

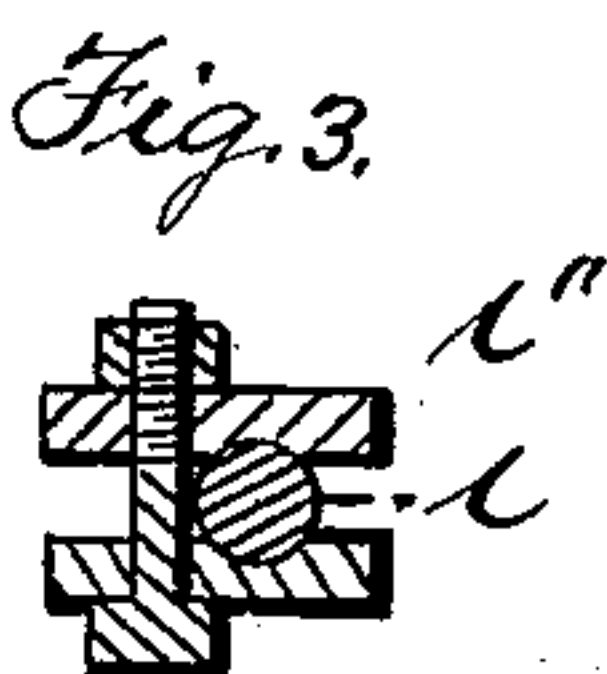
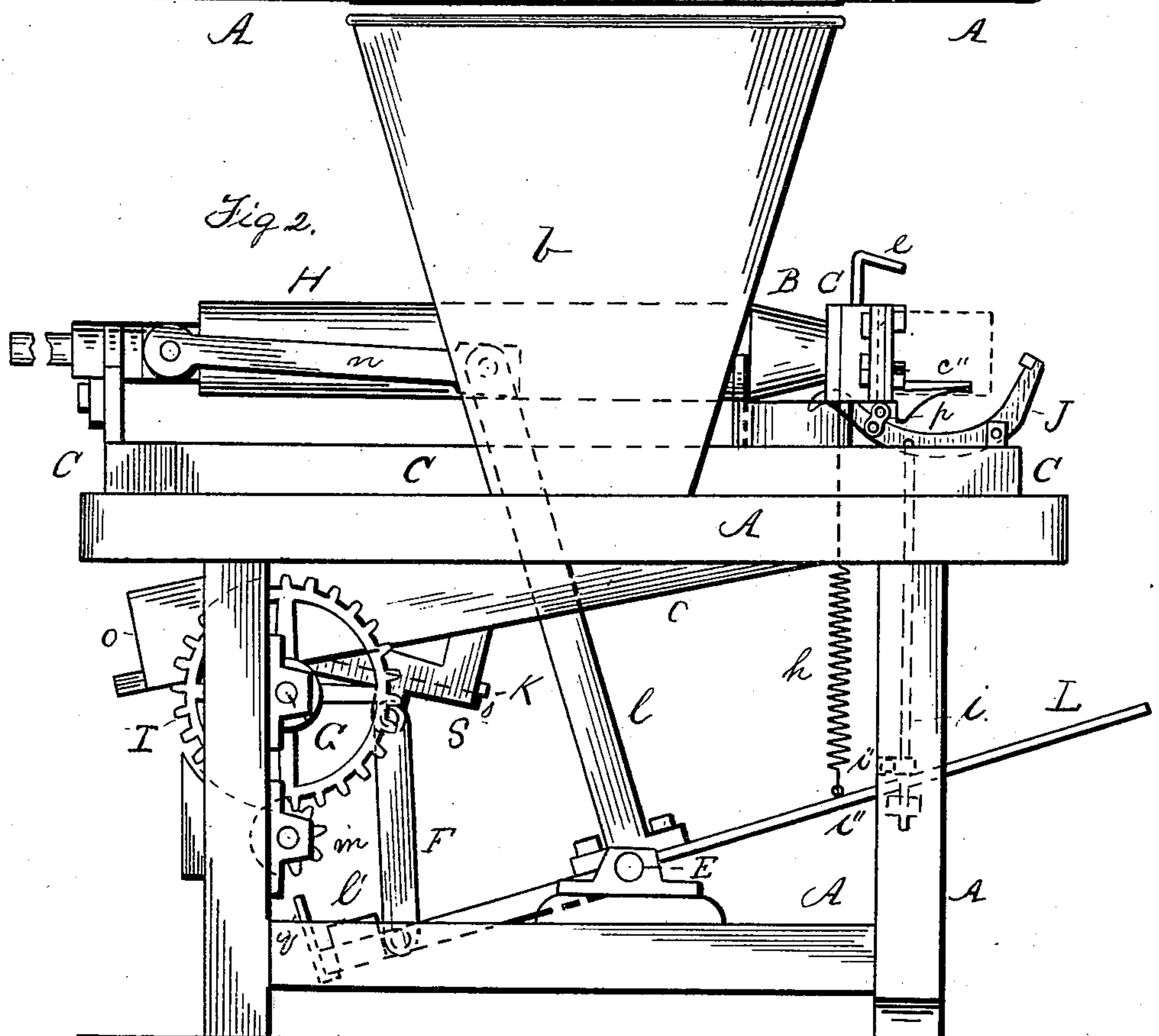
