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Title: MOLDING APPARATUS

Abstract: Source: US1794334A. Will I claim and desire to secure by Letters Patent of the United States is: ~ 1. A1 apparatus of the character described, comprising a, Supp. It; gt; 1'bing base, said sections having operating means and laterally positioned on said base and II()T' i1' ?IU:; V supp. It; gt; rEe_ thereby in Substantially h(' ZI' 1Z?OKJ- talposition, said sections being rrgzwvgble into subfi=u1ti: 11y Vertical bool=ed 1'EHE1011., cam mezzns udlzptefl to engage saifl operalizxg uxezxs and being operable to move Sabi sections by mm action into booked 1'e1:1Z; io11, and means }o cause €Hgi\G'C'I'1€1' 1f, IU9f\€E1I said operating means, and said cam means to book said sections. Q. An appmafus of the charzacter dcscribed, C\311I)TiSiI57,' a supporting base, mold semions having operating; means and later nily ppsitioned on said lmse and 11oL'1{12xllly sivpported thereby ln slxbstantiaxly }IH'I'ZO'I'1f tal' position, suifl sections being plvally supportexl for swinging D10\(?11'101I\$ into Sill? stantially vertical booked rolatiqn? cam lnezms zulapted to engage said opemting; means and being operable to move said soctions byvcam action into booked reatioil. and moans in muse engagenlent between said ope1'zxT,ing H1QiU1S"€1F€I said cum 1515531115 to bool; said- sections. 3. Au apparatus of the character described, comprising :L supporting base, **frame** members laterally positioned on said base, said; **frame** members being pivotally sup= ported on said base at their adjacent edges for movement into substantially vertical par'- Mlel oppusecl r'Ql;at1o11, mold sections having cmnplementary faces adapted for engagsr ment. Said sections being positioned on said fj' iI111€ nleulverg, meuna to. move said7f1'a1z1e members into opposed relation, and compensating means acting; automaically as the sections are moved. into cngagerncut to permit, iim faces of said mold sections to engage Should the combinerl depth of said mold sections be greater than normal. 4. An appa1'n tus of the character described, C()1HPJ' iSi11g El supporting base, **frame** members laterally positioned on said base, said **frame** members being pivotally sup ported on said base at their adjacent edges for movement into :substantially Vertical pal'- ullel opposed relation, mold sections havingv: _gt;mp1e1\1c1ta1'y faces adapted for engage! ment, said sections being laterally posii;io11ed' :md pivotally mounted on said Hmne memf bers for oscillation on substantially horizontal parallel axes whereby said sections may engage each other tlxmughout the widthe of their facas, and mezmi to :novo said -fmme members into opposed relézion. ~ 5. An apparatus 0? the character de- ;=sc:1'1be_it; ;l, comprising a ruovabln supporting base, mold sections laterally positioned 011 said base and normally supported thereby in substantizlly horizontal position, said sei:- tions being l110VL1bJ0 into substantially ve1'~ tical booked' relation, operating means caz1'ied by each section, means adapted to substantially silnultaneously engage said opemtilig lneans to move Said sections Euto b0G1i€€1'I' C111(f_iGll, and means' to ruovu snicl base to cause said last-11:1111sd Hieans to engage said npemting means thereby to buck said seiltions. 6. Au apparatus of the character de~ scriberl, COJ'1IP1' iS'SI'g' a. supporting bdsmsccion members pivoted on said supporting base at ibeir adjacent edges; caln 1' : '1G{11)S' _d€l~1)f}€d to swing mm of said 1uembe1~s through an c_gt; s~ cillation of substanyizxly 360° and to swing the other ofsaicl members through an oscillation of sL1bstantinHy T802 the fates of movement of said l11B111b%1' S being substantially equal, the initial stroke of the oscillation of one member and the initial half stroke of the oscillation of the Oi;5:01'me1Z1bS1' Inoving sailr mexuhers iato substantially parallel abutting re1s:tion, 'a11d means Lo czmsv relative inoveznctnt between said base and said cam mms whereby S',L€(q cam means acts on said members to swing said me111b_/ara through their respective oaarzillations on said base, 7. Au- apparatus of the cilamcter de* scribed, cfwmplisiug 11 }' 1' l0Vvi1b1G_ supporting so S5 no S5 ing :ge *Zo G5 base, **plate** neinliers pivotally supported on said base at their zidzizeut edges, said menibers being normally positioned laterally of each other in substantially horizontal .position, cmn means adapted to engage said members to inove said members on their pivots into substantially purzllel vertical opposed relation, then to iuove said meiiilners while in such opposed relation into substn tially horizontal superposed relation, and then to move the topmost in _lt;€xnliei' into original lateral relation to said other niemlser, eperitiing means on said **plate** IX1€ll' ll' if31'S to engage said cam means, and means to niove said supporting lease to estzse suicl operating nienns to engage said earn means whereby said ezun means will m::';e said ineinlners. S. An apparatus of the character described, comprising n supporting base, mold sections positioned on said base in lateral spaced relation, said sections being pivoted together and to said louse for nioverrient into booking relation, sribstaltially arcuate Cam **plate** members spaced apart :uid curving up_it; wrsdly toward each other, the forward edges of said neinhors being inclined upwardly and longitudinally of said members, the iu~ elination of said forward edges being equal and terminating :it equal heights to form a Cain slet of ggradually decreasing width, each of said sections having an operating member adapted to engage one of the edges of said cam **slot**, means to cause relative movement between said cam **plate** members and said base whereby said operatinnf mernhers enter and pass along said cam sfof to cause said mold sections to be hooked and means coeoperable with said base ineinber to prevent 'ertiea>1 inoveinont thereof as said mold sections are booked. 