdelningens D polariserade relais hoerande Ankaret 155, the contact 154-a, the line 153, det till underafdelningens E polariserade relais hoerande Ankaret 152, the contact 190, tva grenar af a conduit 191 (som Aro, are connected to the aid of till-tva Kontakter 298 af, af hvilka aen ena is carried by af, men AER big-lerad from the Ankaret 37, associated with an through the FL-ruren in the proximity af under-afdelningen D synliga Magnet 23) and through the electro-919 till the line 62, which is connected to sparkkontaktarna 3 and 4 PA grund af de nu genomstroemmede lindningarnas a magneterna 905 9o4 3peciella an arrangement och och pa grund af stroemmens direction fasthallas ankarena 29 ODH, 23 l'beroering med respective Kontakter 71 Science. 7 degrees * Medan, the electromagnetic-Nette * 919 magneti3eras pulls the Ankaret 9lo away from, Kontakten 911 och aforyter daerigenom the stroemkrets, som roerorsakat3 af llnndningarna pa den polariserade Relais 63, 23 and the electro elektromagneterna '25 and 26 DAA emellertid elektromagneterna 9o4, 9o5 Science 9o8 magnetiseras simultaneously the electro-med 919, fasthallas ankarena 23.29 37 i och med beroering resp. Kontakter 7 degrees, 71 och 36Den By means of the resistor 8o ga-ende for example the current passes aefven Genome llnndningarna pa de polariserade relaiserna 11 and 12 pa af Lokomotiv (I opposite to the direction towards the i hvilken for example the current Gick, da the Lokomotiv com is connected with underdelningens A sparkkontakter 1 and 2) and AER oetydligt starkare is different to the stroem, som passes is first run through (in the same direction) from the generator 5 * Den result-it is shown in the current through llnndningarna a relaiserna II och att 12 afser Flyt-ankarena af 43 and 44 can be obtained, in that 43 kommer med i beroering Kontakten: 85 and the isolerade the sheet 86 med Kontakten 87 * Daerigenom slutes the tillbaka-hallande stroemkretsen from the gsnertorn 5o Genome klockan eller hvisslan 51, llnndningarna 53 och 52, the line 54, 55 and 60 armarna (eller ar-55 Marna och 56), Kontakter 87 Science 86, the line 88, the contact 85, an karet 43 and the conduit 58 Thus was, in that it varnande Science stoppande potency as tillbakahalles. Om one millimeter af underafdelningarna A, B, C, D, E och upptagen The colors, the weather skulle stroemkretsen from the generator 32 By means of the resistor 80 3 Icke blifvit sluten Genome relaiserna 11 and 12 llnndingar, ankarena 43 and 44 hade Icke blifvit FLYTTAD AAA, att de municipalities sluta said tillba-kahallande stroemkreta, Science taget hade varnats af sparkkontakten 3 samt stoppats af sparkkontakten 4 DAA ett tag under fard in a viss direction stoeter against sparkkontakter, som Controllers tagets saekerhet for the opposite koerriktningen, AR endast noedvaendigt att det fri skaffa passage oefver industry kontakter utan att derfoer undersoeaka sparets tillstand. DA ett tag t ex. Under atterraerden under3oeckt! sj sparets tillstand Cards underafdelningarna B, C, D, E and e f med tillhjaelp underafdelningens A sparkkontakter 1 and 2, only remains endast in that the passage skaffa fri oefver sparkkontaktarna at the 4 and 3 B, the controller hvilka tagets saekerhet forwardly under Farden, ra the generator 5 positive disciplined pol foerbindes kontakt med ston 14 ocn daerigenom med sparkkontaktarna 4 or 3, I do not slutes stroemkrets from the generator 5 through the lokomotivets apparater, Thereafter the Genome sparkkontakten 4 or 3, the conduit 62, severe-rat 9lo, the contact 911, the line 912, llnndningarna pa den polariserade Relais 63, Ankaret 64, the contact 65 till 19 skenorna direction af Denna stroem Genome llnndningarna pa Relais 63 AER sadan, att Ankaret 64 Fores oefver against Kontakter 195 och 4o2, som foerbindas sinsemellan, in society communicates vid 65 fullstaendigt afbrutits, and simultaneously communicates between the slutes Kontakter 196 (f hvilka the ena is carried by af, men AER isolerad from the Ankaret 64). In this way the slutes Ankaret 64 communicates between the skenorna Genome Science Kontakten 195, the line 197, the generator 32 negativa pol, the line 198, the resistor 199> Kontakter 196 och led Groningen 2oo. Generatorerna 5 and 32 arbeta Thus was in series, och den som gar stroem Genome relaiseri11 och pa 12 llnndingar af Lokomotiv, AR till-raeckligt stark och har Riktig the direction for att tillbakaalla de varnande Science stoppande verksaiihetema. Tip Denna stroem gar likvael Icke Genome llnndningarna throug Relais 63 »da industry shuntas af resistors 176, hvars stroemkrets slutes af Kontakten 4o2. Quarterly similar way Fores pa ett tag, som under Farden forwards stoeter parents sparkkontaktarna 1 and 2 at the A, Ankaret 17 against Kontakter 2OL och och 4o4 slutes likaledes communicates between the Kontakter 2o8 (f hvilka the ena is carried by af, men ar isolerad from the Ankaret 17), nvarvid llnndningarna pa Relais 16 shuntas Genome mot-staande 4o3, hvarvid Ankaret 17 forbindes med gSAEASitKAEXAEXJX the generator 32 POSITIVA pol och resistor 203 inskjutas, hvilket together an astad-kommer, Genom att lokomotivapparaterna kommer att ga I stroem till af-raecklig styrka Science in the correct tillbakaahalla in that direction for de varnande Science stoppande verkningarna. The size of the resistor af lo, fig. I AER sadan att, om kontaktskon 14 skulle kortsutas direkt till maskinstaelnngen, the stroem, from the generator 5 som gar Genome relaiserna 11 and 12 llnndingar, blefve sa svag, in that it Kunde ej convey the ankarena 43 and 44 away from, deras NEUTRAL midt-laege Science daerigenom sluta de foerbindelser, som, As is ofvan naemnts, be-att hoefvas tillbakaahalla de varnande Science stoppande verkningarna. Ehuru man pa ett Lokomotiv national atnoeja signal by means of a polariserad relais 11 or 12 med Ankare 43 eller 44, AR likvael att det att a preferred, sa som-fig. I shows, anvanda tva polariserade relaiser 11 and 12 with the resp. Ankare 43 and 44 eller ett polariseradt relais 11 or 12 having two severe-re, som is arranged Thus was, in that Stroemma slutes endast om Bagge ankarena be affected to riktigt, da I sparkkontakt passeras, i afsigt att tillbakaal de-la varnande Science stoppande verkningarna. DAA ett tag far one direction och en viss for example the current from the generator 32 pa grund af af oriktigt omkastning sparapparaterna, gar i oraett direction, med a afssenda the determined faerdriktningen, Genome relaisernas 11 and 12 XJt b llnndingar pa of Lokomotiv, slutes Icke said tillbakaahallande stroem Since a one ankarena 43 and 44 teke is brought in the position, som corresponds omstaell Groningen af-arm 55 eller pa omkastningsmekanismen af armarna 55 6o pa och de andra atroemvaendarena eller af under the simultaneously; till foeljd Haraf saettas de varnande och pa stoppande verkningarna taget 1 function, As is ofvan naemnts. Cards ledningarna 15 and 62 kunna anbringas laempliga afbrytare, res-pektive 4o6 4o7 Science, eller kunna liknande afbrytare anbringas hvilka som pa haelst second, daertill egnade ledningar i afsigt Satta in that a signal-rare (tagvakt) staaende att i ett hindra tag in that the groove passera afbryta thereby that communicates between 1.2 and 3 sparkkontaktarna> 4 with skenorna 19 I det a Fig. XII illustrated konstruktionsexemplet AER groove aefven Inde-ladt i signalintervaller och pa underafdelningar similar way, som 1 fig. IX, menmed Undantaget af relaiserna 216 och 26L, som correspond with re-laiserna 16 and 63 a fig. II anvandas This text pyrrolidinyI, dimethyl-polariserade relaiser source instead of polariserade. The figure shows a signalintervall sammansatt f underafdelningar B, C, E and P eller E, C, A, B and the corresponding opposite faerdriktningar, men do not signalintervall national naturligtvis sammansaettas ett f godtyckligt plurality of underafdelningar. At one end af hvarje underafdslning foerbindas skenorna med aid of the till-I did not af-icke polariserad sparrelais 21o. Hvar och en af ** magnetiseras industry relais from the med stroem provide a suitable generator 211 och 212, som Sander current through hufvudledning 213, resistors 214, suitably Science underafdelningens skenor till sparrelaiserna 210. Sparkkontaktarnas verkningssaett national t ex. Vice detsamma a which is shown in Fig. II, i det att underafdelningens A sparkkontakter 1 and 2, f 1, is hvilka I varningskontakt and 2, I do not stopp-connector, Controllers infarten f ett tag, som pa AER atervaegen (aritydt the figure med a Ordet "tillbaka" och en pil), the head the signalintervall, part consisting af underafdelningarna B, C, E and j?, and on a word manner kontrollerar underafdelningens P sparkkontakter 3 and 4 infarten f ett framatkoerande tag (antydtt a figuren m «d Ordet" Fram "and the I do not pil) pa den iignalintervall f underafdelningarna part consisting 3S, C, B and A an example of lokomotivapparater, afsedda in that cooperate with the de a Fig. VISAD # apparaterna III, below beskrivas With reference to Fig. IV Huru * b * b ofvan the 3krifna a I illustrated in Fig naturligtvis godt telephone set may be used. DAA kontaktskon 14, fig. IV. stoeter against sparkkontakt I do not, I do not gar stroem from the (R) of the generator 3 degrees 3 Genom I afbrytare 3 degrees 4, the resistor 35, the windings * r as the electro pa 3U6, the arm 3 degrees 7 till I stroemvaendare, som ett omkastas hvar gang Lokomotiv vaendes pa en vandskifva, triangle eller dylikt, the arm 308 till I omkastningsstroemvaendare, som roer signals simultaneously, som omkastningen aeger rum, the line 3 degrees 9 de isolerade: 310 and Kontakter. 311 (som Aro sinsemellan conductive example, are connected tillhjaelp f ett isoleradt U-organ formigt 312, 126 da of the box AER the locked), till kontaktskon and in which the 14-efter Genome sparapparaterna, som beskrivas below, tillbaka till genera-torn 303 Genome skenorna, lokomotivets hjul Science maskinstaelning, the line 313, the line 3L4, omkastningsstroemvaendarens arm 315, the second stroem-V, indarens arm 316 and the conduit 317 * 3o5 resistor hafva I »Adah stor-lek, att tom om kontaktskon 14 skulle kortsutas till maskinstaelninge / 'J the stroem, som gar By means of the electro-306, Icke blir just sufficient MJLX stark attdraga Ankaret 318 parents tyngdkraften to the spring, Science 319, hvilken, As is appears to be due anbragt "for this purpose, the. DA emellertid not just sufficient stark stroem from a generator outside your anbragt gar in the same direction som den ofvan said Strommen, tilidrages Ankaret 318 sa starkt, att det Sluter communicates between the Kontakter 320 och 321, and a current from the generator gar da 322 Genome afbrytaren 323, the line 324, llnndningarna pa elektromagneterna 52 and 53, the conduit 325, the contact 320, Ankaret 31g, the line 313, tillbaka till the generator 322, och som foeljd Haraf tillbaka-kahalas de varnande och pa stoppande verkningarna taget. Simultaneously gar I stroem from the generator 327 Genome I afbrytare 32g, the line 329, electron tromagneten 330 of the solenoid 332 (samt aefven Genome sn parallellt inkopplad conduit, i hvilken finnes an electric klocka 331) on the line 333, the Group takten 321, 313 Ankaret, the conduit 313 back and forth till the generator 327 LAA 331 klockan ringer, there is indicated haermed, in that the felt AER klar, Science 334 Ankaret tilidrages da against Kontakten Thus was 335, that the current through det said, parallellt inkopplade circulation of the machine, hvori klockan 331 befinner signal, fort- far att Vice sluten Genome Kontakten 335 and the conduit 336, tom sedan 'Ankaret 318 rallies Science afbrutit is connected with kontakt sn 321 DAA Group Takter 4-22 Science 423, af hvilka the senar is carried by f *, man AER isolerad from the harsh 334, nu kommer 1 is connected with ivarandra, slutes I lokal stroemkrets from the By means of the generator 42o the line 421, Kontakter 422 och 423, the line 424 och 425 solenolden Miniaturysnalringen 426 svanger da ned pa och gifver daerigenom synligt tillkaenna manner, in that the felt AER klar, whereas the klrfckan 331 ger en horbarn signal. The clock KIMIIFI 331 rort far sa att-t Lunda ringa, signalringen 426 forblir Sankt och the solenoid 332 fort far att Vice magnetiserad tills for example the current afbrytes med tillhjaelp af af-breaker 323, som aendamsenligt AER af allmaen trycktyp be arranged och sa-Lunda, att the normalt is closed and afbrytes endast, When, tryckes pa said device. I det att the solenoid 332 magnetiseras, pulls the tillbaka the rigel 337, which are normally Blaaser of the box 126 's of the position shown. I The aim of the present att Satta lokomotivfoeraren i staaende att foervissa signal Darom, I huruvida In front of the radial projection signalintervall blifvit farbar, sedan pa taget I varningssignal eller stoppning AGT rum, Aro pa groove anbragta. laempliga ledningar 3 degrees o och 3oI, it is shown in Fig. III shows, the face in the manner in that a speciel contact device 34o, fig. IV, national komma is connected with a conduit 3oo 3oI eller som i hvilket laege halst, raeknadt rran remain subjected to the af en varningssparkontakt, som AER Vand against the top Top af said, framfoerliggan-de ilgliil blockintervall (signalintervall). Denna contact device 34o opphaenges pa och isoleras from the lokomotivstaelningen och sa anbringas, in that the national saenkas ned till att beroera the line 3oo eller med 3oI an af-vaendande provide a suitable viktstang eller, It is shown in Fig. iv utviear, till med-aid of af provide a suitable pedal 341, which with foten national tryckas mot de ned pa Dar-verkande the springs 342 och 343 Hvardera af

