



New connection on: : 04-08-2017 : 18:56:44 - Last disconnection on: : 03-08-2017 : 00:13:07

V 4.0.0.43847(LP,U,linux) (Rev:41675 2016-01-15 13:33:59 +0100#(D201706)) (RPM D201706)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fi epodoc

 Database: EPODOC

[EPODOC: SS 1] hopper and auger+

Results in EPODOC **3.370**

[SS 2] 1 and screw

Results in EPODOC **407**

[SS 3] 2 and thread+

Results in EPODOC **16**

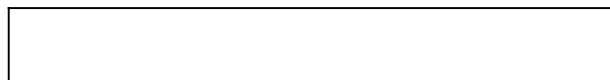
[SS 4] ..v

[EPODOC: SS 4] ..li 6-16



6/16 © EPODOC / EPO

PN - [CN202999240U](#) U 20130619
PR - CN20122665450U 20121206
AP - CN20122665450U 20121206
DT - I
PA - XINGWEN JIN E POWDER
INDUSTRY CO LTD
TI - Vermicelli processing machine
AB - The utility model discloses a
vermicelli processing machine,
comprising a **screw** which is
vertically arranged, wherein a
lifting handle is arranged at the



top end of the **screw**; the lateral wall of the **screw** is connected with a lifting cylinder through a **thread**; an inner sleeve is sleeved inside the lifting cylinder; the upper end of the lifting cylinder is connected with a swing bracket through a bearing; one end of the swing bracket is connected with a motor; the other end is connected with a vermicelli **hopper**; a feeding **auger** is arranged inside the vermicelli **hopper**; a feeding **hopper** is arranged at the lateral wall of the vermicelli **hopper**; a vermicelli screen is arranged at the bottom part of the vermicelli **hopper**; a reducer casing is arranged at the upper surface of the swing bracket far away from one end of the motor; a spindle of the motor is connected with the input end of the reducer casing through a driving belt; two output ends of the reducer casing are respectively connected with the feeding **auger** and an oscillating mechanism; and the other end of the oscillating mechanism is fixedly connected with the lifting cylinder. The vermicelli processing machine can achieve automatic swinging; the fabricated vermicelli is uniform in thickness and folding amount; the labor intensity of manpower is reduced; the production cost is reduced; and the vermicelli processing machine has good practicability.

7/16 © EPODOC / EPO

PN - [CN202527259U](#) U 20121114
 PR - CN20112521370U 20111214
 AP - CN20112521370U 20111214

DT - I

PA - SUOGEN LU

TI - Ceramic pollution-free **screw** feeding device

AB - The utility model discloses a ceramic pollution-free **screw** feeding device. The ceramic pollution-free **screw** feeding device comprises a feeding packing **auger**, a motor and a **hopper**, wherein the feeding packing **auger** comprises a feeding push **screw** rod and a feed pipe which is sleeved on the feeding push **screw** rod; a feed port is formed on the side wall of the feed pipe, a port on one side of the feed port is a discharge port, a port on the other side of the feed port is a transmission connection port, and the **hopper** is arranged on the discharge port; the feeding push **screw** rod comprises a rotating shaft and a ceramic **thread** bush which is sleeved and fixed on the rotating shaft; a transmission connection end of the rotating shaft penetrates through the transmission connection port and is connected to an output shaft of the motor; and ceramic liners are arranged on the inner wall of the feed pipe and the inner wall of the **hopper** respectively. By the ceramic pollution-free **screw** feeding device, during feeding, all parts contacting a material are made from a ceramic material, so that pollution to the material is effectively avoided.