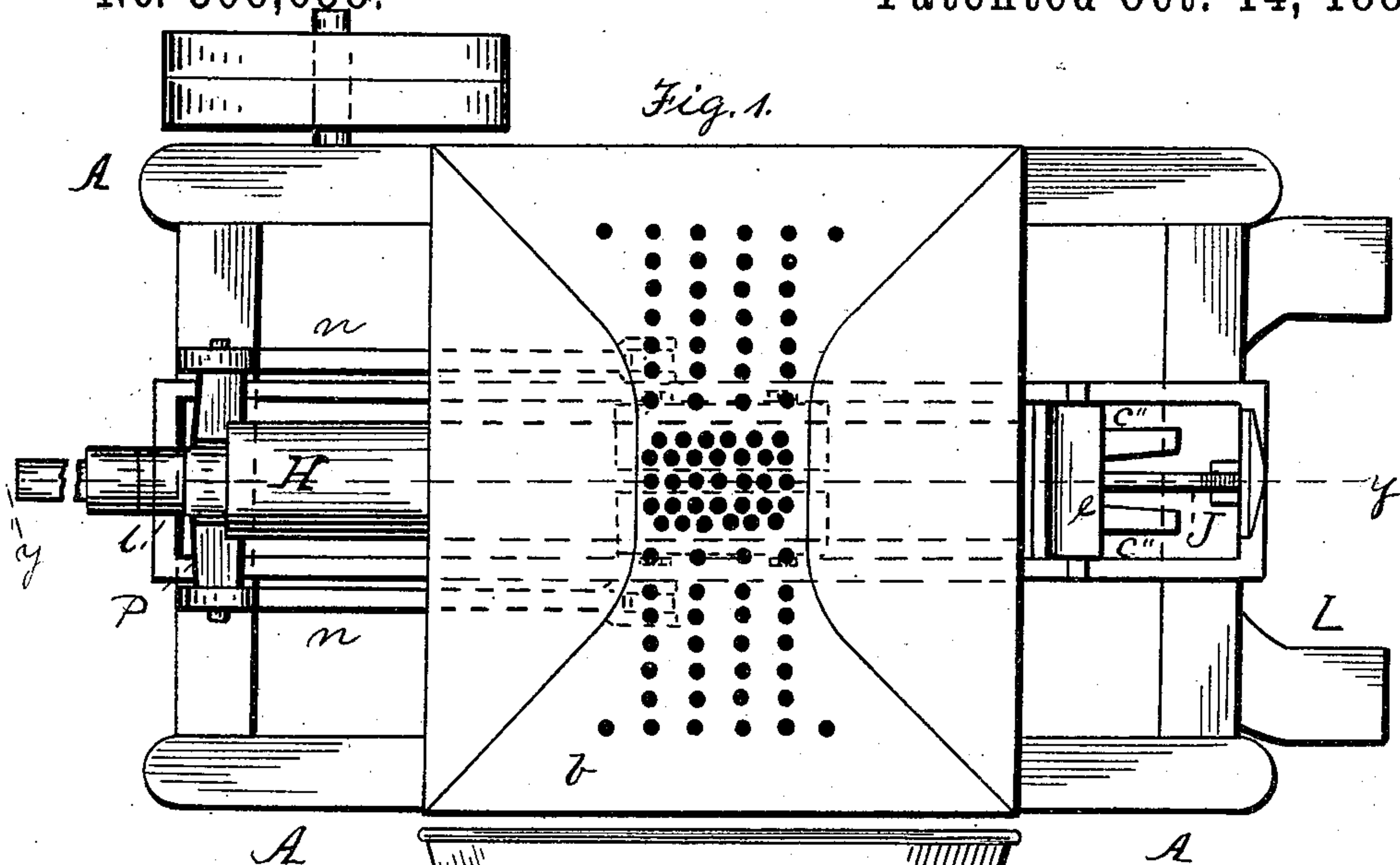
(No Model.)