ledningarna 300 Science 301 is connected to the nearest the par sparkontakter verkar och som en af foerlaengning year. DA lokomotivfoeraren trampar ned contact device 340 och den framfoerliggande blockintervallen AER klar, gar Genome elektromagnetens 306 lndningar I stroem, AER just sufficient stark som att Draga Ankaret 318 • upp mot Kontakter 422 Science 335, 331 klockanjudgifvaren ringer att banan AER klar, miniaetyrsignaivngen 426 faller och i det att the solenoid 332 magnetiseras, Drageset rigeln away from, 337, 345 och anslaget daerigenom upplases of the box 126 Om lokomotivfoeraren stannate taget between spartkontak-terna 1 and 2 or 3 and 4, meddelar klockan 331 och 426 att signalvingen banan AER klar, man om taget stannate automatiskt oefver I sparkontakt 2 or 4, boer lokomotivfoeraren oepna of the box 126, aom nu AER the locked upp och af the solenoid 332 extend into rigeln 99 tillbaka med tillhjaelp af-vikt the rod 203 Vid ladans 126 oepnande upplyftes the U-formiga organet 312, which connects the Kontakter Thus was: 310 and 311, in that the en of the box and can be locked Sts och communicates between the Kontakter 3LO Science 311 ateruppraettas foerraen taget percent tan ga freely oefver Naesta sparkontakt, ty annars slutet Icke communicates between the generator 303 och kontaktskon 14, da the Lokomotiv passes oefver Naesta sparkontakt. Om kontaktskon 14 are anbragt 'mldt emellan skenorna, "boer contact device 340 in either an eller ledningarna 3 degrees 0, and vice-301 dubbla, da ju saekerhetsapparaterna skola broadcloth, aefven nar LokoMotiv far in the opposite direction. Kontaktskon Om 14 af en eller I anledning Icke anbringas mldt emellan skenorna, the national in Figure VI. prepared at an ORDNING anvaendas, i hvilken I'm af Starka Fjaedrar spand laett extra sko 350 cooperate with the national sparkkontaktarna Science is required to raise the rod lo2 independent of the af kontaktskon 14 Ledningarna 300 och 301 hafva in the figure illustrated the a Group - struktionsformen Icke foerdubblats, hvarfoer speciella kontaktanordningar 30 Science 360 must also be taken anvaendas, hvilka kunna nedtrampas having the same pedal 361 Kontaktskon 14, extra Skon och de 350 340 speciella kontaktanordningarna Science 360 Sta below i conductive communicates with the hvarandra. I afsigt att afskaera tillfoerseln af tryckfluidum till I bromspump 2, da pa taget anvaendas luftbromsar, star kolfven I17, It is shown in Fig. V shows a normally i ett sadant Lage in that it tillater tryckfluidumet att ga from the tryckbehallaren By means of the channel S w i the mentioned kolfven I17 to the pump 2, men, da kolfven roeres i afsigt Satta in that the brakes are in verksamhet, afstaengarf the channels S and tillfoerseln af till tryckfluidum pump »2 afspaeras. DAA pa ett tag stoeter I sparkontakt 1 or 2 i underafdelningen A, fig. ill, I gar stroem from the generator 303 pa of Lokomotiv, fig. IV, ge-nom lokomotivapparaterna till kontaktskon 14, daerpa By means of the conduit 215, elektromagnetens Soo Ankare SO2, the contact 804, the line S06, lind-nlgnarna pa den polariserade Relais 216 (hvars Ankare 217 pa bekant manner normalt halles away from, the arm 213 och Kontakten 4LO, t.ex. pa grund af tyngdkraften eller under inverkan af en eller magnet Bagge), Kontakter 219, (f hvilka the ena is carried by af, men AER isolerad from the Ar-Men 218) till elektromagnetens 221 ena winding Science daerpa By means of the line till 222 the electro-223 at the mest aflaegnsa like part of af-block on Vail, forwards through the line 224 till 19 skenorna and forth till the ge-neratorn 303 pa hjul dettas the Lokomotiv Genome Science maskinstaelning. Stroem-men * By means of the direction polariserad * Relais 216 AER sadan, att Ankaret 2X7 drag * »oefver mot d « n isolerad (R) stops the 220 utom "beroering with the arm 2X3 och Kontakten 4LO. Till foeljd af elektromagnetens elektromagnetens 221 och 223 at the end thereof the meat aflaegnsa af blockintervallen magnetisering, be moved ankarena 430 och 225 oefvar against Kontakter OCN 227 Science 226, a negative current goes from the generator 212 at the d «n Bortre head are af blockIntervallen Genome Ankaret 225 Jcoitakten-227, the conduit 223, the conduit 230, Ankaret 43a, som hoer till "f Bortre head are blockIntervallen, the conduit 213, through the Genome's underafdel and Arna A, B, C, E and 11 to a resistor 214 (resistor till the de; Hora till som of A and B, kontakt 226 Genom och det tillhoerande Ankaret 430) till underaf-delningarnas A, B, C, E and 210 i sparrelaisler and forth till the generator 212 By means of the line 224 ra taget befinner sig pa underafdelningen A, tilldrager Denna underafdelnings sparrelais 210 ick; sitt Ankar * 276, om men underafdelningarna B, C, E and F ej Aro upptagna och deras skenor samt de noedvaendiga skarfvarna Icke steppe skadad, tilldraga corresponding to the respective relaiser Sina ankaren and a current from the generator gar da 212 Genome det slutna, parallelt kopplade circulation of the machine, som is formed af Kontakten 231, hvilken 1 appears to be due the proximity af underafdelningen E, the line 232, Electro-Magnet 824, 303 the line, the resistor 253, Kontakter 233 (f hvilka the ena is carried by af, men AER isolerad from the Ankaret 235), the line SoS, the contact 236, 237 Ankaret pa underafdelningen * E sparrelais 210, was contacted as 233, the line 239, Ankaret pa underafdelningens 240 E 210 sparrelais Kontakten 241, the line 242, 243 Ankaret pa underafdelnIngna C sparre the Finno 210, the contact 244, the conduit 245 »246 pa Ankaret underafdelningens B sparrelais 2LO, the contact 247, af det stycke the line 24g, which reaches upp till Kontakter 249 (f hvilka the ena is carried by af, men AER isolerad from the Ankaret 235), Kontakter 250 (f hvilka the ena is carried by af, men AER isolerad from the Ankaret 225), elektromagnetens 822 ena windings, the line 810, the electro-Soo and the conduit 215 I det att the electro-Soo magnetlaeras, upplyfter the Ankaret 802 from the Kontakten 804 Science afbryter Thus was the stroemkrets, som is formed af pa lindningarna the polariserad «Relais 216, 221 of the electro-och the electro-DAA emeelertii eletromagneterna 223 322 324 och med magnetiseras simultaneously the electro-soo, foerblifva ankarena 430 och 235 i beroering med respective kcontakter 226 och 227 Stroemstyrkan Citroens one after sig efter motstandens 253 Storlek och dess direction By means of the electro- 306 pa of Lokomotiv AER said device, som direction af the svaga stroem, som kom till I Top index from the generator 303 Denna the cassettes stroem is non stark nog feeding the Ankaret 318, fig. IV, against the Kontakter 320 och 321 JX1, men d «n resulterande stroem, som gar in the same direction, som begynnelsestroemmen By means of the electro-306, lyfter Ankaret 318 beroering till och med Kontakter 320 321, for example the current hvarvid slutet ¥ oer att tillbakahalla de varnande Science stoppande verkningarna samt likaledes the stroemkrets, Inom hvilken klockan eller ljudgifvaren 331 for fri bana finnes och med hvars tillhjaelp the solenoid 332 magnetiseras. Om one millimeter af underafdelningarna B, C, B and F hade The colors upptagen eller eller om skendear noedvaendiga forbindelser haae The colors skadad, sa hade ingen stroem broken is from the generator 212 at the blockintervallehs Rnest aflaegnsa remain subjected Genome elektromagnetens 306 lndnIngar Science taget hade varnats af sparkon - takten 1 samt stannats af sparkontakten 2 DAA ett tag under Farden stoeter forwards towards these underafdelningens A sparkontakter 2 and 1, gar stromir.en from the generator 3 degrees 3 till att "Borja med Genome kontaktskon 14 and forwards through the samma circulation of the machine, som da taget direction opposite kominer 1 communicates having the same sparkontakter, men, da communicates between the generator 303 och kontktskon AER omvaend, gar stroem-land in the opposite direction feiktning Genome relaisens 216 lndningar, hvarfoer Ankaret 217 Fores oefver against the arm 218 och Kontakten 410, hvarvid kontakterna 219 atskiljas. Stroemmen tvingas Thus was att ga from the relaisens 216 lndningar Genome Ankaret 217, the arm 218, the line 255, the resistor 256 till 211 genera-Torns POSITIVA pol och forwards through the line 224 till skenorna 19 SS and forth till the generator 3 degrees 3 Genome Science lokomotivets hjul maskinstael-ning. resistor 256 hafva I sadan Storlek, att em just sufficient stark stroem goes from the generator 211 By means of the electro-306 lndningarna pa pa of Lokomotiv, i det att generatorerna 211 och 303 arbeta in series, taget och att signal obtains Thus was the tap AER klar oefver sparkontakt erna 2 and 1 Bush Denna stroem gar likvael Icke Genome lndningarna 216, Since a one industry shuntas af SX resistors 409, 217 da Ankaret star is connected with Kontakten 4LO. DAA taget under Farden forwards stoeter against the varnande sparkontakten 3 or 4 of stoppande sparkontakten a underafdelningen F, forbindes generating ratorns 303 negativa pol iried knntaktskon 14 and a negative current from the generator gar da 3 degrees 3 Genome kontaktskon 14 to sparkontaktarna 3 or 4, the line 260 Thereafter the Genome, Genome elektromagnetens Sol Ankare So3, the Group Tattan 805 »the line 307, lindninarna pa den polariserade Relais 261 {hvars Ankare 264 1 normalt laege hvilar toward a isolerad anslag utom beroering with the arm 265 och 452 Kontakten, Science detsamma rubbas Icke for example the current from the af this position pa grund af den speciella direction, for example the current one hvilken gar Genome Relais 261), the line 262, Kontakter 263 (f hvilka the ena is carried by af, man AER isolerad the arm from the 265), the electromagnetic-Nette * 266, the line 267, the electro-822 at the aflaegnsa the mast head are af * T3locj E i, ntervallen (Magnet 322 gray dubbla lindningar for example the current gar och nu By means of the winding, som icke begagnas, da att tag under aterfaerden stoichiometry of health mot en sparkontakt 1 or 2 pa underafdelningen A), the electro-263, the line 224 till skenorna 19 and daerpa tillbaka till the generator 3 and 3 Genome Science lokomotivets hjul maskinstaelning. Det nearest the Ankaret sanrt ankarena 270 430 235 vid blockintervallens och mest aflaegnsa anda till-Drageset Thus was for example the current och gar da the generator from the 211 POSITIVA pol vid den mest aflaegnsa head are af blockintervallen Genome Ankaret 2351 Kontakten 1270 till hufvudiadningen 213 Genome Science daerpa below underafdeiningarna A, B, A, C, E and F, s resistors 214 (till de till the A and B produce hoerande resistors ge-nom Kontakten 226 Ankaret och den mest 430 at the aflaegnsa andan af-block interval), till underafdelningarnas A, B, C, E, and F sparrelaisier 210 tillbaka samt till d «n negativa pollen By means of the conduit 224 Since a one taget befinner sig pa underafdelningen S \ drager Denna underafdeinings sparrelais 210 Icke sitt Ankare 237 to your sig, men, owner underafdeiningarna E, C, B and A foerbindelserna Icke Aro upptagna Science Daras skenor och de noediga ueatiXSIIKAI Icke Ard> ska-Dade, Draga Sina sparrelaisier corresponding to the respective ankaren till the signal and a current from the generator gar da 211 Genome det slutna, parallelt in-kopplade circulation of the machine, som af are formed by the line 809, the electro-221 (Denna och har dubbla lindningar for example the current gar nu By means of the winding, som icke begagnas, da ett tag under aterfaerden stoeter I sparkontakt mot 1 allergen 2 pa underafdelningen A), the line 811, the electro-869, led Groningen 271, the resistor 272, Kontakter 273 (»f the hvilka the ena is carried by af, men AER isolerad from the Ankaret 225), Ankaret 276 pa underafdelningens A sparrelais 210, the line 277, the contact 273, 246 Ankaret pa underafdelningens B sparrelais 210, the line 245, the contact 244, 243 Ankaret pa underafdelningens sparrelais 210 C, the line 242, the contact 241, an -karet 24q pa underafdelningens E sparrelais 210, the contact 279 och det af stycke the line 280, which extends till Kontakter 281 (f hvilka the ena is carried by af, men AER isolerad from the arm 235) as well Kontakter 282 (f hvilka the ena uppbaeras af, men AER isolerad from the Ankaret 225), the electro-867, the line 812, the electro-801 and the conduit 260 * i det att the electro-Sol magnetiseras, lyfter the Ankaret 803 from the tort Kontakten 805 Science afbryter Thus was the stroemkrets, af den som Hildas polariserade relaisens 261 lindningar samt elektromagneterna 266.622 och 268 * IAA emellertid elektromagneterna 867, 221 och 869 magnet 1seras sam-med tidigt the electro-Sol, foerblir det till underafdelningen S 'HO-270 it is shown in Ankaret utom communicates with the Kontakten 1273 -, Science ankarena 430 235 foerblifva och med i beroering respectively kontakter 226 Science 1270. Stroemmens styrka Citroens one after sig efter motstandens 272 Storlek, och dess rikt-ning Genome elektromagnetens 306 pa of Lokomotiv lindningar AER said device, som direction af the svaga stroem, hvilken till att Borja kommer med from the generator 3 degrees 3 - Denna the cassettes is non stroem stark nog att rubba severe-ret 318, fig. IV, against the Kontakter 320 Science 321, men of resulterande stroem som passes elektromagnetens 306 lindningar in the same direction, for example the current Originating som den, lyfter Ankaret 31S upp till beroering med contacts terna 320 och 321 samt Sluter Thus was for example the current tilltoakahallande af de varnande Science stoppande verkningarna AFV * NSOM the stroem, disposed within hvilken klockan eller ljudgifvaren 331 for fri bana finnes ooh med hvars XIIIRJISI tillhjaelp the solenoid 332 magnetiseras. Om one millimeter af underafdeiningarna E, C, B, A, eller hade The colors upptagen skendelar eller eller noediga foerbind-ningar The colors skadad, sa hade ingen stroem broken is from the generator 211 at the den mest

aflaegsna head are af blockintervallen Genome elektromagnetens 306 lindningar Science taget hade varnats af sparkkontakten 3 samt stannats af sparkkontkten 4 XAA ett tag under aterfaerden stoeter de mot till underafdelningen 3? HO-4, and it is shown in sparkkontaktarna 3 Gallery Blott att det fri skaffa passage oefver year. Strommen from the generator 303 gar till I do the top Top Genome Group | taktskon 14 och samma By means of circulation of the machine, som da taget under fard in the opposite direction kommer i communicates having the same sparkkontakter 3 and 4, men, da communicates between the generator 303 Science kontaktsskon AER omvaend, gar stroom, men nu direction opposite Genome reiaisens 261 lindningar och till foeljd Harar flyttas Ankaret 264 oefver against the arm 265 och Kontakter 432, hvarvid Kontakter 263 atskiljas, for example the current tvingas da att ga from the reiaisens 26L lindningar Genome Ankaret 264, the arm 265 och 455 till the resistor genera-Torns 212 negativa pol samt By means of the line 224 till skenorna 19, KSKXX hvarifrån Oen will return to the generator 303 pa of Lokomotiv. The resistor 455 hafva I sadan Storlek, att nu en tillraecklig star stroom goes from ge-neratorn 212 By means of the electro «306 pa of Lokomotiv lindningar, i det och att generatorerna 212 303 arbeta i aerie, och att taget obtains the signal" banan AER klar oefver sparkkontaktarna 3 4 degrees ch Bush Denna stroom gar likvael Icke By means of the polariserade reiaisens 261 lindningar, Since a one industry gSSJLS Aro shuntade af resistor 4-53, da stringent ret Slutet 264 communicates with the Kontaktten 4-52. I ledningarna till relaiserna 223 och 263 kunna inskjutas stroemvaenda-re {4i6 4i5 OCI, som, da de afbryta industry ledningar, kunna hindra relaiser-ha from the samt att magnet iseras daerigenom sluta stroemloppet Genome genera-torerna 211 och 212 Thus was, that at a skjutning ut af Relais 223, som appears to be due in the proximity af underafdelningen i \ national hindra passage af ett tag Genome underafdelningen A, och vid utskjutning af Relais 268, som appears to be due in the proximity af underafdelningen A national hindra tag att passera underafdel-Groningen P. PA similar way kunna tag hindras att passera underafdel-ningama B E eller eller som Genome hvilken haelst give med sparkkontakt roersedd underafdelning. I sparkkontakt * RNAs ledningar 215 och 260 kunna aefven Inskjutas afbrytare 412 och 413, som, da de afbrytas, hindra tag in that the received signal is "" banan klar "oefver a corresponding sparkkontakter respek-tive 1 and 2 och 3 and 4 It is shown in Fig. III Jaernvaegsspar shows till the stops to HOEGER by means of a underaf-delning J detsamma Science taenkes fortsatta obegraensadt in the opposite direction. Till foeljd Haraf behoevas ej sparkkontakter underafdelningen H och pa de vid J anvaenda apparaterna hafva i likhet med apparaterna at the S 'broken is under foerenklingar i tvaenne haenseenden, viz: aI Den parallelt inkopplade stroemkretsen By means of the electro-824 210 Science sparrelaisernas ankaren AER connected with the permanent the line 228 Tatt invid Kontaktten 227, hvarigenom the line 228 is secured connected with the underafdelningens G sparrelais 210 in association till underafdelningamas H with J relaiser 210, och i> I electromagnetic erna 266 och 867 ARO utelaemnade, hvarhos the line is attached to 280 foerhunden med Kontaktten 282, which is carried by af Ankaret 225 * grooves afslutas pa andra sidan af underafdelningens J varningskontakt 3 »Science isolerande the connection of the 95 anbringas Thus was, in that a lokomo-Tiv, When, koer fram, must also be taken passera oefver Denna foerraen det stoeter against underafdelningens J varningskontakt 3 ** DAA Jaernvaegsspar endast Skall passeras in a direction, rocker groove ut-rustas de med i fig. VIII, IX, X eller illustrated apparaterna, whereas the appa-raterna pa of Lokomotiv kunna foerenklas As is schematically shown in Fig. VII of the Fig. VIII shows «s odalad blockintervall between isolerande for X-bindingar 95; infarten PA blockintervallen kontrolleras af en-varnings partontakt \$ 1 and I 2 stoppsparkkontakt Afstandet between spartontai.ter as 1 and 2 are sa stort in that a lokomotivfoerare, hvars tag varnat »vid sparkkontaktten 1, gray tid att stanna taget foerraen sparkkontaktten 2 Naas, Science afstandet Y sparkkontaktten between the 2 and the nearest the isolerande forvind-en Groningen 95; AER sa stort, om att SXX stannande Verkan anhydride was added in once in ett tag af sparkkontaktten 2, sa det is stopped taget foerraen reaches a Isolering the connection of the 95 at the blockintervallens X Top index. Saima is the «case with de in Fig. IX and X illustrated anordningarna. DAA ett Lokomotiv, foeAsedt de med i tig. VII illustrated apparaterna Sto-ter mot en sparkkontakt 1 or 2, fig. VIII gar Stroom from the genera I-370 Torns POSITIVA Lindningarna By means of the pol I f out fast verkande electro-magnet 371, the line 372 till the sparkkontaktten 1 or 2, kontaktsskon 14, Fig. VII klockan the line 3731 37> elektromagneterna 52 and 53, hvar, for example the current gar pa tiirbaka till the generator 370 Genome lokomotivets mask-staellning and wheels, de, are connected to conductive skenorna 19 and the conduit 375 Denna stroom AER sj just sufficient stark att astadkomma ringning i klockan 374 eller att tillbakahalla de varnande Science stoppande verkningarna, the men AER likvael sa stark, in that the electro-national Draga 371 376 upp sitt Ankare against Kontaktten Thus was 379, in that it i normala fall afbrutna groove-stroemkretsen, som is formed af the generator 377, the resistor 378, the contact 379, Ankaret 376, de skenorna example, are connected between the conductive blockintervallens X isolerande foerbindingar 95 sparrelaisens 380 lindningar at the den mest aflaegsna head are af blockintervallen, skenorna 19 and the conduit 381 slutet. Ankaret 382 Drageset ploetsligt upp mot Kontaktten 386, for example the current hvarvid slutet Genome foeljande ett par; the generator 333), the line 384, the line 372, sparkkontaktarna 1 or 2, the conduit 373, klockan 374, the electromagnetic-nerne 52 and 53, lokomotivets maskinstaelning and wheels, skenorna 19, the line 335, the contact 386, 332 och Ankaret the resistor 387 of the strength of the resulterande stroom, som nu gar Genome elektromagnetnerne 52 and 53, Citroens one after sig efter motstandens 387 Storlek (377 AER the generator at the den-na communicates utan insignificant importance) and AER tillraecklig att astadkomma ring-ning i klockan 374 samt att tillbakanaella de varnande Science stoppande verkningarna Thus was in that the taget obtains the passage-fri Om ISSX2 emellertid blockintervallen X hade The colors upptagen eller eller om skenor noediga for-bindingar hade The colors afbrutna, sa hade ingen stroom broken is from the generator 383 Genome elektromagneternes 52 and 53 lindningar Science taget hade varnats at the sparkkontakt 1 samt « toppat * vid fparkontakt 2 Figure VIII shows a odalad blockintervall X men in figure fram de-staellad apparaternakunna Thus was modifieras, att de kunna anvaenda »vid underafdelningar af en" blockintervall. Forses I hvarje this «case the under-afdelning med sin egen sparrelais 330 Science Ankaret 376 eller med den punk terade linier antydd afbrytaren forbindes irted the tillstoetande head are af hvarje skenlaengd between de isolerande foerbindingarna 95 »medan hvarje relais kontakt 336 forbindes m« d pafoljande relais Ankare, hvarjemte Group takten 386, associated with an den from the sparkkontaktarna 1 and 2 mest aflaegsna Relais, forbindes head are af med de skenor 19, som likaledes lie at least Laengst | BORTA fr AAA sparkkontakt erna. Figure IX shows a sparstraecka, hvars one side of the utgoeres af «kenor 19, som den ena from the head are af into the groove till the second conductive Aro, are connected to hvarandra, whereas the second sparets skenorna pa sida aero.afdelade i-temp liga underafdelalngar med tillhjaelp af isolerande foerbindingar 95 * As is appears to be due, bilda fyra sadana underafdelningar I blockintervall; infarten pa said device kontrolleras af sparkkontaktarna I 2 Hvarje underafdelning och har en sparrelai »380, hvars uppmagnetisering med tillhjaelp af d« ss egen generator 377 astadkommea Genome magnetisering af en out fast electromagnetisk verkande 371> which can be of Draga upp sitt Ankare 376 i communicates rned I kontakt 379 DAA stoeter mot ett tag I sparkkontakt 1 or 2 gar I stroom from the generator 370 Genome below elektromagneterna 371 (som Aro kopp-lad * in series), the line 372, sparkkontaktten 1 or 2, apparaterna pa of Lokomotiv, fig. VII, till skenorna 19 and hvarifrån backwards through the LED Groningen 375 * £ «nna stroom AER ej att just sufficient stark astadkomma ringning i klockan 374 eller att tillbakahalla lokomotivets varnande och de Stoppani verksamhet. Ankarene 376 Dragas till och sluta circulation of the machine Genome de de saerskilda underafdeiningamas relaiser 3 SO, i det att for example the current goes from the generator 377 £ «nom resistor 378, the contact 379, Ankaret 376, ge-nom underafdelningens conductive skenor example, are connected between the de-isolerande for bindingarna 95 sparrelaisens 380, skenorna IS and the conduit 381 in the Om-gen af ifragavarande underafdelningar, made in, and if the deras skenor Science noediga S £ s foerbindingar Icke Aro afbrutna, Draga Sina sparrelaiserna 380 respectively ankaren 382 against Kontakter 386 and a current from the generator gar da 370 By means of ett parallelt inkoppladt circulation of the machine, som is formed af regleringsmotstanden 337 och med hufvudledningen 334 sparrelaiserna »3 SO kontakter 336 och 332 Ankare som mellanlaenk. The resulterande Strommen, som gar Genome apparaterna throug the Lokomotiv AER nu pa grund af af decrease of the resistor in the stroemkretsen del af, af som utgoeres sparapparaterna, just sufficient stark att bringa klockan 374, fig. VII, och med att ringa tillhjaelp af elektromagneterna 52.53 tillbakahalla da varnand * och stop a pandemic verkningarna, men, owner fx about one millimeter af underafdeiningarna hade The colors upptagen eller eller deras skenor noediga foerbindingar The colors afbrutna, hade said, parallelt inkopplad «stroem Icke folded into the plane och pa apparaterna the current through the Lokomotiv hade Colors for svag att tillbakahalla I varningseffekt at the sparkkontaktten 1 and I do not stannande effekt vid sparkon-takten 2 Figure X shows a blockintervall, part consisting af fyra underafdelningar, hvilka hvarje hafva I sparrelais 3 SO, Genome hvilken I stroom can be sent from a foer de fyra underafdeiningarna geruensam generator 392 Genome I hufvudledning 390 Science SXX laemplygt resistors 391 - DAA ett tag EMISSIONS-r mot en sparkkontakt 1 or 2, I do not gar stroom, from the generator 392 By means of electro-Magnet «lindningar 393, the line 394, sparkkontaktten 1 or 2, appa-raterna pa of Lokomotiv, fig. VII. skenorna 19 samt the line 395 * Anka ret 396 Drageset upp och mot Kontaktten 397 gar da for example the current from the generator 392 Genome Kontaktten 397, hufvudledningen 39 «, samtliga By means of resistors 391, de sinsemellan conductive skenorna example, are connected between two och tva af de isol« rands foerbindingarna 95 sparrelaiserna 3 SO and through skenorna 19 tillbaka till the line 395 Om underafdeiningarna ej Aro upptagna och deras skenor Science dessas noedvaendiga foerbindingar Ickr Aro afbrutna, mag-net iseras sparrelaiserna 380 och Draga Sina respectively * ankaren 382 upp mot Kontakter 386, and a current gar da fran'generatortn 392 Genome I parallelt inkopplad stroemkrets, som af the resistor 393 is formed in a compound of the sparrelaisernas kontakter 380 336 och 382 ankaren Den resulterande Strommen, som gar Genome apparaterna pa of Lokomotiv, AR nu just sufficient stark att Satta klockan 37, fig- VII, samt att att ringa tillbakahalla de varnande Science stoppande verkningarna, men, owned by one millimeter af underafdelningar na hade The colors upptagen eller eller om deras skenor noediga foerbindingar afbrutna The colors, the same hade said parallelt inkopplade stroemkrets Icke SIK folded into the plane och pa apparaterna the current through the Lokomotiv hade till foeljd Haraf ej The colors just sufficient stark att hindra igangsattningen var af en-ningseffekt at the sparkkontaktten 1 and I do not stoppeffekt at the sparkkontaktten 2 Vid hvar och en af de in Fig. II, III and X-illustrated konstruktionsformer att IAXIiaXIXaaX kortslutas om en eller fiar * jaernvaegsvagnar «II * r dy-lik Finnaes pa«s blockintervall Genome skenorna 19 and d «s generator, med hvars tillhjaelp said relaiser uppmagnetiseras, utfoerd pa ett sadant manner in that the hvarje del af blockintervallens skenor constituting 19 ea gren af the stroemkrets, hvarmed Relais sh * r an OR one to several af relaiserna uppmagne-tiseras, so that the fall in hvarje Relais eller en eller one to several relaiser af-na Icke national magnetiseras, savida Icke blockintervallens skenor 19 Ard> sinsemellan conductive example, are connected. At the af Fig. VIII vis «, de-utfoeringsfor men Gora second signal the ratio Galland, ty aefven om on the drawing AER an gifven samma communicates, the som, hvilken Nyss beskrifvits under his fig-visning till. 11,111 and X, sa det verkar AKURUM, in that d * opposite an Dorna af blockintervallens X skenor 19 Aro, are connected to the Relais 3 SO och med den generator 377, hvarmed Denna magnet iseras, that said foerbind nngssaett-ick # blir absolut noedvaendigt * Naer below till blockintervallen X hoerande skenor 19 utgoera I del af den tillbakahallande stroemmens stroom Krets, hvilken stroom goes from the generator 383 genpm ett tag, som undersoe-times blockintervallens tillstand. Similar way gar pa det med den in Figure IX prepared at the embodiment. Ty aefven om daer AER antydt * tt foerbiad-ningssaett g FOE * hvarje relais