9. An apparatus of the clmracter described, comprising ai supporting base, mold sections positioned on said base in lateral spaced relation, said sections being pivoted together and to said base for movement into leoolcing relation, sulestantially zwcuate earn **plate** members spaced apart and curving upwardly toward each other, means interconnecting and resiliently holding said menibers in spaced relation, the forward edges of said members being inclined upwardly and l0ngi~ tudinally of said members, the inclination of said forward edges being equal and terminating at equal heights to 'form ai cam **slot** of gradually decreasing width, each of said sections having :in operating ineinber adapted to engage one of the edges of _said cam **slot**, and inesns to cause relative movement between said eanl **plate** members and said base \\ 'hereb\$' said operating members enter and pass along said cam **slot** to cause said mold sections to be booked. ' 10. An apparatus of the eliiraeter described, comprising El traek\\vay, a em? adapted to travel on said tmekway, means to pro- pal said our along said traclrwty, **plate** menibors positioned on said Car in laterally spaced relation and pivoted at their adjacent edges to said cur, cam means overlying said trackway and adapted to engage said mernloers to move said members into substantially parallel vertical opposed relation, then to move said eueuihers While in such opposed relation into substantially horizontal superposed relation, and then to move the topmost nleinlner into original lateral spaced relation to said other member, and means on said **plate** nienibers to engage said cum xneznns whereby said cam niefms will move said nieinbers. 11. An apparatus of the character described, Comprising il traelzway, at Cai? HC12l.Pt~ ed to travel on said traeliway, means to propel said ear along said trueltwy, **plate** members laterally and substantially horizontally positioned on said car, said **plate** ineinbers being pivottly supported on said ear along its longitudinal center line, and eatin means overlying said traeliway, said eanl ineznns lmviig cam faces, said **plate** ineinbers having means adapted to engage said cam faces as said em' is propelled along said t1~a.c\\way \\ '1Q! G1y each of said **plate** nienliners is swung into substantially Vertical position, then said meiiihers are S\\ Llllg in relatively fixed relation into substzntially llorizontal superposed relation at one side of said ear, and then the topmost of said nieinbers is swung froin superposed position through Vertical position to its original substantially horizontal posi~ tion at the other side of said cur. 12. An apparatus of "the character de» scribed, comprising 21 SlllfJSIS' [L11t1211y horizoritail endless truekway, a ear adapted to travel on said traeliway, means to propel said ear along said traekwny, mold sections positioned on said ear in lateral spaced relation, sai Sections being pivoted together and to said ear substantially on the longitudiual center line of said ear, and il substantially seini-cylindrieai Cam **plate** overlying said trackWuy having its longitudinal edges secured adjacent to and laterally spaced from said tracklway, said cum plete having it earn guide **slot**, sziid sections having ezun **rollers** adapted to engage the sides of said **slot** and be guided thereby wliere-by said sections are booked and separated as said Cai' is propelled through said seini-cylindrical earn **plate**. 13. An apparatus of the clmmetei' described, comprising :L tmfllwizy, ni ear adapted to travel on said traeluvrty, means to propel said car along said trsekwny, mold sections positioned ou said ear in lateral spaced relation, said sections being pivoted together and to said car substantially on the longitudinal eenter line of said car, adjustable means on the car and positioned laterally of said eenter line for sL1pp0rting said sections in substantially horizontal position, and substantially arcuate cam **plate** members posi» T0 tioned laterally adjacent each side of said traclivay, said cam **plate** members extending upwardly over said traclivay, the i10I'\\EJ.1' (l edge of each cam **plate** member being substantially equally inclined upwardly and longitudinally of the tracltway, thc inclination of the edges terminating at points equidistant above said traclrvvay, said sections having cani **rollers** respectively adapted to engage the inclined edges of said cam **plates** up-on movement of said car along the tracl\$~ way whereby said sections are swung upwardly toward each other into booked relation. . Ist. _In apparatus of the character described, comprising a traeliway, a car adapted to travel on said trackway, means to propel said car along said traclnvay, mold sections positioned on said car in lateral spaced relation, said sections being pivoted together and to said ear substantially on the longitude nal center line of said car, a substantially semi-cylindrical cam **plate** overlyinff said sition to swing said first section to its original lateral, substantially horizontal position, 16. An apparatus of the character de~ scribed, comprising; an endless traclovay, a ear on said trackvay, an endless drive means extending along said trackivay, means connecting said drive means and said car to propel said car, laterally adjacent **plate** members supported on said car, said **plate** menibers being pivoted at their adjacent edges for clockwise and countereclockwise swing re» spectively into