3 Sheets—Sheet 1.

J. STEVENS.
CAN FILLING MACHINE.

No. 306,658.

Patented Oct. 14, 1884.



WITNESSES:

L. F. Brous.
S. W. Weaver

INVENTOR

BY John Stearns
Baltimore &c.

ATTORNEYS.

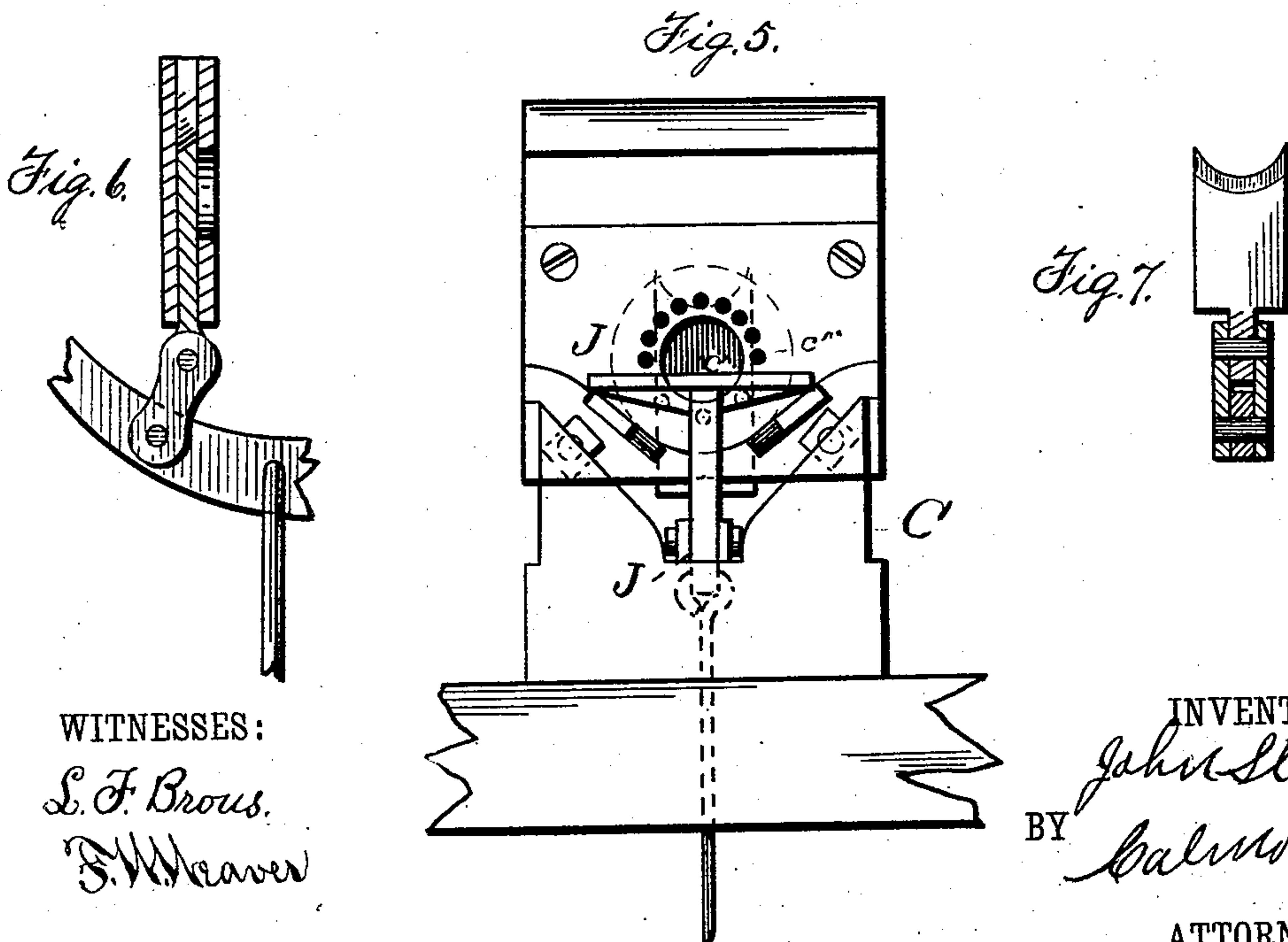
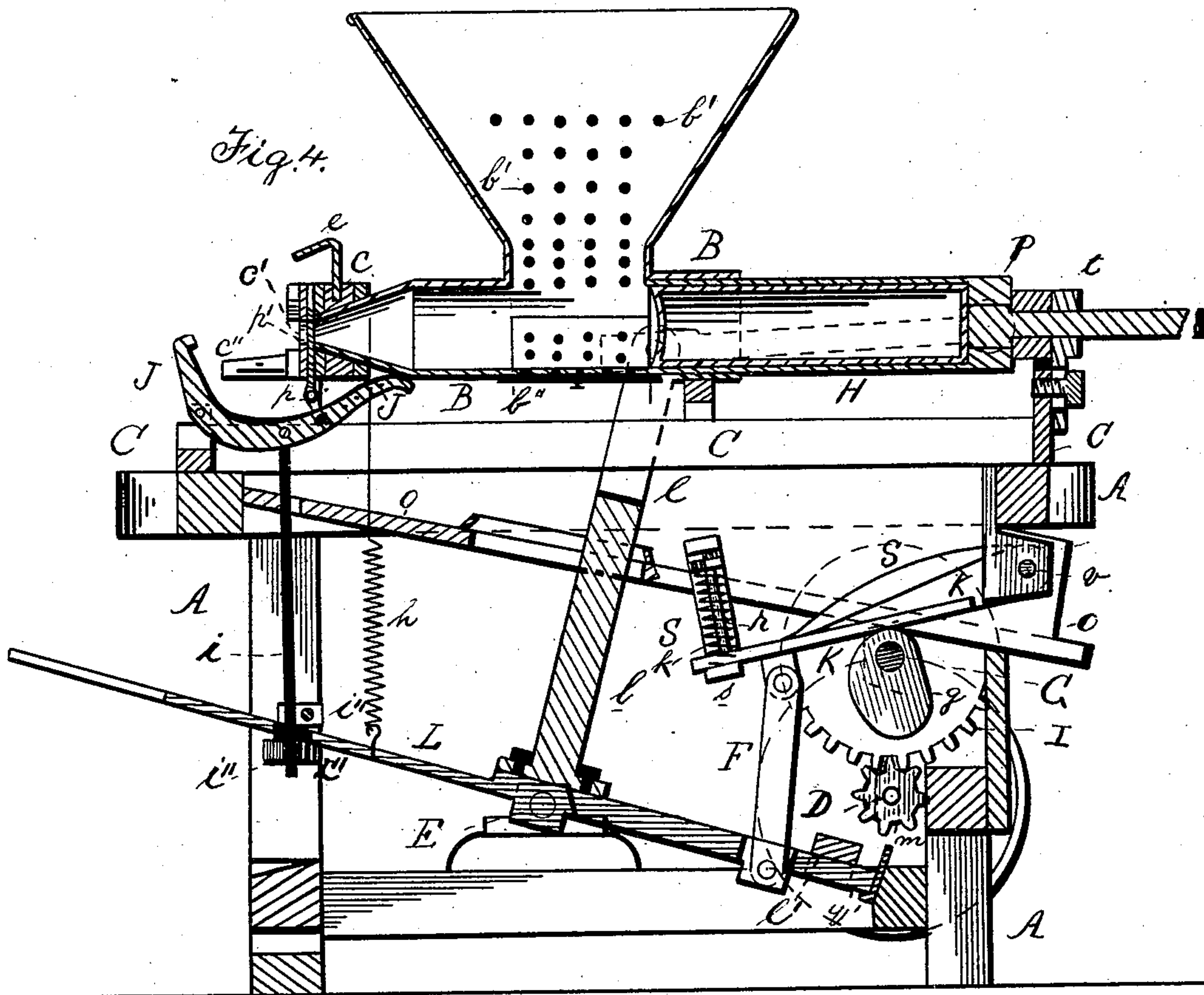