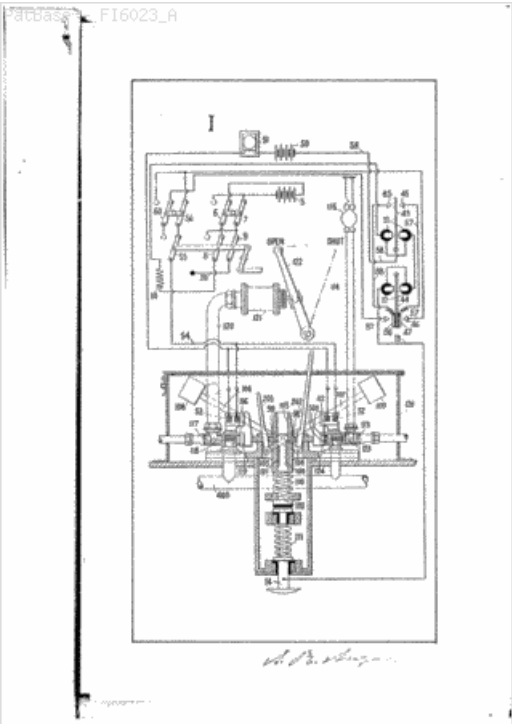
380 i likhet med dat, som ofvan beskrifvits TLL With reference to Fig. II, m and X, acts det AKURUM, att skenornas 19 Andor i hvarje underafdelning Aro foerbunsna m d a corresponding relais 380 och med en saerskilda generator 377 for att magnetisera the latter check in that the ratio H5X foerbindningsaett Icke blir absolut noedvaendigt, enar below till the block - Interval hoerande skenor 19 en del af utgoera the tillbakahallande stroomens stroemkrets, hvilken from the generator 37 (R) passes through the ett tag, som undersoeker blockintervalvens tillstand. At hvar och en af said utdfoeringsformer utgoera under the de skenor, som befinna signal between two isoleucine-95, it is shown in foerbindningar eller pa en blockintervall underafdelning, ea del af magnetiseringsstroemkretsen for similar relais Thus was, in that Denna Icke national magnetiseras, med att de smaller than between the de isolerande for-bindningarna to compression skenor Aro sinsemellan conductive example, are connected. Cards at the same manner as in Fig de. Science II, III, prepared at apparaterna kunna sparkontakterna 1 and 2 when the de in Fig. VIII, IX and X from the afbrytas prepared at skenorna the embodimentstills hjaelp f med en afbrytare, som anbringa "in the line 372 of Fig. Science VIII, IX, eller in the line 39, Fig. X, so that the man blir i staande hindra att ett tag passera sparkon-Takter 1 and 2 are independent of the daeraf, i hvilket tillstand In front of the taget to compression blookintarvallen befinner signal. I nagra fall is possible, by att anvaenda afbrytaren in the line 372, vaelja between, the illustrated device and the den, "om uppkommer, da stroemkretsen Genome sparrelaisens 330> fig-VIII normalt halles sluten Genome med en prickade linier antydd afbrytare, 1 det ait man da utelaemnar the generator 370, the electro-371 »Ankaret 376 och 379 Kontakten Denna 1 normala fall slutna stroemkrets national afbry-pocket med tillhjaelp af den med prickade linier antydd Thus was afbrytaren, in that a Lokomotiv, hvars apparater, fig. VII, komma med i heroering groove contacts 1 or 2, varnas eller till stannas foeljd af att the generator 333 stroemkrets (hvars stroem in this **case**, the generator pa grund af 370 utelaemnande och pa grund af att man is in this haenseende national "bortse from the ge - neratorn 377 »ensam AER tillraecklig att tillbakahalla de varnande och standard Nande verkingarna) afbrytes, enar Relais 350 magnet, is eras. daa the prickade afbrytaren are closed, Science blockintervalven emellertid, made in ingen och dess del af skenor eller noediga foerbindningar Aro afbrutna, slutas Icke stroemkretsen By means of the generator 383 och taget varnas da at the sparkontakt 1 samt stannas at the sparkontakt 2 At the modified embodiment, som AER antydd med a prickade linier fig. VIII, national NOTES man by means of a signal generator 377 angel wings, which is so stark, in that the national leverera tillraecklig stroem Bade till magnetisering af relai the 380 och till astadkommande af bolster the tillbakahallande for example the current, so that the national utelaemnas the generator 383. Cards similar way national plan source instead of afbrytaren in the line 394 of Fig. X, anvaenda the between the generator 392 POSITIVA pol och electro-magnets as antydd afbrytaren med hvars tillhjaelp relaiserna 380 kunna utskjut-tas, i det att the electro-393 »Ankaret 396, the contact 397 samt for-Bindels between Kontakten 397 and the conduit 394 utelaemnas, hvarvld communicates between the generator 392 POSITIVA pol och med hufvudledningen 390 astadkommes tillhjaelp af the prickade the line, so that the stroemkrets By means of the generator 392 sparrelaiserna 380 vanligtvis AER sluten. Fig. XI, XII, XIII och visa to a device, which is to be hindra from the taget nedhaengande krokroar kaettingar eller eller att fastna i rubba I sparkon-tatt. staisparkontaktea 506, torn AER f T ~ shaped, cross-section, is attached to the vid I traekloss 505, som upphaeres af sadlar 504. sadlarna? o4 fasthalla traeklossen 505 Saekert dess plats pa med tillhjaelp af provide a suitable Hult 507, Denna och eller tmlts mutter hufvud 508 dessutom hufvudena och pa de traeskruvfi.r below 509, som fasthalla sadlarna at the Sleeper 519> skyddas against nedhaengafdcde kaettmgar eller af kopplingskrokroar laempliga afsneddade Flan-Aro series * eller sluttande plusa 511 in a corresponding sadel 504 (rings is a perspective-viskt. prepared at in Fig. XIII), oefver hvilka flanges eller sluttande I do not plan nedhaengande kaetting eller kopplingskrok laett national glida. Till yttermara Skydd f is number hildade foerdjupningen flanges, As is Fig. XIII shows, Takt af en jaernplat 864, hvilken "boejts weather, dess att oefre sida med stream is evenly divided, extends flaensarnas edges. Sparkontakten 5 degrees 6 hvilat pa laempliga, isolerande underlit and splattor 513 OAPI is secured at the traeklossen med traeskruvfar, hvilas hufvud 512 skyddas med laempliga jaerntaackplattor 514, som fastskruvfas at the traeklossen skruvfar 516 och med Aro afsneddade at the aendorna, see Fig. och XI, XII. Meningen is characterized by that under the Hult Science skruvmutter Science hufvud, i KIXIi hvilka nedhaengande kaettingar Science kopplingskrokroar annars kunna fastna, skola skyddas As is fig. XI, XII, XIII, Science quiz. andan f med sparkontakten 506 skyddas provide a suitable naesa 517 f in Fig. XII VISAD form, hvilken naesa hvilat pa pa tvaenne hvarandra foeljande ned - sleepers 518 och 519 - 517 Saesans andflaens 520 hringas * i och med jaemnhoejd haelt be somewhat sleepers 513 oefre sida. I nedhaengande kopplingskrokroar kaetting may then Icke komma in hero-ring stalkontakten 506 med eller remain subjected to fastna at the hufvudena till the TRA-513 skruvvarna eller hultarna 508 Science 509 Fig. XIV shows an apparatus, med hvars tillhjaelp man national hindra ett tag att passed a sparvaexel, savida Denna Icke being completely hallet och om-st aelldt i riktigt position, and fasthalles Hari pa tillboerligt manner. Ett tag stoeter under efteraerden (som pa figure, antydd med Ordet "till the hook" oo och en pil) »foerraen det reaches a exchange, can mot spaerkontakten 521, which suitably utgoeres af en stoppkontakt, hvilket below were it is assumed the Vice Fallet, ehuru der aeften national I do not spare varningskontakt. Sparvaexeln national instaeas an Tingen pa hufvudlinien I eller pa sidolinien T, och om it is totally och hallet omstaelldt samt fasthalles Saekert in this position, I gar stroem * from the generator 303, fig-IV, Genome apparaterna pa of Lokomotiv, kontaktskon 14, sparkontakten 521, the line 522 och om hufvudlinien AER klar, As is antydt, Genome de isolerade kontrollapparateriia 523 och 524 eller om »Idol t is klar, geaom d * i * ol * rade kontrollapparaterna 525< I 526 till the line 527, 528 Kontaktter (f hvilka the ena is carried by af, "I AER isolerad from the rigeln 529, hvilka kontakter Sta i ned communicates hvar-second, owned by rigela 529 being completely utskjuten), the line 530, the polariserade relaiseifs liadningar 531, the line 542, de isolerade Kontakter 533 Science 53V, the line 543, skenorna and forth till the generator 3 <3 pa lo-komotivet genome science dettas hjul maskinstaelning. said relai * ankare 532 star usually of i sitt mellanlaege, * om the figure shows, oeh when, inta-ger this position, ar communicates between the sluten de isolerade kontakter 533 and 53 * iaa ankaret flytta 532 * till the ena eller andra sidan, d is brought into * isolerade kontakter 536 och 537 »med hvilka generator * 535, are connected to the poles of the aro, -1 beroering ned fjaederkontakter respectively, in either an 50 and 51 eller 538 science 539 science» amtidigt flytta # i'm af de isolerade kontakter science 533. 53 - »hvrvid communicates between dem afbrytes. rikt-groningen af the stroem, som gar genome llnningarna 531 »da taget, is once again under-farden stoeter against sparkontakten 521, ar sadan, att ankaret 532 flyttas at hoeger och thus was brought, de isolerade kontakter 536 och 537 i be-roering ined r * »pektiv * fjaederkontakter 50 and 51, the generator hvarcid» 535 negativa pol forbindes med och de kontakten 50 * s positiva anti med kontakten 51 »och communicates between the kontakter 533 och 534 - afbrytes. Generator 3 »3 pa och LokoMotiv the generator 535 at the " paret Aro nu de koppla 1 series and the «trommen gar By means of the" troemkret, "aom is formed af genera-torn 303 * fig. IV. apparaterna pa of Lokomotiv, kontaktskon l4, sparkon takten-521, the line 522, kontrollapparat erna 523 och 524 eller 525 och 526, the conduit 527 »rigelkontakterna 528, the line 530, the polariserade relaisens lndningar 531, 542 the line 52, the contact 54 degrees, the contact 536, the generator 535, the contact 537 »Kontakten 54i, the line 544, the line 53 * skenorna samt of Lokomotiv» hjul Science maskin * taellning. D * n resulteran-de for example the current AER just sufficient accuracy * att Draga Ankaret 318, fig. IV, beroering till och med Kontakter 320 321, so that the de varnande Science stoppande verkingarna tillbakahalla »and the signal" banan klar "angifves. Bush Denna »trom gar likvaei ej genoii llnningarna 531, ty, da severe-ret 532 roert signal at HOEGER, ahuritas industry lndningar 531 af the line 546, the resistor 57> Kontakter 548 (f hvilka the ena is carried by af, men AER isolerad from the Ankaret 532) and the conduit 549 taget may then undersoeka, i hvilket tillstand sparvaexeln befinner itself and, ow ratio Icke helt och hallet been pushed oefver the locked riktigt MXZR eller eller is about one millimeter noedvaendigt The connection brutist eller Ankaret 532 icke »star riktigt, afbrytes the current through sparkontakten 521 vid I did not af kontrollap-parateraa eller at the rigelkontakt erna, Science taget stannas at the stoppkon-takten 521 DAA LokoMotiv koer fram, vaendes communicates between the generator 33 and a control * ktskon 14 and, da taget star i beroering med sparkontakten 521, gar'e. " stroem By means of the polariserade relaisens 531 lindni and gar, hvarvld Ankaret flyttas till och vaenster Thus was Sluter communicates between the Group Takter 536 och 537 samt respective fjaederkontakter 533 och 539 och sam-tidigt afbryter Kontakter communicates between 533 and 53 535 ar * Generator da son norr inkopplad i stroemkretsen, men omvaend in a direction I did not just sufficient och stark stroem gar Genome lokomotivets apparater, hvarvid Ankaret 313 till the drag ** och de varnande Science stoppande verkingarna till-bakahallas. llnningarna 531 shuntas in this **case** the stroemkrets af, af som are formed by the line of 550, 560 resistor, Kontakter 561 (f hvilka the ena is carried by af, men AER isolerad from the Ankaret 532) and the conduit 562 DAA ett tag under fard forwards (antdyt med Ordet "fram" och en pil) stoeter against sparkontakten 564, which suitably utgoeres af en stoppkontakt, the land reserve, are connected to ledningarna As is the figure utvisar. Communicates between the sparkontakten Science rigeln avaegabringas therefore it can tillhjaelp af med de isolera-de ISAEXaetl kontrollapparaterna 566 och 567 och 527 Stroemmen the line gar da till the line 527 och Genou the residue af stroemkretsen As is 34X21 ofvan beskrifvits, Science taget varnas eller stannas at the sparkontakten 564, owned by the exchange such Icke AER instaelld pa hufvudlinien eller om communicates between the rigelkoitaktarna 523 AER sluten eller icke about one millimeter af de noediga XSSEIAEMIAEH foerbindningarna AER afbruten eller Ankaret 532 befinner sig i oriktigt Lage. PA ett similar way undersoeker tag under fard forwards pa sidolinien T in the direction towards sparvaexeln om Denna AER raett instaelld Science, da taget Sto-ter against sparkoaktakten 569 (hvilken suitably is not stoppkontakt) gar I stroem By means of the line 570, 571 kontrollapparaterna Science 572, the conduit 527 and through the residue af stroemkretsen 30m ofvan beskrifvits. Om grooves, the exchange such Icke AER raett instaelld pa sidolinien, owner communicates between the rigel-kontakterma 523 Icke AER sluten eller om noediga foerbindningar Aro afbrut as pa ett eller eller be finally give staele om Ankaret 532 AER staelldt oraett, stannas taget at the sparkontakten 569; allt om aaeremot is in the ordning, gar taget klart oefver sparkontakten 569 - Sparkontakterna 521, 564 och. 569 kujuna, o »Weather bandwidths are desired, be provided with« a red dem Foerbundet of asset »gssparkontakt, so that the ett tag national varnas, foerraen det stannas, AAR am vore nagonting 1 vaegen at the sparvaexeln. Sparkontakterna 521, 564 och 569 Bora below anbringas sa on highly from the sparyaexeln, in that a tag, efter att hafva Stott I do not af-sparkon said Takter, national stannas foerraen reaches a det exchange such. LAA into the groove stall passeras af tag endast in a direction, AR att det oneodigt anvaenda relais at the spaervaexeln, d * Since a one Elektriska foerbindelserna as the utfoeras Thus was in that a stroemkrets I slutas Genome generator, such as e.g. 535, da ett tag, som in more detail signal spaervaexeln, stoeter mot en sparkon-stroke, hvilken stroemkrets slutas endast, owned by the exchange such is in the ordning. Fig. XV, XVI och visa anordningar, som ett skola hindra tag att passe-ra ea banatraeckta, e.g. I kurva, directed velocity of larger AER lofligt. Ett tag stoeter t ex. Under efteraerden in the direction towards JtOXIIX I kurva P (antdyt pa fig. XV med Ordet "Tillbaka" och en pil) against I dub bel »parkontakt 602, 603 foerraen reaches a det said kurva och om taget koer directed velocity of larger, An Hvad aom i P Kurva national tillatas, varnas Science stannas taget at said

