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Records:

104.695.878

Terms:

1.461.042.370

Occurrences:

20.553.442.808

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20170727

[EPODOC: SS 71] capsule and coffee

Results in

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1.589

[SS 72] support and capsule and coffee

Results in

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[SS 73] /ic A47J31/44

Results in

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24.618

[SS 74] support and capsule and coffe

Results in

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[SS 75] support and capsule and coffee

Results in

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[SS 76] sensor and stickers

Results in
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[SS 77] machine and sensor and stickers

Results in
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[SS 78] STRUCTURAL and ARRANGEMENT and APPARATUS and MAKING

Results in
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SHENYANG EVERBRIGHT ENV PROT GROUP CO LTD

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Processing apparatus of dairy waste water dross decrement

AB

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The utility model relates to a processing apparatus of dairy waste water dross decrement. The utility model discloses not influenced by the equalizing basin low water level even if provide one kind, system's operation is stable, but the long -time running reduces dairy waste water acidizing formation through making up the paddling process, realizes a processing apparatus of dairy waste water dross decrement of dross decrement function. The utility model discloses a cell body and the stirred tubular way that comprises intake pipe, stirred tubular, its structural feature lies in the stirred tubular way still includes inlet tube and air water mixing arrangement, and the inlet tube links to each other with air water mixing arrangement input respectively with the intake pipe, and air water mixing arrangement output links to each other with stirred tubular, is provided with the valve on intake pipe and the inlet tube respectively.

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CN201521085340U 20151224

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JIANGSU COLLEGE INFORMATION TECHNOLOGY

TI

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Dumpling wrapper device of integral type machine -shaping

AB

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The utility model discloses a dumpling wrapper device of integral type machine -shaping belongs to electromechanical device technical field, agitating mixing apparatus's bottom be equipped with the compression export, the below of compression export be equipped with the device of making dough, one side of the device of making dough be equipped with the extrusion export, the bottom of the device of making dough pass through the support and be connected with the frame, the front side of extrusion export be equipped with the compression roller, forming mechanism pass through strutting arrangement and connect in the frame, forming mechanism set up the front side at the compression roller, forming mechanism's below be equipped with the conveyer belt. Its structural design is reasonable, convenient operation, and the flexibility is good, and extrusion's face skin toughness is good, and the mechanical type accomplishes the shaping of dumpling wrapper, and its machining efficiency is high, has saved the human cost, and has guaranteed the uniformity of dumpling wrapper finished product quality.

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WO2016015126 A1 20160204

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[BR] ISR (A1) US2009007792 A1 20090108 [A] (GLUCKSMAN DOV Z [US], et al) [A] 1-8 * [0066]-[0068]; figures 2, 8-11 *; EP1522243 A2 20050413 [A] (HP INTELLECTUAL CORP [US]) [A] 1-8 * see paragraph 44, Figure 2 *; US8210095 B2 20120703 [A] (BREZOVNIK PETER [SI], et al) [A] 1-8 * the whole document *; WO2012064885 A1 20120518 [A] (ADG DEV LLC [US], et al) [A] 1-8 * see paragraphs [0066]-[0068], figures 3-8A *; US2006090653 A1 20060504 [A] (MCDUFFIE RICHARD [US], et al) [A] 1-8 * see figures 2, 14-27 *

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A47J31/36 ; A47J31/44 ; B67D1/08

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BLEND MÁQUINAS E BEBIDAS S A B [BR]

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STRUCTURAL ARRANGEMENT FOR THE LID OF THE CAPSULE COMPRESSION MEANS OF AN APPARATUS FOR MAKING BEVERAGES

AB

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The present utility model pertains to the technological field of apparatuses for making beverages as defined in class A47J of the international patent classification (IPC). Problem to be solved: The capsule is at present in direct contact with the lid of the capsule compression means of the apparatus for making beverages, which can be detrimental to the cleanliness of the lid and possibly alter the functional layout of the lid. Solution to the problem: According to the new embodiment proposed, the lid is formed by two assemblable and disassemblable bodies, and the body which is in actual contact with the capsule comprises a modular body which is easy to remove, clean and replace.

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[BR] ISR (A1) WO2011141532 A1 20111117 [X] (NESTEC SA [CH], et al) [X] 1, 2 * See the whole document *; WO0228241 A1 20020411 [X] (BOYD COFFEE CO [US]) [X] 1, 2; WO2012010317 A1 20120126 [A] (KRUEGER GMBH & CO KG [DE], et al) [A] 1, 2 * See the whole document *; EP2071986 A1 20090624 [A] (NESTEC SA [CH]) [A] 1 * See claims 1, 3, 7; figures 3-4 *; WO2014091439 A1 20140619 [A] (LAVAZZA LUIGI SPA [IT]) [A] 1 * See claims 19 and 24; figures 5-14 *; WO2014006048 A2 20140109 [A] (UNILEVER PLC [GB], et al) [A] 1, 2 * See the whole document *

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A47J31/44 ; B67D1/08

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BLEND MÁQUINAS E BEBIDAS S A B [BR]

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STRUCTURAL ARRANGEMENT FOR APPARATUS FOR MAKING BEVERAGES

AB

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The present utility model pertains to the technological field of apparatuses for making beverages as defined in class A47J of the international patent classification (IPC). Problem to be solved: Automatic apparatuses for making beverages normally comprise an optical sensor which, for practical reasons, is located simply and closely to the beverage ingredient storage capsules, and sometimes inside the cavity for housing beverage ingredient storage capsules. This type of structure causes all processes inside said housing cavity to interfere with the optical sensor. Solution to the problem: A new structural arrangement for an apparatus for making beverages is disclosed, having the optical sensor arranged in said surface for retaining at least part of the edge of the beverage ingredient storage capsules, outside the cavity for housing the beverage ingredient storage capsules.