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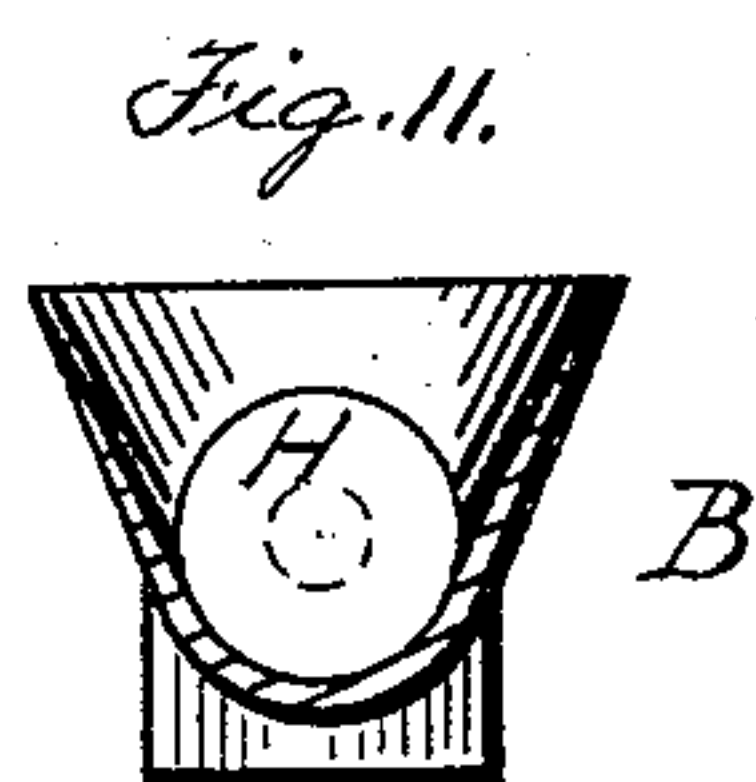
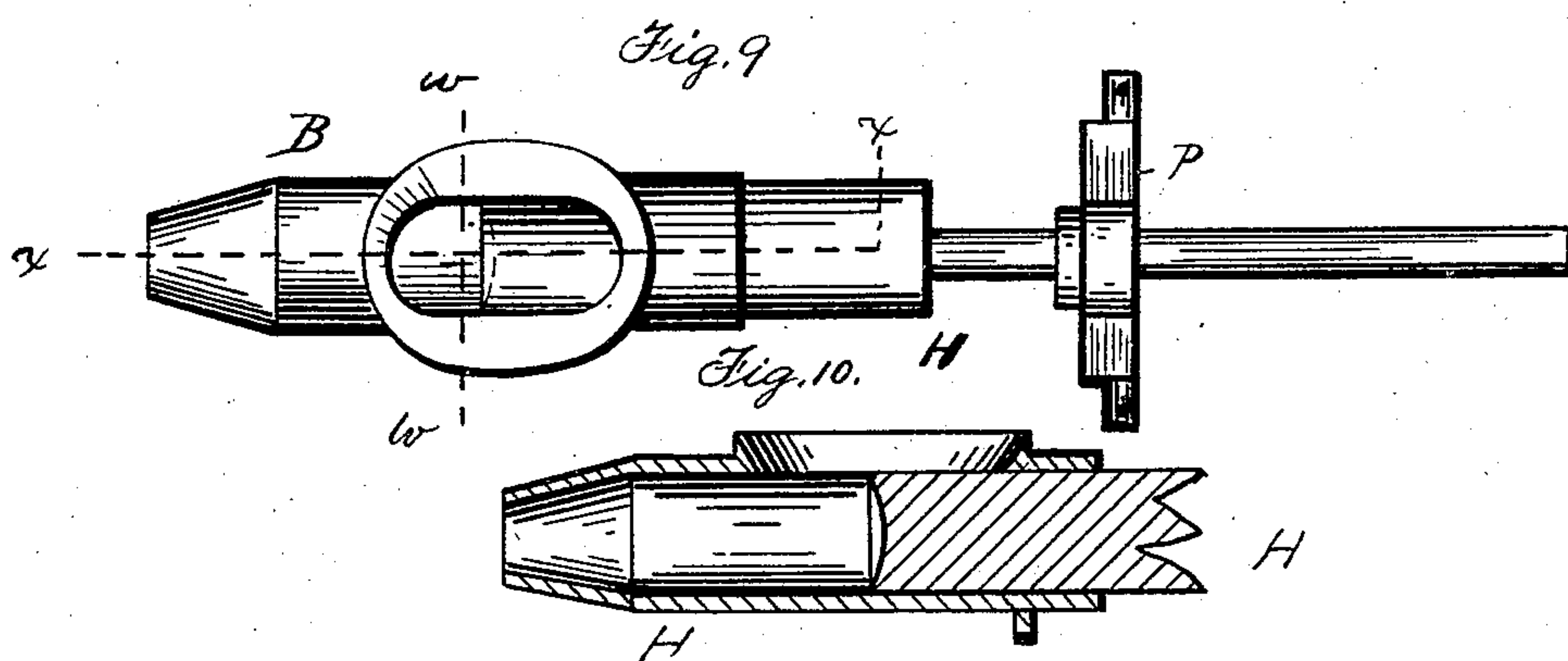