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means -Will move said members, and means operable by traveling movement of a supporting base* to vibrate one of said members while the members are in superposed relation. 50. An apparatus of the character described, comprising a base having a mold section thereon, said mold section having a mold recess to receive material to be molded, and a rotary device to form a vent groove in the material contained in said recess, said device being adapted for engagement with said section whereby relative movement between said base and device rotates said device to form a vent groove in said material. 51. An apparatus of the character described, comprising a supporting framework, a normally idle wheel rotatively carried by said framework, said wheel having a circumferential groove forming means adapted to form a groove in moldable material and being freely movable vertically with respect to said supporting framework, and means to start rotation of said wheel before engagement of said wheel with said material. 52. An apparatus of the character described, comprising a supporting framework, a normally idle wheel rotatively carried by said framework, said wheel having a circumferential groove forming means adapted to form a groove in moldable material and having its ends freely movable vertically with respect to each other and to said supporting framework, and means to start rotation of said wheel before engagement of said wheel with said material. 53. An apparatus of the character described, comprising a supporting framework, a wheel rotatively carried by said framework, said wheel having a circumferential groove forming means and being freely movable vertically with respect to said supporting framework, and brake means resisting rotation of said wheel. 54. An apparatus of the character described, comprising a supporting member, horizontally spaced pivoted supporting arms, carried by said member, each of said arms having in its free end a journal bearing, and a wheel having circumferential groove forming means, and positioned between said arms, said pins journaled in said bearings, said pins being movable upwardly in said bearings so as to move into and out of said bearings whereby the ends of said wheel are movable vertically with respect to each other and to said supporting member. 55. An apparatus of the character described, comprising a supporting member, horizontally spaced pivoted supporting arms, carried by said member, each of said arms having in its free end a journal bearing, a wheel having circumferential groove forming means positioned between said arms and having pins journaled in said bearings, said pins being movable upwardly in said bearings whereby the ends of said wheel are movable vertically with respect to each other and to said supporting member, and means for adjusting the free ends of said supporting arms with respect to said supporting member. 56. An apparatus of the character described, comprising a hopper for containing finely divided material, a vertical feed chute, conveyor means for delivering material from said hopper to the top of said chute, a supporting means having a material receiving recess and positioned below said chute for receiving material therefrom, said chute and supporting means being relatively movable whereby said recess is traversed by said chute, and means to operate said conveyor means to deliver material to said recess upon relative movement between said supporting means and said chute. 57. An apparatus of the character described, comprising a hopper for containing finely divided material, a vertical feed chute, conveyor means for delivering material from said hopper to the top of said chute, a supporting means having a material receiving recess and positioned below said chute for receiving material therefrom, said chute and supporting means being relatively movable whereby said recess is traversed by said chute, means to operate said conveyor means to deliver material to said recess upon relative movement between said supporting means and said chute, means to remove excess material from said recess, and means to return the removed excess material to said hopper. 58. An apparatus of the character described, comprising a mold section having a recess for receiving material to be molded, supporting means above said section, said section and said means being relatively movable, and a plate member carried by said supporting means and having a portion normally disposed below the top plane of the material received by said section and normally urged downward for pressing engagement with the material to be molded thereby to press the material into said recess. 59. An apparatus of the character described, comprising a mold section having a recess for receiving material to be molded, supporting means above said section, said section and said means being relatively movable, and an inclined plate member carried by said supporting means and normally urged downward for engagement with material to be molded and thereby remove excess material from said section and press the remaining material into said recess. 60. An apparatus of the character described, comprising mold sections having a horizontal booked position, an automatically operated hammer means positioned to strike one of said booked sections, said sections and said hammer means being relatively movable, and means operated as said booked sections take position to be struck by said hammer means to cause operation of said hammer means. 61. An apparatus of the character described, comprising a trackway, a car on said trackway and having mold sections supported thereon, said sections having a horizontal booked position, means to propel said car along said trackway, an automatically operated hammer means having reciprocable striking movement and positioned to strike one of the booked sections as said sections are moved past said hammer means, said hammer means being supported to swing in a horizontal plane to permit movement of said sections into position to be operated upon by said hammer means, means normally maintaining said hammer means in operable position, and car operated means to start and stop said hammer means. 62. An apparatus of the character described, comprising a trackway, a car on said trackway to travel thereon, means to propel said car along said trackway, mold members positioned on said car in lateral relation to each other and pivoted on said car, means associated with the trackway and acting by travelling movement of the car to engage said mold members to move said members into substantially parallel vertical opposed relation, then to move said members while in such opposed relation into substantially horizontal superposed relation, and then to move the topmost member into lateral spaced relation to the lowermost member: In testimony whereof I have hereunto signed my name

Classifications:

International (IPC 8-9): B22C11/00 (Advanced/Invention);