8/16 © EPODOC / EPO

PN - [CN202059964U](#) U 20111207

PR - CN2011263877U 20110311

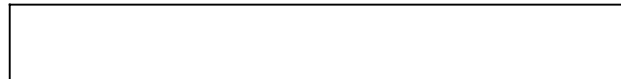
AP - CN2011263877U 20110311

DT - I

PA - UNIV SHAANXI SCIENCE & TECH

TI - Flexible grading knocking type
castanea mollissima hulling
machine

AB - The utility model provides a
flexible grading knocking type
castanea mollissima hulling
machine, which comprises a
machine frame, an outer tube
and a hulling mechanism,
wherein the outer tube is fixedly
connected with the machine
frame, the top of the outer tube is
welded with a material
inlet **hopper**, an **auger** shaft is
arranged inside the outer tube,
the hulling mechanism
comprises a pair of mutually
engaged rolling shafts, the
rolling shafts are positioned
right under the outer tube and
are fixed on the machine frame,
a plurality of **threaded** holes are
arranged on the outer surfaces



of the rolling shafts, a fixed plate is fixedly connected into the **threaded** holes through **screw threads**, installing holes and through holes are arranged on the fixed plate, rubber rods or rubber rods and hair brushes are simultaneously arranged in the installing holes, and screws are arranged in the through holes for being matched and connected with the **threaded** holes arranged on the outer surfaces of the rolling shafts. A waste material recovery groove is placed right under the rolling shafts, a material outlet passage is connected onto the rolling shafts, the tail end of the material outlet passage is respectively provided with a blower installing opening, a castanea mollissima kernel outlet and a castanea mollissima hull outlet, and the **auger** shaft and the rolling shafts are respectively driven by an **auger** shaft driving motor and a rolling shaft driving motor. The castanea mollissima hulling machine has the advantages that the safety is high, the structure and the operation are simple, the cost is low, the damage to castanea mollissima is little, and the economic benefits are greatly improved.

9/16 © EPODOC / EPO

PN - [US3685430](#) A 19720822

PR - US19700084730
19701028; US19690825493
19690519; ZA19720005333
19720803; ZA19720005334
19720802

AP - USD3685430 19701028

DT - **

CT - || STSE (A)



[US1527911](#) A 19250224 [
] (MARIO PATTI);
[US1762368](#) A 19300610 [
] (VANDERGRIFF FRANK C);
[US2060408](#) A 19361110 [
] (SAMUEL WOOD);
[US2340009](#) A 19440125 [
] (MEAKIN EDGAR T);
[US2793582](#) A 19570528 [
] (WALTER ROTHE, et al);
[US2915957](#) A 19591208 [
] (WARREN BOWMAN JACOB);
[US3062657](#) A 19621106 [
] (VOLLINK WILLARD L);
[US3140652](#) A 19640714 [
] (MILTON WILLIAMS ROY);
[US3164375](#) A 19650105 [
] (FRENKEL MEYER S);
[US3316830](#) A 19670502 [
] (HEINRICH BIEHL);
[US3391778](#) A 19680709 [
] (ELVIE LASITER)

- CCI - [A23N12/00](#) ; [A23N17/005](#) ;
[B30B11/24](#) ; [A23L11/31](#)
- PA - JOHN A MCBRIDE
- TI - SOY BEAN PROCESSING MACHINE
- AB - A processing machine for soy beans or other like material comprising a variable speed **auger** means which feeds soy beans into a **hopper** positioned above and in communication with an elongated barrel type housing. A **screw** conveyor means is rotatably mounted in the housing and has one end thereof operatively connected to power means for rotation thereof. A spiral flighting means extends from the conveyor means towards the housing for conveying the soy beans along the length of the housing from its intake end to its discharge end. A fluting means is provided on the interior surface of the housing and extends towards the **screw**

conveyor means. A frustum-shaped end plate is secured to the discharge end of the **screw** conveyor means for rotation therewith. A ring-shaped end member is secured to the discharge end of the housing and has a central opening formed therein with a progressively increasing diameter. The frustum-shaped end member is rotatably received within the central opening. A bearing means is provided at the intake end of the conveyor means and is **threadably** mounted in the intake end of the housing to permit the selective longitudinal movement of the conveyor means with respect to the housing. The selective longitudinal movement of the bearing means causes the longitudinal movement of the conveyor means which permits the clearance between the frustum-shaped end member and the ring-shaped end member to be varied. A brake means is provided on the machine adapted to engage the bearing means to maintain it in its selected positions with respect to the housing. A temperature sensing means is also provided on the housing for sensing the temperature of the material at the discharge end thereof. The soy beans are crushed and conveyed by the conveyor means and are forced outwardly from the housing between the frustum-shaped end member and the ring-shaped member. The soy beans are crushed, heated and cooked by heat and pressure applied thereto as the same travels through the housing and passes outwardly therefrom.

