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PACKING MACHINERY

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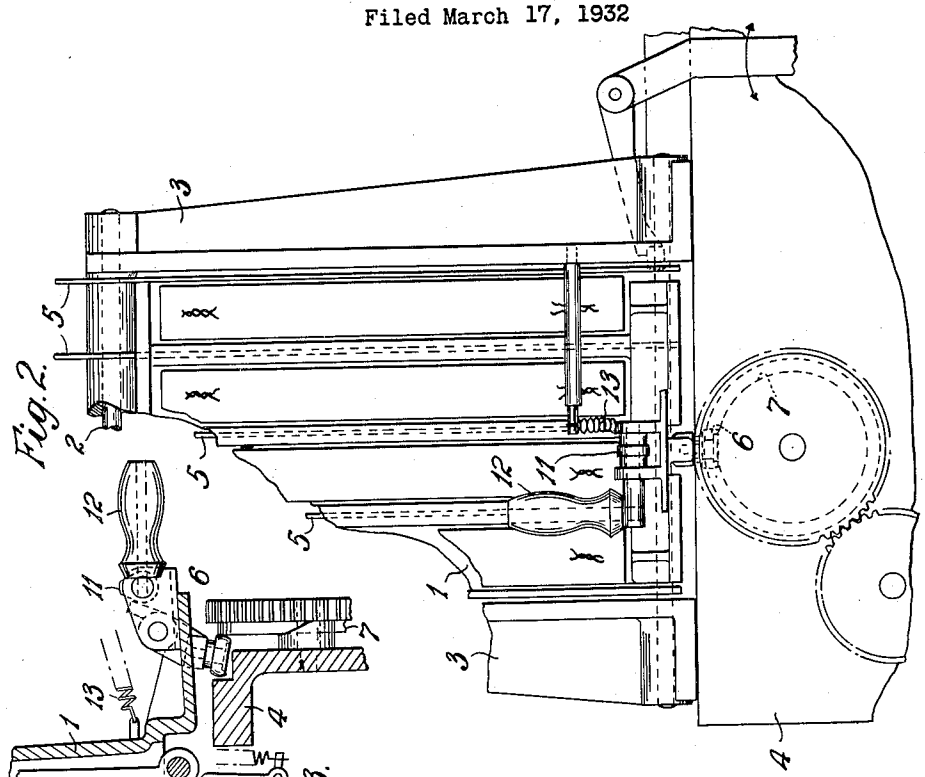


Fig. 2.

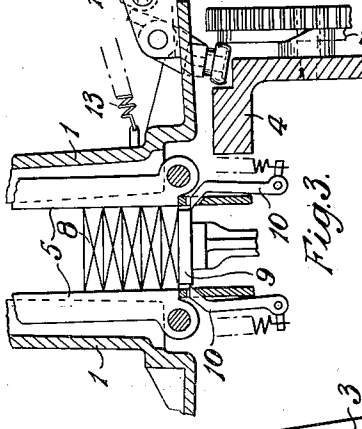


Fig. 3.

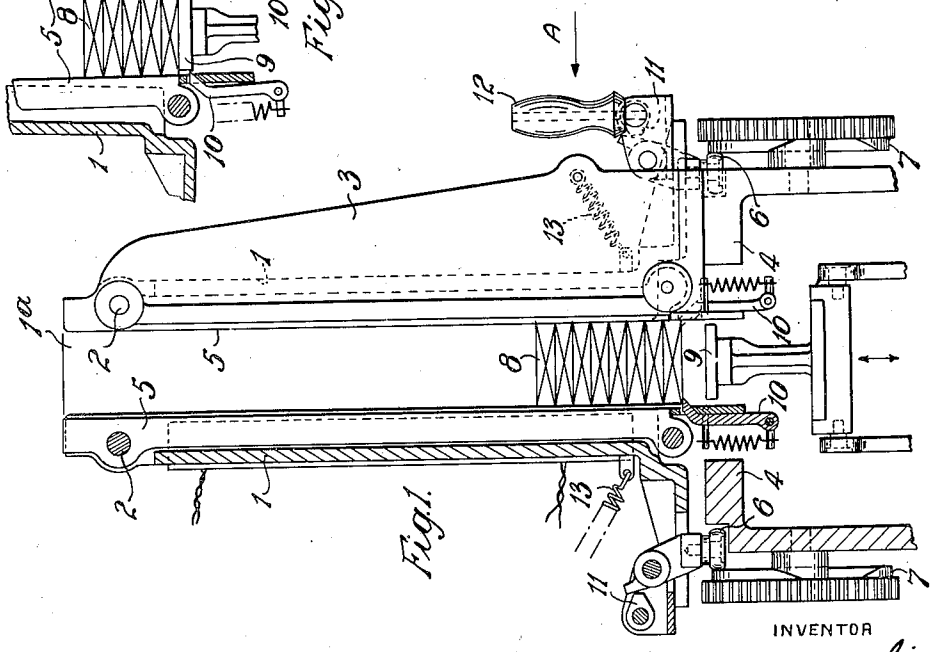


Fig. 1.

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PACKING MACHINERY

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7 Claims. (Cl. 93—2)

This invention relates to packet making machines and refers more particularly to the heated boxes or stackers used on such machines for the purpose of drying the gum which is applied to the folds of the packets.

It is customary to feed freshly made packets step by step through such stackers by pressure exerted on the rear or lowermost packet, and in order to prevent the packets from being crushed in the process, it is usual to move one or more sides of the box away from the packets whilst the latter are being moved.