sparkontakt, As is below Skall foerklarar. I. an slutning till hufvudkontakt Skon 14, which is shown in Fig a. ooh I to IV »finnes pa of Lokomotiv, fig. XVI, ett sidwards movable kontaktorgan 60l, which can be of the pin vrida signal Kring 604 och som svaenges ut sidwards, the figure som utvi series, nar det mot stoeter I sparkontakt. I dubbel sparkontakt består, It is shown in Fig. Science XV, XVI, visa, utom af en vanlig toppkontakt 603, »om tjaenar till att upplyfta kontaktskon 14, hvarvid Rigler 93 och 99 blifva fria (hvilket astadkommer I varnande Science stannande Effect, ifall ej I tillbakahallande stroem gar By means of electron tromagneterna 52 and 53), af, I sidokontakt 602, som AER af sadan form, in that it gradvis national flytta kontaktorganet 60l ett Visst, bestaemt stycke D ut sidwards. Styckets D Storlek beror pa den stoersta speed, for hvar-med taget utan fara national passera Kurva P. LAA t ex. med ett de in Fig. XVI illustrated apparaterna foersed tag stoeter against sparkkontakten 602, 603, fig XV, evaenges kontaktorganet 60I ut sidwards, It is shown in Fig. Utvisar XVI, the weather. att det Slutet communicates mea I kontakt, som e AER maerkt, owner of eeil maximal hastigheten i Kurva P ar e i kilometer converter. Cards taget finnes I'll give one millimeter speedometer eller A suitable hastighets-Matare, hvars visare 618 national sluta communicates with the laempliga kontakter, HTAR som foer sig mot en hafva a definite farhastighet information corresponding to the length of the Science under the ARO, are connected to conductive mad «H af de kontakter, mad-hvilka contactor Ganet 60i national bark 1 beroering. Speedometers visare 613 atar icke i communicates m «d kontakt about one millimeter, da the star pa och 0, 1 below said pipe afsigt, ej haller, da dan an Aager speed, for som ligger under foerut I'm determind minimal farhastighet - J3a Denna directed velocity nalf, kommer visaren is connected with below pa speedome-ter and s, frsae and ida syUliga kontakter. LAA visaren t ex. angar 3 degrees kilometer Timmen i, the i star communicates mad over the kontakter, som do not correspond with re Stor-directed velocity in the top 30 kilometer Timmen * man Icke med de kontakter, som correspond with smaller hastigheter. LAA visaren anger a speed af-tsr kilometers So i timman, the har pa a similar way afbrutit communicates with the below de speedometerkontakter, aom Svara mot. an smaller directed velocity SETUP 30 kilometer i Timmen, men star other hand, if is connected with under the de kontakter, som sva-ra against a larger hastigheter 0.3.v. LAA stoeter mot ett tag I dubbelsparkkontakt 602.603, som flyttar Group taktorganet 60l att stycke D sidwards, hvilket, It is shown in Fig. XVI utvisar, corresponds to a 1 kilometer Timman, Science da speedomsterns visare is simultaneously an-ger a speed, som ej is greater than the e kilometer i timmea och ej Haeller smaller than ofvan said Minimal farhastighet, gar an stroem from the an-gane Rator 6lo, Fig. XVI. By means of an electromagnetic lindniigarna till 611, mot-staande 612, the line 613, ARMAA 611 * - till I omkastnIngastroemvaendare, som kontrolleras af lokomotivets omkastningsmskanism, ladingen 615, Ar-Men 616 till an fctroemvaendare (30m vaendes om hvar gang the Lokomotiv Modifies faerdriktning pa en vaendskifva, triangle, Slinga or the like) ladingen 611, speedometerarms visare 6LS, speedometerkontakten 619, the line 620, the contact e (med hvilken kontaktorganets 60I oefre remain subjected to st5.rib * Roering), kontaktorganet 60I, sidokontakten 602, the line 621, fig. XV, lindningar during an polariserad tenant till 622, the line 623, de isolerade kontakter as 624 och 625 och 626 By means of the line till Skanoer, hvarifran dan is once again vaejaler till the generator * 610 Genome Science lokomotivets hjul masiinataellning, the line 62S, stroembrytarearnen 629, omkastningsstroembrytarearn 630 and the conduit 631 * Denna stroemkrets slutes endast, owner speedometersvisaren 31 618 icke «l angifvrs smaller speed, for minimifastighet than said al-ler mara an? 181 kilometer i Timmen, hvilket AER dan stoersta farhaaetig-het, hvarmed taget utan fara national passera sparkkontakten In front of 602.603 Kurva P dat i att AS sidokontakten 602 vaendt kontaktorganet 60I so that this kommer i communicates the mad kontakt e, som corresponds to the maximal farhastighetea • i Timmen kilometer. Om Denna itroemkrete Icke slute, ". Puts the kontaktskon 14, som Frigor riglarna 98 och 99, da dsn upplyftes af aparkkontakten 603, de varnande Science atopande verkningarna 1 gang. The stroem, som till I do the top Top gar By means of the electro-611, is non-raeckligt stark till att Draga Ankaret 632 against the upp foer att Kontakten 633 pa ratio »aett tillbaxahalla de varnande Science stoppande verkningarna. The po-lariserade reiaisens 622 Ankare 63 star usually of i «tt midtlaege, As is visadt, Science, da detsamma befinner signal 1 this position, AR communicates slu as between de tva isolerad« Kontakter 624 och 625 Stroemmens direction of Genome polariserade reiaisens 622 lindningar AR, DAE ett tag is once again under-passes Farden oefver sparkkontakten 602.603, «Adah, att Ankaret flyttas at HOEGER och thus been brought, SIA isolerade kontakt 635 (* om is connected to the genrator 637 negativa pol) and sin isolerade kontakt 636 (which is connected to med the generator 637 POSITIVA pol) * med i communicates the respective fjaederkontakter 63g Science 639, hvarvid communicates between the Kontakter 624 och 625 afbrytes. Thus was the generator 637 Inskjutes i stroemkretsen in the med-rie * 610 generator and a current gar nu Genome I stroemkrets, som be af-star Generator 610 pa of Lokomotiv, fig. XVI. apparaterna pa lokomo-Tivet, kontaktorga.net 601, the contact 602, the line 621, the polariserade reiaisens lindningar 622, the line 623, sideledningen 640, the contact 633, the contact 635; the generator 637, the line 64i, koaktaken 636, the Group taktan 639, ledniagen 642, the line 626, skenorna AMT lokomotivets hjul Science maskinstaelning. The r-sulterande for example the current AER sa stark, in that the electro. 611 drager sitt Ankar * 632 against the tyagdkraften Science »ot in-Verkan af provide a suitable a spring 644 beroering till och med Kontakten 633 I tillbakahallande stroem gar da from a generator 645 pa lokal By means of the Lokomotiv I klocka 646, aom Thus was gifver signal in that the felt AER klar, Ankaret O32, the contact 633, the line 647, elektromagneternas 52 and 53 lind-niia, aom, aa de uppmagnetiseras, tillbakahalla de varnande och stop a pandemic verkningarna. -, Fitting the stroem, som «. Ar Genome elektromagnetens 611 lindningar, passe-rar likvael ej dea oalariserade reiaisens 622 lindningar, 5S Since a one industry, pa grund af att Ankaret 634 roert signal at HOEGER ijaiiixix gray shuntats af the line 63, the resistor 649, the line 650. the isolerade Kontakten 651 which is carried by af ardcaret 634, k ont aleten 652 and the conduit 653 taget obtains Thus was fri passage oefver the dubbla sparkkontakten 602.603, savida deas E * rh * stighet, som angifves af speedometer, "Icke oeverskrider * i timmea kilometer. Da hastighetsn hos «tt tag, som with» nar speeds into head lmet vis' boer in-skraenkas af sparkkontakten 602, 603, AR Denna gjord weather, in that it flyttar Kontaktorganet 60l pa ett tag, som far in a direction away from Kurva P oefver i ett lig «i hvilket det'samea kommer i beroering by means of a contact af-terna 655 - DAA taiwts faerdriktning AER omvaend, astadkommer flyttningen af omkastningsstroembrytaren the second stroembrytaren eller att, da taget star i foerMndslse med contacts 602.603, a negative current £ ar fraa generating raton 610 By means of the line 617, the line 657 (i det att speedometers visare och nu kontakter Aro outside your stroemkretsen), contact 655 »med hvilken Group * 'ktorganet star i communicates 60I, 60I kontaktorganet, the edge pa sidokontakten 602, som AER Vand away from, ledningsn 621, the line 621 (kontakten 602 sides Aro conductive example, are connected along the whole hvarandra the circumference), the polariserade reiaisens lindningar 622, the conduit 623 »de isolerade Kontakter 624 och 625, the conduit 626 back and forth till the gene - ratorn 6lo Genome Science lokomotiivets hjul mask instaelning, the line 613, the resistor 612 och 611 elektromagnetens lindningar. DA stroemmens direction of Genome polariserad * reiaisens 622 lindningar nu AER omvaend, flyttas an karet 634 oefver vaenster till och "Thus was brought, Sina kontakter 635 och 636 i communicates m«d respectively fjaederkontakter 660 och 661, hvarvid communicates between the Kontakter 624 och 625 afbrytes. The generator 637 in-Skjut es Thus was I stroemkretsen Genome Science Kontakter 606 66i, i det att dess negativa pol By means of the conduit 626 is connected to the nu of the generator 6lo POSITIVA pol pa och LokoMotiv desa POSITIVA pol having the same genera-tors feel negativa pol By means of the line 621 Generatorerna 610 och 637 ARO Thus was kopplad »in series and not just sufficient stark Stroe» gar By means of electron tromagnetens 611 lindningar, so that the handler pulls Denna Ankare 632 upp mot kantakten 633, hvarvid the tillbakahallande for example the current de varnande och pa stoppande verkningarna taget slutes, hvarvid med tillhjaelp af klockan 646 gifves signal att "banan AER klar. Tip the stroem, som gar Genome elektromagnetens 611 lindningar, passe-rar ioke the polariserade reiaisens 622 lindningar, Since a one industry on the a £ 2K grund af att Ankaret 63 flyttats oefver till vaenster shuntats af en stroemkrets, som is formed af resistors 662, the isolerad (R) Contacts pa Ankaret 663 63 * 664 Science Kontakten »Det torde framga, in that vid of traeeffad» anordn-lagen, aeenligen att spee-dometervisaren 618 Icke kommer i communicates msd «n enda af-spedoreter Kontakter foerraen the anger I speed, for EOM is greater than the en viss, foerut b * staemd minimal farhaetighet, "am ka» Deputy saeker om att taget stannas, o (R) speedometervisarsn at the fard oefver snarkontakten 602, 603 Icke Installer sig och efter tagets directed velocity till roeljd daeraf ick 'anger a speed, which is greater than said Minimal f arhastighet. Denna haatig-h * t saettas sa lagt, »om med taken consideration till speedometers kaenslighet och den laegsta foerut antagna maximal farhastigheten pa jaernvaegslinien kraefvea. Det-AR Dar, for noedvaendigt, att sparkontakter, As is 602.603 anbringas pa at points, soa af taget skola passeras at a speed, som icke is smaller than the minimalhastignete said, "Since a one annars vore det att omoejligt upp en-lion sadan directed velocity. DAA ett Lokomotiv, som AER utrustadt med den in Fig. XVI illustrated telephone set till begraensande af farhastigheten, koer in pa grooves, each provided with d * appa-V ", the rater, as shown in Figs. II, III, VIII, IX, X, XIV, XVII, eller, boer hvar och en af de i industry figurer illustrated grooves k ont Active erna ersaettas af en dubbelkontakt består m dels f I toppkontakt i likhet med 603, som tjaenar till att upplyfta kontaktskon H, Science dels f I sidokontakt i likhet med 602, fig. XV, dock with the difference, att, independent of the direction af i hvilken taget far, kontakt.orga.net 60I Thus was vrides, att det kommer med i beroering not af Kontakter 655 DAA ett Lokomotiv Modifies faerdriktning pa en vaendskifva, triangle, Slinga or the like, begagnar man ej omkastningsmekanisuien. Dar-det aer foer att afsigt noedvaendigt i ett saekerstaella riktigt Samarbete between the grooves, apparaterna, om att Vanda communicates between the generator of Lokomotiv pa och ISiEiIXJCiS kontaktskon, hvilket achieved with tillhjaelp af den eller de ofvannamnda second omskiftarena Fig.. XVII shows an apparatus, som att tvingar lokomotivfoeraren omstaella omskiftaren eller omskiftarena foerraen loko-Motivet koer in pa en Slinga. Apparater f liknande construct an kunna can be turned communicates with the I vaendskifva, triangle or the like. In front of infarten till the loop Aro pa groove anbragta stoppkontakter 700 och 70I, af hvilka the senare befinner signal tatt at the infartsstaellet. At the in Fig. I prepared at the XVII and K the embodiment, som foeraendrar fard-direction away from aterfaerd till fard forwards, AR sparkkontakten Yeah connected with the hufvudliniens nearest the sparkontakter 1 and 2 (fig. II eller III). Ett Lokomotiv kosuner under aterfaerden (som pa med antydd the figure, or "control tillbaka" och en pil) is connected with sparkkontakten 700 med ain IS kontaktsko 14, Genome hvilken I stroem I * t j. 1 IL 3pai apnarif * l> £ rma S 01S1 t * (R) *** nom loicnsfiotivapparaterna Aro, are connected to the generator MSA pa of Lokomotiv POSITIVA pol. Har sparkontakten 700 passerats, boer lokomotivfoeraren, in-nan sparkontakten 70I Naaa, omstaella omskiftaren «lier omskiftarena, SA that said kontaktsko rorbimd» 3 med pa of the generator of Lokomotiv siagativa pol. Om lokomotivfoeraren forstagit said omstaellning, da the Lokomotiv stoeter against sparkkontakt I 70l, kopplas Generator 703 pa groove 1 series with the generator pa of Lokomotiv, i det att dess POSITIVA pol forbindes med spa rkontafcten 70l By means of conduit * 7 degrees och dess negativa pol »ed skenor as Genome regleringsmotstanden 705 and the conduit 706 Strommen, som gar Genome apparaterna pa of Lokomotiv, AR da just sufficient stark att-tillbalca keep the level of da varnande och pa stop panda verkningarna ratio, Science of Lokomotiv national saluada Tritt fara rundt in the loop. LAA LokoMotiv leaves the loop is och kommer is once again communicates with the groove 701 contacts, sammankopplas the generator of Lokomotiv pa och GI and IKIX genera,, torn at the groove 703 is once again in series, ocn the Lokomotiv therefore it can obtains the Europe-fri ge, hvilket aefven are achieved, When, stoeter against sparkkontakten 700 Cm lokomo-tivfoeraren emealertid gloemt att Foeretagen omstaellningen foerraen sparkontak as 70l AAAS, the generator Arbetare pa of Lokomotiv, da ratio

