

(No Model.)

V. BARKER.

CAN FILLING MACHINE.

No. 245,270.

Patented Aug. 9, 1881.

Fig. 1.

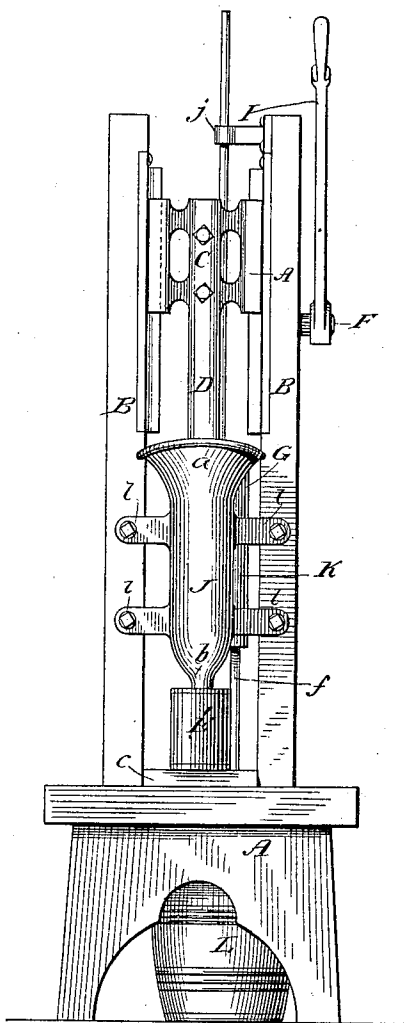


Fig. 2.

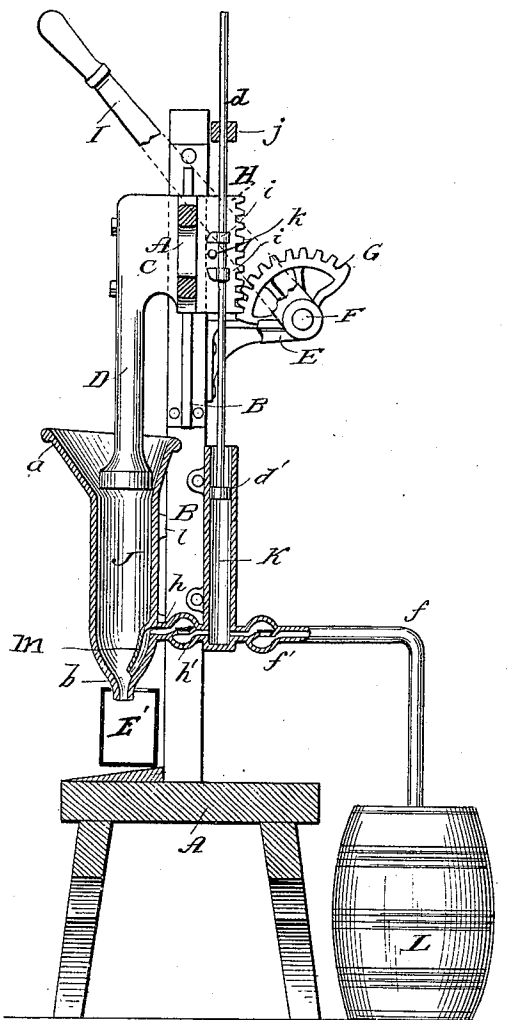
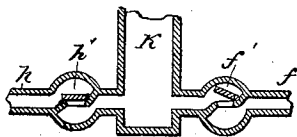


Fig. 3.



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UNITED STATES PATENT OFFICE.

VOLNEY BARKER, OF PORTLAND, MAINE.

CAN-FILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 245,270, dated August 9, 1881.

Application filed June 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, VOLNEY BARKER, a citizen of the United States of America, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Can-Filling Machines; and I do 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention is designed, principally, for canning corn, and relates to means whereby a measured quantity of a suitable liquid is automatically supplied to each can simultaneously with the introduction of the corn into the can.