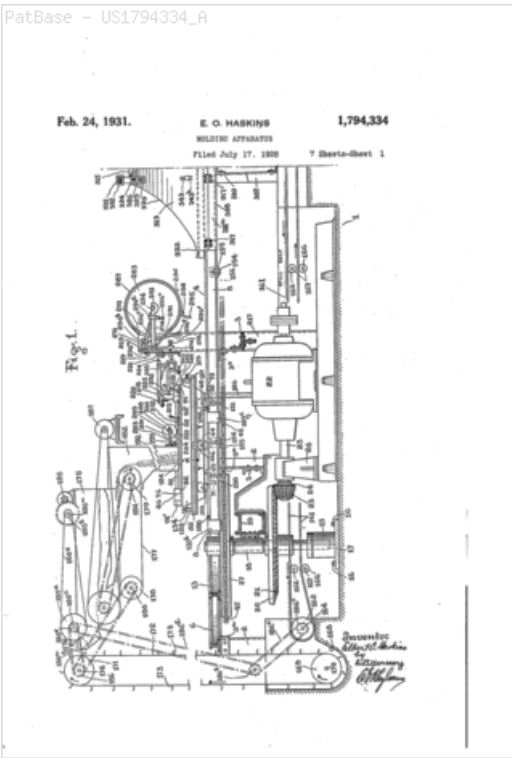
B22C11/00 (Core/Invention)

International (IPC 1-7): B22C11/06

CPC: B22C11/00

European: B22C11/00

US: 164/158 164/192 164/205 164/324 164/5



Family:

Publication number	Publication date	Application number	Application date
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Priority:

US19280293438 19280717

Probable Assignee:	AMERICAN RADIATOR CO
Assignee(s): (std):	AMERICAN RADIATOR CO
Assignee(s):	AMERICAN RADIATOR COMPANY
Inventor(s): (std):	HASKINS ELBERT O

Title: Improvements in and relating to centrifugal casting and to forming a mold for use therewith

Abstract: Source: GB650683A 650,683. Moulding-**machines** centrifugal casting-**machines**. HERMAN PNEUMATIC **MACHINE** CO. Jan. 24, 1947, No. 2256. Convention date, Feb. 18, 1946. [Class 83 (i)] Apparatus for making a mould for centrifugally casting hollow articles comprises a flask open at each end, means for rotating the flask about its **axis**, means for introducing moulding material into the flask, compacting means movable firstly **axially** through the flask and then transversely so as to compact the material to form a cylindrical mould as the flask rotates. After the mould has been completed, molten metal is introduced at one end and the cast article is removed from the other end. The base 2 of the apparatus has uprights 3, Fig. 5, carrying coaxial bearings 4 and 5. In the bearing 4 is a **shaft** 6 adapted to be rocked from a **cylinder** 10 through a piston-rod 9 and arm 7. Through the bearing 5 passes a **shaft** 14 adapted to be driven from a **motor** 17 through a reduction **gear** 15. The flask 20 is carried by a support 19 having legs 18 pivotally mounted on the inner end of the **shaft** 6, to which one leg is keyed, and on a sleeve 13 carried by the **shaft** 14 on the inner end of which is a bevel **pinion** 22 meshing with a similar **pinion** on a **shaft** 24. A **pulley** 26 on this latter **shaft** is coupled to a **pulley** 27 on the flask by a **belt** 28 so that the flask may be rotated about its **axis** by means of the **motor** 17 and may be turned from the horizontal to the vertical position by the **cylinder** 10 as indicated in Fig. 1. The flask has radial cooling fins 30 and is rotatably mounted in bearings 29. Mounted on a track 31 above the flask are trucks 32, 33 rigidly connected by a bar 34 and adapted to be moved by a **cylinder** 37 so that in one position the carriage 32 which has a bin 38 is beneath a hopper 39 while the carriage 33 which has a vertically movable ejector 43 is aligned with the **axis** of the flask when the latter is in its vertical position. In the other position of the carriages, mould material may be discharged into the flask from the bin 38. Mounted on tracks 46 beyond the flask is a carriage 47 which may be traversed by means of a **motor** 49, **pinion** 51 and stationary rack 48. Movable transversely on the carriage by a **cylinder** 55 is a member 52 from which project towards the flask, a mandrel 60 and a tube 61 within which is a screw conveyor driven by a **motor** 65. In operation, the flask is moved into its vertical position and receives a charge of mould material from the bin 38, the lower end of the flask having been closed by a slidable **plate** 94. The flask is then rotated, restored to the horizontal position, the closure **plate** moved, and carriage 47 and member 52 operated so that the tube 61 is passed **axially** through the flask, any surplus material being removed by the conveyor. The tube is then withdrawn and the mandrel 60 passed through the tube so that its end 77 is journaled in a support 72 carried by a slide 71. By means of **stops** 85, 86 carried by a rockable **shaft** 80, the slide 71 and member 52 are positioned to give the mandrel a predetermined eccentricity relatively to the flask so that the mould material is smoothed and compacted to the required diameter, the mandrel being rotated by frictional contact with the material. Portions 69b and 69c on the tube 61 and 89 on the mandrel form a bell-mouth at the end of the mould. The mandrel is then withdrawn, a cone 90, Fig. 6, inserted in the end of the mould and molten metal is poured in from the other end to form the pipe shown at 107. After the molten metal has solidified, the flask is turned into its vertical position and the member 43 is moved downwardly to eject both the casting and the mould material from the flask. In a modified form of apparatus, the **motor** for rotating the flask is mounted on the flask support 19 thereby eliminating the bevel **gearing** 22, 25.

