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E. T. NICKLIN & M. CAMPAU.

COMMODITY DIVIDING APPARATUS.

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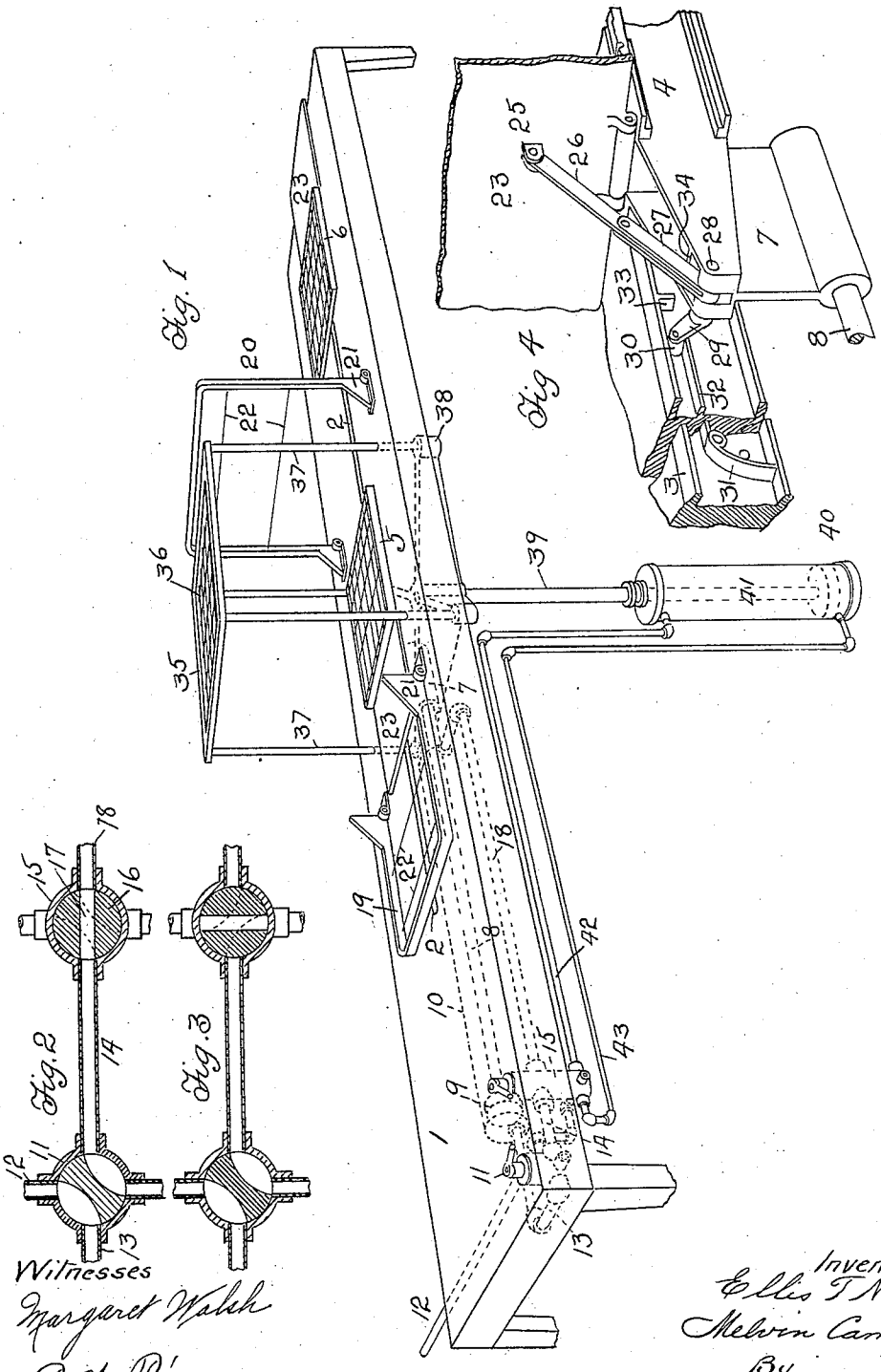


Fig. 1

Fig. 4

Fig. 2

Fig. 3

Witnesses

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ELLIS T. NICKLIN AND MELVIN CAMPAU, OF LOS ANGELES, CALIFORNIA.

COMMODITY-DIVIDING APPARATUS.

No. 884,845. Specification of Letters Patent. Patented April 14, 1908.

Application filed October 22, 1907. Serial No. 398,680.