It frequently happens that the corn, after being cut from the cob, is drier than is desirable, and in such cases the practice obtains among packers of adding a little liquid in the form of sweetened or salted water to the corn being packed. The methods in which this has heretofore been done are either to mix a quantity of the liquid with the corn in mass in a large vessel or tub, or to supply the liquid in measured quantities to each can by means of a ladle of proper size, dipping the same from a pail and pouring it into the can before filling in the corn. The first method is bad, as the liquid is not evenly distributed throughout the mass, and the corn requires to be stirred constantly to prevent the water from rising to the top. The second method requires an extra hand at each press to put the liquid into the cans, and is consequently expensive. Moreover, an even quantity is seldom put in by this method, as in the haste of the operator more or less of the liquid slops over from the dipper or ladle used for measuring, and much is wasted.

The invention consists in the combination, with the mechanism for forcing the corn into the can, of mechanism whereby a suitable quantity of liquid is automatically injected into the can with the corn.

Figure 1 is a front elevation of this improved corn-canning machine. Fig. 2 is a side elevation thereof, partly in section. Fig. 3 is an enlarged sectional view of a portion of the pump-

cylinder, showing the connecting pipes and valves.

The stand or bench A, either portable or fixed, is provided with two upright standards, B, between which is a vertically-sliding cross-head, C, guided in ways of the standards. A plunger, D, is attached to the cross-head and moves therewith. The standards B are provided with rearwardly extended brackets E, in which a transverse shaft, F, has its bearings. This shaft is provided with a toothed segment, G, which meshes into a rack, H, on the rear side of the cross-head. A lever, I, is attached to the shaft F, by which the machine is operated.

A tunnel, J, arranged in line with the movement of the plunger, is attached to the standards by means of ears or plates *l*. This tunnel has a flaring mouth, *a*, at its upper end, for receiving the corn, and a contracted nozzle, *b*, at its lower end, for discharging the same into the can E'. The can to be filled is held under the tunnel, being supported in part by the slanting block *c*. The nozzle of the tunnel projects into the opening in the top of the can. The cut green corn is thrown from a hand-scoop or otherwise into the tunnel, and the lever being operated, the plunger moves downward through the tunnel, forcing the corn through the nozzle into the can.

On the rear side of the upright frame or standards a force-pump, K, is arranged, the piston *d'* of which is connected to and operated by the lever which operates the plunger. An induction-pipe, *f*, having an induction-valve, *f'*, extends from the lower end of the pump-cylinder to a barrel or other receptacle, L, for containing the liquid to be injected into the corn. An eduction-pipe, *h*, provided with a valve, *h'*, connects the lower end of the pump-cylinder with the lower end of the tunnel J. Said tunnel is provided with a downwardly-bent injection-pipe, *m*. The piston-rod *d* passes through an eye, *j*, at the top of the frame, and is provided with collars *i i*, which are adjustable at any height on the rod, being fastened by means of set-screws. A horizontal pin, *k*, attached to the cross-head, projects between the collars, and as the cross-head moves up and down the pin strikes against one or the other of the collars and serves to raise or depress the piston-rod. When the collars are

placed near together the pump will receive a full stroke, and the stroke will be shortened as the collars are moved apart. In this way the stroke can be regulated so as to inject an even quantity of the liquid, more or less, as desired. The piston-rod is provided with a graduated scale, which will indicate the number of ounces or half-ounces of the liquid that will be injected when the collars are in certain positions. In order to secure accuracy the operating-lever should be given a full stroke each time.

The operation is as follows: When the operating-lever is moved upward, both the corn-plunger and the pump-piston make an upward stroke. By this movement of the pump-piston an exact quantity of the liquid, sirup, or brine contained in the receptacle is drawn into the pump through the induction-valve, which then closes automatically. The required quantity of corn sufficient to fill the can is then thrown into the tunnel and the lever brought down. The piston in the pump-cylinder causes the liquid therein to be injected into the funnel, and at the same time the corn-plunger forces both the corn and the liquid into the can.

What is claimed as the invention is—

1. The combination, in a can-filling machine, of mechanism for forcing the corn into the can, and mechanism for automatically injecting a measured quantity of liquid therewith, substantially as described. 30

2. In a can-filling machine, in combination with the corn-tunnel, the plunger, and the mechanism for operating the plunger, of a pump the piston of which is connected with said mechanism and operated thereby, and a liquid receptacle and pipes with valves connecting the pump, tunnel, and receptacle, substantially as described. 40

3. In a can-filling machine, the liquid-pump having a piston-rod graduated, as described, and provided with adjustable collars, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses. 45

VOLNEY BARKER.

Witnesses:

N. M. SYLVESTER,
JOSEPH MALHEUR.