10/16 © EPODOC / EPO

PN - [JPH03176012](#) A 19910731

PR - JP19890316174 19891205

AP - JP19890316174 19891205

DT - I

FI - A47J31/00&B; A47J31/00&101;
A47J31/14

FT - 4B004/AA18; 4B004/BA40;
4B004/CA11; 4B004/CA16;
4B104/AA29; 4B104/BA02;
4B104/BA03; 4B104/BA05;
4B104/BA10; 4B104/BA16;
4B104/BA19; 4B104/BA20;
4B104/BA23; 4B104/BA36;
4B104/BA72; 4B104/BA73;
4B104/BA87; 4B104/CA18;
4B104/DA09; 4B104/DA17;
4B104/DA29; 4B104/DA44;
4B104/DA52; 4B104/EA09;
4B104/EA28; 4B104/EA40

PA - MATSUSHITA REFRIGERATION

TI - APPARATUS FOR FEEDING TEA-
LEAVES

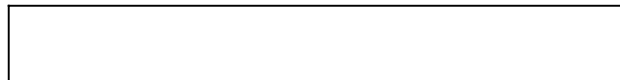
AB - PURPOSE:To positively prevent
the arching and the
accumulation of the tea-leaves,
and in addition, to contrive the
simplification of the mechanism
concerned by providing a **hopper**
shaft, a vibration plate inserted
being made freely rotatable with
the **hopper** shaft working as the
pivot of the rotation, and a worm-
shaped **auger** which conveys tea-
leaves by the motion of its
twisting, all of the above-
mentioned parts being housed in
the tea leaves feed **hopper**.
CONSTITUTION:By bringing in
contact the periphery of the top-
end part 27 of the **screw-thread**
of an **auger** 24 and one end of
vibration plate 14, where
the **auger** 24 rotates, following
said rotation, the end of the
vibration plate 14 is pushed
upward caused by the rubbing



action against the rotating **screw** in the manner of rubbing on the periphery of the top-end 27 of the **screw thread**. Because of this action, the tea-leaves stored in the feed-**hopper** is subjected to stirring in the form of being pushed up once. As the rotation of the **auger** proceeds and reaches a certain point where the vibration plate 14 separates from the engagement and rubbing state does not exist with the periphery of the top-end 27 of the **screw thread**, tea-leaves covering the distance of approximately one pitch which is equal to a distance between two adjacent **screw-threads**, that is the distance to the top-end 27 of this side which follows being twisted, fall under the weight of tea-leaves. At this time, the shock of the falling tea-leaves weight applies on the vibration plate 14, resulting in that the tea-leaves which have been pushed up in the feed **hopper** so far are prevented from causing arching and accumulating because their falling shock are applied thereon.

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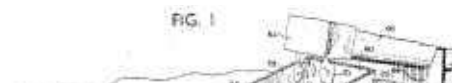
PN - [JPS6221608](#) A 19870130
 PR - JP19850159915 19850718
 AP - JP19850159915 19850718
 DT - I
 FI - B65G33/14
 FT - 3F040/BA01; 3F040/EA02;
 3F040/EA04
 PA - DAIHO CONSTRUCTION CO LTD
 TI - VERTICAL TRANSFER DEVICE
 AB - PURPOSE: To reduce frictional resistance between an auger and a casing for improving the efficiency of transfer in a device for vertically transferring



pulverulent bodies or the like by rotating the **auger** in the same direction when the **auger** is moved vertically by a lifting jack. CONSTITUTION: Materials dumped into a **hopper** 18 to be transferred are supplied to be filled in the lower end of a casing 2 by an **auger** 16. Then, a lifting jack 9 is extended to fill said materials below the lower end of an **auger** 3. And when a rod 9a of the lifting jack 9 is contracted, a downward force is applied to a drive shaft 4 through a rotary support portion 7 and a flange portion 6 and a downward acting force is acts on a descending **screw** 4a to rotate the drive shaft 4 in cooperation with a first ratchet 10. In the extension of the jack 9, a ratchet 11 engages an ascending **screw** 4b having the reverse **thread** to rotate the drive shaft 4 in the same direction. By this constitution can be reduced frictional resistance between the casing and the **auger**.

