

(No Model.)

2 Sheets—Sheet 1.

F. J. STEINHAUSER.

COMBINED FILLING AND PACKING DEVICE.

No. 370,427.

Patented Sept. 27, 1887.

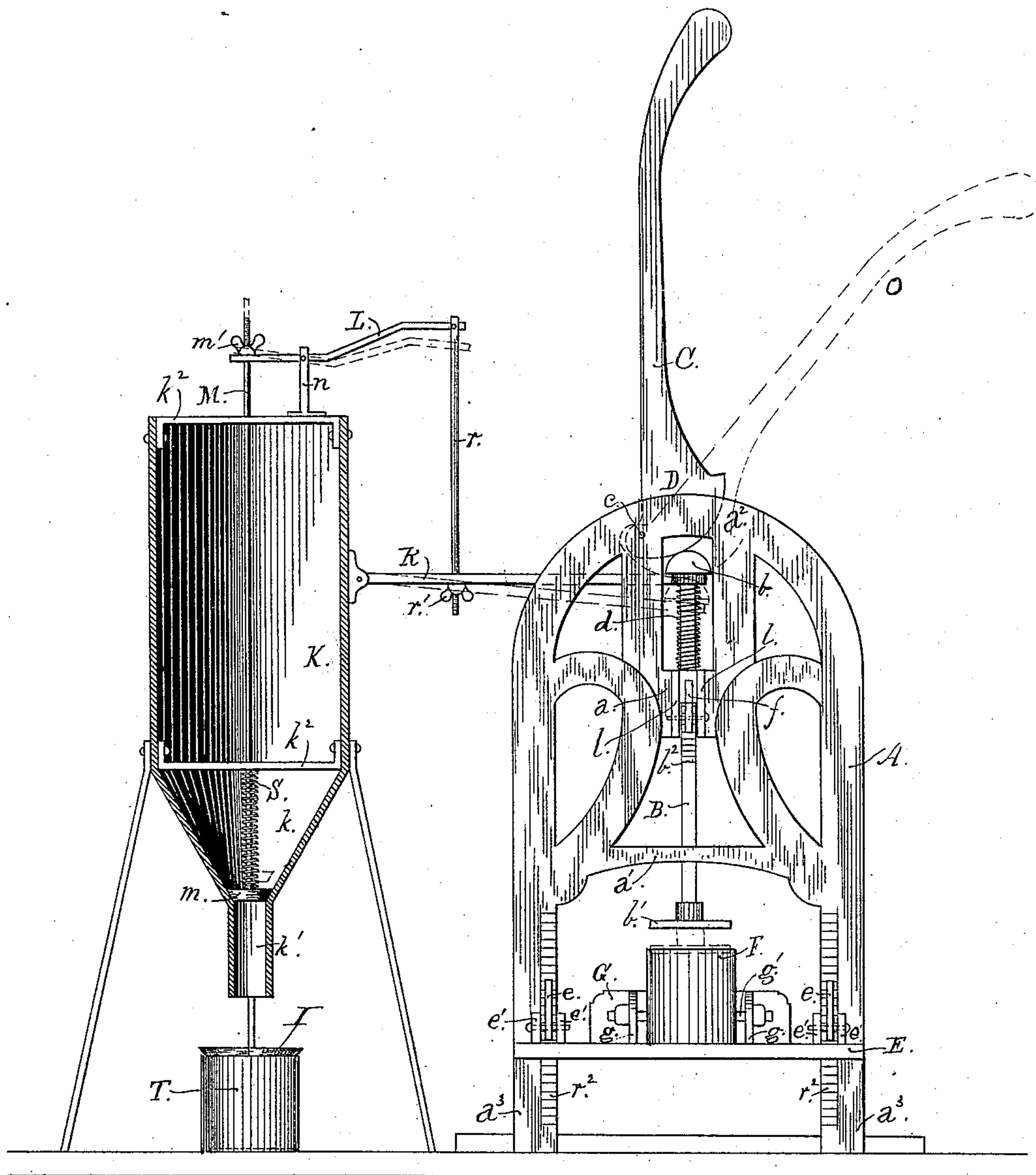


Fig. 1.

Witnesses
Ella L. Gerhart
Geo. W. Lane

Inventor
Frank J. Steinhauer
By his Attorney
Wm. R. Gerhart

(No Model.)