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| US| ISR (A1) US2006090252 A1 20060504 [X] (PANTOS WILLIAM P [US], et al); US5075906 A 19911231 [Y] (ROBBINS DANIEL T [US]); US1967104 A 19340717 [Y] (SORROW JR WALTER J); US5404595 A 19950411 [Y] (CARMEL YEHUDA [IL]); US2007056084 A1 20070315 [Y] (WATT GLENN M [NZ], et al); US6701539 B1 20040309 [Y] (HOGAN SHERMAN DAVID [US]); US6293286 B1 20010925 [Y] (GUERET JEAN-LOUIS [FR]); WO2006030222 A1 20060323 [Y] (ALLEN JEFFREY [GB], et al)

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A47K13/105
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NO TOUCH SYSTEMS INC [US]; PANTOS WILLIAM C [US]; SWORD CURTIS [US]
TI

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APPARATUS FOR LIFTING TOILET SEAT AND LID WITH FRICTION-BASED EMBODIMENTS FOR REGULATING DIFFERENTIAL LOWERING RATE OF THE SEAT AND LID
AB

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A toilet seat lifting and lowering device, i.e., one that does not require use of or touching with the hands is disclosed. The invention comprises several improved embodiments for not only making the lifting and lowering assembly more simplified but also for counterbalancing the seat and lid against the pedal. In preferred embodiments the invention comprises a torque transfer assembly comprising two interacting cams that can, depending upon the embodiment used, designed to be self limiting in their rotational travel such that the arc rotation of the seat travels from horizontal to about vertical. The apparatus further has a friction-regulated tension assembly that acts to attenuate the rate of drop of the seat while a separate friction structural arrangement between the seat and lid provide for a differential lowering rate for the lid thereby eliminating inherent slamming down of the lid onto the seat.

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US2009033585 A1 20090205

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US8646675 B2 20140211
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DE20041053388 20041102; DE20051028467 20050620; WO2005DE01932 20051027

