(No Model.)

H. R. STICKNEY.

CAN FILLING MACHINE.

No. 523,553. Patented July 24, 1894.

Fig. 1.

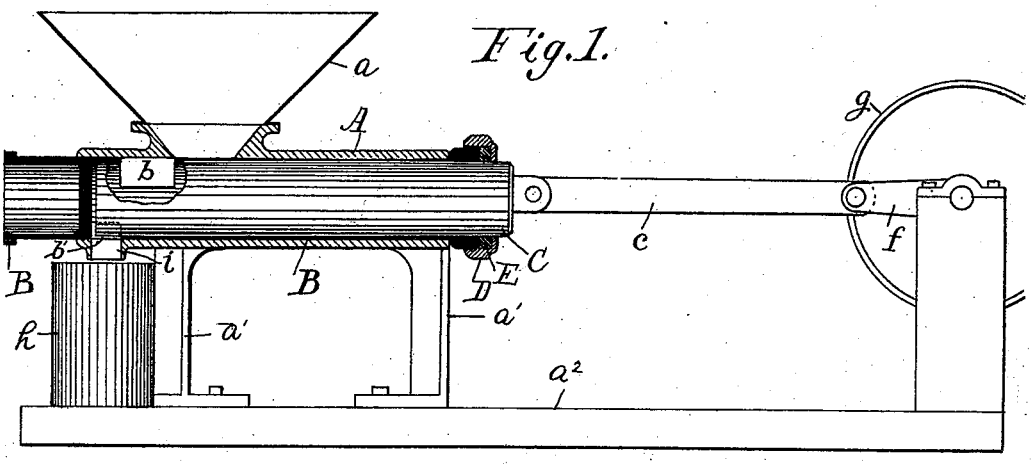


Fig. 2.

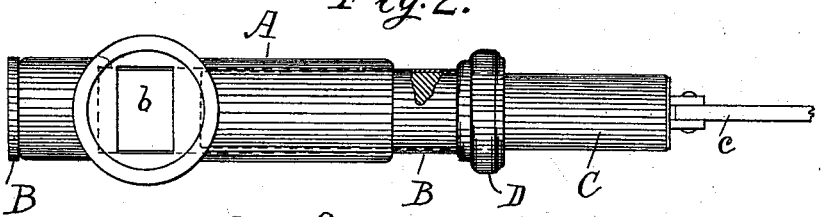
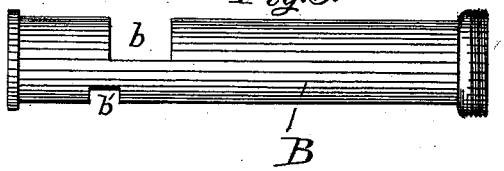


Fig. 3.



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UNITED STATES PATENT OFFICE.

HENRY R. STICKNEY, OF PORTLAND, MAINE, ASSIGNOR OF ONE-HALF TO JOHN E. BURNHAM, OF SAME PLACE.

CAN-FILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 523,553, dated July 24, 1894.

Application filed March 8, 1894. Serial No. 502,841. (No model.)

To all whom it may concern:

Be it known that I, HENRY R. STICKNEY, a citizen of the United States, and a resident of Portland, in the county of Cumberland and State of Maine, have invented a certain new and useful Improvement in Can-Filling Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to machines for filling cans in the process of packing corn, beans and other like substances.

The chief object of the invention is to construct a machine which shall do the desired work and which shall at the same time be simple of construction and easily cleaned and kept in order, having in mind the fact that it is more than ordinarily desirable to make this class of machines simple because they must be cleaned often and kept clean. If any opportunity is given for the corn to lodge it quickly sours and is liable to damage all the corn which is run through the machine.

My machine consists essentially of a cylinder having a hopper and a filling nozzle connected with it and a longitudinally movable sleeve fitting within it the said sleeve having ports which connect with the hopper and the filling nozzle by which the corn is drawn into the sleeve and then discharged into the can through the filling nozzle. A plunger works in the sleeve and its friction with the plunger is sufficient to overcome the friction between the sleeve and the cylinder so that the motion of the plunger in the sleeve slides the latter back and forth charging and discharging it and transferring the corn from the hopper into the cans.

In the accompanying drawings I have illustrated a machine constructed according to my invention although I desire to state that I do not wish to limit myself to the exact construction here shown.

In the accompanying drawings, Figure 1 is a general longitudinal section. Fig. 2 is a plan or top view and Fig. 3 is a detail of the sleeve.

A represents the cylinder which is horizontally disposed and supported on suitable standards a' a', these in turn being shown as bolted to a bed a^2. In the top of the cylinder is an opening connecting with a supply hopper a and on the lower side of the cylinder, preferably at one end thereof is the filling nozzle i. In the cylinder is a longitudinally movable sleeve B having stops or flanges at its ends by which its movement is limited. As here shown the sleeve has a horizontal movement equal to the width of the hopper opening. In the sleeve is a port b which connects with the hopper and a port b' which connects with the filling nozzle. These ports are so arranged that when one is open the other will be closed. Motion is given to the sleeve as I prefer to construct the machine, by the motion of the plunger, although the sleeve may be reciprocated by other means.

The plunger C fits within the sleeve and it is operated by a pitman c and a crank f; g being the driving pulley. These are shown by way of illustration but any suitable means may be used to operate the plunger. A stuffing box D screws onto the end of the sleeve inclosing a packing ring E which is preferably of leather.

The gland is screwed up tight enough to produce friction between the sleeve and the plunger sufficient to overcome the friction between the sleeve and the cylinder so that as the plunger slides back and forth it will draw the sleeve along with it until the latter is stopped by the flanges on its ends.

h represents a can in position under the filling nozzle.

The operation of the machine is as follows:—Assuming the plunger to be at the forward end of its stroke as shown in Fig. 1 the port b' registers with the filling nozzle and the contents of the charge has been discharged into the can, the port b being cut off from the hopper opening. As the plunger is drawn back its friction with the sleeve draws the sleeve back with it until the port b registers with the hopper opening. The sleeve then stops and the plunger continues its backward motion sucking the amount necessary for a charge into the sleeve through the port b, the port b' during this time being drawn back and cut off from the filling nozzle. When the plunger moves forward it first slides the

sleeve inward, cutting off the port *b* and opening the port *b'* before it has any motion with relation to the sleeve. When the sleeve stops, the plunger slides in the sleeve and forces the contents of the sleeve through the filling nozzle into the can.

The machine as thus described is simple in construction and operation and the parts being so few in number it can be easily kept clean.

I claim—

1. In a machine for filling cans, the combination of a horizontally disposed cylinder having a hopper on top and a filling nozzle underneath, a longitudinally movable sleeve within said cylinder having ports adapted to register with said hopper and said filling nozzle and a reciprocating plunger fitting within said sleeve, the friction between said plunger and said sleeve being greater than the friction between said sleeve and said cylinder, whereby the sleeve is reciprocated by the movement of the plunger, substantially as described.

2. In a machine for filling cans, the combination of a cylinder having a hopper connecting with one side and a filling nozzle connected with the other, a sleeve within said cylinder having ports adapted to register with said hopper and said filling nozzle, a plunger within said sleeve operatively connected therewith and mechanism for reciprocating said sleeve and said plunger longitudinally, substantially as described.

HENRY R. STICKNEY.

In presence of—
S. W. BATES,
E. DUDLEY FREEMAN.