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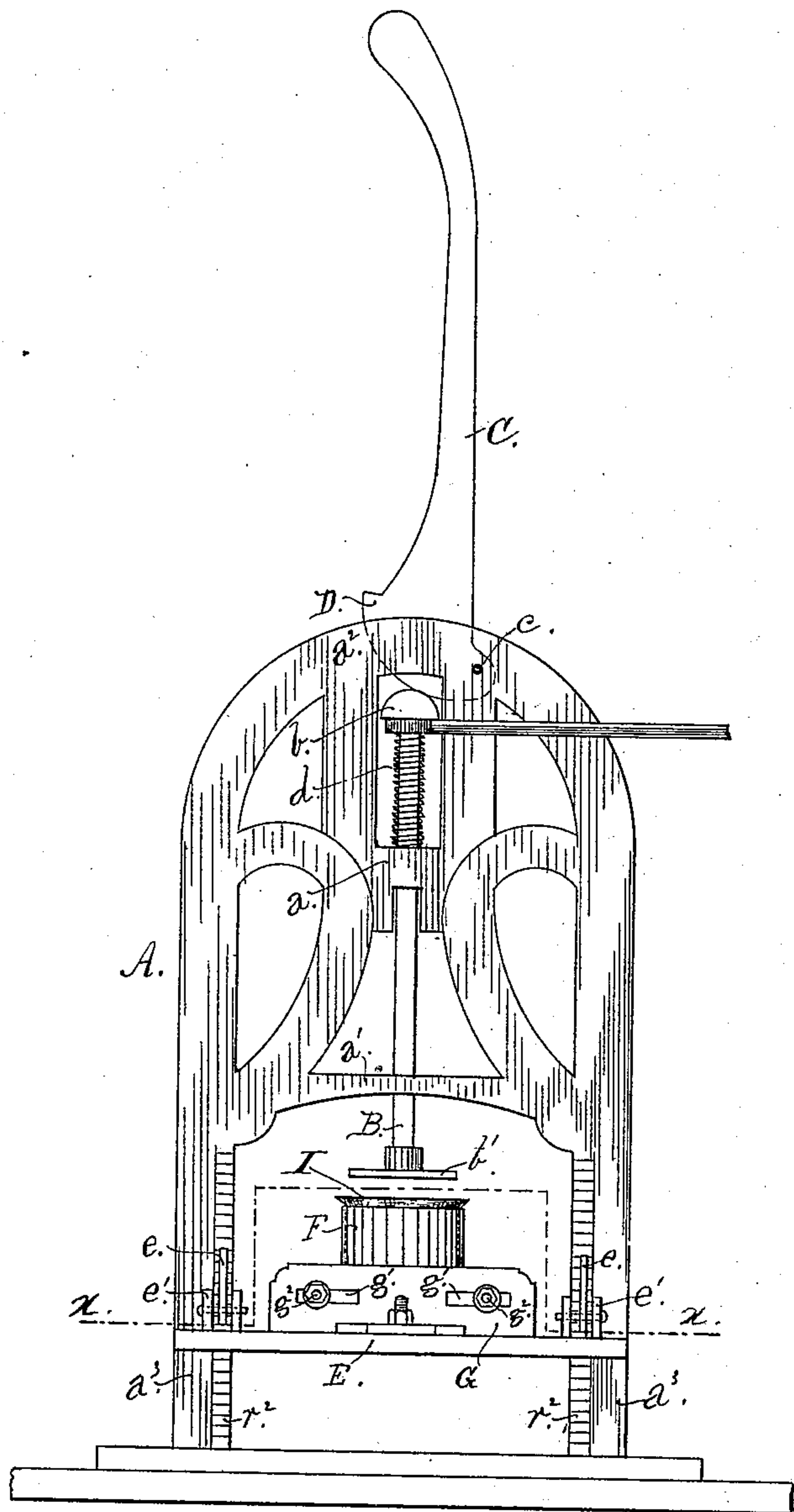


Fig. 2.