stoeter against the grooves make contact parents for the generator 703 pa groove, Genome Science Strome Lokomotiv apparaterna will be relatively Ikke just sufficient stark att tillbakahalla de Varna-de stoppande verkningarna och, och till foeljd Haraf stannas taget at said sparkontakt. I fall (R) of the Slinga or the like were used till att aendra faerdriktningten foer ett Lokomotiv from the forwards till tillbaka, national begagna I liknande an arrangement, which can be of tvinga lokomotivfoeraren att Foeretagen noediga omstaell-ningar 1 det att sparkontaktten foo in this case the forblades hufvudlii the f-med nearest the sparkontakter 3 and 4, Fig. 11 eller III, hvilkas till med ett-aid of tag under fard forwards undersoeker det In front of the radial projection sparets tillstand, hvarvid the generator 703 foerbindelser »ed sparkontakten 701 och med skenorna can be turned om. Ett hufvuddrag att the hvarje af de ofvaa said the embodiments for tagapparater is characterized by that de sa are arranged, in that a tag blir i »tand att i sam-Verkan by means of a sparkontakt sluta I stromkrets, hvarvid uppstar I bakahallande till-strom af tillraecklig styrka, foeraen stangens stoppande edge of 102 glider "from the Oort regel» 98 Innan stangens lo2 och andra stoppande edge glider away from, rigeln 99, ty annars varnas Science is stopped taget in-nan det undersoekt Jaernvaegsspar. Hvarest sparkontakterna Bade upplyfta the rod 102 ooh Earn points for som conductor for example the current into the electric, hvilket AER Fallet VLD under ufoeringaformer, utom de vid in Fig. ooii XV, XVI VISAD «, ratio is achieved for Genome I £ S Forsa sparkontakterna med att just sufficient langa ramper for aendorna med hvilkas tillhjaelp upplyftningen af the rod lo2 aeger rum, Science By means of AJ £ att anvanda sparapparater af a corresponding A suitable kaenslighet. Om man oenskar begagna the invention, one komisi hat lon med elektriskt drlf as tag, kam ratio scenario by connecting the anvanda skenorna i saekerhetsapparatsen tjaenst on in the same AATT, som ofvan "beskrifvits, whereas the drlf into the electric-tillfoeres the force taget pa" bekant manner, hvarvid de som skenor bilda ena the side af the groove, begagnas som to a common tillbakaledning for drifkraft as och foer den till saekerhetsapparaten anlaenda for example the current, whereas the scenario de-nor, som "bilda the second side af sparst, delas in from the hvarandra isolera-" de of skenlaengder tillhjaelp f med isolerande foerbindingar, As is ofvan "beskrifvits. I staeltet for * n Gemensam tillbakaledning for drifkraften och foer saekerhetsapparatsen stroa national man "begagna I saerskilda till the hook line for drifkraften. Den pa taget to compression-like part af stromkretsen for drifkraftens strom be arranged | £ hvarje fall weather, in that it afbrytes f ett eller you enter the movable organ, As is t ex. rigela 99, hvarvid taget stannas. Det torde framga in that the de f med tillhjaelp in Fig. n, IIL, ix and X visa-de anordningarna och med tillhjaelp af den a modified ufoeringaformen i fig. VIII, det aer moejligt foer ett tag att under infarten pa en bloc on-vall difference, which can be very much LANGRE SETUP Hvad which as previously is found to aendama, according to, undersoeka blockintervallens saekerhet med tillhjaelp af en enkel sparkontakt pa grund af kortslutning i do not prarrelai, " i fall into the groove, made in af rullande materiel. Ratio ernas Genome anvandande af-underaf delningar, som hvarje Aro provided with egen sparrelais, and through wide-gabringandet af en sadan an arrangement in that the kortslutning i do not sparrelais astadkommer in that a stroom Sandes Genome apparaterna pa ett tag, som star is connected with sparjontakten at the head are af blockintervallen. At konstruktionsformer through med f Undantaget de modofiaaee, som antytts med prickade linier in Fig. VIII and X, resulterar kortslutningen 1 alstrandt af en Ikke just sufficient stark strom Science at said modifikationer i-ute blifvandet af en viss strom. patentansprak. 1 lagsaekerhetsapparater, circuit consisting af apparater pa och taget appara-ter pa groove, med hvilkas tillhjaelp tag autociatlakt och pa vaeg kunna Skydda an electric signal sjaelfva, characterized daeraf, in that a tag varnas eller eller stannas, varnas Science daerpa stannas eller varnas Science stannas samti-digt, »eller af that said tagsaekerhetsapparat controls the brakes are och I fara puts the fall af dem one function, hvilket allt ufoeres automat i slet Naer haelst I direkt In front of tagst "belaegen" bloc tint ervall af en banan Includes rubbad eller brusten skena, eller pa Denna over a distance befinner SII «tt an nat tag eller I rullande material hvilket slag som haelst, eller daer'finnas' sparvaexlar, som icke kunna befaras af taget, eller tagets directed velocity AER for stor for Vissa straeckor af banan, hvarvid tagsaekarhets - telephone set funktionerar trots oriktiga manoevrar eller Brister vld ett par af said device. 2 Tagsaekerhetsapparat af 1 1 ansprak angifvet slag, at the hvilken I varnande eller stoppande an arrangement verkar, Naer haelst pa ett organ taget be affected to af en sparkontakt pa sa manner, in that it naeamda varnande eller stoppande the apparatus, »om i normala fall halles tillbaka, frigoeres, Make-vida. ratio Ikke hindras Genome uppkomsten af I just sufficient stark strom By means of an apparatus pa en kontrollerande taget, daeraf characterized in that the deft varnande eller pa stoppande verksamheten taget halles tillbaka, da ratio kommer 1 communicates with the I sparkontakt 1 or 2, med tillhjaelp af en Genome taget gaende strom af tillraecklig styrka, hvilken strom kontrolle-ras af en som en proefvoelektromagnet verkannde an arrangement 1210.2 lo 380 eller pa groove, Science hvars stromkrets slutes Genome generator en eller 32.212 377 into the groove at the af taget, da ratio star is connected with sparkon-takten, hvarvid kortslutning af said apparatus in 1210, 210 380 eller, astadkomies af en som pa groove jaernvaegssvagn to compression or the like, hindrar uppkomsten af said just sufficient Starka strom (fig. II, III, VIII, IX and X). 3 - Tagsaekerhetsapparat af 1 2 ansprak angifvet slag, characterized by Dar-af, att taget, When, konmer 1 is connected with sparkontakten 1 or 2, till I Top index generates a strom, som icke AER just sufficient stark att till-bakahalla I varnande eller stoppand * Verkan Science hvilken gar By means of the apparatur kontrollerande taget pa en och Genome sparrelais (25.26 eller 223 371 eller 393)> hvarpa the current through the kontrollerande kept in constant contact Groningen is increased, owner of blockintervall (B, C, D, E, E eller eller B.CJE. ff X), till hvilken sparrelaisen hoer, icke, made in, till noedig styrka medverkan af * under the som en-proefvo electromagnetic verkannde the apparatus 1210, 210 330 eller pa groove, owned by Denna other hand, if the cassettes an arrangement Ikke blif-vit uppmagnetiserad pa grund af in that it short-circuited blifvit till foeljd af in that a Jaernvaegssvagn or the like befinner lig eller pa groove till ett foeljd af brott I ledningarna, foerblir dea aaesmda for example the current nere at its Originating-otillraeckliga styrka. 4 Tagsaekerhetsapparat af i ansprak 1-3 angifvet slag, Hvid I hvilken varnaaie eller stoppande an arrangement verkar, Naer haelst pa ett organ taget be affected to af en sparkontakt pa sa manner, that said varnande eller raenordaia, chords normalt hall (R) »tillbaka. frigoeres, savida ratio Ikke hiadras gaom uppkomsten af en af kontrollerande strom tillraecklig controls the Genome-ka I do not kontrollerajade aardning pa taget, daeraf characterized in that the taget, da det kommer communicates with the I aparkontakt 1 or 2 • In front of a blockintervall, generates a current in the eu en viss riktniag By means of polarization SERAD sparrelais LO eller 216, hvilket astadkommer, in that it de-Controllers strommens styrka beror daerpa om pa blockintervallen "I do not jaernvaegssvagn befinner signal or the like, som foerorsakar kortslutning ho» «a-stroom kontrollanordning 1210 eller 210, hvarvid taget, When, under fard-i mot satt direction kommer 1 communicates with the I f sparkontakter said, sedan det laemnat blockintervallen, generates a current in the direction opposite to the Genome polariserad »sparrelaisen, hvarvid the kontrollerande stroommea uppnar the Riktig The strength independent of the af tillstand pa aaesmda blockintervall (fig. II, Science III). 5 »Tagsaekerhetsapparat af 1 ansprak angifvet slag, characterized in that the SA af, da taget far ia pa en blockintervall oefver sparkontakten I or 2, the polariserade sparrelaisens 16 eller 216 Ankare 17 or 217 Flyt-tas oefver i ett sadant Lage att I stroom gar Genome give sparrelais 25.26 ea «lter 223, hvarvid the kontrolleraade stroommens styrka blir bero-ende af om pa blockint ervallen befinner signal I j aernvae and svaga eller liquidity Nande, which can be of kortsluta the stroomkontrollerande the apparatus 1210 eller 210, hvarvid the polariserade sparrelaisens 16 eller 216 Ankare 17 or 217 afbryter the second reiaens 25.26 eller 223 stromkrets, da one at a time un-der fard in the opposite direction kommer is connected with said grooves do not af-kontakter, sedan det laemnat blockintervallen, hvilket afbrott astadkommer in that it koatrollerande for example the current uppnar raett styrka independent of the af-till staande on said blockintervall. 6 Tagsaekerhet sapparat af i ansprak 3 and k eller ansprak 3 and 5 of an gifvet »lag, daeraf characterized in that the taget, When, passes a sparkon-takt one direction towards the blockintervallen, generates a otillraecklig strom ge-nom the polariserade sparrelaisen 16 216 1 eller en viss direction, hvar-efter the current through the apparatus in kontrollerande pa taget tilltager i saframt styrka tills lea blir just sufficient starlc, "iaiii * the stroeikontrollerande som en slaelctromagnet verkannde anordningen 1210 210 eller pa groove blif-vit uppmagnetiserad, medan the otillraeckliga stroommen Originating in Europe, rar sparrelaisen 16 eller 216 i »ot satt direction, da taget under fard in the opposite direction leaves the blockintervallen oefver och samma sparkontakt the current through the apparatus in kontrollerande pa taget vaexer till foeljd Haraf TLU tillraecklig styrka oberoelid« af said som I verkannde electromagnetic anordningXAE pa into the groove. 7 Tagsaekerhetsapparat af i ansprak 3 «Her 6 angifvet slag, the action-Tecknade daeraf, att tillvaexen i stroomstyrkan be generated af med tillhjaelp sparrelaisens 25.26 eller eller 223 371, som tillkoppar is a generator 32, 212, 333 eller pa groove, hvilken daerpa Arbetare AEX in series with the genera-tor's 5,303, 370 eller 610. som afger the Originating, otillraeckliga for example the current (fig. I, II, III, IV, VHI Science XVI). g. Tagsaekerh «tsapparat af 1 ansprak 6 and 7 angifvet slag, kaenneteck-nad af att, for example the current from the obi of senare tillkopplade the generator 32 eller 212 gar in the opposite direction towards the Originating, for example the current otillraeckliga till foeljd felaktigheter f i de automatiskt verkannd * apparaterna, the resulterande for example the current Icke AR1 of their GDP to med att tillhjaelp af the kontroll, it is shown in the apparatus pa taget tillbakahalla dn varnande eller stoppande Effect, da taget star communicates with the I sparkontakt. 9 - lagsaekerhetsapparat af i ansprak 3 «Her 6 angifvet slag, kaenneteck ~ nad daeraf, 32 eller att spargenerator 212, som Tjan * r till att arbeta 1 kombination ned d« n generator 5 or 3 «3, som afger the Originating, for example the current otillraeckliga, simultaneously tjaenar till uppmagnetisering af d« n sobi I verkannde electromagnetic apparatus in 1210 210 eller pa into the groove. 10 Tagsaekerhetsapparat af i ansprak 3 or 6 and an ifvet slag, the action-Tecknade daeraf, att stroeffistyrkans tillvaext avaeagbringas Genou I foerbiae-delse del af af the resistor i stromkretsen for the Genome of the control apparatus in lerande pa taget gaende strom, som finnes at the groove, hvilken XAEKMIXIS foerminskning achieved with tillhjaelp af den som proervo, the electromagnetic-net verkannde anordalngen 380 (fig. IX and X). Tag 11 Saekerhetsapparat af i ansprak lo angifvet slag, characterized by Dar-af, att motstandets »insknlng aataukommes med tillhjaelp af the s <sm i proefvo-electromagnetic verkannde by means of the apparatus shunting af deo. f dal for the originating stromkretsen, for example the current otillraeckliga, som befinner signal at the groove (fig. ix, and x). 12 Tagsaekerhetsapparat af i ansprak 1 angifvet slag, via hvilken I varnande eller stoppande an arrangement verkar, Naer haelst pa ett organ taget be affected to af pa en sparkontakt sadan manner, that said varnande el-ler stoppande an arrangement, som nomalt halles till beaten, frigoeres, savida ratio fcke hindras g Enoa uppkomsten af en strom Genou I kontrollerande an arrangement pa taget, characterized daeraf, in that it varnande eller pa stoppande Verkan. taget tillbakahaelles af Stroeme »from a generator 392 pa SPAA-ret, da taget star communicates with the I sparkontakt, hvilken generator aefven tjaenar till att Genome I uteslutande at the spaeret belaeagen stroeKkrets uppmagnetisera som en-proefvo electromagnetic verkannde an arrangement 380, owner kortslutning med tillhjaelp I'm af pa groove jaernvaegssvagn to compression or the like hindrar genoaigangen af said, tillbakahallande strom, Fol-som jer I SIED proefvo-elektroBiagnetes parallelt inkopplad stromkrets (fig-X). 13 - Tagsaekerhetsapparat ar i ansprak 12 angifvt slag, daeraf characterized in that the stromkretsen By means of the generator. Science 392 at the groove proefvo electron-trosiagningen 3GO vanligtvis AER sluten (Fig. X). 11, lagsaekerhet »apparat af i ansprak 1-3 angifvet XXXgl slag, kaernie-Tecknade daraf, att, below de skenor 19, Sona utgoera blockintervaiiensi * ida Aro, are connected to conductive hvarandra from the dess remain subjected to till the second, de Bkenor," No »bilda blockintervallea» sida second, Aro ned tillhjaelp af insierade foerbindingar 95 afskilda i

laengder, arr hvar for signal Aro alltigenom conductive, so that the blockintervallen delas i underafceiningar, hvilka hvar och en hafva sin egen »troemkontrollerandt eller som en proefvo electro-magnets» verkanen an arrangement I2lo, 21o eller 3 SO. 15 Tagsaekerhetskapparat af i anspråk 14 angifvet slag, daeraf characterized in that the de skenor 19, »om ena utgoera of the side af the groove in a block-intervall, he says, are connected to conductive hvarandra from the dess remain subjected to till the second, whereas the de skenor, Soai utguera the second side into the groove af, af med tillhjaelp isolerande foerbindingar 95 Aro afskilda i straeckor, hvar for som »ig Aro alltjenom conductive AAA att dela blockintervallen» i un-derafdelningar, hvar och som en hafva sin egen stroemkontrollerande eller undersoekande an arrangement 121o, 21o eller 3 SO, hvarvid kortslutning hos den as an arrangement oed tillhjaelp af en jaernvaegsvagn or the like against pa »va-Rande underafdelning, da ett tag star communicates with the I sparkkontakt 1, 2, 3 or 4 naera blockintervallens Andor, inverkar pa the current through sparkkontakt Denna och pa apparaterna Thus was taget, att. ett varnand «eller stoppande Verkan manner» si once in the ratio, so that the taget »ad tillhjaelp af naaenda sparkkontakt blir i staande undersoeka tillstand pa att block intervallens samtliga underafdelningar. Kombination f tagapparater 16, som Earn points till in that cooperate with the groove-apparater, som i angifvits anspråk 3, 6, 7, 8, 9, lo, 11, 13, 12; I 4 or claim medparvaexelunder soekande apparater med hvilkas tillhjaelp Sandes, da taget] Co »mer is connected with *» sparkkontakt 521 eller 564 eller 569 sparvaexel * ar raett instaellid for taget, I stroem, som att AER otillraecklig tillbakahalla I varnande eller pa stoppande Verkan taget, Genome dan kontrolltrande the apparatus pa d * s and through I sparrelai * 531 »« i (R) u hvars tillhjaelp The strength af Strome kontrollerande By means of the apparatus is increased till taget pa det Varde som foer att AER noedvaendigt tillbakahalla the varnande Science stoppa.de Verkan (fig. - I, IV, Science XIV). 17 Kombination. f tagapparater, som Earn points till in that cooperate with the groove-apparater, som i angifvits anspråk 3, 6, 7, 8, 9, lo, 11, 12, 13, 1 »I Collier, Bied hastighetsDegraensand * apparater med hvilkas tillhjaelp Sandes da tag kommer ett i foerbindel »« by means of a sparkkontakt 602, 603 och ratio tag koer at a speed which is smaller aan den for Denna sparkkontakt 1 Forvaegen "relationships determined hastigheten, I stroem, som att AER otillraecklig tillbakahalla I varnande och pa stannande Verkan taget, By means of the kontrollerande kept in constant contact Groningen pa ratio Genome I sparrelais 622, med hvars tillhjaelp The strength af stroeiniien kontrollerande By means of the apparatus is increased till taget pa det Varde som foer att erfordras tillbakahalla the varnande eller stoppande blocking activity (fig. Science XV, XVI). 18 Tagsaekerhetskapparat af 1 anspråk 16 eller 17 an. gi fv you slag ', Kan-netecknad daeraf, att sparrelais 531 eller 622 AER polariserad, such that it, da be affected to the af en Stroe, "hvars direction corresponds taget * fard-direction, national tillkoppla I spargenerator pa engaged, in that Denna ar-Betar in series with the generator, som afger the Originating, otillraeck-ligt Starka for example the current (fig. XXV Science XV). 19 Tagsaekerhetskapparat f i anspråk 3, 6, 7 > 8, 9, lo, 11, 12, 13 '14 eller 15 angifvet kinds, daeraf characterized in that the generator of 5 »il 33 or claim 610, i.e.," afger the foe, for example the current otillraeckligt Starka, befinner Cards taget signal and in that the magnitude f the resistor in the vid into the groove to compression-like part af stroemkretsens for the foe, for example the current otillraeckligt Starka AER saian in that a kortslutning, som hindrar stroeimen from said generator sparapparaterna pa att passera raett. manner (dvs kortslutningen between the Toa att «to» I4 Science. lokomotivets maskinst aeilj and IAG), Icke foersorsakar att styrt * af naesmda the generator afgifna for example the current rises to a so-dant vard * att «a varnande eller» toppande Verta daerigenom tillbaka-halles. 20. iragsaeterhetskapparat af i anspråk 1-19 angifvet slag, characterized daeraf, att att spartomt erna for Bagge faerdriktingarna actuete ett enkelt pa'taget organ, so that the fall in hvarje be generated en eller varnande stoppande v »rkan pa taget, savida ea sadan Verkan Icke hindras By means of uppkomsten af I just sufficient stark Stroe »Genome sparkkontakten in a direction, som mot-svarar tagets faerdrikting. 21 Tagsaekerhetskapparat af 1 anspråk 1-2o angifvet slag, characterized daeraf, in that it kontrollerande anordningens pa taget Riktig Verkan ton trollers thereby that Denna is provided with, more than one, under inverkan af elektromagneter staende movable organ (43 and *), aom below Bora Sta i riktigt mutuall laege foer att tillata, att stroemkretsens for tiirbaka-hallande af the varnande eller stoppande Verkan slut.es (fig. I). 22 Tagsaekerhetskapparat af 1 anspråk 21 angifvet slag, characterized daeraf, in that the movable organens 43 and 44 herein pursuant to correspond with laeget af en om-vaexlingsanordning g,? Science 55, som flytta »med simultaneously oaekastningsme the mechanism by eller correspond with laeget give af ea omvaexlingsanordning 6, 7 and 56, 60, som begagaas, da the Lokomotiv indrar faerdrikting pa en vaendskifva triangle, Slinga or the like, eller, oh Bagge anordningarna be used simultaneously, deras correspond with relativa instaellning (Fig. I). 23 Tagsaekerhetskapparat af i anspråk 1 angifvet slag, at the hvilkea det Riktig Samarbete between sparapparaterna och pa apparaterna taget aeger rum endast da taget, i det att det Sarna tourner is connected with the sparkkontakt *, Sander «a Stroe» Genome sparkontaktea in a direction towards the faerdriktingen information corresponding genotype Science »ea omvaexlare,« om ir anbragt the Lokomotiv och pa det som goer moejligt foer att lokomotivfoeraren foeraendra direction of current daeraf characterized in that the fc. tVnw »i afsigt att tvinga lokomotivfoe-raren in that company if the noediga omvaexlingen foerraen the Lokomotiv far i mot-satt direction sedan det.sanana vaents pa en vaendskifva, triangle, Slinga or the like, (I do not anbragt s generator 7o3,, which with SIA ena pol AER for the generator, so that the groove 703 pa Icke blir satt is connected with de-or till I stoppande Verkan pa taget, da ratio kosas er is connected with bundfn by means of a sparkkontakt 7ol and has its second anti med sparets skenor, bakahallande apparaterna pa taget i afsigt att tillbakahalla ea varnande gparkontatten 7 degrees Ij »isridta, IOK- * 'omvaexlingen AER raett ufoerd aljLokomotiv-foeraren foerraen taget Maar Denna sparkkontakt 7 degrees I (fig-XVII). 24 lagsaekerhetskapparat f i anspråk 23 angifvet kinds, daeraf characterized in that the apparaterna Cards Earn points till the taget in that the »anrvsrka sparappara-med f i tsma anspråk 3, 6, 7, 8, 9, lo> 11, 12, 13 '14 '15 angifvet Her kinds, and in that the generator 7 degrees at the 3 sparatt till the tjaenar in that in series with arbeta "aen gferator, i.e. the foe * afger, for example the current otillraeckligt Starta hvillet endast takes place, owner omvaexlinien Cards taget foersiggatt pa raett AATT (flue. XVII). 25 Tagsaekerhetskapparat af i anspråk 1-24 angifvet slag, daeraf characterized in that the said device at the Finnaes anordniagar 3oa eller 30I 30 till och med 33 Liv # tillhjaelp a device 51, 331 »26 eller 646, som tan giIva signal pa tagst in that the ftanan AER Ilar, tan saettas i verksaehet, da the groove is once again blifvit passabelt, "eda's I varnande eller stoppande Verta igt rum pa taget under inverkan af» Warning is a »- or stoppspartontakt Science taget passed the said sparkkontakt (fig. III, IV Science). 26 Tagsaekerhet »apparat af i anspråk 1 angifvet» lag, at the hvilken I-Strand af en varnande eller pa ett stoppande effekt Inko »otiv Kontrol leras af-ett organ, som, independent of the af Huru LokoMotiv SETUP Vander tan flyttas SIED tillhjaelp af sparkontakter, characterized daeraf, via the att-samma Finnaes, one aim of the present att det moejliggoera for organ lo2, som till tjaenar _ / som icke Aro anbragta midt / pa att flyttas »ed tillhjaelp af * parkontakter7 ~ att" be affected to aisaiianS KISM Tvenne kontaktskor 14 and 35o, som kunna flytta said means lo2, och af hvilka the ena 14 konsser i conductive communicates »ed och roeres af-sparkoa Takter, da the Lokomotiv far the oefver, vandt pa ett Visst» aett, hvarvid the second 35o kojn and er i is connected with conductive Science roeres af aparkontakter da the Lokomotiv far oefver dem vaendt i Kotsatt direction (fig. VI). 27 Tagsaeterhetskapparat f i anspråk 1 angifvet kinds, at the hvilken I kontaktsto, da the tommer communicates with the I spartontatt, instjutes flyttas in an electric stroemkrets By means of this sparkkontakt Science thus been XAXIX the f-saijm, "hvarvid varnande en eller" toppande Verkan sitt »* i gang A turn-Tecknade daeraf, att kontaktskon i4 AER isolerad from the lokomotivets» footstep staellning and in that of the genomic »I att foerflytta ett organ, JX from the hvillet the aefven AER isolerad, the national Satta varnande eller stoppande Verkan *I gang. 20 Tagsaekerhetskapparat af i anspråk 27 angifvet slag, daeraf characterized in that the said means lo2 normalt tillbakahaller I varnande eller stoppande Verkan and in that detsamma national rubbas from the handler tillbakahallande laege By means of a motion af kontaktskon 14. 29 Tagsaekerhetskapparat af 1 anspråk 27 eller 28 angifvet slag, the action-Tecknade daeraf, att kontaktskon 14 is connected to the said means lo2 med tillhjaelp af «ae non-conductive, ledad communicates, so that the kontaktskon 14 drager organet lo2» ed sig om the skulle Falla eller af rubbas, hvarvid * I varnande eller pa atoppande Verkan alstas taget. 3o. Tagsaekerhetskapparat af * 1 an prak 1 angifvet slag, at the hvilken not be generated varnande eller pa stoppande Verkan taget, da ratio passes over a distance af into the groove at a speed, aom is greater than I for said over a distance foerut bestaemnd maximal farhastighet, characterized daeraf, in that it Maximal farhastigheten for en viss over a distance af det By means of the groove anges satt, pa hvilket That in the vid taget fastened kontaktorgan 6ol foerskjutes vid pa en af-Verkan sparkkontakt 602, 603 (fig. Science XV, XVI). 31 * Tagsaekerhet »apparat af i anspråk 3 degrees angifvet slag, characterized daeraf, in that it varnande eller stoppande Verkan tillbakahalles, da the speed, for hvarmed taget passes sparkkontakten, ej AER for stor, till foeljd af samverkan tre.llan kontaktorganet 6ol Science a device 618, hvars laege beror af tagets speed, for hvaremot the varnande eller pa stoppande Verta taget Satte * i gang da ratio sparkkontakten passes by means of a alltfoer stor speed, for till foeljd af att naaenaida iaKMAEIAE xsx £ 618 £ anordnings laege nu AER sadant in that the said device Icke national saaverka med kontaktorganet 6ol weather, that said Verkan tillbakahalies. 32 Tagsaekerhetskapparat af i anspråk 31 angifvet slag, characterized daeraf, att, om the apparatus 61S, hvar * laege beror af taget »speed, for Icke foeljer Denna och pa raett manner till foeljd deraf Icke flyttar signal from the handler nollaage till eller oefver det laeget, that is, »corresponds to a viss foerut ue-stueiend sJLIIEI miniaalhastighet, Satte * I varnande eller stoppande compared Ican i once in the taget, da d * s far oefver» parkontakter 6o2, 6oJ. 33 - Tagsaekerhet apparat af * i anspråk 31 eller 32 angifvet slag, Kan-netecknad daeraf, att tillbakahallaadet takes place by an electric pa vaeg och XIIIIX astadkoEne af * I stroem, »o» gar Genome I stroemkrets, hvilken slutes ge-nom saeverkan between kontaktorganet 60I och den apparat in 6i8, hvars laege beror af taget »directed velocity. 34 Tagsaekerhetskapparat af i anspråk 33 auangifvet slag, characterized daeraf, att det is in this anspråk said tillbakahallandet tjaenar till att ersaetta ett tillbsxshallaade, which are normally uppraetthalies med ett give af tillhjaelp kontaktorgan 14, which, da det kommer is connected with I mot-information corresponding sparkomtakt 603, af Denna roeres weather, att detsamjra foerlorare tillbakahallande broadcloth pa sin d »« varaade «Ilsr stoppaade the apparatus. 35 Tagsaekerhetskapparat AI 1 anspråk 34 angifvet slag, daeraf characterized in that the dat noaeala tillbakahallandet uppraetthalies pa icka an electric-vag. 36 Tagsaekerhetskapparat af i anspråk 3 or 35 angifvet slag, Kan-netecknad daeraf, in that it. jvillbakahallande stroemkretsens slutas af-kontakt organet 60I ut an samverkan »ed the apparatus in the XIX 618, hvars laege beror af tagets speed, for da taget national fara oefvar I sparkontakt» ed obegraen sad-directed velocity. 37 Tagsaekerhetskapparat af i anspråk 33> 31 * - »35 allar 36 angifvet slag, daeraf characterized in that the graph tillbakahallande atroeamen gar Genome I sparkkontakt 602, m # d hvilken taget star i conductive communicates. 38 Tagsaeksrhetskapparat af i anspråk 3 degrees i 31, 32, 33, 3 »35, 36, 37 allergens angifvet slag, kinnetackaad diraf, att," eda kontaktorganet 601 pa ett tag, som far i aa viss direction oefvar ea sparkontakt 602, 603, for Skjut-es till to the position, som corresponds to aa foerut bestid »axiaael farhast ig-het, ar ett tag, som far one direction opposite to oefvar the same sparkkontakt 602, 603 staad att fara i ned obegraensad speed, for utan att pa datsaima dar-roer I varnande eller stoppande Verkan anhydride was added in gang. 39 * lagsaekerhetskapparat af i anspråk 1-33 angifvet slag, daeraf characterized in that the hufvude »ellar muttrar eller pa Bultar» krufvar? o8 512 skyddas eller mot att rubbas eller af borttrivas from the taget nedhaengande Losa kopplingskrokak kaettingar eller pa med tillhjaelp af sadlar 5o4 anbragta afsneddada flinsar 511 ellar X »f ed tillhjaelp rampformade tickplattor 51 (Fig. II, XII, XIII, Science). 4o. Tagsaekarhettapparat af i anspråk 1-39 angifvet slag, slag kannsteck