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US20050718512 20051027

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|| R141 (A1) US5281855 A 19940125 [] (ZIRBES GLEN LEO [US], et al); US4641773 A 19870210 [] (MORINO RONALD [US], et al); US4642321 A 19870210 [] (SCHOENBERG ANDREW J [US], et al); US5186776 A 19930216 [] (BOYCE JOSEPH S [US], et al); US5288008 A 19940222 [] (HAJI HIROSHI [JP], et al); US5393001 A 19950228 [] (GUSTAFSON AKE [CH]); US5606488 A 19970225 [] (GUSTAFSON AKE [CH]); US6023837 A 20000215 [] (FINN DAVID [DE]); US6190942 B1 20010220 [] (WILM ROBERT [DE], et al); US2002020903 A1 20020221 [] (KREFT HANS-DIEDRICH [DE], et al); US6351525 B1 20020226 [] (RODRIGUEZ JUAN GILBERTO [MX]); US6521829 B2 20030218 [] (MATSUMURA KAZUHITO [JP], et al); US4437603 A 19840320 [] (KOBAYASHI MAMORU [JP], et al); US4912143 A 19900327 [] (AHN TAE O [KR], et al); US5094907 A 19920310 [] (YAMAMURA TAKEMI [JP], et al); US5294290 A 19940315 [] (REEB MAX E [DE]); US6698089 B2 20040302 [] (FINN DAVID [DE], et al); US6870497 B2 20050322 [] (KONDO YASUO [JP], et al); US5008619 A 19910416 [] (KEOGH RAYMOND J [US], et al); US3384283 A 19680521 [] (MIMS BRUCE L); US4450623 A 19840529 [] (BURR ROBERT P [US]); US6055720 A 20000502 [] (FINN DAVID [DE], et al); US6067235 A 20000523 [] (FINN DAVID [DE], et al); US6233818 B1 20010522 [] (FINN DAVID [DE], et al); US2002060239 A1 20020523 [] (OR SIU WING [HK], et al); US6897090 B2 20050524 [] (DISTEFANO THOMAS H [US], et al); US5770807 A 19980623 [] (FINN DAVID [DE], et al); US5773812 A 19980630 [] (KREFT HANS-DIEDRICH [DE]); US7059535 B2 20060613 [] (RIETZLER MANFRED [DE]); US7229022 B2 20070612 [] (RIETZLER MANFRED [DE]); US3674602 A 19720704 [] (KEOGH RAYMOND J, et al); US3674914 A 19720704 [] (BURR ROBERT PAGE); US5531390 A 19960702 [] (GUSTAFSON AKE [CH]); US5535043 A 19960709 [] (LA FIANDRA CARLO [US], et al); US5649352 A 19970722 [] (GUSTAFSON AKE [CH]); US6088230 A 20000711 [] (FINN DAVID [DE], et al); US4861533 A 19890829 [] (BERTIN ROBERT [US], et al); US5041826 A 19910820 [] (MILHEISER THOMAS A [US]); US6095423 A 20000801 [] (HOUDEAU DETLEF [DE], et al); US6604686 B1 20030812 [] (TABAN VAHID [US]); US6779348 B2 20040824 [] (TABAN VAHID [US]); US4693778 A 19870915 [] (SWIGGETT BRIAN E [US], et al); US5809633 A 19980922 [] (MUNDIGL JOSEF [DE], et al); US6288443 B1 20010911 [] (FINN DAVID [DE], et al); US6626364 B2 20030930 [] (TABAN VAHID [US]); US6628240 B2 20030930 [] (AMADEO PAUL [US]); US2006208066 A1 20060921 [] (FINN DAVID [IE], et al); US7105915 B1 20060912 [] (FINN DAVID [DE], et al); US6295720 B1 20011002 [] (FINN DAVID [DE], et al); US6310778 B1 20011030 [] (FINN DAVID [DE], et al); US6471878 B1 20021029 [] (GREENE MORTON [US], et al); US5365657 A 19941122 [] (BROWN JERALD L [US], et al); US6142381 A 20001107 [] (FINN DAVID [DE], et al); US6152348 A 20001128 [] (FINN DAVID [DE], et al); US6313566 B1 20011106 [] (CUNNINGHAM JOHN [US], et al); US6810580 B2 20041102 [] (YAMAGUCHI SHIGEO [JP], et al); US4711026 A 19871208 [] (SWIGGETT BRIAN E [US], et al); US4791285 A 19881213 [] (OHKI SHINJI [JP]); US6008993 A 19991228 [] (KREFT HANS-DIEDRICH [DE]); US6662430 B2 20031216 [] (BRADY MICHAEL JOHN [US], et al); US3116889 A 19640107 [] (LASCH JR CECIL A, et al); US3917148 A 19751104 [] (RUNYON ROBERT C); US5201453 A 19930413 [] (AMADOR GONZALO [US], et al); US5377894 A 19950103 [] (MIZOGUCHI KIYOSHI [JP], et al); US6102275 A 20000815 [] (HILL WILLIAM H [US], et al); US6173879 B1 20010116 [] (CHIBA HIDEKAZU [JP]); US2002027152 A1 20020307 [] (USHIKI HIROSHI [JP], et al); US6491202 B1 20021210 [] (KYOMASU RYUICHI [JP], et al)

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|| STSE (B2) US5535043 A 19960709 [] (LA FIANDRA CARLO [US], et al); US6313566 B1 20011106 [] (CUNNINGHAM JOHN [US], et al); US2002060239 A1 20020523 [] (OR SIU WING [HK], et al)

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B23K20/005 ; B23K20/106 ; H01L24/78 ; H05K13/06

CLC

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H01L2924/01015, H01L2924/00 , ADD

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H01L2924/00014, H01L2224/48 , ADD

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H01L2224/45147, H01L2924/00014 , ADD

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H01L2924/12042, H01L2924/00 , ADD
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H01L2924/12042 ; H01L24/45 ; H01L2224/45147 ; H01L2224/78301 ; H01L2224/85205 ; H01L2924/00014 ;
H01L2924/01005 ; H01L2924/01006 ; H01L2924/01015 ; H01L2924/01023 ; H01L2924/01029 ; H01L2924/01033 ;
H01L2924/01052 ; H01L2924/01057 ; H01L2924/01068 ; H01L2924/19043 ; Y10T29/49018 ; Y10T29/5313 ; Y10T29/53174 ;
Y10T29/53261
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(A1) IMASYS AG [DE]

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(B2) LANG ULRICH [DE]; HID GLOBAL GMBH [DE]
TI

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(A1) LAYING APPARATUS, CONTACT-MAKING APPARATUS, MOVEMENT SYSTEM, LAYING AND CONTACT-MAKING UNIT,
PRODUCTION SYSTEM, METHOD FOR PRODUCTION AND A TRANSPONDER UNIT

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(B2) Laying apparatus, contact-making apparatus, movement system, laying and contact-making unit, production system,
method for production and a transponder unit
AB

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(A1 B2) The invention relates to a laying device which is used to lay wire windings on transponder units, wherein the wire is
guided in an axial manner in the laying device, a contacting device is used place the wires in contact with an automatic
thermal clamping arrangement, an advancing system is used to advance machining devices by means of a piezo-leg-motor,
a production system is used to produce transponder units in a console structural manner. The invention also relates to a
method for the production of transponder units with horizontal ultrasonic introduction and a transponder unit wherein the
wire ends engage directly on the ends of the connection surfaces of the chip.

