(No Model.) 2 Sheets—Sheet 1.

J. P. SIMMONS.

CAN CASING MACHINE.

No. 589,226. Patented Aug. 31, 1897.

Fig. 2.

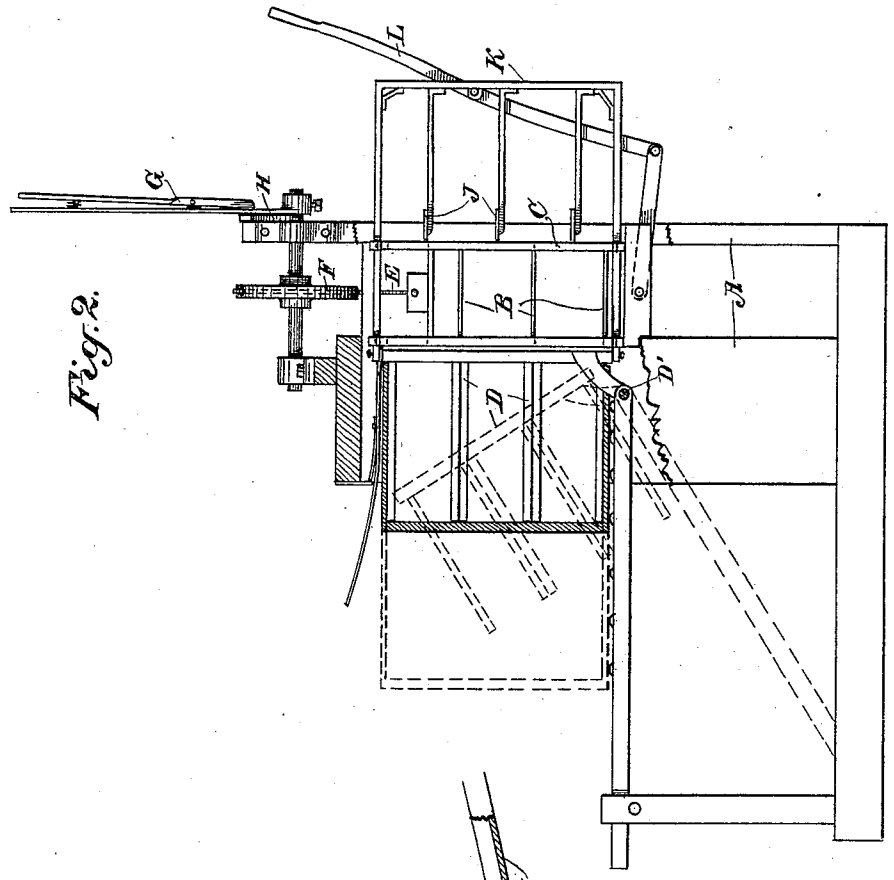
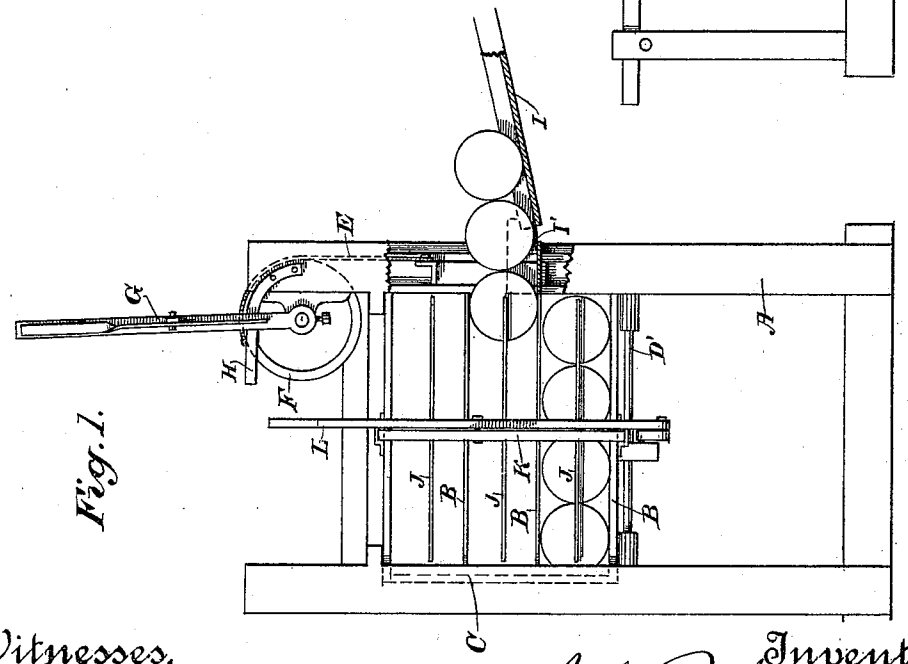


Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

J. P. SIMMONS.

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Fig. 3.