This practice has the disadvantage that the gummed flaps of the packets tend to open as the lateral pressure is released and become slightly displaced, and further, the heat causes the gum to crystallize in the open seams, thus producing unsatisfactory packets.

The invention comprises a stacker for use on packing machines in which some or all of the walls are movable and having means for keeping the flaps of the packets under constant control.

The invention will be more particularly described with reference to the accompanying drawing, in which:—

Fig. 1 is an elevation of an apparatus constructed according to the invention.

Fig. 2 is an elevation of Fig. 1 in the direction of the arrow "A".

Fig. 3 is a fragmentary view similar to Fig. 1 with the parts disposed in a different position.

Referring to the drawing, two of the sides 1 which form the walls of the stacker and which are heated for the purpose of drying the gum, are pivoted at 2 to brackets 3 which are fixed to the bed of the machine 4. The brackets 3 also carry immovable guides comprising a series of thin ribs 5 which are fixed thereto and extend the whole length of the stacker, the walls 1 being slotted to accommodate the said ribs.

Each of the movable stacker walls 1 has a cam roller 6 fixed thereto which engages with a cam 7 so that the walls are oscillated about the pivot 2 each time the cam 7 revolves, the packet flaps being retained meanwhile by the fixed ribs 5. The remaining walls 1^a of the stacker, in the present instance, are fixed.

The packets 8 are thrust up into the stacker by a reciprocating platform 9 and spring pressed catches 10 are provided to support the stack of packets, the catches opening as each fresh packet is thrust upwardly into the stacker.

The cam roller 6 is held in its working position by a hand operated cam 11 in the manner shown in Fig. 1, in which position the roller 6 is rigidly connected with the stacker side 1. Should the machine stop, each wall may be moved about its pivot so that it is away from the packets within the stacker.

Each of the movable stacker walls is provided with a spring 13, the other end of which is fixed to the frame and tends to pull the wall away from the packets.

When the cam 11 is twisted by means of the handle 12 the roller 6 becomes loose on its pivot and the stacker side is then free to move and moves outwards under the tension of the spring 13. The parts then assume the position shown in Fig. 3. The packets are, however, still firmly held by the thin ribs 5 so that the flaps in the packets cannot become displaced.

The cams 11 may, of course, be operated automatically by linkwork connected to the striking gear of the machine. As the packets only rub on a few thin ribs during movement, there is no tendency for the packets to jam, whilst at the same time the folds cannot open and become displaced.

Although the invention has been described with reference to a stacker having two movable walls, it may obviously have as many movable walls as may be necessary according to the number of gummed seams on the packets being made.

What we claim as our invention and desire to secure by Letters Patent is:—

1. In packing machines employing containers of the type having one side thereof provided with gummed flaps, the combination with a stacker having at least one wall thereof supported for movement away from and toward the containers accommodated therein and normally engaging and retaining the gummed flaps in position, of separate means associated with the stacker and extending into close proximity to the said side of the containers for engaging and retaining the container flaps in position on movement of the said movable stacker wall away from the containers.

2. In packing machines employing containers of the type having sides provided with gummed flaps, the combination with a stacker having at least one wall thereof supported for movement away from and toward the containers accommodated therein and normally engaging the gummed flaps, of means for feeding containers into the stacker, means associated with the stacker extending into close proximity to the aforesaid sides of the containers for engaging and retaining the container flaps in position on movement of the said movable stacker wall away from the

containers, and means operable in timed relation with said feeding means for moving the said movable stacker wall away from the containers during the feeding operation.

3. In packing machines employing containers of the type having opposed sides provided with gummed flaps, the combination with a stacker having opposed walls thereof supported for movement away from and toward the containers accommodated therein and normally engaging the gummed flaps, of means for feeding containers into the stacker, means for supplying heat to the said movable stacker walls, and means associated with the stacker and extending into close proximity to the aforesaid sides of the containers for engaging and retaining the container flaps in position on movement of the said movable stacker walls away from the containers.

4. In packing machines employing containers of the type provided with gummed flaps, the combination with a stacker having at least one wall thereof supported for movement away from and toward the containers accommodated therein, of stationary means extending within and longitudinally of said stacker having a container engaging face of relatively small width measured transversely of the stacker, said face being located substantially in the plane of the movable wall of the stacker, whereby on movement of the latter away from the containers, the gummed container flaps are maintained against displacement.

5. In packing machines employing containers of the type provided with gummed flaps, the combination with a stacker having at least one wall thereof supported for movement away from and toward the containers accommodated therein, of stationary means extending within and longitudinally of said stacker having a container engaging face of relatively small width measured transversely of the stacker, said face being located substantially in the plane of the movable wall of the stacker, whereby on movement of the latter away from the containers, the gummed container flaps are maintained against displacement, means for feeding containers, one at a time, into the stacker, and means operable in timed relation with said last named means for moving the said movable wall of the stacker away from the containers during the feeding operation.

6. In packing machines employing containers of the type provided with gummed flaps, the combination with a stacker having at least one wall thereof supported for movement away from and toward the containers accommodated therein, said wall being provided with a longitudinally extending recess in the inner face thereof, and stationary means positioned in said recess for engaging the flaps of the containers when said movable wall is displaced away from said containers.

7. In packing machines employing containers of the type provided with gummed flaps, the combination with a stacker having at least one wall thereof supported for movement away from and toward the containers accommodated therein, said wall being provided with a longitudinally extending recess in the inner face thereof, stationary means positioned in said recess for engaging the flaps of the containers when said movable wall is displaced away from said containers, and means for supplying heat to the said movable wall.

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