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US20070981274 20071030; WO2005US38923 20051028; US20050261118 20051028; US20050187252 20050725; US20040979039 20041102; US20040640537P 20041230

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Apparatus for lifting toilet seat and lid with friction-based embodiments for regulating differential lowering rate of the seat and lid

AB

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A toilet seat lifting and lowering device, i.e., one that does not require use of or touching with the hands is disclosed. The invention comprises several improved embodiments for not only making the lifting and lowering assembly more simplified but also for counterbalancing the seat and lid against the pedal. In preferred embodiments the invention comprises a torque transfer assembly comprising two interacting cams that can, depending upon the embodiment used, designed to be self limiting in their rotational travel such that the arc rotation of the seat travels from horizontal to about vertical. The apparatus further has a friction-regulated tension assembly that acts to attenuate the rate of drop of the seat while a separate friction structural arrangement between the seat and lid provide for a differential lowering rate for the lid thereby eliminating inherent slamming down of the lid onto the seat.

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AGRIBOARD IND [US]

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Apparatus for making compressed agricultural fiber structural board

AB

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A mill is described for compacting agricultural fibrous matter, such as straw or other agricultural waste, into a structural board. The board is useful as a dominant part of a load bearing and insulating panel replacing many of the load bearing and insulating structures typically used to make small buildings, such as houses. The mill includes many features not found in previous mills of this type, including not only a packer to place material in front of an oscillating ram head as is known, but a precompactor arrangement to regulate the volume of material fed to the packer. Another feature incorporated into the mill to aid in achieving a consistent density is a pressure offset mechanism which adjusts the rate of core formation. The mill has a modular design to facilitate replacement of those components subjected to significant wear.

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B23K26/06 ; B23K26/0648 ; B23K26/067 ; B23K26/16 ; B41J2/162 ; B41J2/1634 ; B41J2/1637 ; B23K26/064 ; B23K26/364 ; B23K26/389 ; B23K26/066

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CANON KK [JP]

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Laser processing apparatus and method for manufacturing a liquid jet recording head by use of such laser processing apparatus

AB

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A laser processing apparatus is provided with a light source to generate laser beam, a lens to guide laser beam to a predetermined portion of a blank that becomes a structural member of a liquid jet recording head, a split prism arranged on the optical path between the light source and the lens. This laser processing apparatus is arranged to further include a rotary mechanism capable of rotating the lens centering on the optical axis of the laser beam. With the structure thus arranged, it is possible to prevent the lens from being locally damaged by the irradiation of laser beam, thus making the life of the lens longer, while reducing the frequency of lens replacements. This arrangement leads to the implementation of a

significant reduction of maintenance costs of the apparatus, as well as to the simplified manufacture of a liquid jet recording head at lower costs.

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NORDBAK JOHN A

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Apparatus for making a prestressed concrete slab

AB

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A plurality of cables to be prestressed and made a part of the final concrete slab, each have their ends secured within a plate with the overall arrangement of wires or cables being of a geometry substantially that of the desired final structural

unit. A pair of lever bars pivotally related at their ends are connected to the plates such that when pivoted into straight line relation, the plate securing the ends of the cables are separated from one another, placing the wires in tension. The entire set of stressed cables and lever bars is lifted as a unit and placed onto a horizontal surface having upstanding means received through openings in the plates. Adjustment screws secure the plates to the upstanding means on the horizontal surface, after which the lever bars are removed. Concrete is poured over the tension cables, forming the structural slab, after which on setting up, the end plates are removed from the wires, leaving the prestressed concrete slab with implanted tension wires.

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B08B15/00 ; B23K7/002 ; B23Q11/0046

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LUKENS STEEL CO

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BURNING TABLE AND EXHAUST SYSTEM THEREFOR

AB

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Its might be actuated by the plasma produced by the torch to control the exhaust flow. But this in itself posed a problem inasmuch as it was known from experience that the support grating's vertical dimension had to be sufficient so that it could be cut repeatedly and still retain the structural capability to support heavy loads. Still further, the grating needed to be sufficiently flexible to withstand flattening by heavy loads without distortion by repeated heating and cutting. These requirements in themselves seemed inconsistent with the design of a grating which would permit the plasma of a cutting torch to extend below it in all types of torch cutting operations. Still further, the openings in the grating should be such as to provide support for small pieces of plate and scrap which may be left on the grating after completion of a cutting operation. Moreover, needless to say, the cost of the grating which is considered expendable could not be great. The inventors' solution was to locate the support bars diagonally at 45 DEG whereby long cuts of the bars were statistically reduced when the usual rectangular type patterns are being cut in supported metal plates. Short stiffening bars are staggered between the supporting bars so that the longer diagonal bars remain stable to the extent that they will not roll or twist under impact while at the same time the entire assembly is sufficiently flexible for its purposes. The grating could have a greatly reduced vertical dimension for a given amount of use. Thus it was possible to provide photoelectric cells and associated circuitry for the actuation of exhaust from the ducts involved. The ducts have been formed by utilizing the steel plate partitions which support grating to function as the sides of the ducts and the work piece itself forms the top of the ducts. By making these partitions removable, cleaning becomes a simple task compared to conventional designs. The resulting structure is rugged and in combination with the expendable grating, the heavy plate partitions should last almost indefinitely. An exhaust system which is selective to the duct space wherein the actual burning and smoke production takes place is provided by a manifold located longitudinally adjacent the burning table and includes therein a series of openings one of which is for each duct. Such openings are located in a horizontal dividing plate within the manifold and a simple hinged horizontal plate or door with a deep lip soft sealing ring provides a self-cleaning effective sealing vent door for each duct. Also an arrangement is provided whereby the smoke and fume laden air is required to make a 90 DEG turn prior to entering the vent opening whereby heavy particles and objects are slung out of the path of the air and dropped to the bottom plate of the chamber for easy removal. The hinged door is virtually fool proof and is of a type which can be operated over an extended period without appreciable air leakage. The long lipped sealing ring eliminates the necessity of machining around the vent opening and alignment is therefore not critical. The arrangement also minimizes assembly time machining and thus contributes to economical fabrication. Although the air seal is not absolutely airtight, it is sufficiently so for the function of the apparatus and does not require adjustment.