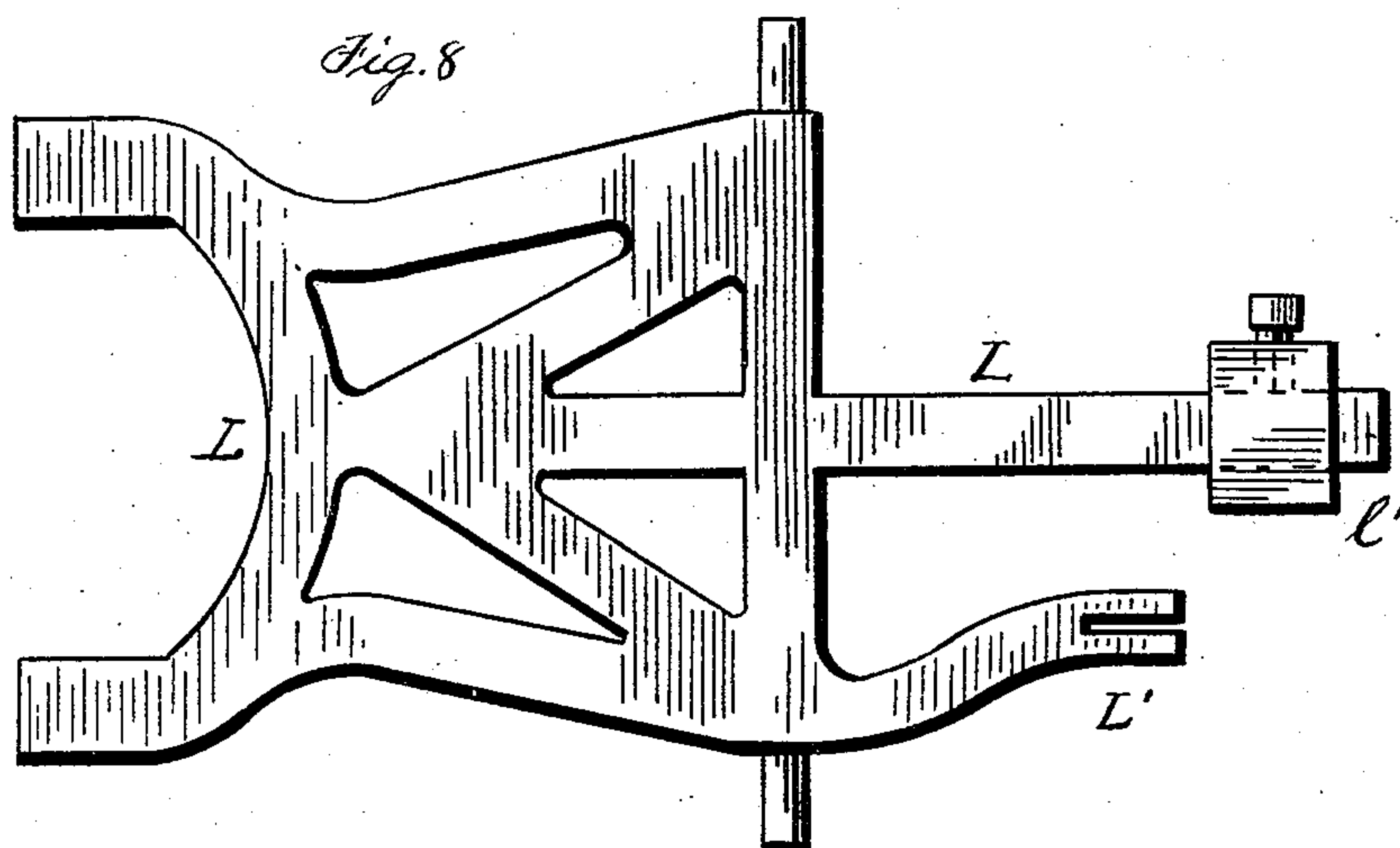
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3 Sheets—Sheet 3.