daeraf in that the said device at the finnes anordningar 126, 345, soa hindra loko-motivfoeraren att Sitta taget reevaporated i gang sedan I stoppande Verkan igt rum, utan tillhjaelp I do not give af tag funktionaer, savida Icke blockinterval-len, iivars tillstand foerorsakade dsn stoppande Effect, is once again blifvit pas-SABEL och Thus was frlgifvit »Sanda anordningar pa elaktrisk vag (fig. IV), 4l. Tagsaekerhetsapparat af i ansprak 4o angifvet slag ellar af det slag, at the hvilket Finnaes anordningar, so »kunna hindra lokomotivfoeraren att atar Satta stoppaada the apparat« »i staellning, sedan stoppande an effekt AGT rum pa taget, utan tillhjaelp give af sn tjaensteman, the action - Tecknade daeraf, taget hindras att att fara oefvar I sparkontakt, downstream the dan stoppande telephone set 99 bragts i sitt normala Lage utan att * a varnande eller stoppande broadcloth be generated, savida Icke ninmda anordnlagar 126, 35 Aro aterfoerda till Sina nornala Ligen. 42 Tagsakerhet »apparat af i ansprak 1-41 angifvet slag, at the hvilken I Mea tryckfluidum verkande broms pa taget automatiskt sittes i network samhet, farligt 8AA det aer foer att taget RUNNING disclosure, diraf characterized in that the bromsens Automatisk igangsaettning Tillikka resulting in that bromine and scylindera 2 afskares from the kraftkallaa W (Fig. V).



International class (IPC 8-9): B61L3/08 (Advanced/Invention);
B61L3/00 (Core/Invention)
International class (IPC 1-7): B61L3/08
Family:

Publication number	Pub. date	Application number	App. date
FI6023 A	19150401		00000000

Inventor(s): (std): REGINALD ANGUS ARTHUR
Inventor(s): ANGUS ARTHUR REGINALD

Legal status (INPADOC)
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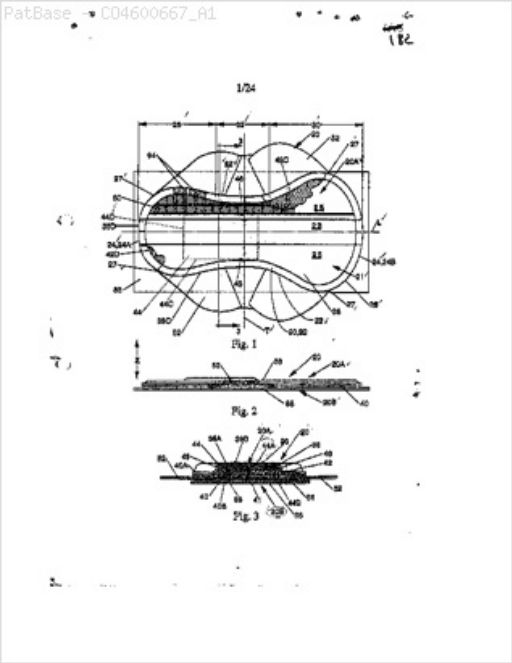
Patent	Date recorded	Event group	Code	Event	Details
FI6023 A	19150401	LSGT	+	granted / extensions (spc, cpc, pte)	

39) Family number: 43630808 (CO4600667A)

Title: ARTICULOS ABSORBENTES PROVISTOS DE MECANISMOS MEJORADOS PARA MANTENERLO EN CONTACTO CON EL CUERPO DEL USUARIO Y QUE PERMITAN UNA MEJOR COBERTURA DE LA PRENDA INTERIOR DEL USUARIO Absorbent Articles IMPROVED MECHANISMS PROVIDED TO KEEP IN TOUCH WITH THE BODY AND TO ALLOW YOU BETTER COVERAGE USER undergarment (Machine translation)

Abstract:

Source: CO4600667A SE DESCRIBEN ARTICULOS ABSORBENTES, TALES COMO TOALLAS SANITARIAS, PANTIPROTECTORAS, O ALMOHADILLAS DE INCONTINENCIA QUE ESTAN PROVISTOS DE MECANISMOS MEJORADOS PARA MANTENER EL ARTICULO ABSORBENTE EN CONTACTO CON EL CUERPO DEL USUARIO Y MECANISMOS QUE PROPORCIONAN EL ARTICULO ABSORBENTE CON UNA CAPACIDAD MEJORADA DE CUBRIR Y, DE ESTA MANERA PROTEGER, LAS PRENDAS INTERIORES, PRENDAS DE VESTIR, ROPA DE CAMA, ETC., DEL USUARIO, DE MANCHARSE. DESCRIBED absorbent articles, such as sanitary towels, PANTIPROTECTORAS, O ALMOHADILLAS of incontinence are provided with mechanisms IMPROVED TO KEEP absorbent article BODY CONTACT USER AND MECHANISMS TO PROVIDE THE absorbent article with a capacity IMPROVED COVER AND, THUS PROTECT, THE undergarments, clothing, bedding, ETC., USER, staining.



International class (IPC 8-9): A61F13/15 (Advanced/Invention);
A61F13/15 (Core/Invention)
International class (IPC 1-7): A61F13/15
Family:

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Inventor(s): THOMAS WARD OSBORN III ; REBECCA WHITE PATTERSON ; MARGIE HINES LETHA ; MICHAEL EDWARD CARRIER ; GARTH SHIRLEY FLORENCE ; BRUCE WILLIAM LAVASH ; CARL LOUIS BERGMAN

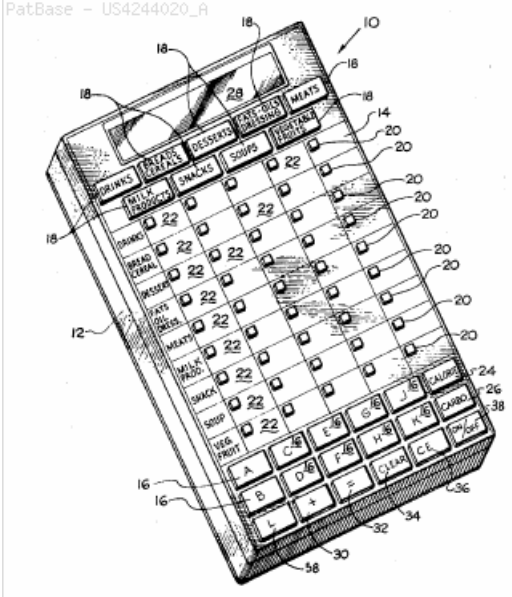
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Patent	Date recorded	Event group	Code	Event	Details
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40) Family number: 8044598 (US4244020A)
Title: CALORIC AND/OR CARBOHYDRATE CALCULATOR
Abstract:

Source: US4244020A A calculator for use in calculating the appropriate caloric and/or carbohydrate value of a food or drink item that is to be consumed by the user of the device is disclosed. The calculator utilizes a modified four-basic-function calculator of the type having the functions of addition, subtraction, multiplication and division. This basic calculator has been modified by adding a plurality of first contacts to the calculator which visually indicate alphabetical letters and are connected to numerical contacts in the standard calculator. A plurality of second contacts are numerical in function and indicate pre-determined food and drink items and are electrically connected to the calculator circuit while a plurality of third contacts are multiplier contacts and have located in proximity thereto indications of pre-determined alphabetical letters which correspond to caloric and/or carbohydrate values of varying portions of food and drink items. A fourth contact is electrically connected in the equal circuit of the standard calculator and indicates the wording "calorie" or "carbohydrate". Also disclosed is a novel method using the novel calculator whereby the calories and/or carbohydrates of a given food and drink item may be quickly determined without resorting to pages and pages of printed material relating to the various values. As a modification of the basic invention, there is disclosed a modified calculator in combination with a weighing scale mechanism, the scale having an exposed dial indicating varying combinations of alphabetical letters.



International class (IPC 8-9): G06F17/00 (Advanced/Invention);
G06F17/00 (Core/Invention)
International class (IPC 1-7): G01G19/04 G06F15/42
CPC: G06F15/025 G06F19/3475
European class: G06F17/00
US class: 177/25.16 364/413 702/32 708/133
Family:

Publication number	Pub. date	Application number	App. date
US4244020 A	19810106	US19790003741	19790115

Priority: US19790003741 19790115;

Cited documents: US4095274 A,
Assignee(s): (std): RATCLIFF LLOYD P
Inventor(s): (std): RATCLIFF LLOYD P

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
US4244020 A	19810106	LSGT	+	granted / extensions (spc, cpc, pte)	
US4244020 A	19800927	LSGT	PAT1	Patented Case	

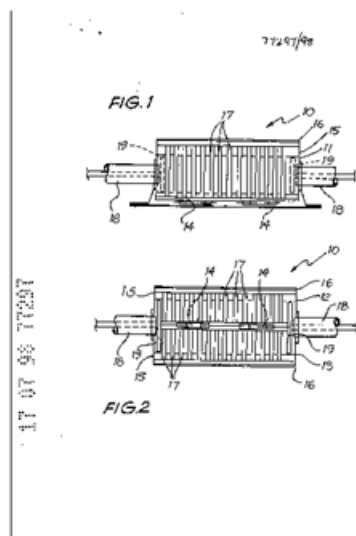
41) Family number: 10929251 (AU199877297A)

Title: FRESH MEAT COMPRESSOR

Abstract:

Source: AU199877297A A device for producing controlled portions of a food product such as fresh chilled **meat**. The device has a housing that can close at least partially around and support the food product. The housing has a plurality of slots that can be equally spaced along the body. Once in the housing, a ram is extended into the housing to compress the food product. While compressed, a **cutting** implement such as a knife can extend through slots in the housing and **cut** through the food product to produce portions each of a desired shape and thickness. Once the food product has been portioned, the ram can be retracted and the housing opened to allow the food -roduct to be removed. o tss a 6 064 4" S ssI

PatBase - AU733832_B2



International class (IPC 8-9): A22C17/00 A22C7/00 A23P1/10 (Advanced/Invention);
A22C17/00 A22C7/00 A23P1/10 (Core/Invention)

International class (IPC 1-7): A22C17/00 A22C7/00 A23P1/10

Family:

Publication number	Pub. date	Application number	App. date
AU199877297 A1	19990128	AU19980077297	19980717
AU733832 B2	20010524	AU19980077297	19980717
AU809297 A0	19970814	AU1997P008092	19970717

Priority: AU1997P008092 19970717; AU19980077297 19980717;

Cited documents: US5658608 A, AU5924973 A1, AU5609973 A1,

Assignee(s): (std): LAGERLOW P A ; PETER ALBERT LAGERLOW

Assignee(s): LAGERLOW PETER ALBERT

Inventor(s): (std): LAGERLOW PETER ALBERT

Inventor(s): PETER ALBERT LAGERLOW

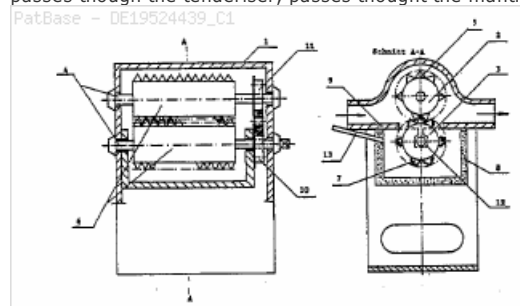
Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU199877297 A1	19990128	LSPB	+	published / reissued	
AU733832 B2	20010524	LSGT	+	granted / extensions (spc, cpc, pte)	
AU733832 B2	20010920	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU733832 B2	20040219	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	

42) Family number: 22836844 (DE19524439C1)**Title:** Steak tenderiser assembly rollers apply spices, herbs, marinating fluid Muerbschneider mit Gewuerzdosierung**Abstract:**

Source: DE19524439C1 Combined **meat** tenderiser, spice-adding and marinating assembly (1) comprises adjacent upper (2) and lower (3) **rollers** with projecting and laterally-transposed tenderiser blades (5) fixed to the respective **roller** mantle surfaces (6). The blades do not touch each other as the contra-rotating **rollers** turn, but project into the upper and lower faces of the **meat** as it passes between the **rollers**. Dry or moist herbs and spices are applied to the upper face of the **meat** as it passes through the tenderiser and enter the pores created by the blades. The lower section of the lower **roller** rotates within a sub-**meat** surface (9) marinating reservoir (8). The plane upon which **meat** rests as it passes through the tenderiser, passes through the mantle face of the lower **roller**.

