

No. 756,637.

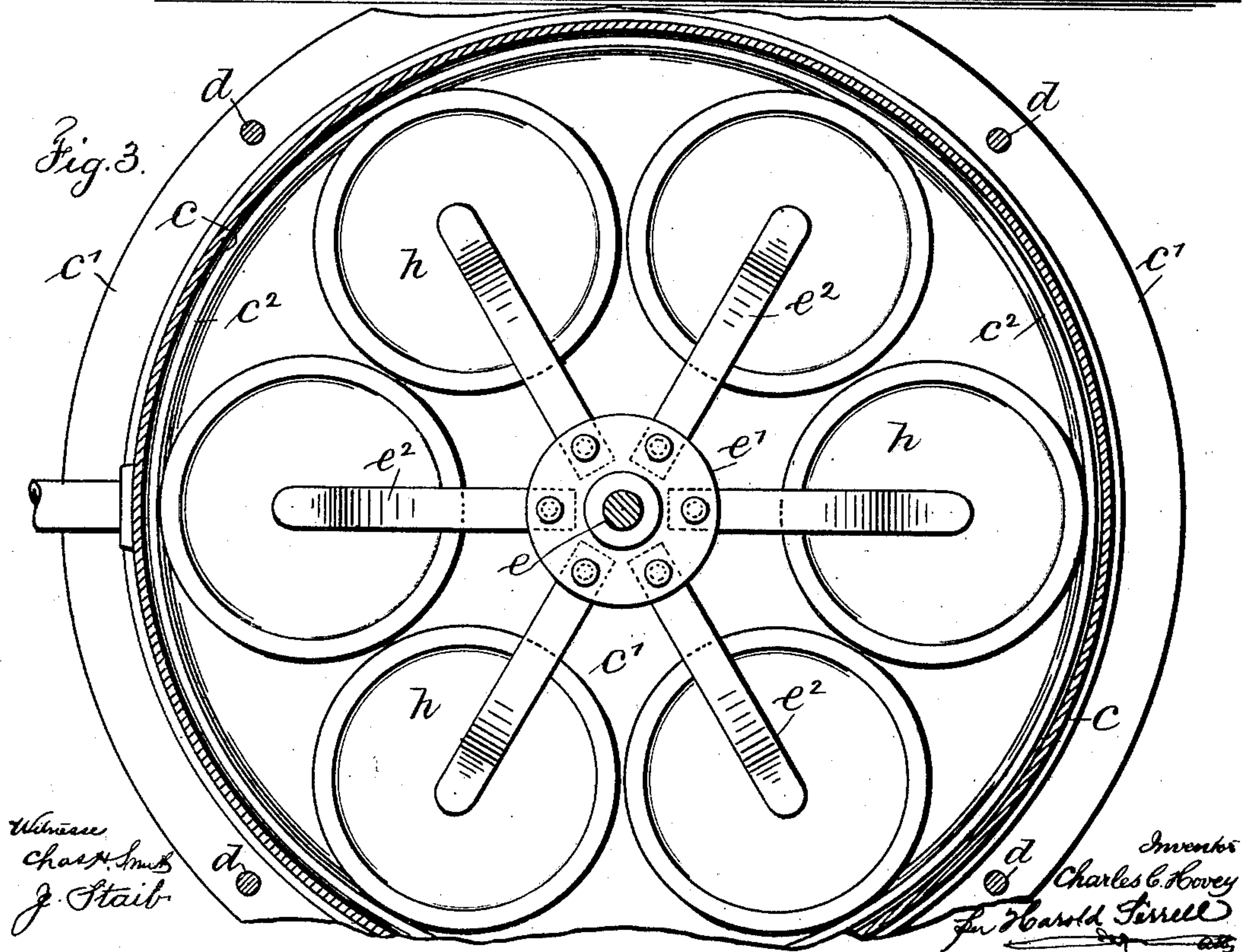