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CAN FILLING MACHINE.

No. 306,658.

Patented Oct. 14, 1884.



Witnesses:

L. F. Brous.
D. Weaver.

Inventor
John Stevens
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UNITED STATES PATENT OFFICE.

JOHN STEVENS, OF WOODSTOWN, NEW JERSEY.

CAN-FILLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 306,658, dated October 14, 1884.

Application filed July 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN STEVENS, a citizen of the United States, residing at Woodstown, in the county of Salem and State of New Jersey, have invented certain new and useful Improvements in Can-Filling Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention consists of a simple, effective, and useful machine for filling cans or jars with fruit, tomatoes or other vegetables, and meats, and in general contour resembles a former machine on which Letters Patent were granted to me January 8, 1884, No. 291,799, can-filling machine, but which is much simpler in construction and effective in operation, which I will explain in detail further on, reference being had to the accompanying drawings, in which—

Figure 1, Sheet 1, is a plan view of my improved machine. Fig. 2, Sheet 1, is a side elevation thereof. Fig. 3, Sheet 1, is an enlarged sectional view of the lift-stop. Fig. 4, Sheet 2, is a horizontal vertical section on line *y y* of Fig. 1. Fig. 5, Sheet 2, is an enlarged face view of the head, showing clearly the opening for the fruit, vegetable, or meats to pass through, and the can-holding lever. Fig. 6, Sheet 2, is a side view, partly sectional, of the closing-plate. Fig. 7, Sheet 2, is a face view, partly sectional, of the same. Fig. 8, Sheet 3, is a plan view of the treadle. Fig. 9, Sheet 3, is a plan view of a modified form of piston-plunger. Fig. 10, Sheet 3, is a horizontal vertical section on line *x x* of Fig. 9. Fig. 11, Sheet 3, is a cross-section on line *w w* of Fig. 9.

Similar letters refer to similar parts.

Upon a suitable table or frame, A, is a horizontal metallic bed, C, in which rests a cylinder or tube, B. The cylinder B is conical at the front end, which enters the head *c*, and is provided with an opening communicating to a hopper, *b*, in which is placed the fruit, vegetable, or meats to be forced into the can or jar.

The shaft D, supported in suitable bearings on the frame A, forms the means, either mechanical or hand, by which power is imparted to the machine. A transverse shaft, E, jour-

naled in suitable bearings in the frame-work A, carries the treadle L, another means of power, and to which is bolted or otherwise secured a right-angular bifurcated or forked arm, *l*, which is pivoted at the top to connecting-rods *n n*, attached at their opposite ends to the cross-head P, which is secured to the piston-plunger H, working in the cylinder B.

Upon one end of the shaft D is secured a pinion, *m*, meshing with a gear-wheel, I, secured above on a parallel shaft, G. Said shaft is also provided with a cam, *g*.

An arm, *L'*, forming part of the treadle L, has attached to it the connecting-rod F, the upper end of which is connected to an L-shaped lever, S, which has a projecting lip, *s*, forming a seat at its outer end for a lever, K, both of which levers have a common pivot at *v*.

To the outer end of the L-shaped lever S is secured a downwardly-projecting rod, *r*, passing through a hole in said lever, and a coil-spring, *k*, surrounds the rod *r* and receives a bearing both at the top upon the L-shaped lever S. An L-shaped lever, J, forming the can or jar holder pivoted to the bed C, has its rear end connected by a spring, *h*, to the treadle L. It is also supplied with a depending rod, *i*, having a collar, *i''*, and a lift-stop, *i'*, and has link-connections *p* to closing-plate *p'*, which slides in the head *c*. The head *c* has secured to its face supports *c''*, on which to rest the unfilled can or jar, and is provided with an aperture, *c'*, through which the vegetables or meats pass.

To a central rear arm of the treadle L is an adjustable sliding weight, *l'*, which serves to balance all the parts.