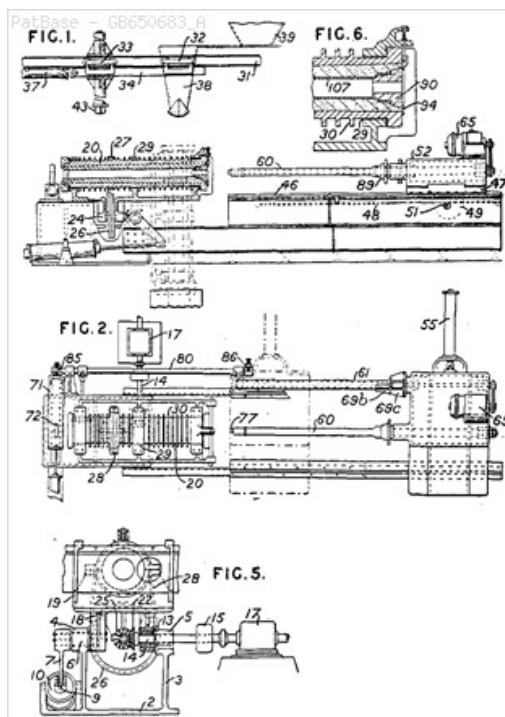
Classifications:

International (IPC 8-9): B22D13/02 (Advanced/Invention); B22D13/00 (Core/Invention)

International (IPC 1-7): B22D13/02

CPC: B22D13/02 B22D13/023

European: B22D13/02 B22D13/02H



Family:

Publication number	Publication date	Application number	Application date
DE934846 A	19551103	DE1951H008027	19510331
GB650683 A	19510228	GB19470002256	19470124

Priority:

19460218 DE1951H008027 19510331

Probable Assignee: HERMAN PNEUMATIC MACHINE CO

Assignee(s): (std): HERMAN PNEUMATIC MACHINE CO

Assignee(s): HERMAN PNEUMATIC MACHINE COMPA ; HERMAN PNEUMATIC MACHINE COMPANY

Inventor(s): (std): JOHNSTON LOYAL LLOYD

Title: Improvements in or relating to an apparatus for casting hollow articles

Abstract: Source: GB732785A 732,785. Moulding hollow articles from vinyl resin. SUN RUBBER CO. Feb. 26, 1952, No. 4996/52. Class 87 (2). Hollow articles are made from plasticized vinyl resin by delivering a measured charge of the resin to non-porous moulds which are rotated about a number of axes as the resin is gelled, fused and finally cooled in the moulds. Each mould 105, Figs. 3, 4, is mounted in a yoke 100 which is rotated about a **shaft** 99 by bevel **wheels** 102, 103 and **sprockets** 80, 89 connected by a **chain** 90. The yoke is mounted on the extremity of an L-shaped crank 82 the inner end of which is fixed to a **shaft** 72. The **shafts** 72 are journaled in a double conveyor **chain** 24 which comprises **rollers** 28 and links 25. During a certain portion of the travel of the conveyor, a **pinion** 76 fixed to the centre of the **shaft** 72 engages a rack 78 and the crank 82 is caused to rotate. The **sprocket** 80, rotatably mounted on the **shaft** 72, rotates with the **shaft** until a pin 94, fixed to the **sprocket**, strikes the conveyor **chain** and holds the **sprocket** stationary. Under these conditions the **chain** 90 will drive the **sprocket** 89 as the crank 82 moves about the **axis** 72. The moulds will thus be rotated about two axes. The rack 78 extends from the filling station at the righthand end of the **machine** through a heat-insulated oven 55. Figs. 1, 3, where the plastic material is gelled and fused in the rotating moulds. The oven contains two long chambers enclosed by reflecting walls 58, 60. It is heated by heaters 59 and the temperature, which may vary from 300? to 650?F., is controlled by heat-sensitive bulbs 69. On leaving' the oven, the moulds pass around the conveyor driving **wheel** 39 and thence through a cooling tunnel 64 where the moulds are cooled by water sprays fixed to the roofs of two parallel cooling chambers. The **pinions** have by this time left the rack 78 so that the cranks hang under their own weight and the yokes take up a non-uniform angular position with respect to the conveyor. As each mould enters the cooling chamber a **roller** 92, Figs. 4, 13, strikes a pin 170 fixed to the girder 20 and the crank is rocked to the angular position shown in Fig. 13. During this rocking movement, rotation of the **sprocket** 80 is arrested by contact of the pin 94, which is now under the conveyor, with the underside of the **chain** and this results in a rotation of the yoke to a position at right-angles to the **chain**. As the **roller** 92 passes off the pin 170, the crank falls by gravity to the vertical position. The yoke, however, remains in the desired position since the pin rotates with the **sprocket** 80 away from the **chain**. Before the yokes enter the mould-opening mechanism, Fig. 14, it is necessary to turn them into a position parallel to the conveyor **chain** with the slide-bars 118 lowermost and this is done by interposing, in the path of cam shoes 96 on the cranks 82 a **plate** 182 which has a similar effect to the pin 170. The shoe 96 now passes from the **plate** 182 onto a curved cam track 185 and the yoke enters the flared opening between a pair of vertical **plates** 190, 191, Figs. 14, 16, the locking lever 134 being rotated to the open position as its arm 137 strikes a raised portion of the **plate** 191. The unlocked mould is opened by the curved cams 198 which engage the **roller** 125 on the end of the slide bar 118. It is then discharged by hand. As each mould passes from the opening station to the charging station, Fig. 20, it is guided by engagement of the **roller** 92 in a track 145. During passage through the charging station the **roller** rides on cams 148, 156 whilst the **rollers** 125 are guided on curved rails 161 fixed to the inside of a pair of parallel **plates** 164. The empty moulds may be sprayed with a plasticizer (acting as a wetting agent) by means of spray guns 320 actuated by a microswitch 323. At the charging station the yokes actuate two further microswitches 311, 312 one of which causes a pivoted solenoid-operated delivery nozzle (not shown) to tilt forward over the lower mould-half whilst the other causes a measured charge to be delivered to the nozzle. When the **rollers** reach the end of the rails 161 the upper mould-half falls and closes the mould. A pneumatic hammer 201 controlled by microswitches ensures that the mould is properly closed. Thereafter the locking lever 134 is closed as its arm strikes a spring-loaded **roller** (not shown). If the lock fails to operate, the arm strikes a microswitch which **stops** the conveyor.