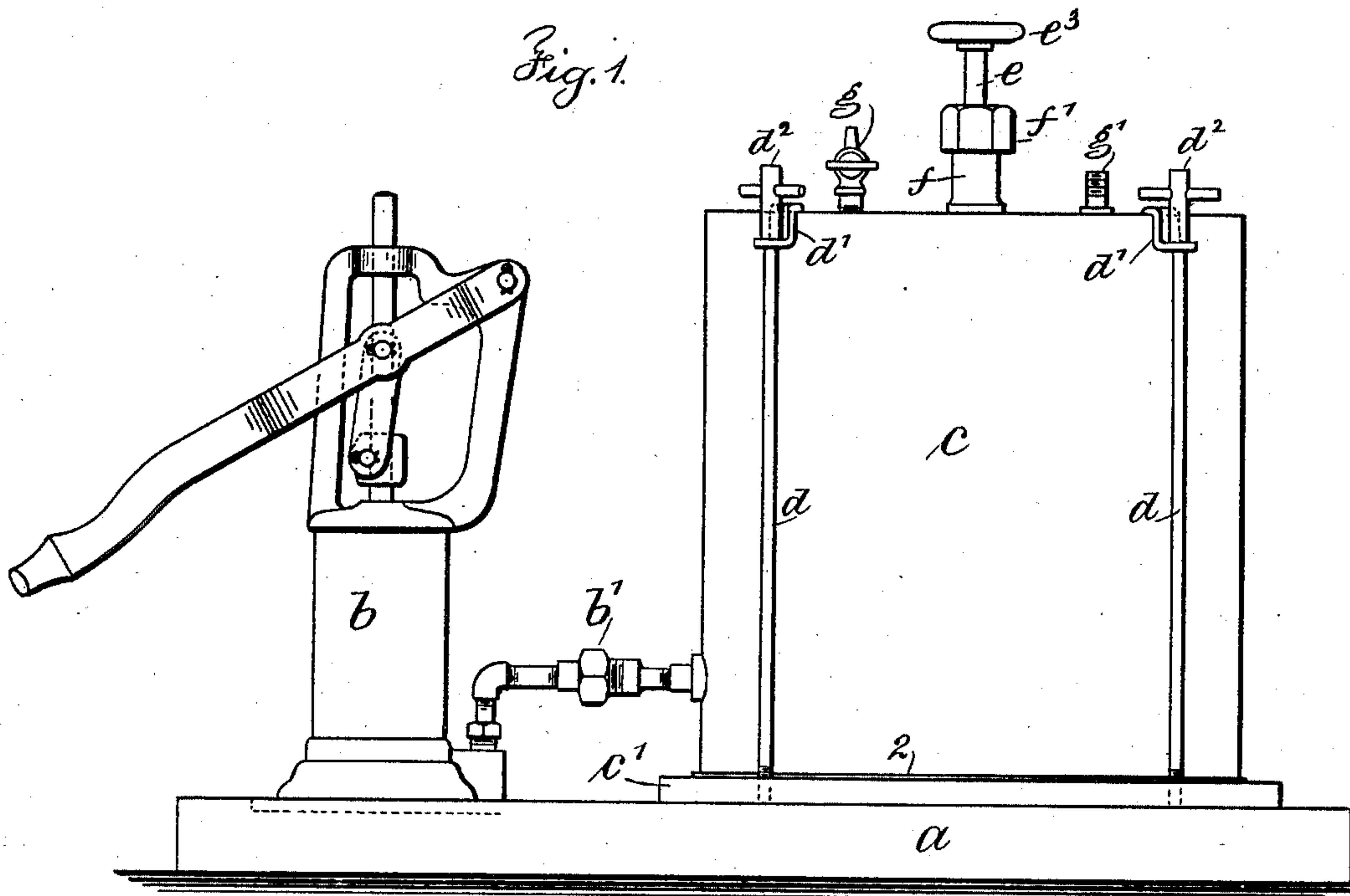
PATENTED APR. 5, 1904.

C. C. HOVEY.
APPARATUS FOR CANNING FOOD.

APPLICATION FILED DEC. 10, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witness
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Inventor
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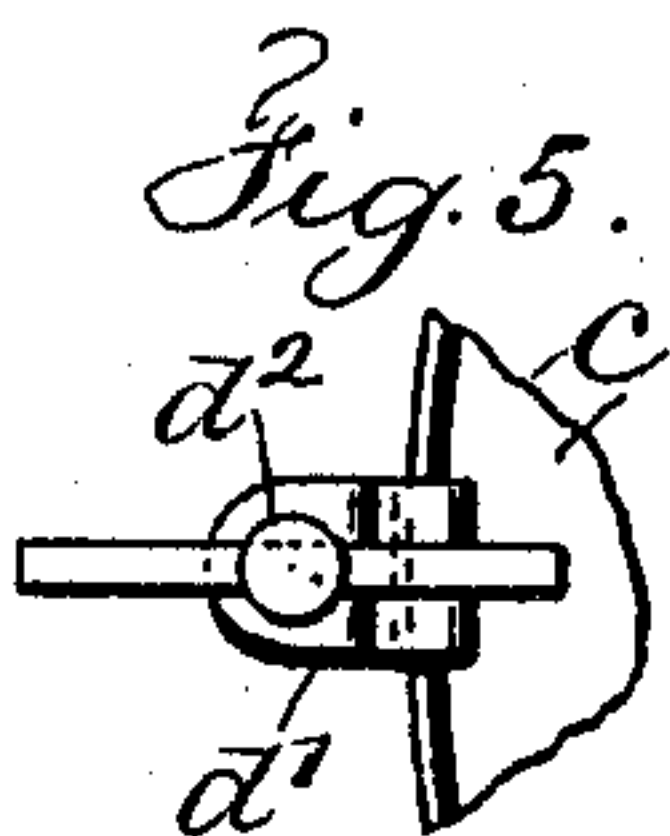
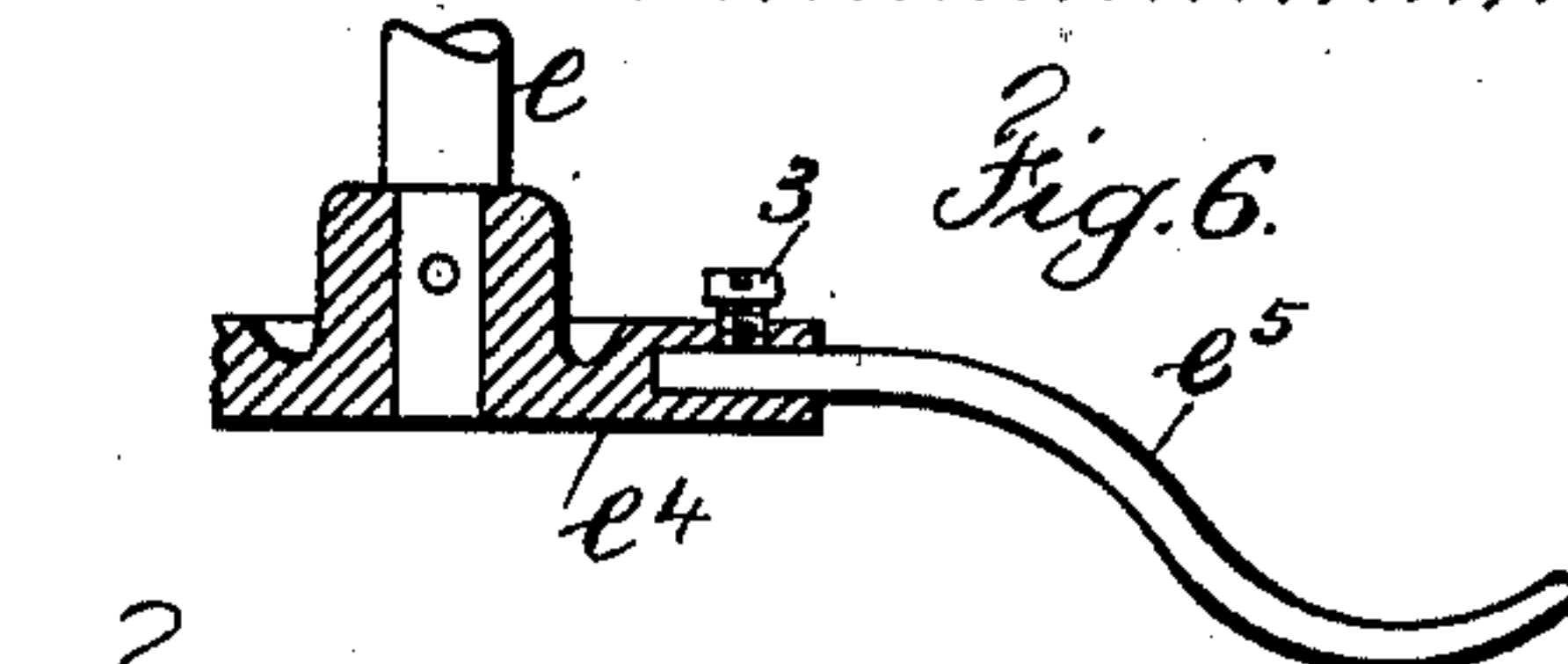
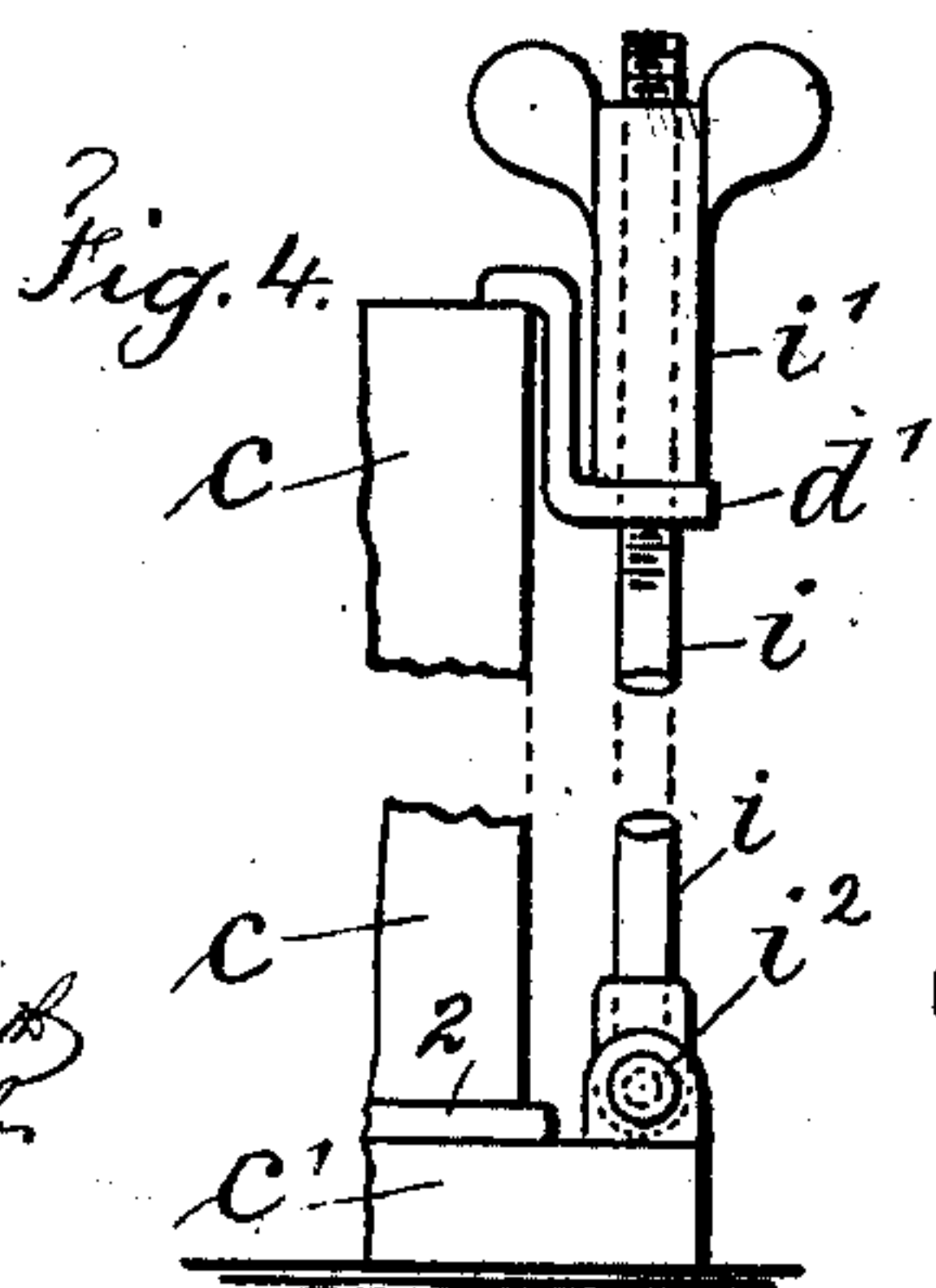
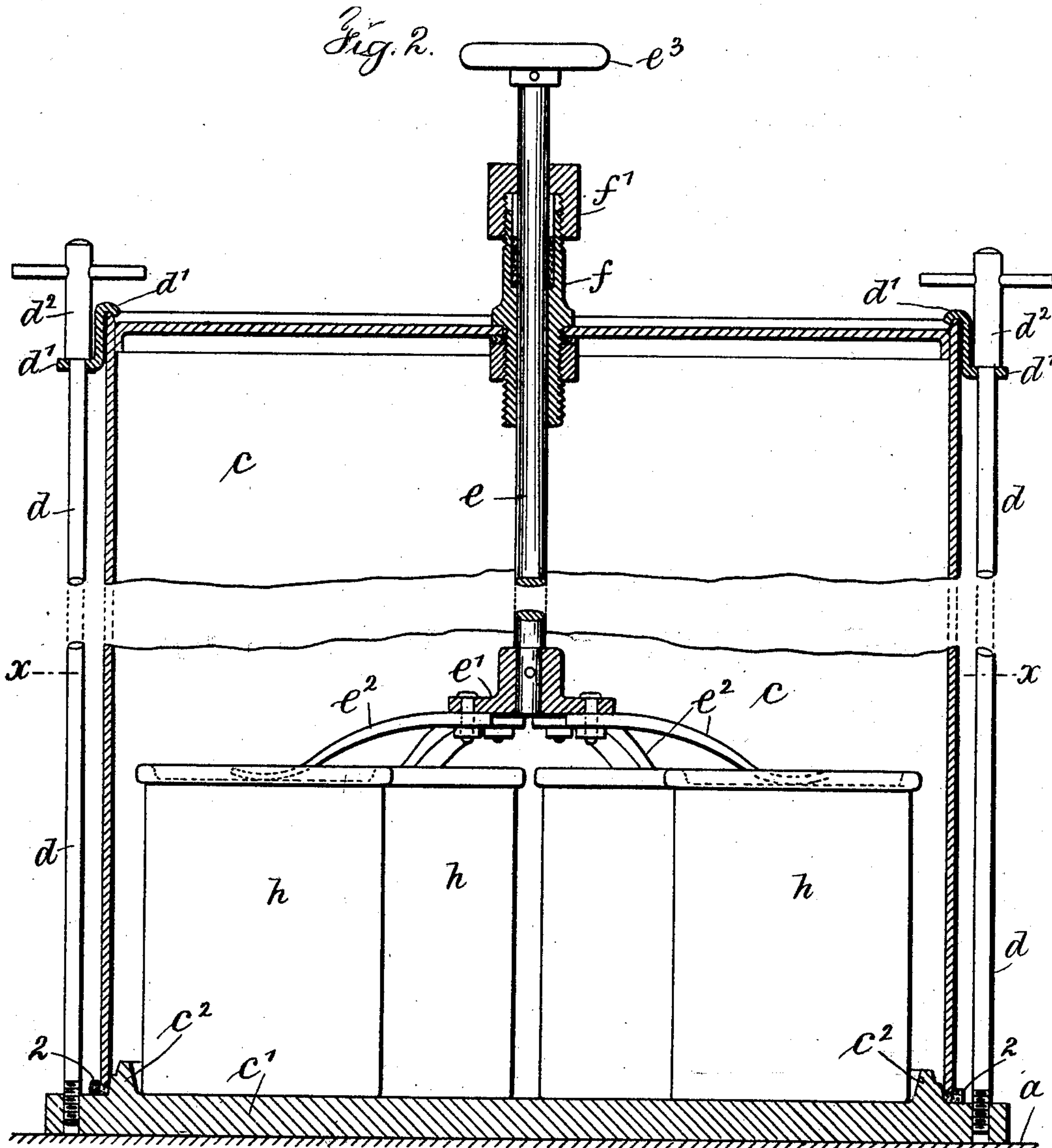
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2 SHEETS—SHEET 2.



Witnesses
Charles Smith
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UNITED STATES PATENT OFFICE.

CHARLES C. HOVEY, OF BAINBRIDGE, NEW YORK.

APPARATUS FOR CANNING FOOD.

SPECIFICATION forming part of Letters Patent No. 756,637, dated April 5, 1904.

Application filed December 10, 1903. Serial No. 184,547. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. HOVEY, a citizen of the United States, residing at Bainbridge, in the county of Chenango and State of New York, have invented an Improvement in Apparatus for Canning Food, of which the following is a specification.

My invention relates to devices for exhausting the air from cans or jars containing articles of food for their preservation and in which cans or jars a vacuum is formed and the same are sealed by atmospheric pressure.

My invention aims to provide a device for household use or the use of small consumers, the same being only adapted to hold a limited number of cans or jars at a time and the device being portable and convenient.

In carrying out my invention I provide upon a common base a vacuum-cylinder and bottom plate, to which the same may be securely held, an air-pump and separable coupling between the air-pump, and the vacuum-cylinder. The bottom-plate is adapted to support a limited number of cans or jars the contents of which are to be preserved and which the vacuum-cylinder covers when in place, and I provide a central rod vertically movable in the cylinder and series of fingers connected thereto and adapted to rest either directly on the covers of the cans or jars or on a septum-plate placed upon all the cans or jars, and I further provide devices for holding down the vacuum-cylinder in position and which devices are adapted for connection with the bottom plate and the upper edge of the vacuum-cylinder, respectively, there being by preference a packing-ring under the lower edge of the vacuum-cylinder supported upon the bottom plate for insuring the vacuum.

In the drawings, Figure 1 is an elevation generally representing my improvement complete. Fig. 2 is a vertical section through the common base, the bottom plate, and the vacuum-cylinder with an elevation of the central rod, the figure showing some cans in position. Fig. 3 is a plan and partial section at the line *xx* of Fig. 2, and Figs. 4, 5, and 6 represent details and modifications hereinafter described.

eral support for the devices constituting my improvement.

b represents an air-pump of any well-known form or construction secured to the base *a*; *c*, a vacuum-cylinder between which and the air-pump there extend pipes with a separable coupling *b'*.

c' is a bottom plate, of metal, secured to the base *a* and preferably provided with an inclined centering-rim *c''*, outside of which is a packing-ring 2, upon which rests the lower edge of the vacuum-cylinder *c*.

The vacuum-cylinder is provided centrally with a sleeve *f* and cap *f'*, forming a packing-gland, secured in any desired manner to the vacuum-cylinder. A rod *e* passes centrally through the said packing-gland into the vacuum-cylinder, and on the lower end of this rod is a disk *e'*, to which radially-disposed fingers *e''* are connected. The upper end of the rod *e* preferably terminates in a hand-knob *e'''*, to be grasped so as to raise and lower the rod, the disk, and the fingers. I have shown the vacuum-cylinder as provided with an air-cock *g*, and it may be and advantageously is provided with a pressure-gage (not shown) and which is to be attached to the threaded pipe *g'*.

The ends of the fingers *e''* are shown as resting directly upon the covers of cans or jars *h*, arranged in circular form within the vacuum-cylinder and upon the bottom plate thereof. In Figs. 2 and 3 I have shown the fingers *e''* of downwardly-bent form, secured by bolts to the disk *e'*; but these may be constructed as shown in the modification Fig. 6, in which the edge of the disk *e'* is provided with radial apertures for the insertion of the fingers *e''*, the same being held in position by screws 3. These fingers *e''* may be of any desired shape in cross-section.