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WILSON PETER C; ROBERT P HUGHART

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APPARATUS FOR CENTRIFUGALLY REMOVING LIQUID FROM A MIXTURE

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A method and apparatus for continuously removing, through a centrifuging operation, liquid from a mixture including therein a cellulose fiber pulp of organic origin which is used or could be used in the making of paper. The method involves impinging the mixture upon a rotating screen surface to form a layer of lightly compacted, relatively porous, fibrous material thereon and passing a portion of liquid through said porous layer of material and through said screen followed by effecting a further removal of the liquid from said mixture by cleaning said screen surface by moving the edge of a transporting member adjacent said screen surface while simultaneously producing and maintaining a mass of densely compacted, relatively impervious, fibrous material between said edge and said screen and using said mass to remove continuously from said screen surface fibrous material deposited thereon, and rolling, wringing and redepositing said fibrous material upon said screen surface while passing additional liquid through said screen and moving said fibrous material along said screen surface. The mixture is centrifuged at a force varying within a range between approximately 70 and 650 times the force of gravity. The fibrous material passing with the liquid through the screen is recovered by impinging the liquid-fibrous material upon the surface of a second screen. The method may also be used with a mixture containing fibers which are relatively short in length by adding to said mixture a predetermined quantity of fibers having a relatively long length. The apparatus comprises a hollow, rotatably mounted screen means, a scroll member rotatably mounted concentrically within said screen means, and means for rotating the scroll member at a predetermined angular velocity differential relative to the angular velocity of rotation of the screen means. The screen means preferably has a circularly shaped inner surface and a plurality of openings formed therethrough, the minimum dimension of said openings, taken in a direction generally normal to the longitudinal axis of said openings, varying within a range of not less than approximately 0.3 millimeters nor more than approximately 3 millimeters. The scroll member has a plurality of helical flights formed on the surface thereof so constructed and arranged to prevent fibrous material from "bridging" between adjacent flights. This construction and arrangement includes helical flights disposed to form an included angle with a plane disposed perpendicular to the longitudinal axis of the scroll member not more than approximately 65 DEG , and perpendicularly spacing each flight from an adjacent flight by an amount equaling at least approximately 0.03 and preferably 0.04 times the inner circumference of the screen means. The clearance between the edge of each flight and the inner surface of the screen means adjacent the end into which the mixture is supplied to the apparatus equals approximately not more than 0.004 times the inner diameter of the screen means. A relationship exists between certain structural parts of the apparatus

whereby, upon operation thereof, the fibrous material is retained upon the inner surface of the screen means at least approximately 11/2 seconds and preferably about 3 seconds.

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US3890077 A []; US4025278 A []; US4212616 A []; US4451322 A []; US5413746 A []; US5498478 A []

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Apparatus and method for making compressed agricultural fiber structural board

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A mill is described for compacting agricultural fibrous matter, such as straw or other agricultural waste, into a structural board. The board is useful as a dominant part of a load bearing and insulating panel replacing many of the load bearing and insulating structures typically used to make small buildings, such as houses. The mill includes many features not found in previous mills of this type, including not only a packer to place material in front of an oscillating ram head as is known, but a precompactor arrangement to regulate the volume of material fed to the packer. Another feature incorporated into the mill to aid in achieving a consistent density is a pressure offset mechanism which adjusts the rate of core formation. The mill has a modular design to facilitate replacement of those components subjected to significant wear.

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GB964804 A []; SU404529 A1 []; US2037247 A []; US2089475 A []; US2720241 A []; US2774406 A []; US3098518 A []; US4037458 A []; US4198844 A []

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ATLANTA GROTNES MACHINE COMPAN

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Method and apparatus for making beads on drums

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The present machine, sometimes known as a beader or drum beader, receives a steel drum in a horizontal position and expands circumferential beads into the body to provide structural strength. A pair of opposed heads which reciprocate in and out of the drum body are driven respectively by means of a crank arrangement comprising a connecting rod which is fixed with a pivoting joint on the back of the head. The other end of the connecting rod is attached to gear by a pin which is offset from its center axis. Each head travels horizontally on a frame of the machine into and out of a drum which is placed

thereon. A hydraulic cylinder provides the expansion of the dies on the head which are used to engage the drum and form the beads. Thus, the operation of the connecting rod is mechanical but the dies are operated by hydraulic cylinder in the head and when the proper stroke is reached that corresponds to the correct height of the bead the cylinder retracts the bead dies. The connecting rod is driven by a motor through a clutch which transmits power to the gear and a brake is signaled electrically to stop the crank.