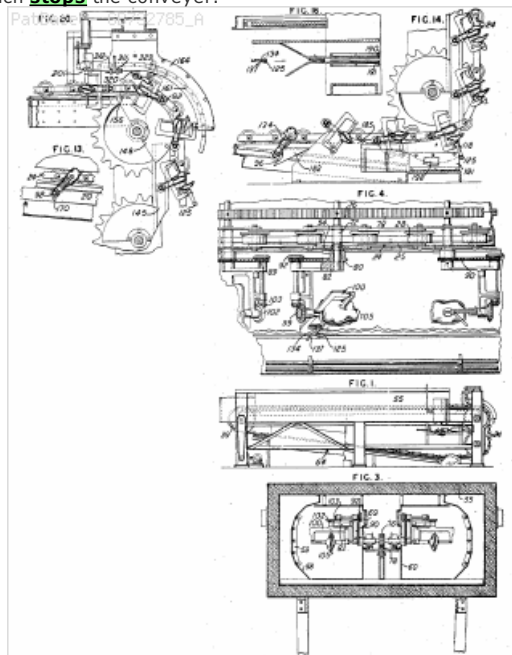
Classifications:

International (IPC 8-9): B29C41/06 (Advanced/Invention)

International (IPC 1-7): B29C5/04

CPC: B29C41/06

European: B29C41/06



Family:

Publication number	Publication date	Application number	Application date
GB732785 A	19550629	GB19530004996	19530226

Priority:

GB19530004996D 19530226

GB19530004996 19530226

Probable Assignee:

SUN RUBBER CO

Assignee(s): (std):

SUN RUBBER CO

Assignee(s):

THE SUN RUBBER COMPANY

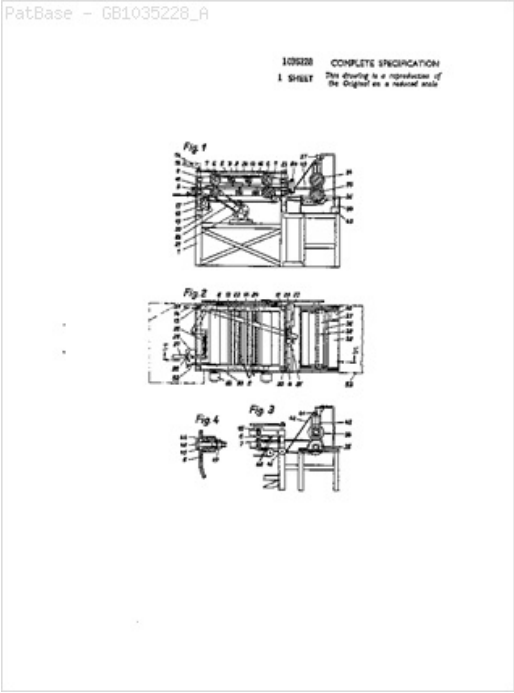
Inventor(s): (std):