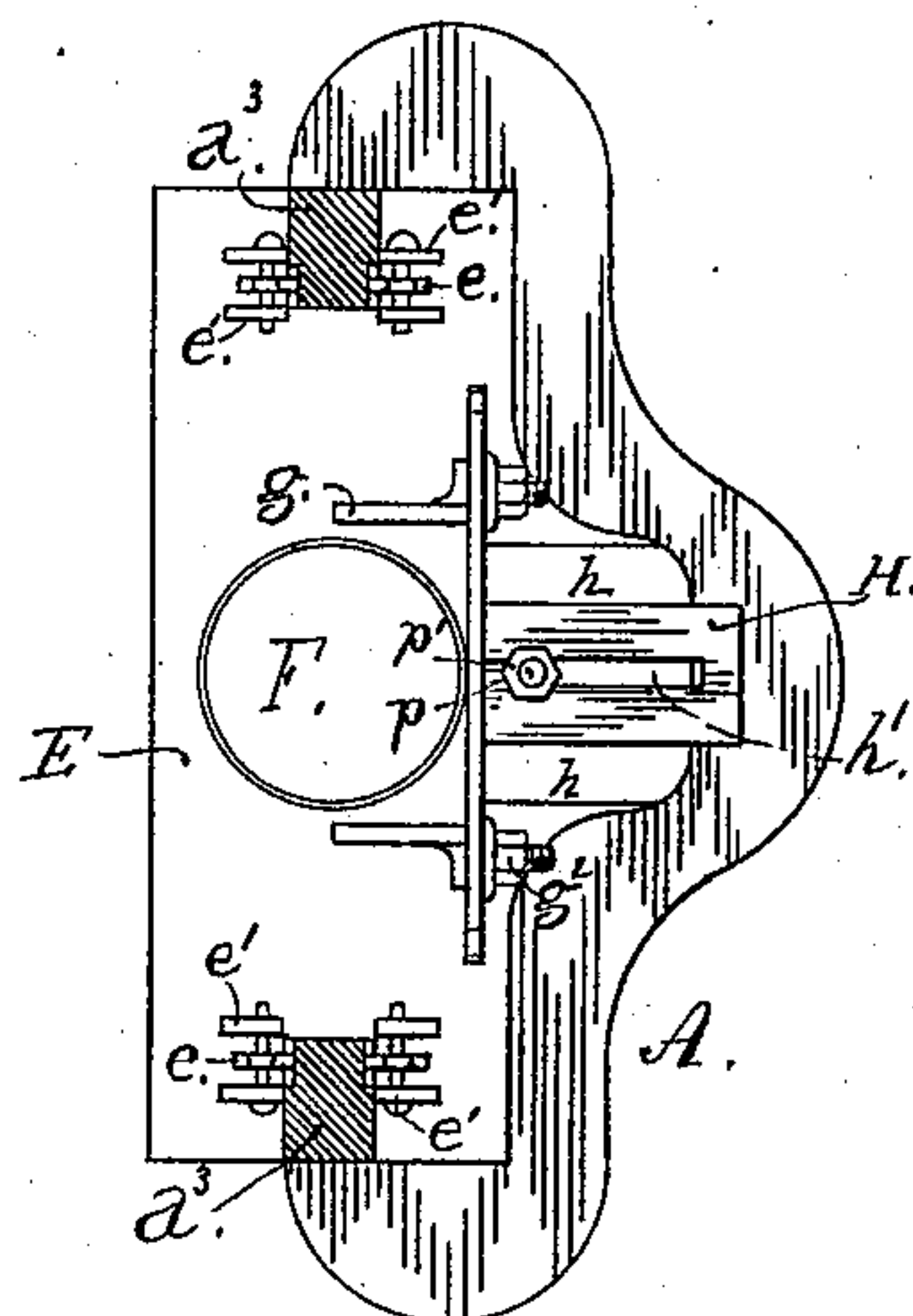


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK J. STEINHAUSER, OF LANCASTER, PENNSYLVANIA.

COMBINED FILLING AND PACKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 370,427, dated September 27, 1887.

Application filed February 24, 1887. Serial No. 228,791. (No model.)

To all whom it may concern:

Be it known that I, FRANK J. STEINHAUSER, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Combined Filling and Packing Devices, of which the following is a specification.

My invention relates to improvements in devices for compressing horse and cattle powders or other powders of a similar character in the receptacles containing them, or in compressing and holding in position for a length of time cigar-molds, tobacco to be pressed into compact shape, or, in fact, to pack any material requiring compression for so doing; and the objects of my improvements are, first, to afford a means of compression more rapid, powerful, and simple than any heretofore used, and, second, to combine, in the case of powder or other pulverized materials, a packing and a filling machine so constructed that the mechanism of the two shall be arranged so that in operating one receptacle or can will be filled while the contents of another are being compressed. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my entire invention, the filling device being shown partially in section; Fig. 2, a rear elevation of the packing device, showing the means for adjusting the clamps between which the can rests, and Fig. 3 a horizontal section through the line *x x* of Fig. 2.

Similar letters refer to similar parts throughout the several views.