Secured to a cross-rail of the frame-work A is an adjustable right-angular step, *q*, which forms a seat for the rear end of the central arm of the treadle L, limiting its downward movement, while a front rail of the frame-work A performs a like function. The bed C is provided with an adjustable bearing, *t*, for the stem, and the chute *o*, constructed the width of the machine, secures all the drippings and the juices from the perforations in the hopper and cylinder.

The operation of my machine is as follows; and in this description I will confine myself to the filling of cans or jars with tomatoes, and

which are first introduced into the hopper *b*, said hopper being supplied with small perforations *b'*, to allow the juices to a great extent to drain from the tomatoes. The cylinder *B* is also perforated directly below the opening into the hopper; but only a portion of these perforations are open at all times, the hinged doors *b''* being open or closed as the quantity of juice may require. The operator having placed the empty can or jar upon the rests *c'' c''*, corresponding to the shape of the same, the power is applied, when using mechanical or hand, to the shaft *D*, provided with the pinion *m*, meshing with the gear-wheel *I* on the shaft *G*. The cam *g* at each revolution of the shaft plays against the under side of the lever *K*, forcing the same upward, at the same time lifting the rear end of the treadle *L* and drawing forward plunger *H* through the medium of the bifurcated or forked-shaped arm *l*, attached at the top to the connecting-rods *nn*, secured at their opposite ends to the cross-head *P*, forming part of the piston-plunger *H*, working in the cylinder *B*, and simultaneous with the same movement the L-shaped lever *J*, forming the can or jar holder, is drawn down by the rod *i*, and the opposite end of said lever forced up against the can or jar, which forces the can or jar firmly against the face of the head *c* directly in front of the aperture *c'*. The spring *h*, secured at one end to the rear end of the lever *J* and its opposite secured to the treadle *L*, and the spring *k* upon the lever *S* will yield and allow a further descent of the treadle while the can or jar is in contact with the head *c*. The closing-plate *p'*, sliding in the head *c*, through the medium of the link-connections *p* with the lever *J*, will be drawn from in front of the aperture *c'* in the head *c*, allowing the tomatoes to enter the can or jar from the cylinder *B* through its conical or nozzle shaped end by the forward movement of the plunger *H*. Upon the upward movement of the treadle *L* the plunger *H* is withdrawn, because of the connections *n*, *l*, and *P*, for about one-third of its stroke, and the treadle thereby rises to a corresponding extent before it engages the lift-stop *i'* upon the rod *i*, connected

to the L-shaped lever *J*, and which operation places the closing-plate *p'* in position and removes said L-shaped lever *J*, forming the can-holder, from the rear of the same. 50

When filling cans or jars with more solid or tough substances, like meats, the plunger and cylinder portion should be constructed in more substantial manner, the former preferably of steel and the latter of cast-iron, so that better cutting-edges can be secured between the plunger and front end of the opening in the cylinder, as shown in Figs. 9, 10, and 11, Sheet 3. 60

A bent guard, *e*, secured to the head *c* of the bed *C*, shields the face of the operator from flying juices when running the machine.

The form of treadle shown clearly in plan view, Fig. 8, Sheet 3, is preferable, because when using the machine with power the danger is obviated of its striking the operator. 65

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

1. The combination of perforated cylinder *B* and hopper *b*, plunger *H*, and treadle *L* with lever *J* and rod *i*; with mechanism, as described, for moving said cylinder in conjunction with the plunger, as set forth. 70

2. The combination of the perforated cylinder *B*, doors *b''*, and plunger *H* with the adjustable bearing *t* and guard *e*, as set forth. 75

3. The combination of the cylinder *B*, plunger *H*, treadle *L*, and connecting mechanism with the lever *J*, forming a can-holder, depending rod *i*, lift-stop *i'*, closing-plate *p'*, link *p*, and spring *h*, as set forth. 80

4. The combination of the cylinder *B*, plunger *H*, treadle *L*, connecting mechanism, can-holding lever *J*, depending rod *i*, lift-stop *i'*, closing-plate *p'*, link-connection *p*, spring *h*, levers *S* and *K*, spring *k*, connecting-rod *F*, and means, substantially as described, whereby the whole is connected and operated, as set forth. 85 90

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

JOHN STEVENS.

Witnesses:

WALTER W. CALMORE,
JAS. H. STEVENSON.