MARTIN HENRY ; REKETTYE PAUL

Title: Machine for cleaning shuttering planks

Abstract: Source: GB1035228A 1,035,228. Cleaning shuttering c. K. LAULE. April 9, 1963 [April 10, 1962; Aug. 6, 1962], No. 14057/63. Heading F2N. A machine for cleaning shuttering plates or planks includes scrapers arranged in a plate guide track, the individual scrapers each comprising a plurality of scraping elements arranged in juxtaposition and are either resilient or resiliently mounted. As shown, frames 8, 9 carry inclined scrapers 3, 2, the upper frame 8 being vertically adjustable on spindles 10 operatively connected by a chain 12 and carrying resiliently mounted feed cylinders 6 driven, together with feed cylinders 7 on the frame 9, by a chain 16 and a motor 21. Arranged on the frame 9 is a fixed side scraper and a displaceable side scraper subjected to the tension of a spring. The axles of the cylinders 6, 7 support cleaning cylinders 32 and there are end scrapers; the cylinders are grooved both axially and transversely. The cleaned plates c. are coated with an impregnating liquid by passage between cylinders 34, 35 covered with foam material. Brushes are mounted on the frames 8, 9.

Classifications:
International (IPC 8-9): E04G19/00 (Advanced/Invention); E04G19/00 (Core/Invention)
International (IPC 1-7): E04G19/00
CPC: E04G19/006
European: E04G19/00B



Family:

Publication number	Publication date	Application number	Application date
AT242347 B	19650910	AT19630002709	19630404
CH415010 A	19660615	CH19630004416	19630405
DE1434375 B1	19700122	DE19621434375	19620410
DE1434376 A1	19690206	DE19621434376	19620806
GB1035228 A	19660706	GB19630014057	19630409

Priority:
DE1962L041706 19620410 DE1962L042649 19620806

Probable Assignee: LAULE KARL

Assignee(s): (std): KARL LAULE ; LAULE KARL

Inventor(s): (std): KARL LAULE ; LAULE KARL

Title: Press system for urethane parts

Abstract: Source: US6254371B The mold press includes a drive **arrangement** for controlling press movement and closure force. The drive **arrangement** includes a pair of generally identical drive units connected between upper and lower press **plates** adjacent opposite longitudinal ends of the press. The drive units in a preferred embodiment each employ a ball-screw drive **arrangement**. The screw **shaft** extends vertically between the top and bottom press **plates**. The screw **shaft** engages a ball nut mounted on one press **plate**, typically the bottom press **plate** which is disposed for movement toward and away from the top press **plate**. A first high speed drive **arrangement** employing a first **electric motor** is coupled to the screw **shafts** for effecting high speed opening and closing of the bottom press **plate**. A second low-speed driving **arrangement** including a second **electric motor** is drivingly connected to the ball-nut **assemblies** for permitting low-speed but high-torque driving of the nut units for final closing of the press and application of the desired press force. Each drive unit has the screw **shaft** resiliently supported for limited **axial** displacement relative to the upper press **plate** so that, when the second drive system is activated to effect final closure of the mold, one or the other of the screw **shafts** can be **axially** displaced a small amount if necessary so as to permit full closure between the opposed upper and lower mold parts even though irregularities may cause one longitudinal end of the mold parts to contact and close prior to the other longitudinal end.

Classifications:

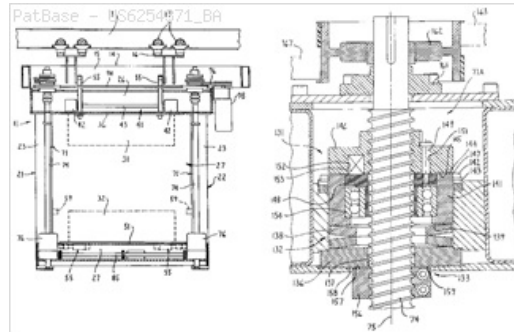
International (IPC 8-9): B29C33/22 B29C33/36 B29C45/00 B29C45/04 (Advanced/Invention)

International (IPC 1-7): B29C33/20 B29C33/22 B29C33/36 B29C44/34 B29C45/00 B29C45/04

CPC: B29C33/22 B29C33/36 B29C45/0441 B29C2045/0483 B29K2075/00

European: B29C33/22 B29C33/36 B29C45/04D L29C45/04G L29K75/00

US: 425/214 425/451.2 425/451.7 425/590



Family:

Publication number	Publication date	Application number	Application date
AT237447 E	20030515	AT19980941650T	19980819
CA2300860 AA	20000217	CA19982300860	19980819
DE69813585 D1	20030522	DE19986013585	19980819
DE69813585 T2	20040304	DE19986013585T	19980819
EP1015219 A2	20000705	EP19980941650	19980819
EP1015219 B1	20030416	EP19980941650	19980819
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WO9910155 A2	19990304	WO1998IB01467	19980819
WO9910155 A3	19990610	WO1998IB01467	19980819

Priority:

US19970915621 19970821 US19980041068 19980312 WO1998IB01467 19980819

Probable Assignee: KONAL ENGINEERING AND EQUIPMENT INC

Assignee(s): (std): KONAL ENGINEERING AND EQUIPMEN

Assignee(s): KONAL ENGINEERING AND EQUIPMENT INC ; KONAL ENGINEERING AND EQUIPMENT INC BLENHEIM ; MCNALLY DOUGLAS J ; WALLACE KEITH