In Figs. 1, 2, and 3, *d* represents tie-rods provided with screw-threaded lower ends adapted to engage threaded apertures at spaced-apart intervals in the bottom plate *c'*. The upper ends of these screw tie-rods *d* are provided with head portions *d''*, having cross-bars to be engaged by the fingers, and clip-plates *d'* of bent form extend over the upper edge of the vacuum-cylinder and have apertures through which the screw tie-rods *d* pass.

a represents a common base forming a gen-

From this construction it will be apparent that when the rods d are screwed into the plate c' with the clip-plates engaging the upper edge of the vacuum-cylinder that the same will be firmly held down against the packing-ring and a tight joint formed.

As an alternate equivalent and possibly more advantageous construction to these parts I have shown in Figs. 4 and 5 the tie-rods i as screw-threaded at their upper ends for a wing-nut i' and at their lower ends provided with a pivotal or hinge joint i'' to lugs on the bottom plate c' , the clip-plate d' in this case being substantially the same as the clip-plate heretofore described. With this structure there are no parts actually separable from the bottom plate c' , it only being necessary to rotate the wing-nuts i' to loosen the clip-plates d' to free the vacuum-cylinder, after which the screw tie-rods i can be swung to one side out of the way for the removal of the vacuum-cylinder.

I do not limit myself to the character of the air-pump structure b nor to the construction of the separable coupling b' in the pipe connecting the same with the vacuum-cylinder, nor do I limit myself to the precise details of the screw tie-rod devices which are adapted to hold the vacuum-cylinder down tightly upon the bottom plate c' . I do not limit myself to the particular form of the fingers e^2 or e^5 or the manner of securing the same to the disks e' or e^4 nor to applying the free ends of these fingers directly to the covers of the cans or to a septum or partition-plate that may be laid on the covers of the cans and upon which the fingers bear.

I claim as my invention—

1. An apparatus for canning food, comprising a base, an air-pump structure secured thereto, a bottom plate, a vacuum-cylinder adapted to rest thereon, a pipe from the air-pump and a pipe from the vacuum-cylinder, a separable coupling connecting the said pipes, a packing-gland structure connected centrally to the top of the vacuum-cylinder, a rod movable vertically and axially of the vacuum-cylinder through the said packing-gland, a disk at the inner and lower end of the said rod and

radially-placed fingers, and means for connecting the same to the said disk, said fingers adapted at their free ends to exert a pressure upon the covers of the cans placed within the vacuum-cylinder and from which the air is to be exhausted.

2. An apparatus for canning food, comprising a base, an air-pump structure secured thereto, a bottom plate, a vacuum-cylinder adapted to rest thereon, a pipe from the air-pump and a pipe from the vacuum-cylinder, a separable coupling connecting the said pipes, screw tie-rod devices adapted for connection with the bottom plate, clip-plates connected to the tie-rod devices and adapted to engage the upper edge of the vacuum-cylinder so that when tension is applied the cylinder will be firmly held against the bottom plate, a packing-gland structure connected centrally to the top of the vacuum-cylinder, a rod movable vertically and axially of the vacuum-cylinder through the said packing-gland, a disk at the inner and lower end of the said rod, and radially-placed fingers and means for connecting the same to the said disk, said fingers adapted at their free ends to exert a pressure upon the covers of the cans placed within the vacuum-cylinder and from which the air is to be exhausted.

3. In an apparatus for canning food, the combination with a base, of a bottom plate secured thereto, an inclined rim of annulus form as a part of said bottom plate, a packing-ring lying upon the bottom plate and surrounding the inclined rim, a vacuum-cylinder adapted at its lower edge to be guided to position by the inclined rim and to set upon the packing-ring, and screw tie-rod devices connecting at their lower ends with said bottom plate, and clip-plate devices coacting therewith at their upper ends and adapted to engage the upper edge of the vacuum-cylinder for holding the same firmly in position and against the packing-ring as a seat.

Signed by me this 2d day of December, 1903.

CHAS. C. HOVEY.

Witnesses:

JULIEN SCOTT,
L. E. HOVEY.