The frame A supports the vertical acting plunger-rod B. This rod passes through central cross-pieces, *a a'*, of the frame A, and is provided at the top with a semicircular head, *b*, and at the bottom with a plunger-head, *b'*, of such shape as to conform with that of the receptacle, I, it is to pack. The plunger-heads are removably attached to the rod B, that those of various forms may be used to conform with the shape of the receptacle to be packed.

The top *a²* of the frame has a vertical slot cut therein, in which is pivoted a cam-lever, C, at *c*. This lever is so located that the cam D at its lower end rests upon the head *b*, and thereby in its movement imparts a vertical downward motion of the rod B. The plunger-

rod B is forced upward and kept in engagement with the cam D by a spiral spring, *d*, embracing it between the cross-piece *a* and the head *b* and bearing against those parts.

The movement of the cam lever is shown by the dotted lines O, the slot in which it moves extending to the right in Fig. 1 from the point at which the lever is shown by the full lines as resting.

The rod B is furnished with a rack, *b²*, which is engaged by the dog *f*, secured to the lips *l*, projecting from the face of the upper cross-piece, *a*. The cross-piece is slotted between the lips *l* to permit the engagement of the dog with the rack. Bringing the dog *f* into engagement with the rack holds the rod down in any position it may be in at the time. This arrangement is for the purpose of keeping the plunger pressing upon cigar-molds or the like for some time.

The platform E, upon which the receptacle to be filled rests, embraces the posts *a³* on each side, and each of these posts is provided with a vertical rack, *r²*, upon the front and rear faces, which are engaged by dogs *e*, pivoted between the lips *e'* on the upper surface of the platform E, that the platform may be adjusted vertically and held in position.

In packing powders in paper, cotton, or receptacles of other flexible material, the receptacles are placed in a rigid can, F, of corresponding size, to prevent the bursting of such receptacles under the pressure exerted by the packer. These cans F are secured between arms *g*, made laterally adjustable in slots *g'* in the frame G by set-nuts *g²*. The frame G is itself adjustable backward and forward by means of a rearwardly-projecting arm, H, resting between two cleats, *h*, upon the upper surface of the platform E, the arm H having a slot, *h'*, cut therein, through which a threaded pin, *p*, projects and is engaged by the set-nut *p'*.

On one side of the packer there is a filling device located. This device consists of a body, K, having a funnel-shaped bottom, *k*, the spout *k'* of which is closed at the upper end by a stopper, *m*. The stopper *m* is secured to the lower end of the rod M, working vertically through the cross-pieces *k²*, and secured at the upper end to the lever L.

The lever is pivoted on the standard *n*, and

connected by means of the rod *r* with the lever R, having its fulcrum in the side of the filler, and the other end attached to the plunging-rod B just below the head thereof. The rods
 5 M and *r* are provided with set-screws *m'* *r'*, respectively, that the height to which the stopper may be raised can be varied to regulate the flow from the spout *k'*. The rod M is embraced by a spiral spring, S, between the
 10 lower cross-pieces, *k*², and the stopper *m*, which acts to keep the latter in engagement with the top of the spout *k'*.

Beneath the spout *k'* there is a can, T, placed, similar to that under the packer, to support
 15 flexible bags while being filled.

A brief examination of Fig. 1 will show that when the lever is depressed for compressing a receptacle, I, under it the stopper in the filler is raised, permitting a similar receptacle there-
 20 under to be filled ready for packing. Thus by the use of the same power the packing and filling are carried on simultaneously.

As will be readily observed, there might be a number of alterations made in the details of
 25 my device without materially interfering with the principles of its action. I therefore do not confine myself to the minor points of my machine as described, closely; but

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the supporting-
 frame, the plunger-rod B, having the circular
 head *b* and plunger-head *b'*, the spring *d*, and
 the cam-lever C D, pivoted in the top of the
 frame, of the platform E and a rigid can, F,
 35 all combined and operating substantially as
 and for the purpose set forth.

2. The combination, with the supporting-
 frame, of the plunger-rod B, having the head
b and plunger *b'*, and provided with the rack
*b*², the dog *f*, pivoted to the cross-piece *a*, the
 spring *d*, the cam-lever C D, and the platform
 E, all combined and operating substantially as
 40 and for the purpose specified.

3. The combination, with a packing-ma-
 45 chine, of a filling-reservoir and connections
 between said packing-machine and reservoir,
 whereby the movement of the machinery for
 compressing a receptacle in the former opens
 the outlet of the latter for filling a receptacle
 50 under it, substantially as specified.

FRANK J. STEINHAUSER.

Witnesses:

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 WM. R. GERHART.