**International class (IPC 1-7):** A22C9/00**CPC:** A22C9/004**European class:** A22C9/00D**Family:**

Publication number	Pub. date	Application number	App. date
DE19524439 C1	19960912	DE19951024439	19950705

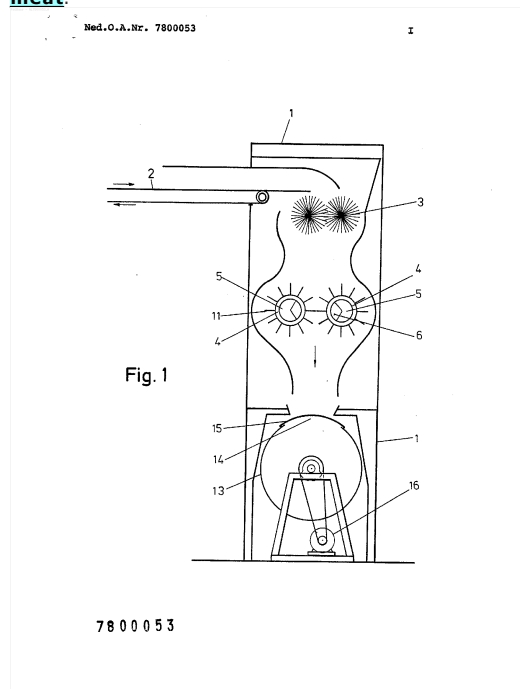
Priority: DE19951024439 19950705;**Cited documents:** FR2016726, DE2629812, DE2141372,**Assignee(s):** (std): LEOPOLD REX**Assignee(s):** LEOPOLD REX 06493 DANKERODE DE**Inventor(s):** (std): LEOPOLD REX**Inventor(s):** LEOPOLD REX 06493 DANKERODE DE**Legal status (INPADOC)**[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
DE19524439 C1	19960912	LSGT	+	granted / extensions (spc, cpc, pte)	
DE19524439 C1	19960912	LSPB	+8100	PUBLICATION OF THE EXAMINED APPLICATION WITHOUT PUBLICATION OF UNEXAMINED APPLICATION	
DE19524439 C1	19960912	LSGT	+D1	GRANT (NO UNEXAMINED APPLICATION PUBLISHED) PATENT LAW 81	
DE19524439 C1	19970313	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE19524439 C1	20020926	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	

43) Family number: 2529621 (GB1593821A)
Title: METHOD AND APPARATUS FOR PICKLING MEAT

Abstract:

Source: GB1593821A When **meat**, especially ham, is cured, it is first finely punctured in a softening device (3) and then injected with curing brine using hollow needles (11). During the injection process, the **meat** is kept in a vacuum and is moved in a drum (13). The hollow needles (11) are situated on two **rollers** (4) which run in opposite directions and are arranged at a distance from one another. In this manner, a product does not become disfigured by patches or other unsightly blemishes during curing. The concentration of the curing brine is adapted to the weight of the **meat**.



International class (IPC 8-9): A22C17/00 A23B4/28 F16K17/36 G05D16/06 (Advanced/Invention);
A22C17/00 A23B4/26 F16K17/36 G05D16/04 (Core/Invention)

International class (IPC 1-7): A22C17/00 A22C9/00 A23B4/02 F16K17/36 G05D16/06

CPC: A23B4/285

European class: A23B4/28J

Family:

Publication number	Pub. date	Application number	App. date
AT379291 B	19851210	AT19770009421	19771230
AT942177 A	19850515	AT19770009421	19771230
BE862636 A1	19780502	BE19780184102	19780104
CH615808 A	19800229	CH19780000095	19780104
DE2700125 A1	19780706	DE19772700125	19770104
DE2700125 C2	19830908	DE19772700125	19770104
DK3678 A	19780705	DK19780000036	19780104
ES465725 A1	19781001	ES19780465725	19780103
FR2375830 A1	19780728	FR19770039657	19771229
FR2375830 B3	19801017	FR19770039657	19771229
GB1593821 A	19810722	GB19780000009	19780103
IT1092955 A	19850712	IT19780019013	19780103
IT7819013 A0	19780103	IT19780019013	19780103
JP1284345 C3	19851009	JP19770159162	19771227
JP53121233 A2	19781023	JP19770159162	19771227
JP53121981 A2	19781024	JP19780000109	19780103
JP57035484 B4	19820729	JP19770159162	19771227
NL7800053 A	19780706	NL19780000053	19780103

Priority: DE19772700125 19770104; JP19770159162 19771227;

Cited documents: US3347679 A, DE6926086 U, DE2528471 A1,

Assignee(s): (std): ASSICO IMPORT EXPORT GMBH ; HANSU SOMMER AND CO KG GMBH ; RO Y SOMA MASCH GERATE GMB ; ASSICO IMP UND EXP G M B H AND C ; ASSICO IMPORT AND EXPORT GMBH AND ; RO Y SOMA MASCHINEN GERATE GMB ; SOMMER HANS GMBH AND CO KG ; SOMMER GMBH AND CO HANS KG ; SOMA MASCH GERATE GMBH AND C ; SOMMER GMBH AND CO KG HANS ; SOMA MASCHINENGERATE ; AKASHI SEISAKUSHO KK ; SOMAMASCHINENGERATE AND GMBH ; SOMA MASCHINEN GERATE GMBH AND C ; SOMAMASCHINENGERATE G M B H and

Assignee(s): SOMA MASCHINEN GERATE GMBH AND CO KG ; ASSICO IMP U EXP AND C GMBH ; SOMAMASCHINENGERATE G M B H AND CO K G ; ASSICO IMPORT UND EXPORT GMBH AND CO KG IBERO ARNUM HANN REP FED DI GERMANIA SOMA MASCHINEN GERATE GMBH AND CO KGLIMBACH HEIDER REP FED DI GERMAN ; ASSICO IMPORT UND EXPORT GMBH AND CO KG IBERO TE ARNUM HANN EN SOMA MASCHINEN GERATE GMBH AND CO KG TE LIMBACH HEIDERSBACH BONDSREPUBLIEK DUTSLAND ; RO Y SOMA MASCH GERATE GMBH AND CO ; ASSICO IMPORT AND EXPORT GMBH AND CO KG IBERG ; ASSICO IMPORT AND EXPORT GMBH AND CO KG ; ASSICO IMPORT EXPORT GMBH CO KG ; HANS SOMMER GMBH AND CO KG ; ASSICO IMPORT UND EXPORT GMBH AND CO KG IBERO ; HANS SOMMER GMBH AND CO KG 6951 LIMBACH DE ; ASSICO IMPORT UND EXPORT ; HANS SOMMER G M B H AND CO KG ; ASSICO IMPORT UND EXPORT G M B H AND CO K G ; RO Y SOMA MASCHINEN GERATE GMBH AND CO K G

Inventor(s): (std): HANSU ZOMMERU ; SOMMER H ; UIRUFURIITO ATSUSHIENBURENNERU ; ASCHENBRENNER W ; YOSHITARA SHINKICHI ; KOSEKI TETSUO ; ASCHENBRENNER WILFRIED ; SOMMER HANS ; SCHENBRENNER WILFRIED

Inventor(s): HANS SOMMER ; WILFRIED ASCHENBRENNER ; SOMMER HANS 6951 LIMBACH DE ; H SOMMER ; W ASCHENBRENNER

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT379291 B	19851210	LSGT	+	granted / extensions (spc, cpc, pte)	
AT379291 B	19870215	LSLE	-ELJ	CEASED DUE TO NON-PAYMENT OF THE ANNUAL	

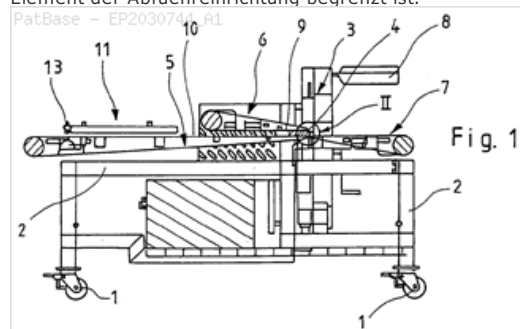
AT379291 B	20080515	LSLE	-RER	FEE CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT942177 A	19850515	LSPB	+	published / reissued	
BE862636 A1	19780502	LSPB	+	published / reissued	
BE862636 A1	19860731	LSLE	-RE	LAPSED	OWNER NAME : ASSICO IMPORT UND EXPORT G.M.B.H. AND CO. K.G. EFFECTIVE DATE : 19860131
BE862636 A1	19860731	LSLE	-RE	LAPSED	OWNER NAME : SOMAMASCHINENGERATE G.M.B.H. AND CO. K.G. EFFECTIVE DATE : 19860131
CH615808 A	19800229	LSGT	+	granted / extensions (spc, cpc, pte)	
CH615808 A	19860930	LSLE	-PL	PATENT CEASED	
DE2700125 A1	19780706	LSPB	+	published / reissued	
DE2700125 A1	19780706	LSES	+OAP	REQUEST FOR EXAMINATION FILED	
DE2700125 A1	19780817	LSES	+OD	REQUEST FOR EXAMINATION	
DE2700125 A1	19820902	LSAS	8127	NEW PERSON/NAME/ADDRESS OF THE APPLICANT	OWNER NAME : HANS SOMMER GMBH AND CO.KG, 6951 LIMBACH, DE
DE2700125 A1	19830908	LSGT	+D2	GRANT AFTER EXAMINATION	
DE2700125 A1	19840301	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE2700125 A1	19860313	LSLI	8320	WILLINGNESS TO GRANT LICENCES DECLARED (PARAGRAPH 23)	
DE2700125 A1	19870122	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE2700125 C2	19830908	LSGT	+	granted / extensions (spc, cpc, pte)	
DK3678 A	19780705	LSPB	+	published / reissued	
ES465725 A1	19971101	LSLE	-FD1A	PATENT LAPSED	EFFECTIVE DATE : 19970925
ES465725 A1	19971101	LSLE	-FD1A	PATENT LAPSED	EFFECTIVE DATE : 19970925
FR2375830 A1	19780728	LSPB	+	published / reissued	
FR2375830 A1	19780929	LSAS	CD	CHANGE OF NAME OR COMPANY NAME	
FR2375830 A1	19811231	LSRE	+RC	OPPOSITION AGAINST DECISION OF LAPSE	
FR2375830 A1	19820129	LSRE	+DA	ANNULMENT OF DECISION OF LAPSE	
FR2375830 A1	19831021	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2375830 B3	19801017	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1593821 A	19810722	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1593821 A	19811007	LSGT	+PS	PATENT SEALED	
GB1593821 A	19830817	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	
IT1092955 A	19850712	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1284345 C3	19851009	LSGT	+	granted / extensions (spc, cpc, pte)	
JP53121233 A2	19781023	LSPB	+	published / reissued	
JP53121981 A2	19781024	LSPB	+	published / reissued	
JP57035484 B4	19820729	LSPB	+	published / reissued	
NL7800053 A	19780706	LSPB	+	published / reissued	
NL7800053 A	19800925	LSLE	-BV	THE PATENT APPLICATION HAS LAPSED	

44) Family number: 42980940 (EP2030744B1)

Title: Device for cutting fresh meat pieces Vorrichtung zum Schneiden von Frischfleisch-Stuecken Dispositif de coupe de pieces de viande fraiche

Abstract:

Source: EP2030744A1 The device has a **cutting** head (3) with a **cutting** tool that is designed as endless circular **cutting** strip (4). A supply station includes a conveyor (5). A **cutting** head is movably supported around an axis in a machine frame (2), where the axis is arranged in a conveying plane of a conveyor and arranged parallel to conveying direction. Lump of the **cutting** strip runs in a free die clearance, which is limited by an end-sided deflection **roller** of the conveyor and by a unit of a delivery device (7). The unit is arranged parallel to the deflection **roller**. Eine Vorrichtung zum Schneiden von Frischfleisch-Stuecken, insbesondere Haehnchenbrust-Filet, ist mit einem Schneidkopf versehen, der ein Schneidwerkzeug aufweist, das als endlos umlaufendes, ueber angetriebene Umlenkrollen verlaufendes Schneidband ausgebildet ist. Eine Zufuehrstation der Vorrichtung weist ein Foerderband auf, mittels dem auf das Foerderband aufgelegte Frischfleisch-Stuecke dem Schneidebereich des Schneidwerkzeuges des Schneidkopfes zufuehrbar sind, sowie einen Niederhalter fuer das zu schneidende Stueck Frischfleisch, und eine Abfuehreinrichtung fuer die geschnittenen Teilstuecke des Frischfleisches. Der Schneidkopf ist in einem Maschinengestell stellbeweglich um eine Achse gelagert, wobei die Achse in der Foederebene des Foerderbandes der Zufuehrstation und parallel zur Foerderrichtung verlaufend, ausgerichtet ist. Das schneidende Trumm des Schneidbandes seines Schneidwerkzeuges verlaeuft in einem freien Schnittpalt, der einerseits durch eine endseitige Umlenkrolle des Foerderbandes der Zufuehrstation und andererseits durch ein parallel zur Umlenkrolle angeordnetes Element der Abfuehreinrichtung begrenzt ist.



International class (IPC 8-9): A22C17/00 A22C17/12 A22C25/18 B26D1/46 B26D5/02 B26D7/01 B26D7/06 (Advanced/Invention);

B26D5/02 B26D7/01 B26D7/06 (Advanced/Non-invention);

A22C17/00 A22C25/00 B26D1/01 (Core/Invention);

B26D5/02 B26D7/01 B26D7/06 (Core/Non-invention)

CPC: B26D1/46 B26D5/02 B26D7/01 B26D7/0625

European class: B26D1/46 L26D5/02 L26D7/01 L26D7/06D

Family:

Publication number	Pub. date	Application number	App. date
AT490063 E	20101215	AT20080015090T	20080827
DE102007041388 A1	20090305	DE200710041388	20070831
DE502008001924 D1	20110113	DE200850001924T	20080827
EP2030744 A1	20090304	EP20080015090	20080827
EP2030744 B1	20101201	EP20080015090	20080827

Priority: DE200710041388 20070831;

Cited documents: WO07036261 A1, WO04106020 A1, US4111085 A, US2005139053 AA, US2003221532 AA, JP3294198 A2,

Assignee(s): (std): WICHELMANN BERND

Inventor(s): (std): WICHELMANN BERND

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT490063 E	20101215	LSGT	+	granted / extensions (spc, cpc, pte)	
DE102007041388 A1	20090305	LSPB	+	published / reissued	
DE102007041388 A1	20090305	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE102007041388 A1	20110922	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE102007041388 A1	20120126	LSWD	-R120	APPLICATION WITHDRAWN OR IP RIGHT ABANDONED	EFFECTIVE DATE : 20111201
EP2030744 A1	20090304	LSPB	+	published / reissued	
EP2030744 A1	20090304	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090105
EP2030744 A1	20091111	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	COUNTRY OF REF DOCUMENT : AT COUNTRY OF REF DOCUMENT : BE COUNTRY OF REF DOCUMENT : BG COUNTRY OF REF DOCUMENT : CH COUNTRY OF REF DOCUMENT : CY COUNTRY OF REF DOCUMENT :

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EP2030744 A1	20101201	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2030744 A1	20101215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2030744 A1	20110105	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2030744 A1	20110309	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP2030744 A1	20110429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110301
EP2030744 A1	20110429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20110525	LSRV	-LTIE	LT: INVALIDATION OF EUROPEAN PATENT OR PATENT EXTENSION	REF COUNTRY CODE : EP EFFECTIVE DATE : 20101201
EP2030744 A1	20110531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF

				NAT. OFFICE TO EPO	THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
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EP2030744 A1	20110531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20110531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
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EP2030744 A1	20110622	LSWD	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FD4D
EP2030744 A1	20110630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110302
EP2030744 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110401
EP2030744 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110401

EP2030744 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110312
EP2030744 A1	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20110831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PL NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20110831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20110831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20111031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20111109	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20110902
EP2030744 A1	20111229	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 502008001924 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20110902
EP2030744 A1	20111230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201

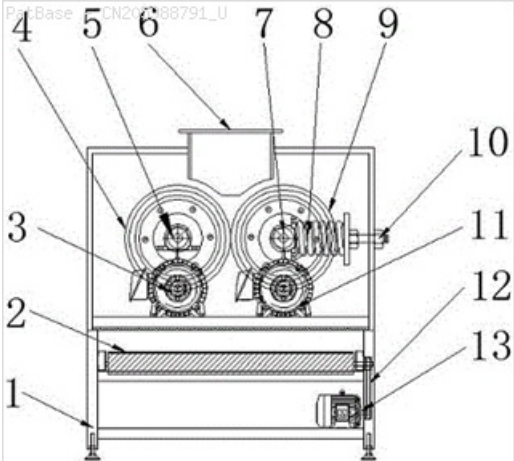
EP2030744 A1	20111230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20120229	LSLE	-BERE	BE: LAPSED	PARTY TYPE : OWNER REF COUNTRY CODE : EP OWNER : WICHELMANN, BERND EFFECTIVE DATE : 20110831
EP2030744 A1	20120330	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110831
EP2030744 A1	20120531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110831
EP2030744 A1	20130424	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20120827
EP2030744 A1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110827
EP2030744 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GB NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20120827
EP2030744 A1	20130930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : TR NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20131031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HU NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20101201
EP2030744 A1	20160825	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 9
EP2030744 A1	20160930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160824 YEAR OF FEE PAYMENT : 9
EP2030744 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160824 YEAR OF FEE PAYMENT : 9
EP2030744 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160622 YEAR OF FEE PAYMENT : 9
EP2030744 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160825 YEAR OF FEE PAYMENT : 9

EP2030744 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20160822 YEAR OF FEE PAYMENT : 9
EP2030744 B1	20101201	LSGT	+	granted / extensions (spc, cpc, pte)	

45) Family number: 65070029 (CN205988791U)
Title: NOVEL PRACTICAL MEAT GRINDER

Abstract:

Source: CN205988791U The utility model discloses a novel practical meat grinder, including frame, conveyer belt, first motor, first roller, fixing bearing, movable bearing, second roller, second motor, third motor, minced steak case, transmission shaft, lower hopper, screen cloth, cutter piece, the conveyer belt is equipped with at the middle part in the frame, is equipped with the third motor in the frame of conveyer belt below, and conveyer belt one end is passed through V -belt with the third motor and is connected, and the conveyer belt other end is equipped with down the hopper, installs the minced steak case above the conveyer belt in the frame, the minced steak incasement is equipped with first roller, second roller, and first roller passes through fixing bearing to be connected at the minced steak incasement, and the second roller passes through the movable bearing to be connected at the minced steak incasement, and first roller is connected with the first motor that sets up outside the minced steak case, and the second roller is connected with the second motor that sets up outside the minced steak case, is equipped with the cutter piece on the roll surface of first roller, second roller, and minced steak bottom of the case portion is equipped with the screen cloth. The utility model discloses use safely efficiently.