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[US] ISR (A3) US4451322 A 19840529 [Y] (DVORAK BOLEK [CA]); US3890077 A 19750617 [Y] (HOLMAN JOHN A); US4025278 A 19770524 [Y] (TILBY SYDNEY EDWARD); US4212616 A 19800715 [A] (TILBY SYDNEY E [CA]); US5498478 A 19960312 [A] (HANSEN MICHAEL R [US], et al)

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B27N3/04 ; B27N3/20

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(A2 A3) AGRIBOARD IND [US]

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(A2 A3) APPARATUS AND METHOD FOR MAKING COMPRESSED AGRICULTURAL FIBER STRUCTURAL BOARD

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(A2) A mill is described for compacting agricultural fibrous matter, such as straw or other agricultural waste, into a structural board. The board is useful as a dominant part of the load bearing and insulating panel replacing many of the load bearing and insulating structures typically used to make small buildings, such as houses. The mill includes many features not found in previous mills of this type, including not only a packer to place material in front of an oscillating ram head as is known, but a precompactor arrangement to regulate the volume of material fed to the packer. Another feature incorporated into the mill to aid in achieving a consistent density is a pressure offset mechanism which adjusts the rate of core formation. The mill has a modular design to facilitate replacement of those components subjected to significant wear.

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US20020071147 20020207; US20010794505 20010226; WO1999US28229 19991129; US19980110417P 19981130

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|| STSE (B2) US3407300 A 19681022 [] (HANSEN CARL W); US5303459 A 19940419 [] (KURAKAKE TADAKAZU [JP])

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G01V5/0016 ; G01V5/005 ; G01N23/046

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(B2) INVISION TECHNOLOGIES INC [US]

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(A1) Nonintrusive inspection apparatus

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(B2) Method for making a collimator for an x-ray technique-based nonintrusive inspection apparatus

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(A1) An x-ray technique-based nonintrusive inspection apparatus is provided which is capable of inspecting 600 containers an hour which is small, and which is easily maintainable. Features of the apparatus include "radiation locking" with "active curtains", "continuous scanning" utilizing an x-ray line scanner subsystem and a CT scanner subsystem, good structural integrity, radiation containment in a self-shielding manner, an easily maintainable driving arrangement, shielding curtains that can be raised and lowered quickly, a container jam release mechanism, and efficient air conditioning.

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(B2) According to one embodiment of the invention, a method of making a collimator for a detector array of an x-ray technique-based nonintrusive inspection apparatus is provided. The method includes injecting a die with a material, the die being shaped and dimensioned to form a collimator including a body defining a support structure and a plurality of septa secured to the support structure; allowing the material to set within the die to form the body; and removing the body from the die.

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TOYOTA CENTRAL RES & DEV; TOYOTA MOTOR CORP

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EXHAUST GAS PURIFICATION APPARATUS

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PROBLEM TO BE SOLVED: To improve purification activity by making use of an external energy while securing a large surface area for a catalyst.

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SOLUTION: The apparatus is composed of a carrier 3 in contact with a monolithic catalyst 2, an oscillator 4 disposed on an outside portion of an exhaust gas flow path and oscillating the monolithic catalyst 2 by way of the carrier 3, and a driving circuit driving the oscillator 4. The apparatus allows exhaust gases to pass therethrough, while oscillating the monolithic catalyst 2 using the oscillator 4. It is considered that a large displacement occurs in a noble metal on the catalyst through oscillations, changing a state of a gas molecule, such as NO<SB>x</SB>, adsorbed onto a surface of the catalyst. This greatly improves purification activity of the catalyst. Because of the arrangement of the oscillator being disposed on the outside portion of the exhaust gas flow path, there is no possibility of the oscillator's contacting a corrosive gas contained in the exhaust gas. The oscillator therefore never develops a structural destruction nor a characteristic change.

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(A) NAT INST RES INORGANIC MAT

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(A) APPARATUS FOR PRODUCING CRYSTAL MODEL

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(A) PROBLEM TO BE SOLVED: To provide a new apparatus for producing a crystal model capable of inexpensively and easily producing the crystal model which characterizes the positional relations of the atoms in the crystal and enables a user to have the knowledge on the actual crystalline state, such as the sizes of the gaps among the atoms, crystal structural distortions and others. SOLUTION: This crystal structure model has a frame body consisting of supporting columns 1 erected perpendicularly on a base plate in arrangement of a plane square shape or rectangular shape and stationary horizontal members 3 for fixing these supporting columns 1. The model described above has a moving section consisting of movable horizontal crossing members 5 which are supported at the supporting columns 1 freely vertically movably between the supporting columns 1, a horizontal moving member 6 which is spanned between the opposite parts thereof and is formed freely horizontally movable and an atom model disposing terminal member 10 which is mounted at this horizontal moving member 6 and is formed freely horizontally movable and vertically movable. The atom model held at the atom model disposing terminal member 10 is arranged in the prescribed position by making this moving section freely movable in three-dimensional directions relative to the frame body.