Inventor(s): (std): MCNALLY J ; WALLACE KEITH ; MCNALLY DOUGLAS J

Agent(s): KIRBY EADES GALE BAKER

Designated states: AT BE CA CH CN CY DE DK ES FI FR GB GR ID IE IT JP KR LU MC NL PT SE SG

Title: RAISED ISLAND ABRASIVE AND PROCESS OF MANUFACTURE

Abstract: Source: US2002061723A Abrasive sheet materials, abrasive sheet materials with island distributions of abrasive particles, processes for manufacture of abrasive sheet materials with minimized abrasive content, processes for attaching abrasive particles exclusively on the top surface of raised islands in monolayers, and processes for attaching raised island foundation structures to inexpensive flexible backing sheets are described. The process for manufacturing the abrasive sheeting provides an economical method for providing improved quality abrasive sheeting, while also allowing for greater control over the shape and distribution of abrasive islands on the sheet than is available from present processes of manufacture.

Classifications:

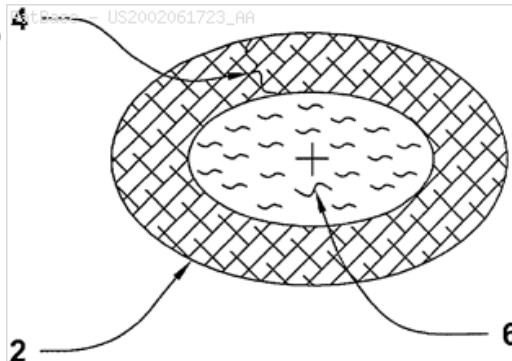
International (IPC 8-9): B23P25/00 B24B1/00 B24B27/00 B24B37/00 B24B37/04 B24B45/00 B24B5/00 B24B7/00 B24B9/00 B24D11/00 B24D18/00 B24D3/00 B24D3/28 B24D9/10 B29B11/16 B29B9/00 B29B9/08 C09K3/14 (Advanced/Invention); B24B1/00 B24B7/00 B24D11/00 B24D18/00 B24D3/00 C09K3/14 (Core/Invention)

International (IPC 1-7): B24B1/00 B24B5/00 B24B7/19 B24D11/00 B24D18/00 B24D3/00 C09K3/14

CPC: B24B1/00 B24B5/00 B24B7/00 B24B9/00 B24B37/00 B24B37/14 B24B45/00 B24D9/10 B24B37/042 B24B37/12 B24B37/245 B24B37/26 Y10T29/4998 Y10T29/49982 B24D11/001 C09K3/1436 B24D11/00 B24D18/00

European: B24B1/00 B24B37/00 B24B37/04B B24B37/12 B24B37/14 B24B37/24F B24B37/26 B24B45/00 B24B5/00 B24B7/00 B24B9/00 B24D11/00 B24D11/00B B24D18/00 B24D9/10 C09K3/14C

US: 264/11 264/12 264/13 264/15 29/527.1 29/527.2 451/178 451/259 451/259P 451/28 451/285 451/286 451/287 451/290 451/36 451/360 451/41 451/449 451/494 451/527 451/527P 451/53 451/530 451/533 451/539 451/548 451/548P 451/550 451/56 451/56P 451/59 51/293 51/293S 51/298 51/300 51/300S 51/309



Family:

Publication number	Publication date	Application number	Application date
EP1207015 A2	20020522	EP20010309698	20011116
EP1207015 A3	20030730	EP20010309698	20011116
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US2002061723 AA	20020523	US20010015478	20011213
US2004235406 AA	20041125	US20040824107	20040414
US2005032469 AA	20050210	US20040816275	20040816
US2005118939 AA	20050602	US20050029761	20050105
US2008299875 AA	20081204	US20080221265	20080730
US2010003904 AA	20100107	US20080217565	20080707
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US6149506 A	20001121	US19980168057	19981007
US6752700 BB	20040622	US20010015478	20011213
US6769969 BA	20040803	US20000715448	20001117
US7520800 BB	20090421	US20040816275	20040816
US7632434 BB	20091215	US20040824107	20040414
US8062098 BB	20111122	US20080217565	20080707
US8256091 BB	20120904	US20080221265	20080730
US8545583 BB	20131001	US20050029761	20050105

Priority:

US19970812012 19970306	US19980168057 19981007	US20000715448 20001117
US20040816275 20040401	US20050029761 20050105	US20040816275 20040816
US20040824107 20040414	US20030418257 20030416	US20010015478 20011213
US20080217565 20080707	US20080221265 20080730	

Probable Assignee: KELTECH ENGINEERING

Assignee(s): (std): DUESCHER WAYNE O ; KELTECH ENGINEERING ; KELTECH ENGINEERING INC

Inventor(s): (std): DUESCHER WAYNE O

Inventor(s): DUESCHER WAYNE

Agent(s): TSURUTA JUNICHI; NISHIYAMA MASAYA; HIGUCHI SOTOJI; ISHIDA TAKASHI; MARK A LITMAN AND ASSOCIATES PA YORK BUSINESS CENTER; MARK A LITMAN AND ASSOCIATES PA; YORK BUSINESS CENTER

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR