(No Model.)

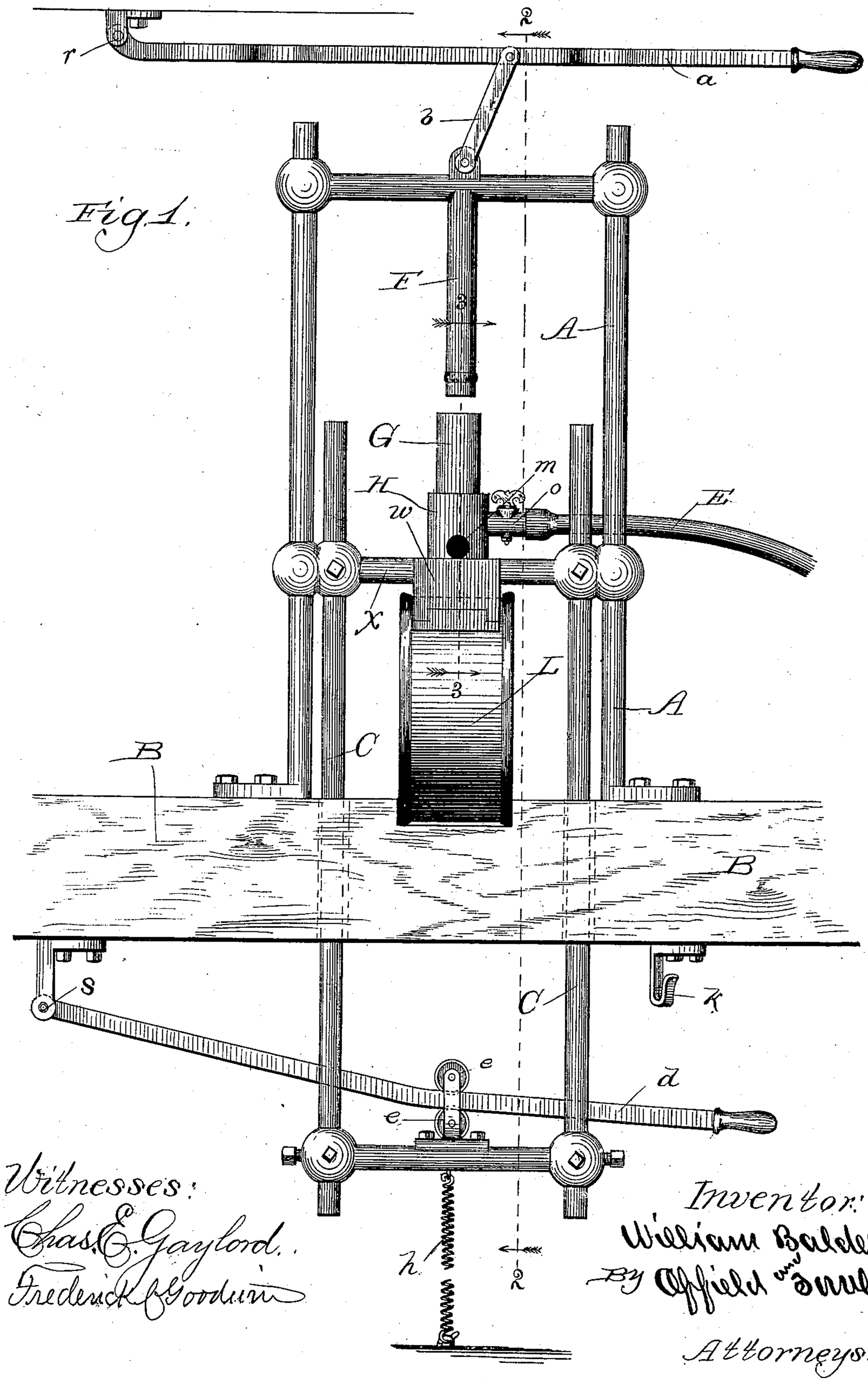
2 Sheets—Sheet 1.

W. BALDER.

APPARATUS FOR PRESERVING MEATS, &c.

No. 332,988. Patented Dec. 22, 1885.

Fig. 1.



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(No Model.)

2 Sheets—Sheet 2.

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APPARATUS FOR PRESERVING MEATS, &c.

No. 332,988. Patented Dec. 22, 1885.

Fig. 2.

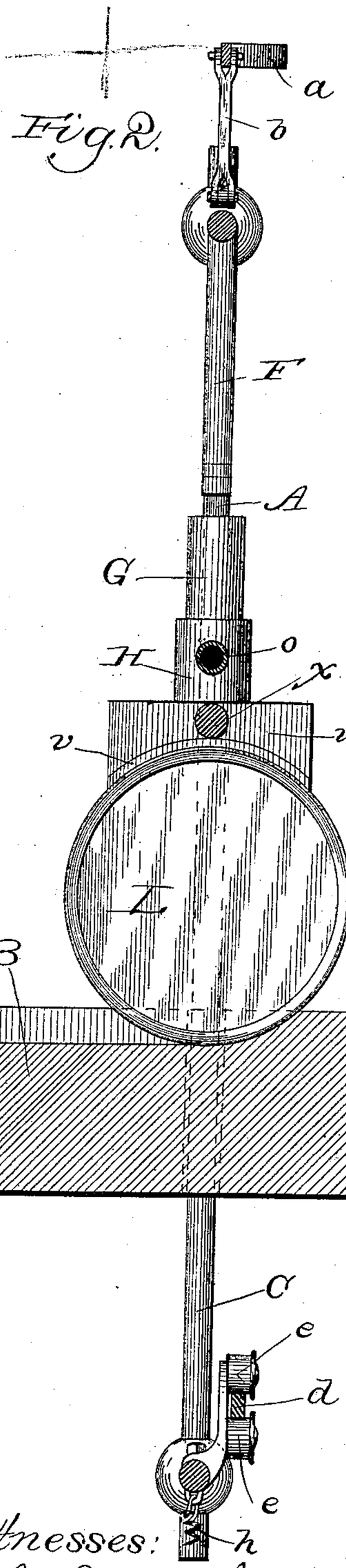


Fig. 3.

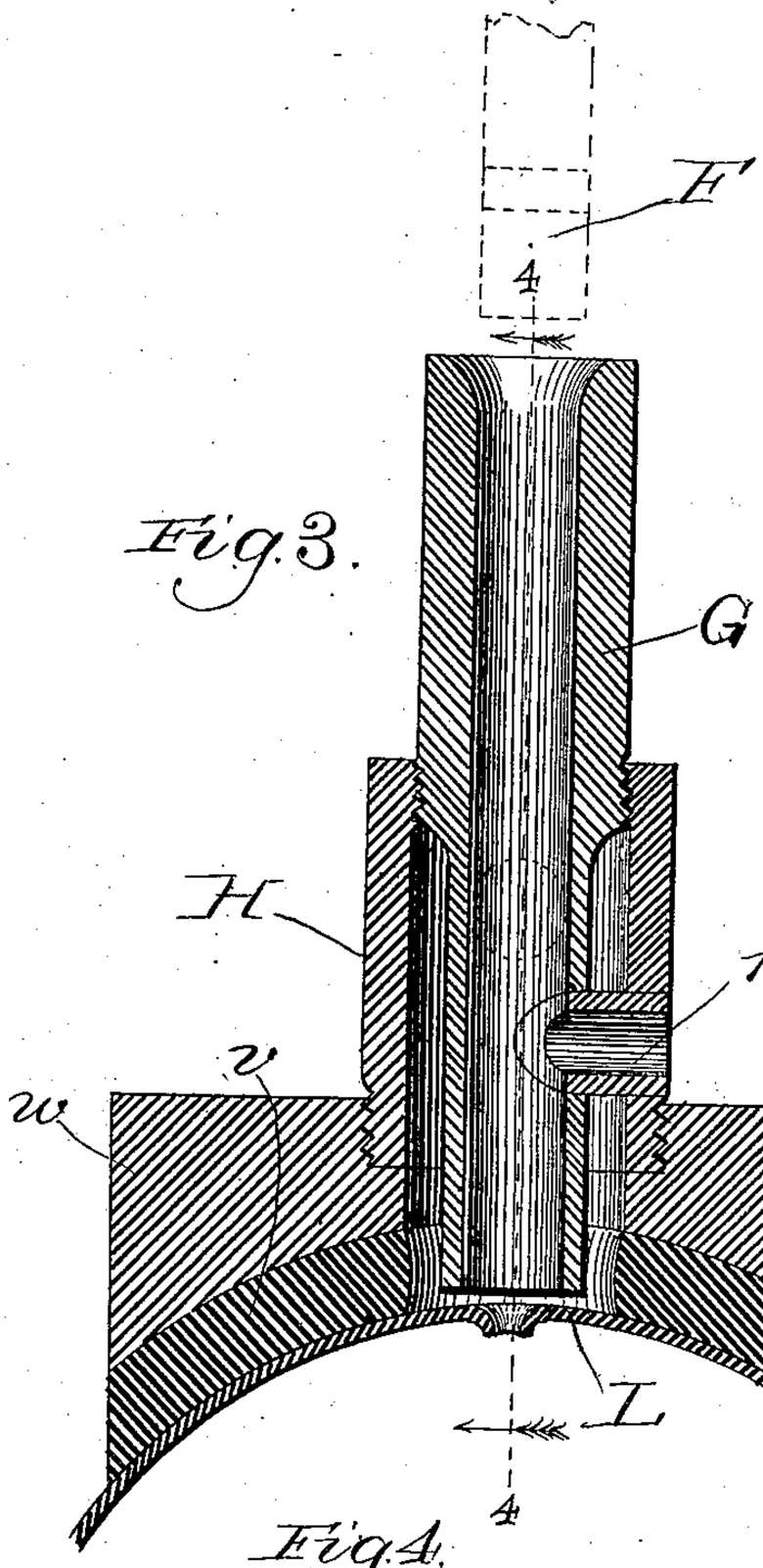
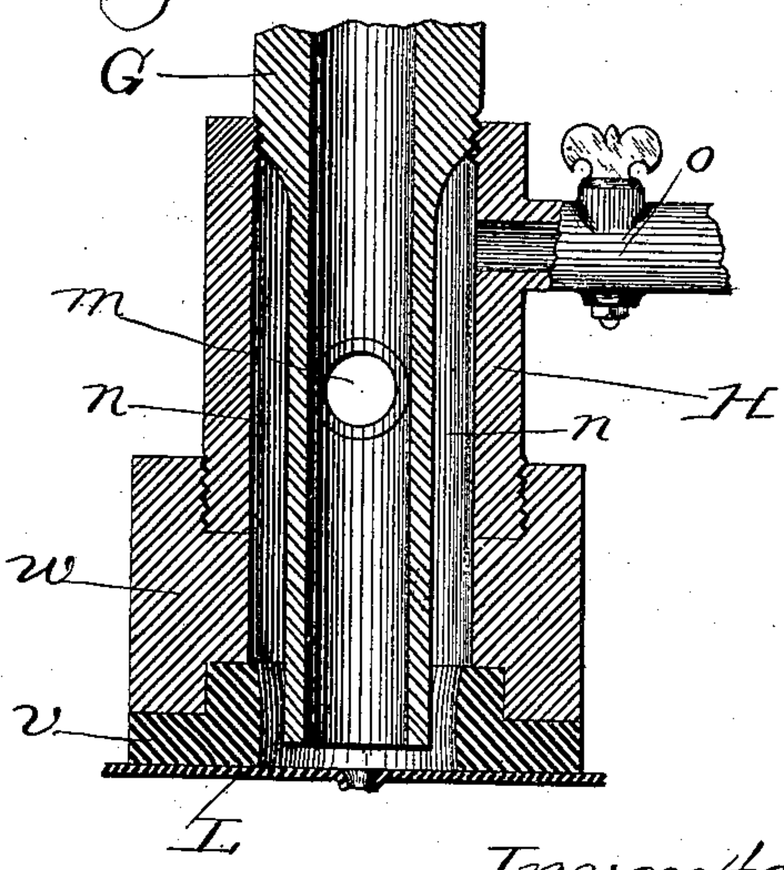


Fig. 4.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR PRESERVING MEATS, &c.

SPECIFICATION forming part of Letters Patent No. 332,988, dated December 22, 1885.

Application filed June 23, 1884. Serial No. 135,785. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BALDER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Apparatus for Preserving Meats, Fish, Fruits, and Vegetables, of which the following is a specification.

I have illustrated my invention by the accompanying drawings, in which Figure 1 is a front elevation of my improved apparatus. Fig. 2 is a cross-sectional view on line 2 2 of Fig. 1, showing a can when in position for sealing. Fig. 3 is likewise a cross-section on line 3 3 of Fig. 1, showing on an enlarged scale the chamber or tube from which the air is exhausted. Fig. 4 is another sectional view showing the connection with the air-exhaust pipe, also the side passages through which the air passes when taken from the central chamber after the plunger has passed below the opening through which the wax used for sealing is inserted, said view being also on an enlarged scale.

Like letters refer to like parts throughout the several views.

A indicates a stationary frame of iron, or other suitable material, which is secured upon the table B, or any other suitable support, by means of bolts or screws.

C indicates an interior movable frame, which is connected with the frame A and extends downward through and beneath the table B.

x is the upper cross-bar of frame C. This frame C, as will be seen, is guided by the side posts of frame A, upon which side posts said frame moves upward or downward, as governed or controlled by the levers hereinafter described.

E indicates the pipe through which the air is exhausted from the can or other receptacle within which the article to be preserved is placed.

F is a plunge-rod or plunger, which is operated by lever *a* through the connecting-arm *b*.

G is the tube or chamber within which plunger F passes when forced downward by the action of the lever *a*.

H indicates the lower section of the tube or chamber G, which lower section is enlarged for the purpose of having air-passages on each side of said tube or chamber G, to afford a connection with the exhaust-pipe E. This lower chamber is supported by the cross-bar *x* of frame C.

L indicates the can when placed in position for having the air exhausted.

d indicates the lower hand-lever, by means of which frame C is raised, as desired.

e e are friction-rollers within which said lever *d* is placed, so as to afford a free motion when the lever is raised or lowered.

h indicates a spiral spring connected with the lower portion of the frame C, and secured to the floor or to any other rigid support.

k indicates a hook into which lever *d* is placed when it is desired to raise frame C. This spring *h* acts to draw downward the frame C when lever *d* is released from hook *k*.

m indicates the opening into tube or chamber G, through which or into which wax is inserted, which wax is carried down by the action of the plunger F.

n n indicate the air-chamber surrounding tube or chamber G, and with which exhaust-pipe E is connected.

o indicates a stop-cock which opens or closes the exhaust-pipe E, as desired.

r indicates the fulcrum on which lever *a* turns.

s indicates the fulcrum on which lever *d* turns.

w indicates a shoulder on the under side of cross-bar *x*, which is connected with said cross-bar, and through which passes the central tube or chamber, G, also the side air passages or chambers, *n n*. This shoulder on the under side is shaped to closely fit over or upon the can; and to more effectually do this is provided with the facing *v* of india-rubber or other plastic or yielding substance. This feature of my construction is particularly shown in Fig. 3.

