

G. W. DEITZLER.

MACHINES FOR PACKING FRUIT AND OTHER ARTICLES.

No. 175,947.

Patented April 11, 1876.

Fig: 1.

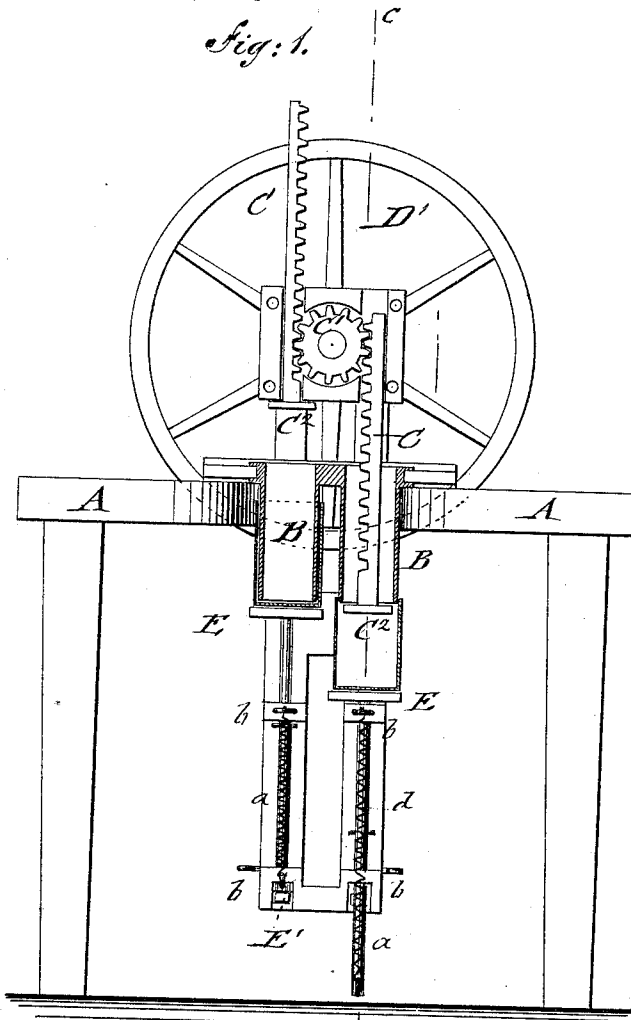


Fig: 2.

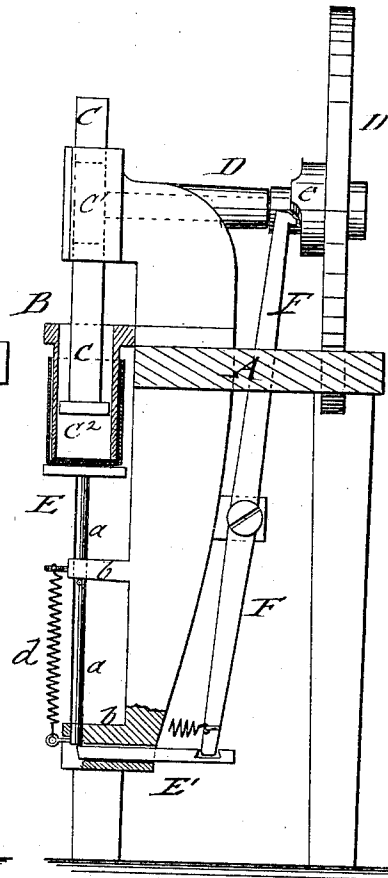
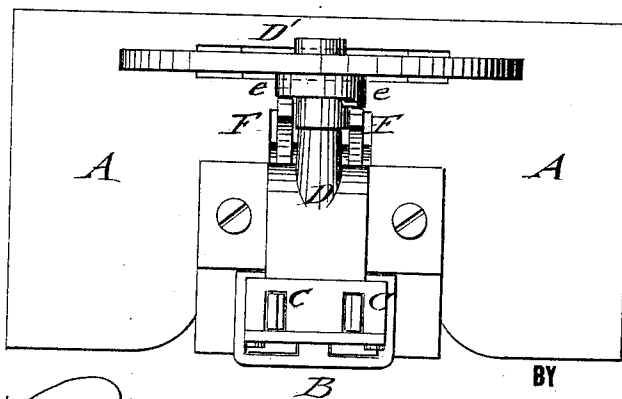


Fig: 3.



WITNESSES:

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IMPROVEMENT IN MACHINES FOR PACKING FRUIT AND OTHER ARTICLES.

Specification forming part of Letters Patent No. **175,947**, dated April 11, 1876; application filed January 15, 1876.