To all whom it may concern:

Be it known that we, ELLIS T. NICKLIN and MELVIN CAMPAU, citizens of the United States of America, residing at Los Angeles, in the county of Los Angeles, State of California, have invented a certain new and useful Commodity-Dividing Apparatus; and we hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an apparatus for cutting butter or similar commodities, and comprises substantially a reciprocating member carrying platforms for the commodity to be cut; a frame or frames for holding wires to make the initial cuts on the mass of material; means to operate the reciprocating member to move the material past the wires; a frame carrying wires to make the secondary cuts; and means to move said frame.

With the foregoing may be combined means to automatically raise the plate which retains the material as it is moved past the first set of wires; also means to prevent the operation of the first mentioned press while the second press is at the lower point of its travel or moving thereto.

One form of the invention is herein described, and is illustrated in the accompanying sheet of drawing, in which

Figure 1 is a perspective view of the apparatus partly broken away. Fig. 2 is a horizontal section of the 4-way valves controlling the presses. Fig. 3 is a similar view of the same mechanism, with one of the valves in a different position, and Fig. 4 is a perspective view of the mechanism for raising and lowering the plate which retains the material as it is moved past the primary cutting-wires.

Reference numeral 1 designates a table having therein a slot 2, the edges of which may be provided with guides 3 (Fig. 4) in which a member comprising crosshead 4, carrying platforms 5 and 6, is adapted to slide. The end of crosshead 4 adjacent to platform 5 has attached thereto bracket 7, to which is connected piston rod 8 connected to piston 9 within cylinder 10. Fluid, preferably air, under pressure is admitted at will, to either end of cylinder 10 by means of 4-way valve 11 connected to pipe 12, which leads from a source of air pressure supply (not shown). The left-hand outlet of valve 11 connects by means of pipe 13 to one end of cylinder 10, while the right-hand outlet connects by means of pipe 14 to the upper part of 4-way valve 15, the movable portion 16 of which, has a passage 17 therethrough, which, when the portion 16 is in the position indicated in Fig. 2, communicates with a pipe 18 leading to the end of cylinder 10 adjacent to bracket 7.

Frames 19 and 20 are hinged to table 1 in the position indicated in Fig. 1 of the drawings, and have attached thereto stops 21 to prevent the movement of said frames beyond the vertical. These frames are provided with wires 22 stretched horizontally between the upright portions thereof.

To each end of cross head 4 is hinged a plate 23, having thereon bracket 25 which receives one end of a link 26, the opposite end of which is movably connected to a link 27, the lower end of which is fast on shaft 28. One end of shaft 28 carries a crank 29 provided with a roller 30. Pawls 31 are hinged to guides 3, and guards 32 and trip 33 are also attached to said guides. A stop 34 is affixed to cross head 4 to limit the motion of link 27. A horizontal frame 35 carrying wires 36 is supported by rods 37, which pass through table 1 and are attached at their lower ends to spider 38. To the central portion of the spider 38 is attached piston rod 39 connected to piston 40 in cylinder 41. To the upper end of cylinder 41 is connected pipe 42, which enters the right-hand side of valve 15, the left-hand outlet of which connects by means of pipe 43 with the lower end of cylinder 41.

The mode of operation of this apparatus is as follows: A mass of material to be cut is deposited upon one of the platforms, 5 or 6. Valve 11 is then operated whereby the platform is moved to bring the mass beneath frame 35. When roller 30 contacts with pawl 31 shaft 28 is rotated thereby raising plate 23, stop 34 preventing link 27 from moving beyond a straight line with link 26. Plate 23 retains the material as it is moved through frame 19 or 20, as the case may be, until the wires 22 have almost passed through the material, whereupon roller 30 strikes trip 33 and plate 23 is allowed to drop back to the horizontal position to clear the wires. Valve 15 is thereupon actuated, causing frame 35 to descend, dividing the material vertically in accordance with the spacing and arrangement of the wires 36

which preferably enter grooves in the platforms, provided for their reception. The divided material is then removed from above wires 36, frame 19 or 20 being lowered to facilitate this operation. Valve 17 is next thrown to its initial position, thereby raising frame 35. Meanwhile, a mass of material has been deposited upon the other platform. Valve 11 is then operated, causing cross head 4 to travel in a reverse direction, roller 30 raising pawl 31 and passing under it. Meanwhile, the last mentioned mass of material is brought under frame 35 and is divided in the manner just described. Should the valve 11 be operated inadvertently or through ignorance, when frame 35 is in its lower position, no damage will result, as the upper part of the movable portion 16 of valve 15 is then in the position indicated in Fig. 3, closing communication between pipes 14 and 18, and preventing air from passing to cylinder 10 or from passing from said cylinder to the exhaust.