By my improved device or mechanism, as shown, I am enabled to entirely exhaust the air from the can or receptacle without the aid of heat, and to seal the opening through

which the air has been taken out with wax before it is possible for the air to again reenter the can.

The operation of my improved apparatus is as follows: Frame C is raised by lifting lever *d*, so as to hook the same within the catch or support *k*. This permits of the placing of the can, or other receptacle which it is desired to seal, beneath the rubber facing of the shoulder *w*. Lever *d* is then released, and the action of spring *h* draws frame C downward until the rubber *v* is pressed against the can with sufficient force to prevent the passage of air between the can and the rubber. The can has a small opening on one side, which opening is placed so as to come under the tube or chamber G. Wax, or such other substance as may be used for sealing, is then inserted through the opening *m*, prepared to receive the same. The plunger F is then forced downward by the action of lever *a* and connecting-arm *b*, below the point where the wax has been forced within said chamber. This causes an air-tight chamber to exist between the lower end of the plunger, which fits tightly within the tube G and the surface of the can, with which chamber exhaust-pipe E is connected through the air-passages *n n*. These side air-passages may be omitted, however, and the exhaust-pipe connected directly with the central chamber. The stop-cock in the exhaust-air pipe is then turned and the air entirely drawn from the can through the opening in the side. The plunger F is then forced downward until it presses the wax tightly over the opening in the can, so as to seal the same. The lever *d* is then lifted and frame C raised, so as to release the can, which is then removed, and the operation of sealing another can in the manner described is repeated.

All the parts described may be advantageously constructed of iron or metal; but wood or other suitable material may be substituted, if desired.

The dimensions of the frames shown and the parts connected therewith are not material; but I have found it convenient to have the frame above the platform or table of the height of about thirty-six inches and to have the portion below the table extend downward about twelve inches.

The plunger F, I prefer to construct with a diameter of half an inch, the chamber within which the same passes being of a size not to permit the passage of air between the plunger and the sides of the chamber. Suitable packing may be used to materially aid in this respect should the plunger or the chamber become worn.

The width of the upper frame I prefer to have about eighteen inches, or so as to permit of working of the parts connected therewith without inconvenience of crowding.

The several operations which I have described are successively performed in the manner indicated, and the sealing of a can effected within a very brief space of time.

By the use of an apparatus constructed and operated as described I am enabled to entirely exhaust the air from the cans, vessels, or receptacles used for preserving meats, fish, fruits, and vegetables, and thus secure a degree of preservation which it is not possible to attain when the air has to be expelled by the application of heat in any form.

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

1. In apparatus for preserving, &c., the combination, with an exhaust-chamber, of an inner tube extending to, or near to, the bottom of said chamber, and having a reciprocating piston therein, and a branch feed-tube extending laterally from the piston-tube and open at its outer end, substantially as shown and described.

2. The combination, in an air-exhausting apparatus, of the frame A, the chamber G, having an opening in one side to receive wax, the frame C, the plunger F, the lever *a*, the lever *d*, and the spring *h*, said parts being connected with any suitable support, and being operated substantially as and for the purpose set forth.

3. The combination, with frame A, of lever *a*, connecting-rod *b*, and plunger F, substantially as set forth and for the purpose specified.

4. The combination, in an apparatus for exhausting air from cans or other vessels, of the frame C, the lever *d*, the spring *h*, and the friction-rollers *e e*, all arranged and operated substantially as described, and for the purpose set forth.

5. In an apparatus for exhausting the air from cans or other vessels containing articles to be preserved, the combination, with a sliding frame within which is contained an exhaust-chamber having an inner sealing-plunger and cylinder, the extended base of said exhaust-chamber being provided with a rubber seating shaped to fit over and surround an opening in the can, of a spring or its equivalent attached to the frame and serving normally to force the said seating down upon the surface of the can during the sealing operation, substantially as and for the purposes set forth.

WILLIAM BALDER.

Witnesses:
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