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KAPELLA LTD; DAVY & UNITED ENGINEERING COMP; RICHARD EDMUND REASON

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Improvements in or relating to apparatus for measuring relative movements or deflections of associated or interconnected parts

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537,611. Photo-electric apparatus for measuring deflections. KAPELLA, Ltd., DAVY & UNITED ENGINEERING CO., Ltd., and REASON, R. E. Dec. 18, 1939, No. 32429. [Class 40 (iii)] [Also in Group XXXVIII] Deflections of a pillar B, Fig. 3, of a press or similar structural deviations are detected and measured by a photoelectric apparatus comprising two photo-electric cells 24, 25 on which two beams of light 20, 21 are directed through two sets of apertures 13, 14 and 26, 27, one set defining sharp edges of the beams at right angles to each other, and the other set determining the amount of light passing through to the respective cells in accordance with relative alignment of the beam or beams and the structure. For example, the set of apertures 13, 14 may be mounted with the lamp 15 and accessory parts at the base of the pillar and the set of apertures 26, 27 with the cells 24, 25 may be attached to the top of the pillar. The two cells are connected through two amplifiers 34, 35 to two electric measuring instruments with scales 36, 37 at a desk 12. The various parts are adjusted so that normally the pointers of the two instruments are in the middle of their respective scales marked zero. If the top of the pillar deviates in the direction X or W, the amount of light passing through to the cell 25 is unaffected, but the amount striking the cell 24

increases or falls and the corresponding pointer moves to one side or the other of the zero of its scale 36. Similarly any deviation in the direction Y or Z is indicated on the scale 37. The optical devices may be arranged in various ways. Various specific constructions including means for making vanous adjustments are described with reference to various Figures not shown here. The light beam is interrupted by a rotating apertured disc 22, preferably in conjunction with a mask having sinusoidal apertures, to produce periodic pulsations of say 1,000 cycles per second which is suitable for amplification by three.stage amplifiers. Signalling : If the deviations reach predetermined limits indicated by adjustable red index marks 43, 431 on the scales 36, 37, relays operate to sound a signal bell 41. To ensure that the deviations intermediate between the axes WX and YZ shall not become excessive before the bell is sounded, an arrangement of three relays 38, 39, 40 is provided. These relays are connected as shown in Fig. 5. The relays 38, 40 are respectively connected across the output rectifier devices 58, 59 of the amplifiers 34, 35. The relay 39 is connected between the relays 38, 40, so that the several relays share between them the output of each amplifier. These three relays all control one relay 52 for the bell 41. If the relay 39 is given an impedance twice that of each of the relays 38, 40, the relay 52 will be operated by maximum values of deviations in all directions represented by the six-sided field shown in Fig. 6, which approximately coincides with a circle.

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AVCO CORP

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REINFORCED STRUCTURAL MEMBERS AND METHODS OF MAKING THEM

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1352936 Making structural members AVCO CORP 19 April 1971 [24 March 1970] 25134/71 Heading B3A [Also in Division E1]
A method of making an integrated metalcomposite structure of high strength/weight ratio comprises constructing a metal structural member 11, e.g. in the form of a tube or girder, with at least one passage 16, threading a plurality of high modulus filaments 12 into the passage so that the filaments occupy 40% to 70% by volume of the cross-section of the passage, optionally evacuating the passage, filling the passage with a heat curable resin, and curing the resin in situ by applying heat to the structural member. The filaments may be coated with a semi-cured resin prior to threading them into the passage, whereby the filaments are more uniformly distributed within the passage, semi-curing occurring as a result of suitable adjustment of the quantity of hardener, the resin being fully cured by applying heat after threading the filaments into the passage. The step of evacuating the passage may then be omitted if desired. The wall of the passage 16 may be coated with a polymeric matrix 13 prior to threading of the filaments, the matrix 13 having a lower modulus than the resin whereby an increased bond is created during the heat curing step, which is preferably in two stages at respectively low and high temperatures. Apparatus for carrying out the method comprises a guide structure (Fig. 5, not shown), for guiding bundles of filaments during the threading step, and a curing apparatus which comprises electrical heating elements 26 surrounding the structural member 11 and an arrangement for feeding in the resin under reduced pressure which consists of a reservoir 29 connected to a vacuum pump, a conduit 31 connecting the reservoir 29 sealingly to one end of the passage 16, a resin pot 36 containing the resin and connected by a conduit 33 to the other end of the passage 16, and a valve arrangement 37 for admitting air at a controlled rate to the pot 36. The filaments used are preferably boron but may alternatively be of glass or graphite. The metal structural member may be of aluminium alloy, magnesium steel or titanium. The resins used may generate a volatile substance when being heat cured, e.g. phenolics and polyimides may be used as well as epoxy and polyester resins.