It is not desired to limit or confine the invention to the specific construction, combination, and arrangement of parts in the one form in which the invention may be embodied, which is herein shown and described, and the right is reserved to make all such changes and modifications in the construction as come within the spirit and scope of the invention.

We claim:

1. In a commodity dividing apparatus, a table, a dividing frame, dividing frames carried on said table at the sides of and at right angles to said first mentioned dividing frame and devices to carry the commodity past said last mentioned frames to a position under said first mentioned frame.

2. In a commodity dividing apparatus, primary dividing frames, devices to carry the commodity past said frames, means to operate said devices, a secondary dividing frame positioned intermediate of said primary frames, and means to operate said secondary dividing frame.

3. In a commodity dividing apparatus, a table, a reciprocating member therein, a platform attached to each end thereof, means to reciprocate said member, and stationary dividing appliances attached to said table.

4. In a commodity dividing apparatus, a table, a reciprocating member therein, platforms carried by said member, dividing frames opposite each of said platforms, and means to reciprocate said member, and dividing appliances attached to said table.

5. In a commodity dividing apparatus, a table, a reciprocating member therein, a platform attached to each end of said member, a fluid actuated press to reciprocate said member, and dividing appliances attached to said table.

6. In a commodity dividing apparatus, a table, a reciprocating member therein, a platform attached thereto, means to reciprocate said member, and hinged dividing appliances attached to said table.

7. In a commodity dividing apparatus, a primary dividing frame, devices to carry the commodity past said frame, means to operate said devices, a secondary dividing frame, means to operate said secondary dividing frame, appliances to prevent the operation of said first mentioned operating devices while the latter mentioned operating devices are in a predetermined position.

8. In a commodity dividing apparatus, a primary dividing frame, devices to carry the commodity past said frame, a fluid actuated press to operate said devices, a secondary dividing frame, a fluid actuated press to operate said secondary dividing frame, and appliances to prevent the operation of said first mentioned press while the latter mentioned press is in a predetermined position.

9. In a commodity dividing apparatus, a dividing frame, a platform adapted to travel past said frame, a plate adapted to co-act with said platform in moving commodities past said frame, and means to automatically raise said plate.

10. In a commodity dividing apparatus, a dividing frame, a platform adapted to travel past said frame, a plate adapted to co-act with said platform in moving commodities past said frame, means to automatically raise said plate, and means to automatically lower said plate.

11. In a commodity dividing apparatus, a primary dividing frame, devices to carry the commodity past said frame, means to operate said devices, a secondary dividing frame, means to operate said secondary dividing frame, appliances to prevent the operation of said first mentioned operating devices while the latter mentioned operating devices are in a predetermined position, a dividing frame and platform adapted to travel past said frame, a plate adapted to co-act with said platform in moving commodities past said frame, means to automatically raise said plate, and means to automatically lower said plate.

12. In a commodity dividing apparatus, a primary dividing frame, a reciprocating member operating in proximity thereto, a commodity carrying platform on said member, means to operate said reciprocating member, a secondary dividing frame, and means to prevent the operation of said reciprocating member while said secondary member occupies a predetermined position.

13. In a commodity dividing apparatus, a primary dividing appliance, devices to carry the commodity past said appliance, a fluid actuated press to reciprocate said devices, a 4-way valve to control said press, secondary

dividing appliances, a fluid actuated press to operate the latter, a second 4-way valve to control said latter press, a stop-cock operated by said second 4-way valve, and connections between said first 4-way valve and said stop-cock, and between said stop-cock and said first mentioned press.

14. In a commodity dividing apparatus, a table, a reciprocating member thereon, a stationary dividing appliance attached to said table, a platform carried by said member, a plate hinged to said member, a link hinged to said plate, a lever jointed to said link, a shaft whereon said lever is pivoted, a lever on said shaft, and contact devices carried by said table to operate said last mentioned lever.

15. In a commodity dividing apparatus, a table, a reciprocating member thereon, a stationary dividing appliance attached to said table, a platform carried by said member, a plate hinged to said member, a link hinged to said plate, a lever jointed to said link, a shaft whereon said lever is pivoted, a lever on said shaft, and hinged contact devices carried by said table to operate said last mentioned lever.

In testimony whereof, we have signed our names to this specification in the presence of two subscribing witnesses at Los Angeles, county of Los Angeles, State of California, this 11th day of October, A. D. 1907.

ELLIS T. NICKLIN.
MELVIN CAMPAU.

Witnesses:
MARIE H. HUEHNER,
MARGARET WALSH.