12/16 © EPODOC / EPO

- PN - [GB1513615](#) A 19780607
- PR - US19750567500 19750414
- AP - GB19760015000 19760413
- DT - **
- CCI - [E01C19/4873](#) ; [E02B5/02](#)
- PA - MILLER FORMLESS CO INC
- TI - APPARATUS FOR LINING
DRAINAGE DITCHES AND THE LIKE
WITH CONCRETE
- AB - 1513615 Ditch lining apparatus
MILLER FORMLESS CO INC 13
April 1976 [14 April 1975]
15000/76 Heading E1S The side
102 and top brim 32 of a ditch is
lined with concrete which is laid
by an apparatus comprising



a **hopper** 54, a slip form 124 and a screed 230, the **hopper** 54 having a leading lower edge contoured to that of the ditch and a trailing lower edge located in a plane above the leading edge and contoured to that of the surface of the concrete lining 100. Concrete is supplied to the **hopper** 54 by a chute 66 having an internal **auger**, and the **hopper** 54 includes weir plates 80 and vibrators 92. The slip form 124 is integral with the wall 72 of the **hopper** 54 and is stiffened by members 152. To allow various widths of concrete to be laid, an adjustable skirt member 180 is transversely moved by rams 200, 202 and comprises an end wall 182 for the **hopper** 54, two side walls overlapping the side walls 72, 74 of the **hopper** 54 and a web plate (182) which slidably rests on the slip form 124 and is held in position by being located under the members 152. The apparatus is suspended off the side of a mine mover 10 by telescopic struts 140, 168 and rams 212. The height of the screed 230 is adjustable by a **screw threaded** crank 264 and is biased into a canted position.

13/16 © EPODOC / EPO

PN - [GB1207432](#) A 19700930

PR - FR19670097628
19670306; GB19450000171
19450102

AP - GB19680010751 19680305

DT - *

CCI - [B62D49/0678](#) ; [A01B51/026](#) ;
[A01D41/04](#) ; [B62D21/186](#) ;
[B62D49/0607](#)

PA - BOBARD EMILLE [FR]

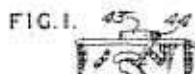


- TI - IMPROVEMENTS IN SELF-PROPELLED MACHINES FOR FARMING, EARTH-WORKING AND ANALOGOUS PURPOSES
- AB - 1,207,432. Agricultural implements. E. BOBARD. 5 March, 1968 [6 March, 1967], No. 10751/68. Addition to 1,148,073. Headings A1B and A1F. [Also in Divisions B7 and E1] A tractor (see Division B7) for incorporation therewith of an agricultural implement to form a compound machine comprises two side frames, each with a driving wheel 2 and a steerable wheel 4, joined by an elevated cross brace supporting a power unit 7. The vertically interengageable coupling means comprise recessed brackets 17 on the implement engageable by complementary **threaded** studs 16 on longitudinal members 21 of the tractor, each member 21 being pivotable about an end 22 by a hydraulic ram 14a to first engage and lift the implement and then adjust the working height of the implement. The coupling means may alternatively comprise a pair of perpendicular vertical plates with corresponding V-shaped recesses (Fig. 5, not shown) or an equal vertical stud and corresponding recess (Fig. 6, not shown). In Fig. 1 the implement is a combine harvester with a reaper M, and thresher B including a grain tank 62c, with recesses n1 and n2 for the power unit and a control position, and a straw shaker 63 with a removable top to facilitate passage under the cross bracing of the tractor when coupling the implement. In Fig. 15 the implement is a corn-picker with