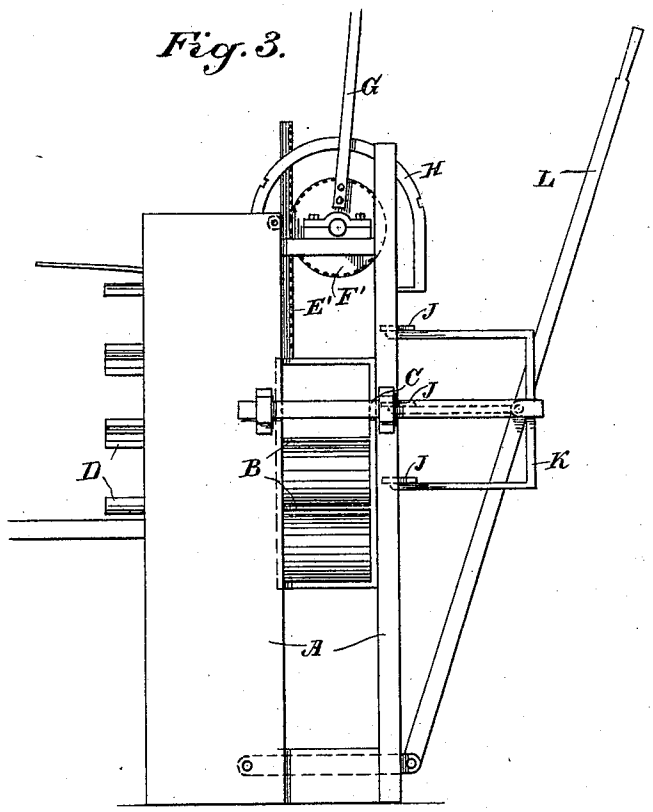
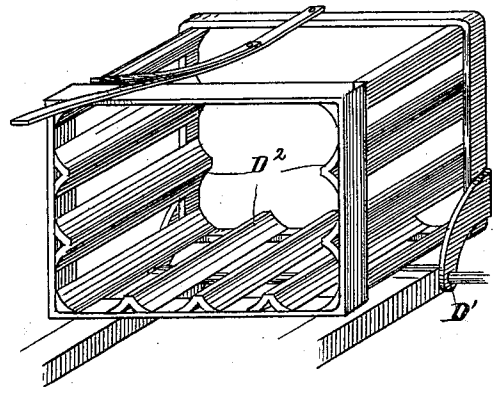


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN P. SIMMONS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO LYMAN C. PARKE, OF SAME PLACE.

CAN-CASING MACHINE.

SPECIFICATION forming part of Letters Patent No. 589,226, dated August 31, 1897.

Application filed March 12, 1897. Serial No. 627,092. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. SIMMONS, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Can-Casing Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an apparatus which is especially designed for casing cans which have been filled and labeled ready for the market.

It consists, essentially, of a series of tables, a chute arranged with relation thereto, mechanism by which the tables and chute are brought into line, so as to allow the cans to pass by gravitation from the chute to the tables until the latter are successively filled, and a means for delivering the contents of the tables simultaneously into the case.

Referring to the accompanying drawings, Figure 1 is a front view showing the chute-adjusting mechanism. Fig. 2 is a side view of same with discharging and case-filling device. Fig. 3 is a side view showing mechanism for moving the tables instead of the chute. Fig. 4 is a view of the device for receiving and transferring the cans to the cases.

A is a framework suitably arranged having a series of tables B mounted thereon. These tables may be stationary with a feed-chute I, which is movable to connect successively with the tables, as shown in Figs. 1 and 2, or the chute may be stationary and the tables movable vertically, so as to connect either table with the chute, as in Fig. 3. These tables are of such length and width that each table will receive a row of cans lying horizontally upon the sides equal in length to the length of the case in which they are to be packed.

In the present illustration I have shown my machine as designed to pack cans in cases which hold two dozen. Each table is therefore of a length sufficient to hold four cans side by side, and three tables, one above the other, will receive one dozen cans. In line with these tables is a hinged tilting frame consisting of supports D in line horizontally with the tables B and of sufficient length to receive two rows of cans endwise lying upon their sides, this constituting the depth of a case which contains the two dozen cans. The tables are charged successively from the inclined feed-chute, which may be movable or stationary, as above stated. If the chute is stationary, the tables are movable, as shown in Fig. 3, in which case the frame C, carrying the tables, has a rack-bar E′ fixed to and extending upwardly therefrom, this rack-bar engaging with a gear or pinion F′, which is journaled upon the main frame above the tables B. Connected with the pinion F′ is a lever-arm G, which extends radially from it and is adapted to engage with and to be locked by a curved rack H, also secured to the main frame.