International class (IPC 8-9): B02C18/14 B02C18/24 B02C23/16 (Advanced/Invention)
Family:

Publication number Pub. date Application number App. date
CN205988791 U 20170301 CN201620873080U 20160813

Priority: CN201620873080U 20160813;

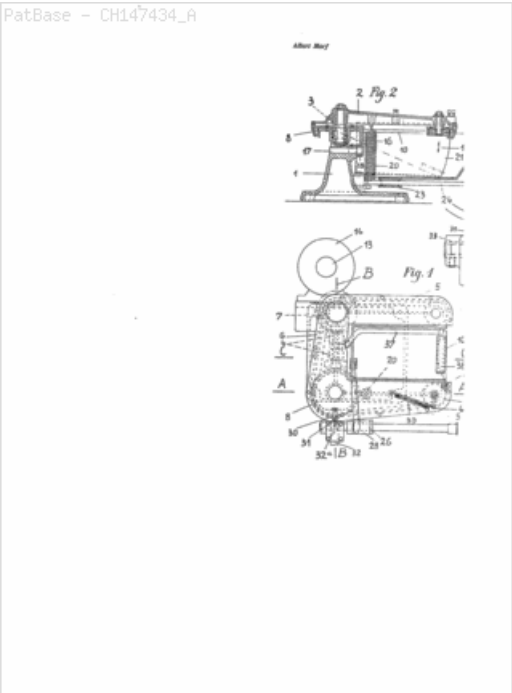
Assignee(s): (std): FUJIAN QUANZHOU HONGQUANZHOU FOOD CO LTD
Assignee(s): FUJIAN QUANZHOU RED WEEK FOOD CO ; FUJIAN QUANZHOU HONGQUANZHOU FOOD CO
Inventor(s): (std): HUANG BAOBAO ; SU WEIQUN ; ZHANG FULAI

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN205988791 U	20170301	LSGT	+	granted / extensions (spc, cpc, pte)	

46) Family number: 24865653 (CH147434A)
Title: FLEISCHSCHNEIDEMASCHINE. MEAT SLICER. (Machine translation)
Abstract:
Source: CH147434A 1. Fleischschneidemaschine nach Patentanspruch, dadurch gekennzeichnet, dass das 'umlaufende Schneidband auf einem Schwenkarm gelagert ist, welcher sich quer zur Laufrichtung des Schneidbandes gegen das Schneidgut hin- und herbewegt. . 1 **Meat cutting** machine according to patent claim, characterized in that the 'revolving **cutting** tape is mounted on a swivel, which transverse to the direction of the **cutting** tape back and forth against the material to be **cut**.



International class (IPC 8-9): B26D1/46 (Advanced/Invention);
B26D1/01 (Core/Invention)
International class (IPC 1-7): B26D1/46
CPC: B26D1/46
European class: B26D1/46
Family:

Publication number	Pub. date	Application number	App. date
CH147434 A	19310615		19300604

Priority: 19300604;
Assignee(s): (std): MORF ALBERT
Inventor(s): (std): ALBERT MORF
Inventor(s): MORF ALBERT

Legal status (INPADOC)
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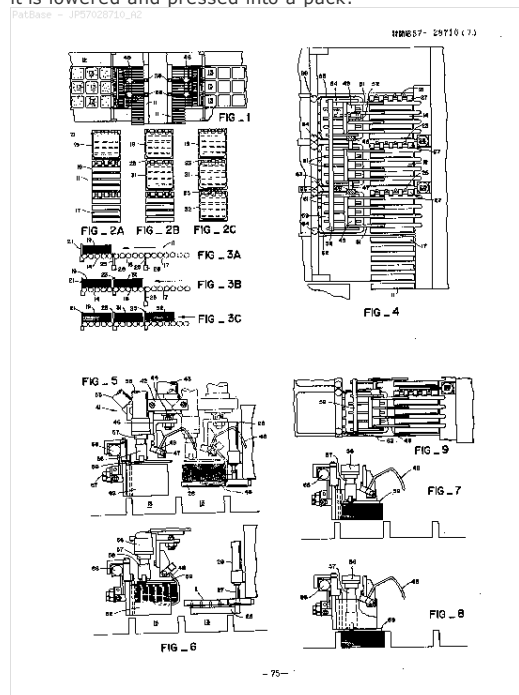
Patent	Date recorded	Event group	Code	Event	Details
CH147434 A	19310615	LSGT	+	granted / extensions (spc, cpc, pte)	

47) Family number: 1980185 (JP57028710A)

Title: LOADER

Abstract:

Source: DE3049606A1 (Claim 1) 1. Patentansprüche Beschickungsvorrichtung zum Einlegen mehrerer Stapel eines aufgeschnittenen Nahrungsmittels in eine entsprechende Anzahl von vorgeformten Packungen, insbesondere in in einem durchgehenden Band vorgeformte Packungen, gekennzeichnet durch folgende Merkmale: a) es ist ein Paar von **Rollenfoerderern** (11) vorgesehen, von denen beide jeweils in die gleiche Anzahl von Abschnitten (14, 16, 17) unterteilt sind, wobei die **Rollen** jedes Abschnitts (14, 16, 17) selektiv zu einer gemeinsamen Drehbewegung antreibbar sind; b) es sind Tereinrichtungen (21, 23, 25) vorgesehen, mit deren Hilfe die Stapel (19, 31, 32) des aufgeschnittenen Nahrungsmittels beim Vorrücken auf den **Rollenfoerderern** (11) auf jedem der genannten Abschnitte (14, 16, 17) anhaltbar sind, derart, dass auf jedem **Rollenfoerderer** (11) eine vorgegebene Anzahl von Stapeln (19, 31, 32) zusammenstellbar ist; c) es ist ein Paar von Transportwagen (41) vorgesehen, die verfahrbar oberhalb der **Rollenfoerderer** (11) angeordnet sind und von denen je der zwischen einer Übernahmestellung oberhalb seines zugeordneten **Rollenfoederers** (11) in eine Übergabestellung oberhalb einer Anzahl von vorgeformten Packungen (13) verfahrbar ist, wobei jeder der Transportwagen (41) eine Anzahl von Ladeplattformen (48) aufweist, die gleich der Anzahl der zu beschickenden Packungen (13) ist und durch die die einzelnen Stapel (19, 31, 32) des aufgeschnittenen Nahrungsmittels von den zugeordneten Abschnitten (14, 16, 17) des betreffenden **Rollenfoederers** (11) uebernehmbar sind; d) es ist eine Anzahl von Schubvorrichtungen (59) vorgesehen, von denen jede jeweils einer Ladeplattform (58) zugeordnet und zum Einpressen des betreffenden Stapels (19, 31, 32) in die zugeordnete vorgeformte Packung (13) nach unten absenkbar ist und e) es sind mehrere Paare von Führungselementen (62, 63) vorgesehen, die derart angeordnet sind, dass jeweils ein Paar von Führungselementen (62, 63) die Öffnung einer zuzuführenden Packung (13) uebergreift und der Führung eines in diese Packung (13) einzulegenden Stapels (19, 31, 32) des aufgeschnittenen Nahrungsmittels dient. The mechanism is intended for placing portions of sliced **meat**, cheese etc. in packs (13) moved by a conveyor belt. The portions are moved at right angles to the pack conveyor by two parallel **roller** conveyors up to successive stops, formed by vertical bars raised by actuators (28) for alignment above parallel rows of packs on the conveyor. A carriage (41) is movable between a pick-up position above the portion carrying conveyor to a position above the pack conveyor. It is provided with swivelable pick-up forks (48) and pusher (59) for each row, whilst lateral baffles (62) guide each portion as it is lowered and pressed into a pack.



International class (IPC 8-9): B65B25/06 B65B35/44 B65B5/10 (Advanced/Invention); B65B25/00 B65B35/44 B65B5/10 (Core/Invention)

International class (IPC 1-7): B65B25/06 B65B35/44 B65B5/10

CPC: B65B25/065

European class: B65B25/06D

Family:

Publication number	Pub. date	Application number	App. date
DE3049606 A1	19820211	DE19803049606	19801231
JP57028710 A2	19820216	JP19810022848	19810218

Priority: US19800167720 19800711;

Assignee(s): (std): TOBY ENTERPRISES

Inventor(s): (std): EDOWAADO TOBII ; TOBY EDWARD

Legal status (INPADOC)

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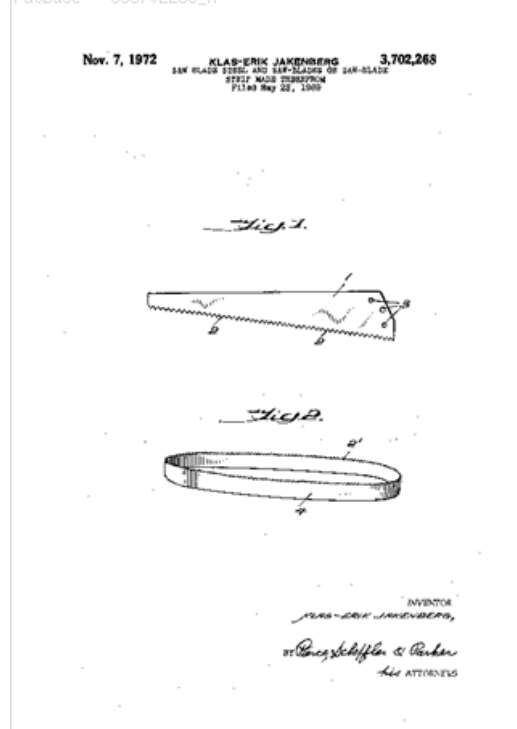
Patent	Date recorded	Event group	Code	Event	Details
DE3049606 A1	19820211	LSPB	+	published / reissued	
DE3049606 A1	19851205	LSLE	-8139	DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE	
JP57028710 A2	19820216	LSPB	+	published / reissued	

48) Family number: 28931717 (US3702268A)**Title:** SAW BLADE STEEL AND SAW BLADES OR SAW-BLADE STRIP MADE THEREFROM**Abstract:**

Source: US3702268A ABSTRACT OF THE DISCLOSURE

There is provided a steel for making saw blades, and a saw blade made from the steel. The steel having an analysis of up to 20% Or, 0.2-1.5% C, and a maximum of 6% additional alloying elements and being such that it has a ferrite matrix in the temperature range of 550-790 degrees C., and in which range the steel in a ferritic state has been **rolled** to a total area reduction of at least 60%.

PatBase - US3702268_A

**International class (IPC 8-9):** C21D8/02 C22C38/18 (Advanced/Invention);
C21D8/02 C22C38/18 (Core/Invention)**International class (IPC 1-7):** B21B3/00 B23D61/00 C21D7/00 C21D7/13 C21D7/14 C21D9/24 C22C39/00 C22C39/16**CPC:** Y10S148/905 C21D8/0205 C22C38/18**European class:** C21D8/02A C22C38/18**US class:** 148/12 148/325 148/588 148/607 148/609 148/905**Family:**

Publication number	Pub. date	Application number	App. date
AT326165 B	19751125	AT19690005041	19690528
AT504169 A	19750215	AT19690005041	19690528
DE1927428 B1	19710311	DE19691927428	19690529
DE1927428 B2	00000000		00000000
DE1927428 C2	19741114	DE19691927428	19690529
FR2009793 A1	19700206	FR19690017930	19690530
GB1279483 A	19720628	GB19690027887	19690602
SE354487 B	19730312	SE19680007334	19680531
SE354487 C	19780323	SE19680007334	19680531
US3702268 A	19721107	US19690827279	19690523

Priority: SE19680007334 19680531;**Cited documents:** US1206902 A, CH208027 A, AT217075 B,**Assignee(s):** (std): UDDEHOLMS AB ; UDDEHOLMS AB SW ; UDDEHOLMS AKTIEBOLAG**Assignee(s):** UDDEHOLMS AB UDDEHOLM SCHWEDEN**Inventor(s):** (std): JAKENBERG K ; JAKENBERG K SW ; JAKENBERG K E ; JAKENBERG K E**Inventor(s):** KLAS ERIK JAKENBERG ; JAKENBERG KLAS ERIK HAGFORS SCHWEDEN**Legal status (INPADOC)**[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
AT326165 B	19751125	LSGT	+	granted / extensions (spc, cpc, pte)	
AT326165 B	19781115	LSLE	-ELJ	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AT504169 A	19750215	LSPB	+	published / reissued	
DE1927428 B1	19710311	LSPB	+	published / reissued	
DE1927428 B1	19741114	LSGT	+C2	GRANT AFTER PREVIOUS PUBLICATION (2ND PUBLICATION)	
DE1927428 B1	19780330	LSLE	-EHJ	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE1927428 B2	00000000	LSPB	+	published / reissued	
DE1927428 C2	19741114	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2009793 A1	19700206	LSPB	+	published / reissued	

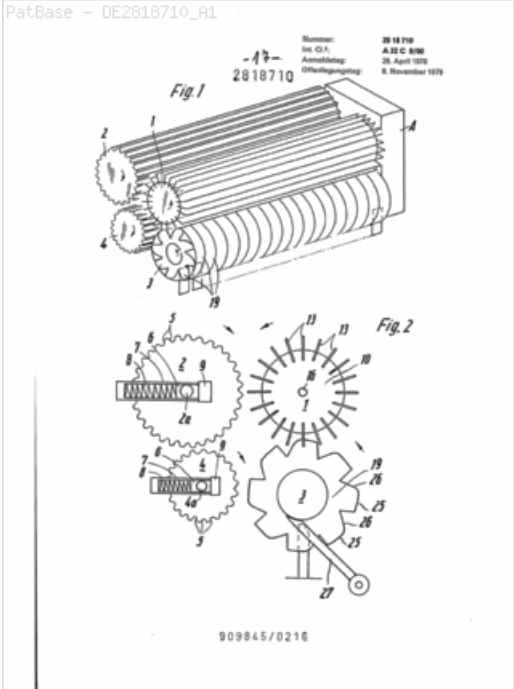
FR2009793 A1	19780713	LSLE	-ST	NOTIFICATION OF LAPSE
GB1279483 A	19720628	LSGT	+	granted / extensions (spc, cpc, pte)
GB1279483 A	19721108	LSGT	+PS	PATENT SEALED
GB1279483 A	19810204	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
SE354487 B	19730312	LSPB	+	published / reissued
SE354487 C	19780323	LSGT	+	granted / extensions (spc, cpc, pte)
US3702268 A	19721107	LSGT	+	granted / extensions (spc, cpc, pte)

49) Family number: 1715049 (DE2818710A1)

Title: VORRICHTUNG ZUM EINSCHNEIDEN VON FLEISCH MEAT TENDERISING MACHINE - HAS TWO WORK ROLLS WITH RADIAL AND AXIAL CUTTERS AND TWO CORRUGATED BACK-UP ROLLS

Abstract:

Source: DE2818710A1 Patentanspruche 9 Vorrichtung zum Einschneiden von Fleisch im Kreuzschnitt, ge kennzeichnet durch zwei mit ihren Drehachsen in einer Ebene lie gende und in gleicher Drehrichtung angetriebene Messerwalzen (1 und 3), denen in einer parallelen Ebene gleichsinnig ange triebene Foerderelemente (2 und 4) oder (28) gegenueberliegen, wobei eine der Messerwalzen mit parallel zu ihrer Drehachse angeordneten Kamm-Messern (13), die andere mit Messerscheiben (19) versehen ist 2. A machine to tenderise meat by performing crosscuts in it is fitted with two tool rolls, one with radial blades parallel to its axis of rotation and the other with serrated radial disc plates. Each roll is faced by a back-up roll with a corrugated surface. The two tool rolls are revolved in the same direction; the two back-up rolls are also revolved in the same direction, opposite to that of the tool rolls. This machine can process lumps of meat of any size or shape. It provides a simple quick and reliable way of performing the cruciform incisions.



International class (IPC 8-9): A22C9/00 (Advanced/Invention); A22C9/00 (Core/Invention)

International class (IPC 1-7): A22C9/00

CPC: A22C9/008

European class: A22C9/00F

Family:

Publication number	Pub. date	Application number	App. date
DE2818710 A1	19791108	DE19782818710	19780428

Priority: DE19782818710 19780428;

Assignee(s): (std): GLASS HORST

Inventor(s): (std): GLASS HORST

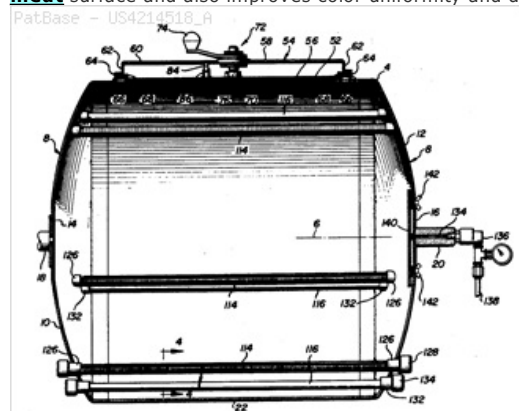
Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE2818710 A1	19791108	LSPB	+	published / reissued	
DE2818710 A1	19810226	LSLE	-OHJ	NON-PAYMENT OF THE ANNUAL FEE	

50) Family number: 2461350 (US4214518A)**Title:** MEAT TUMBLER**Abstract:**

Source: US4214518A Apparatus for treating **meat** comprises introducing pieces of **meat** into a tumbling drum rotatable about a horizontal axis and which contains circumferentially spaced rods on the inside of the drum adjacent to its periphery and parallel to the axis of rotation. The rods contain teeth so that upon rotation of the drum the **meat** is tumbled causing the teeth to produce a mass of small **cuts** in the surface of the **meat**. The drum is sealed by a watertight door that is readily opened and closed, as needed. The tumbling process takes approximately 20 minutes. The tumbling in combination with the formation of small **cuts** in the surface of the **meat** increases the exposure of myosin protein at the **meat** surface and also improves color uniformity and dispersion of pickling solution in the **meat**.



International class (IPC 8-9): A22C17/00 A22C9/00 A23B4/00 A23B4/16 (Advanced/Invention); A22C17/00 A22C9/00 A23B4/00 A23B4/14 (Core/Invention)

International class (IPC 1-7): A22C17/00 A22C21/00 A22C5/00 A22C7/00 B26D3/08 E05C19/18

CPC: Y10T83/0244 Y10T292/237 A22C9/005 A23B4/00 A23B4/16

European class: A22C9/00D2 A23B4/00 A23B4/16

US class: 292/260 83/867 99/535

Family:

Publication number	Pub. date	Application number	App. date
DE2640171 A1	19770324	DE19762640171	19760907
DK415976 A	19770316	DK19760004159	19760915
FR2337502 A1	19770805	FR19760027608	19760914
GB1496637 A	19771230	GB19760037317	19760909
US4214518 A	19800729	US19750613056	19750915

Priority: US19750613056 19750915;

Cited documents: US684923 A, US4029824 A, US2457927 A, US1507577 A, US1273662 A, GB1232905 A,

Assignee(s): (std): FOLDENAUER EQUIP ; FOLDENAUER EQUIPMENT CO

Assignee(s): FOLDENAUER EQUIPMENT CO INC

Inventor(s): (std): PETSCH LEE EDMUND ; PETSCH LEE E ; PETSCH L E

Inventor(s): EDMUND PETSCH LEE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE2640171 A1	19770324	LSPB	+	published / reissued	
DE2640171 A1	19831201	LSLE	-8141	DISPOSAL/NO REQUEST FOR EXAMINATION	
DK415976 A	19770316	LSPB	+	published / reissued	
DK415976 A	19850722	LSWD	-AHS	APPLICATION SHELVED FOR OTHER REASONS THAN NON-PAYMENT	
FR2337502 A1	19770805	LSPB	+	published / reissued	
GB1496637 A	19771230	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1496637 A	19780510	LSGT	+PS	PATENT SEALED	
GB1496637 A	19850501	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	
US4214518 A	19800729	LSGT	+	granted / extensions (spc, cpc, pte)	
US4214518 A	19780824	LSGT	PAT1	Patented Case	