a pair of lifting members 29 mounted on the pivots of the respective steerable wheels, an elevator section 200, a stripping section 38, which may include means to strip the grain from the cob, and a **hopper** 123 for the grain. Rotation of an **auger screw** 125, disposed in the base of the **hopper**, in one sense distributes the grain and in the opposite sense discharges the grain from the **hopper** through an outlet pipe 128. In Fig. 12 the implement is a multi-furrowplough comprising a beam 54 which is pivoted by parallel links 59, 59a to a cross-member 58 of the tractor, and a mass 56 at the end of an extension 57 of the beam 54 to provide a resultant force acting predominantly at the driving wheels 2 due to the mass and the plough load.

14/16 © EPODOC / EPO

PN - [GB972854](#) A 19641021
 PR - US19600057810 19600922
 AP - GB19610002645 19610123
 DT - **
 CCI - [A01C1/00](#)
 CCA - [Y10S47/09](#)
 PA - BEN GUSTAFSON & SON MFG CO
 TI - Seed-treating machine
 AB - 972,854. Treating seeds. BEN GUSTAFSON & SON MANUFACTURING CO. Jan. 23, 1961 [Sept. 22, 1960], No. 2645/61. Heading A2Q. [Also in Division B8] A machine for treating seeds, such as cotton seeds, with one or two liquid chemical agents comprises a frame 8, Figs. 1 and 2, a housing 9 having a vertical portion 9a and a tapering portion 9b



leading to an outlet 9c, a conical or outwardly flaring seed distributor 21 rotatable, in the housing, about a vertical axis, means for feeding seeds downwardly on to the conical or flared upper surface of the distributor, a rotatable horizontal disc 38 for flinging a mist of a liquid agent, fed on to its upper serrated surface, on to the seeds as they are distributed in the housing and means including variable speed mechanism for rotating the distributor 21 at a desired speed, e.g. ranging between 20 and 350 R.P.M. and the disc 38 at a constant speed e.g. 2,000 R.P.M. Wipers 22, eg. of resilient wire, are attached to the distributor to clear the interior surface of the housing 9. The distributor 21 is secured to the lower portion of a hollow, vertical shaft 12 supported at its lower end on a ball-bearing 17 and rotated, about a fixed inner tube 14, by a chain 20 which engages a sprocket wheel 19 on the upper end of the shaft and a sprocket wheel 46 on the output countershaft 47 of variable speed mechanism, Fig. 3, controlled by a hand-wheel 60 and driven by a motor 41 mounted, on a bracket 42, on the frame 8. The disc 38 is secured to the lower end of a vertical shaft 39 passing through the tube 14 and bearings 36, 37 at the ends thereof, and carrying at its upper end, a pulley driven, by a belt 40, from a pulley on the output shaft of the said motor. An **auger** or **screw** conveyer 23, provided, peripherally, with downwardly inclined agitators 26 and outwardly and

downwardly inclined agitators 27, is secured to the middle portion of the shaft 12 to break up any balls or lumps of seeds and propel the seeds from a surrounding funnel-shaped **hopper** 25, through its outlet opening 24 on to the distributor. The opening 24 is surrounded by a tubular collar 28 which can be raised away from or lowered towards the distributor, by mechanism comprising a link 29 pivoted, at 34, to the outside of the **hopper** and to a **threaded** block 31, a link 30 pivoted to this block and to a lever 35 supporting the collar, and a **screw** 32, which engages the **threads** in the block 31 and can be turned by a hand-wheel 33, to regulate the flow of seeds e.g. to a substantially single layer on to the distributor. The seeds are fed through a shoot 43 and metering mechanism, of the type described in U.S.A. Specification 2,823,904 and controlled by a counter-weight arm 44, into the **hopper** 25. Liquid agent is fed on to the disc 38 through metering mechanism, of the type described in the aforementioned U.S.A. Specification, or a modification thereof provided with a dual tank enabling two different liquid agents to be used alternatively, and through a pipe 45, Fig. 3, passing downwardly through the tube 14 and terminating in an outlet 45a. Pipes 61 and 62 are connected to suction devices to exhaust air, lint and dust respectively from the space surrounding the variable speed mechanism (Fig. 5 not shown) and the housing 9.