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E04C2002/3444 ; E04C2002/3455 ; E04C2002/3494

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NORTH AMERICAN AVIATION INC

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Improvements in or relating to method and apparatus for making corrugated core structural sheet material

AB

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805,198. Making composite sheet materials; corrugating; welding by pressure. NORTH AMERICAN AVIATION, Inc. Jan. 26, 1956, No. 2597/56. Classes 83 (2) and 83 (4). [Also in Groups X and VIII] In making corrugated core sandwich-type sheet material as in Fig. 7, sheet material is fed from a roll, transversely corrugated, creased along uniformly spaced longitudinal paths and folded into a corrugated section by bending along the paths, flat sheet material is fed from two rolls into contact with each side of the corrugated sheet and the apexes of the corrugated sheet and the flat sheets are bonded to form a sandwich. Stainless steel sheet 1 is fed by rollers 70, Fig. 1, from a roller 2 through transverse corrugating rolls 3, 4 and then through rolls 5, 6 which crease the corrugations longitudinally of the sheet. The creased sheet is then fed to a corrugator 7 comprising upper and lower blocks 8, 9 having guide members 10 which fold the sheet into V-section corrugations. Rollers 11, 12 flatten the peaks and valleys before the sheet is fed between bracket held electrodes 20, 21 which engage the valleys in the sheet as in Fig. 13. Two flat stainless steel sheets 13, 14 are fed from rolls 15, 16 on each side of the corrugated sheet and adjustable rollers 18, 19 built up of alternate conducting and insulating discs effect seam or closely spaced spot-welding of the sheets. The use of aluminium, magnesium or plastic sheets is referred to. In an alternative arrangement the electrodes fitting the valleys of the sheet are pivoted at 39, Fig. 6, in brackets 31, and are pressed into contact with the corrugated sheet by hydraulic pistons 32 connected to the electrodes by insulating material 34. Cooling water from conduit 40 is sprayed on to the electrodes through ducts 58. The initial transverse corrugations and longitudinal creases may alternatively be made simultaneously by toothed rollers 62, 63, Fig. 8 (not shown), arranged between rollers 22-27.

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|| STSE (A1) JPH0760470 A 00000000 [XA]; US3571554 A 19710323 [A] (BAUJOIN JEAN) [A] 1,9,13 * the whole document *;
EP0538842 A2 19930428 [A] (CANON KK [JP]) [A] 9-13,15,16 * the whole document *

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|| STSE (A1) [XA] - PATENT ABSTRACTS OF JAPAN, (19950731), vol. 095, no. 006, [X] 1,3 * abstract * [A] 9,13,14

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B23K26/06 ; B23K26/0648 ; B23K26/067 ; B23K26/16 ; B41J2/162 ; B41J2/1634 ; B41J2/1637 ; B23K26/064 ; B23K26/364 ;
B23K26/389 ; B23K26/066

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(A1 B1) CANON KK [JP]

TI

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(A1 B1) Laser processing apparatus and method for manufacturing a liquid jet recording head by use of such laser processing apparatus

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(A1) A laser processing apparatus is provided with a light source to generate laser beam, a lens to guide laser beam to a predetermined portion of a blank that becomes a structural member of a liquid jet recording head, a split prism arranged on the optical path between the light source and the lens. This laser processing apparatus is arranged to further comprise a rotary mechanism capable of rotating the lens centering on the optical axis of the laser beam. With the structure thus arranged, it is possible to prevent the lens from being locally damaged by the irradiation of laser beam, thus making the life of the lens longer, while reducing the frequency of lens replacements. This arrangement leads to the implementation of a significant reduction of maintenance costs of the apparatus, as well as to the simplified manufacture of a liquid jet recording head at lower costs. <IMAGE>

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HUANG JIANCHAO [CN]

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Apparatus for electrolyzing water to hydrogen and oxygen

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The utility model discloses a hydrolytic and electrolytic oxyhydrogen making device comprising a tank (4), a positive electrode (1) and a negative electrode (7) which are arranged on the two ends of the tank (4), an insulating spacing ring (9) and cross-sectional metal plates (11) which are arranged in the tank (4) and a liquid inlet and a liquid outlet arranged on the two ends of the tank (4). The utility model is characterized in that every two adjacent cross-sectional metal plates (11) clamp the insulating spacing ring with axial convex points (10) on the circumference and the insulating spacing ring can be a ceramic insulation spacing ring or a plastic insulating spacing ring. The convex points (10) support the cross-sectional metal plates (11) which are provided with a plurality of punches (12). The metal plates in the tank increase many punches, thereby increasing water flow and gas production. The utility model overcomes the structural shortcoming the electrolytic tank without a gas chamber in the prior art only has an electrolytic chamber and a liquid chamber. The arrangement of a one-way valve prevents the gas in the gas pipe backing-up.

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HUA ZESUI [CN]

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Helical water conduit type scouring machine

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The utility model discloses a helical water conduit type scouring machine relating to the technical field of cleaning machinery and vehicle cleaning apparatus, and designed to aim at the unreasonable structural design of the existing cleaning apparatus. The helical water conduit is connected with the water gun and water pump and is positioned in the conduit slot body after usage; the water pump connected with the helical water conduit is provided with a pump body which is the connector which is composed of at least three working chambers, each working chamber is provided with a water inlet, an elastic inlet valve and a water outlet, a toroidal locating slot is arranged outside the chamber, and an independent elastic membrane is arranged in the chamber and is connected with the rocker, making the central line of the membrane cover and the central line of the elastic inlet valve coaxial. The working chamber connector is as the pump body to enhance the rigidity of working chambers, the working pressure is greatly raised, and the effluent pressure exceeds like products. The helical water conduit type scouring machine has the advantages of compact structure, reasonable arrangement, easy carrying and long service life, suitable for decontaminating and scouring other apparatus except for automobiles.