J J are bars united together and connected with a yoke K, which slides in guides upon the main frame, so that by means of a lever L these plates J may be moved backward and forward in a horizontal plane. These plates stand in line just above the level of the tables B, so as to come in contact with the ends of the cans on the table when the plates are pushed toward the rear, for a purpose to be hereinafter described.

I is an inclined chute upon which the cans roll to the machine. When the tables are to be charged with cans, the lever-arm G is moved so as to rotate the pinion F′, which, acting upon the rack E′, raises the frame C and the tables B until the lowermost of the tables is in line with the chute I, and the cans being released will roll in upon the lowermost table until it is filled. The lever G is then moved and the pinion F′ rotated, acting upon the rack E′ to depress the frame C until the next table B is brought in line with the chute, and another series of cans will roll upon this table, and the third table is filled in the same manner, so that there will then be one dozen cans upon the three tables. The lever L is then pressed forward, and the plates J, pressing against the rear ends of the cans, force them upon the carriers D, which stand in line with the tables. The plates J are then drawn back and the frame C again raised, and another series of a dozen cans is admitted upon the tables in the same manner as before described, and these cans are then forced forward by the plates J, pushing the cans, which are already on the guides or car-

riers D, far enough to allow the second series of cans to be received thereon. The carriers D now contain two dozen cans, which are in position to be introduced into the case. The case is placed in front of the carriers D, resting on its side on guides or rollers, and it may be pushed forward, so as to slip over the carriers D, thus inclosing them and their contents within the case. When the tables are again charged and the cans pushed back into the carrier, they will displace those already there, pushing them and the case backward until the case is filled, when it can be moved backward and another case placed in position to be filled. The carrier-frame is fulcrumed at D′, and when the last table is to be filled it is slipped over the carrier and the latter tilted about its fulcrum to such an inclination that the cans will slip into it. The guides are also inclined, as shown in dotted lines, Fig. 2, so that the case will move easily to the floor.

In the construction above described the chute I remains stationary, and the tables B are successively moved into line with it to allow the cans to pass from the chute upon the tables; but I have found it very practicable to allow the tables B to remain stationary and to move the discharge end of the chute to bring it successively into line with the tables, the operation of filling the tables and delivering them into the tilting holder D being essentially the same. This construction is shown in Figs. 1 and 2, in which the drum or segment F is journaled upon the frame similarly to F′ and is operated by a lever G in the same manner. In this construction the chain E is fixed to F, and its opposite end is connected with the chute I with intermediate connecting-strips I′, so that by the movement of the lever G the chute is brought successively into line with the tables B, the latter being loaded and discharged in other respects in the same manner as before described.

In order to reduce the friction upon the cans when they are being pushed through the carrier D, an exterior casing D^2 of sheet-steel is fitted around the sides and bottom of the carrier, so that the sides of the cans slide against this casing.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for casing cans consisting of a series of superposed tables, a can-delivering chute and mechanism by which the tables and chute are successively brought into line whereby the cans pass by gravitation upon the tables, a receiver in line with the tables and a reciprocating mechanism by which the cans are forced from the tables to the receiver.

2. A can-casing machine consisting of a series of tables, an inclined chute from which the cans are adapted to roll by gravitation, a mechanism by which the tables and chute are brought successively into line whereby the tables are charged with cans, a carrier extending in line with the tables, a reciprocating mechanism whereby the cans are forced from the tables into the carrier, a support and guide for the case whereby the latter is registered with the carrier to allow the cans to slide therefrom into the case, and to move away from the machine after it is filled.

3. A can-casing machine consisting of a series of tables, an inclined chute from which the cans are adapted to roll by gravitation, a mechanism by which the chute and tables are brought successively into line to charge the tables with cans, a carrier extending in line with the tables, a reciprocating mechanism whereby the cans are forced from the tables into the carrier, a guide to register the case with the carrier and upon which the case is retracted from the carrier, said carrier being hinged and adapted to tilt with the guide into an inclined position, whereby the cans are delivered into the case and the case removed from the carrier.

4. An apparatus for casing cans consisting of a series of tables, a can-delivering chute and mechanism by which the tables and chute are successively brought into line whereby the cans pass by gravitation upon the tables, a carrier in line with the tables, a reciprocating mechanism by which the cans are forced from the tables to the carrier and a sheet-metal casing fitting the sides and bottom of the carrier and against which the sides of the cans slide.

In witness whereof I have hereunto set my hand.

JOHN P. SIMMONS.

Witnesses:
S. H. NOURSE,
PETER T. BARCLAY.