15/16 © EPODOC / EPO

PN - [FR2737466](#) A1 19970207

PNFP - FR2737466 B1 19980529

PR - FR19950006801 19950606

AP - FR19950006801 19950606

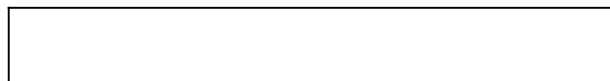
DT - *; Rep

CT - || STSE (A1)
[US2988249](#) A 19610613
 [Y] (WAHLE EUGENE A)
 [Y] 1-3
 * column 5, line 3 - line 61 *
 * column 7, line 25 - line 59;
 figures 9,16 *;
[FR2321319](#) A1 19770318
 [Y] (BANBURY BUILDINGS
 HOLDINGS LTD [GB])
 [Y] 1-3
 * page 5, line 28 - page 6,
 line 26; figure 1 *;
[EP0049315](#) A1 19820414 [Y] (K
 TRON SODER AG [CH])
 [Y] 3
 * page 5, line 33 - page 6,
 line 30; figure - *;
[US1712235](#) A 19290507
 [A] (SMALL CHESLEY T)
 [A] 4
 * page 1, line 31 - line 72;
 figure - *;
[DE667345](#) C 19381109
 [A] (OSCAR BOTHNER FA);
[US2991870](#) A 19610711
 [A] (EDWIN GRIFFITH, et al)

CCI - [B65B37/10](#) ; [B65G33/22](#) ;
[B65G33/265](#) ; [B65G65/46](#) ;
[B65D88/68](#)

PA - (A1 B1)
 SOLIGNAC IND SA [FR]

TI - (A1)
 Powder perfume sampling **auger**
 feed - comprises powder
 supply **hopper** feeding
 horizontal tube containing
 Archimedes **screw** bringing
 powder to tube end lower
 opening, **screw** shaft carrying
 disc blocking tube end over



opening

AB - (A1)

The powder sampler comprises, at the bottom, a measured powder supply **hopper** (2). A horizontal tube (1), whose end (10) has a lower opening (12), contains an Archimedes **screw** (3) for bringing the powder to the opening. The tube is transversely blocked in the rear and at the edge of the opening by a disc (4) displaced along a longitudinal shaft (30). The opening edge has a chamfer (40) facing the **screw**, which is held in position by a spring (5), and applied against the face (4) opposite to that facing the **screw**. The blocking disc which is **threaded** on to an extension of the Archimedes **screw** shaft has the possibility of being rotated.

16/16 © EPODOC / EPO

PN - [CN2865854Y](#) Y 20070207

PR - CN20052125398U 20051202

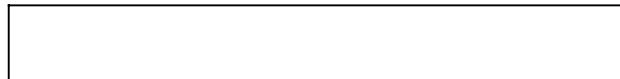
AP - CN20052125398U 20051202

DT - I

PA - WEI LIANGJUN [CN]

TI - Improved flour mill and fiberizer

AB - An improved powder milling and pulping machine composed of main axis, casing, helix packing **auger**, movable mill wheel, fixed mill wheel and **hopper**. Main axis is connected to movable mill wheel inside casing. Movable mill wheel is fastened to helix packing **auger**. Main axis, movable mill wheel and helix packing **auger** are installed in the same center line. Movable mill wheel is opposite to fixed mill wheel surface. Fixed mill wheel is installed to adjusting



sleeve moving horizontally along inside wall axis of casing. Adjusting casing is connected to **screw** type adjusting handle. Internal **thread** connecting block is set and fastened to adjusting sleeve through bolt and is connected to adjusting handle. The utility model divides adjusting sleeve into two parts, of which the part connecting to adjusting handle is made into an independent block (internal **thread** connecting block) connecting to other adjusting sleeve part. Therefore, the failure of **screw thread** sliding-filament will only require the replacement of internal **thread** connecting block while not replacing the entire adjusting casing, which can lower the cost.

[SS 4]