To all whom it may concern:

Be it known that I, GEORGE W. DEITZLER, of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Machine for Packing Fruit and other Articles, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front vertical section; Fig. 2, a vertical transverse section on the line *cc*, Fig. 1; and Fig. 3, a top view of my improved machine for packing dried fruits and other articles.

Similar letters of reference indicate corresponding parts.

The invention relates to that class of machines designed for pressing and packing certain articles, as dried fruit, herbs, hops, tobacco, beef, jelly, lard, &c.; and it consists of one or more vertically-reciprocating pistons, that press the articles by means of guide-boxes into suitable bags, cans, or other packages, which are supported on movable and spring-acted bottoms, that are intermittently locked by sliding latch-pieces actuated by lever-connection with the driving-shaft.

In the drawing, A represents a metal frame of suitable strength, on which the different operating parts are supported. A horizontal driving-shaft, D, is supported on top bearings of frame A, and provided with a fly-wheel, D', at one end. Vertical racks C are guided in proper recesses at the front part of frame A, and alternately reciprocated by a pinion, C¹, at the front end of the driving-shaft. The racks C are driven by giving the fly-wheel motion alternately to the right and to the left. At the lower end of the racks are fastened in adjustable manner, so as to be readily interchanged, pistons C², that enter on their down-stroke vertical guide-boxes B, placed so as to allow the pistons to play freely up and down in the same.

It is preferable to arrange the machine with two pinions and boxes; but the same principle may also be applied to a single piston or box, or to more than two, in which case the pinion is extended backward, and additional racks and pinions arranged back of the front boxes, by which the working capacity of the machine can be increased to any extent.

The boxes B are made detachable with their supporting-frames, so that different shapes and sizes of packages may be packed thereon with equal facility by attaching the required boxes and pistons.

The lower end of the guide-boxes B is closed by a movable bottom, E, which is guided vertically by a sliding rod, *a*, in supports *b* at the under side of frame A. The bottom is pushed against the box, or to a small distance from the same, by a spring, *d*, and retained in closed position by a horizontal latch, E', that slides in guide-grooves at the lower part of the frame, being pushed forward under rod *a* by a suitable spring.

The bottoms E are alternately unlocked, to correspond with the downward descent of the piston, by levers F, that are fulcrumed to frame A, their lower ends engaging recesses at the rear ends of latches E, while their upper ends are actuated by a cam, *e*, placed fast, but in adjustable manner, on the shaft, so that the levers alternately unlock the latches at that particular time of the stroke of the pistons when the articles to be packed have been compressed by the pistons in their packages, ready to be taken off.

The operation of the machine is as follows: One of the movable bottoms is first pushed down, the latch being unlocked by hand, in which position it is held by the friction of the latch against the rod, acting as a brake. A paper bag or other package is then placed on the bottom E. The bag is carried up over the box by the upward motion of the bottom. The bottom is then locked by the forward sliding of the latch, while the other piston descends. The other box is then provided with a paper bag, and as the first piston is at the uppermost position, its box is charged with the proper quantity of fruit. The fly-wheel is then reversed, so that the first piston goes down, pressing on the fruit until the movable bottom is unlocked by the operation of the cam. The latch being withdrawn by the lever, the fruit is driven out of the box, being surrounded by its paper bag, and removed at the end of the stroke by pressing the bottom farther down. A new bag is then placed over the box, ready for the next charge. The second box has been charged while its piston was at its uppermost position,

the fruit being pressed and packed by the down-stroke of the piston, after which the filled bag is taken off and another one placed on the box. This operation is repeated by alternately charging one box and providing the other with a paper bag: To render the action of the levers smooth, the upper ends may be provided with friction-rollers, that bear against the cam.

When grapes, apples, jelly, honey, lard, and similar articles are packed or pressed, the boxes must be perforated and arranged with a suitable trough around the other bottom edge to carry off the liquids pressed out. The package is taken out at the bottom in the manner described. For this purpose the boxes may be made in circular form, as well as for pressing meats, &c., into tin cans. In the latter case the cans should be fitted at the inside of the boxes into recesses of the same, so that the pistons will fit closely into the cans. The articles may thus be packed in varying quantities with great rapidity, and the packages

thereby made up and prepared for sale in a neater and more economical manner than by the common methods hitherto employed.

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

1. The combination, with a stationary tube, B, open at both ends, of the reciprocating plate E and piston C², both operated substantially as and for the purpose specified.

2. The movable spring-bottom applied to vertically-sliding rods, in combination with sliding spring-latches and fulcrumed levers, actuated by cam of driving-shaft to lock the bottom, for compressing action of piston and releasing the same, for detaching charged package and admitting replacing of new one, substantially as set forth.

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Witnesses:

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