

(No Model.)

2 Sheets—Sheet 1.

P. O. JENKINS.
LIME HEATING FOOT STOVE.

No. 266,369.

Patented Oct. 24, 1882.

Fig. 6.

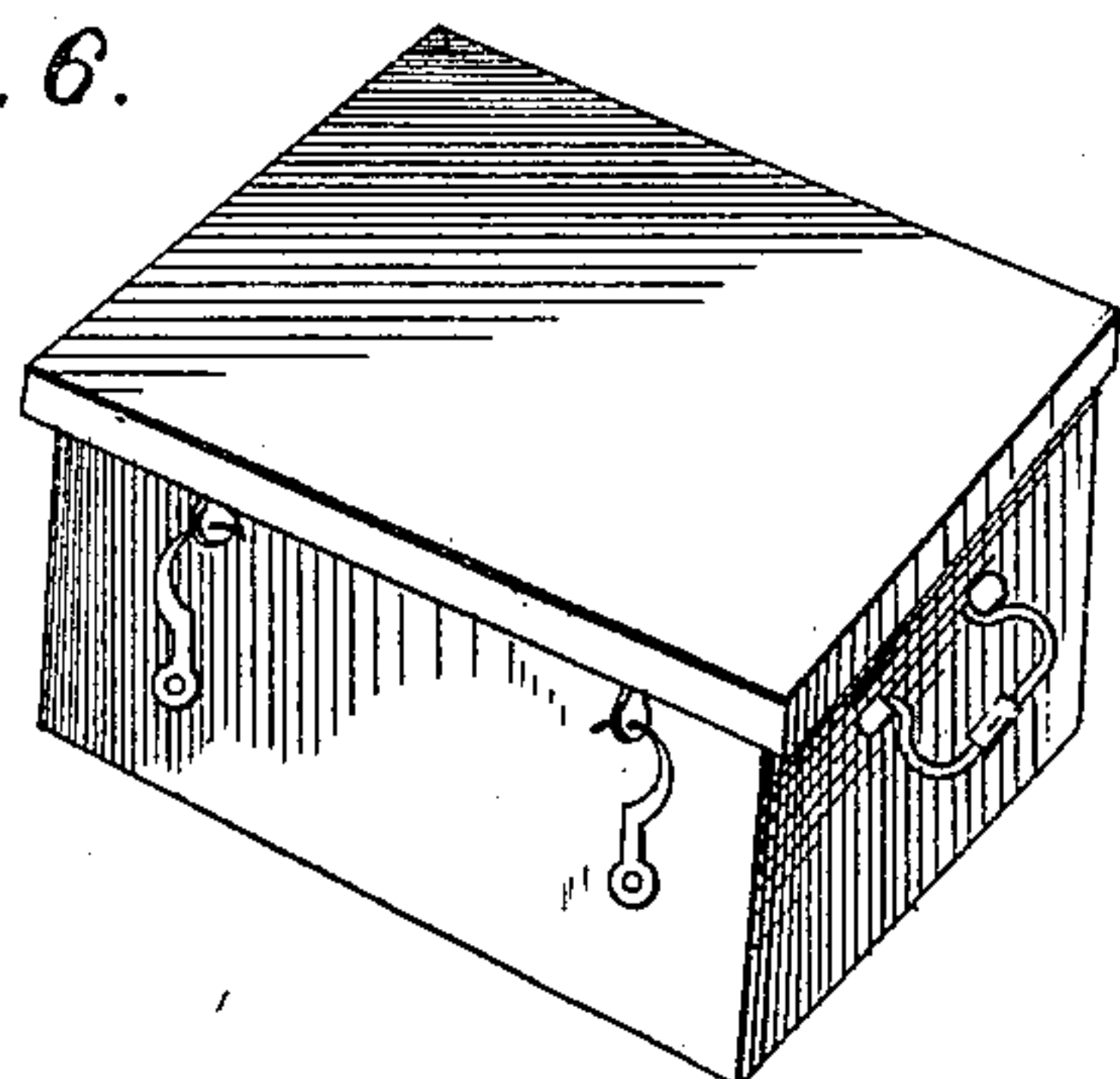


Fig. 1.

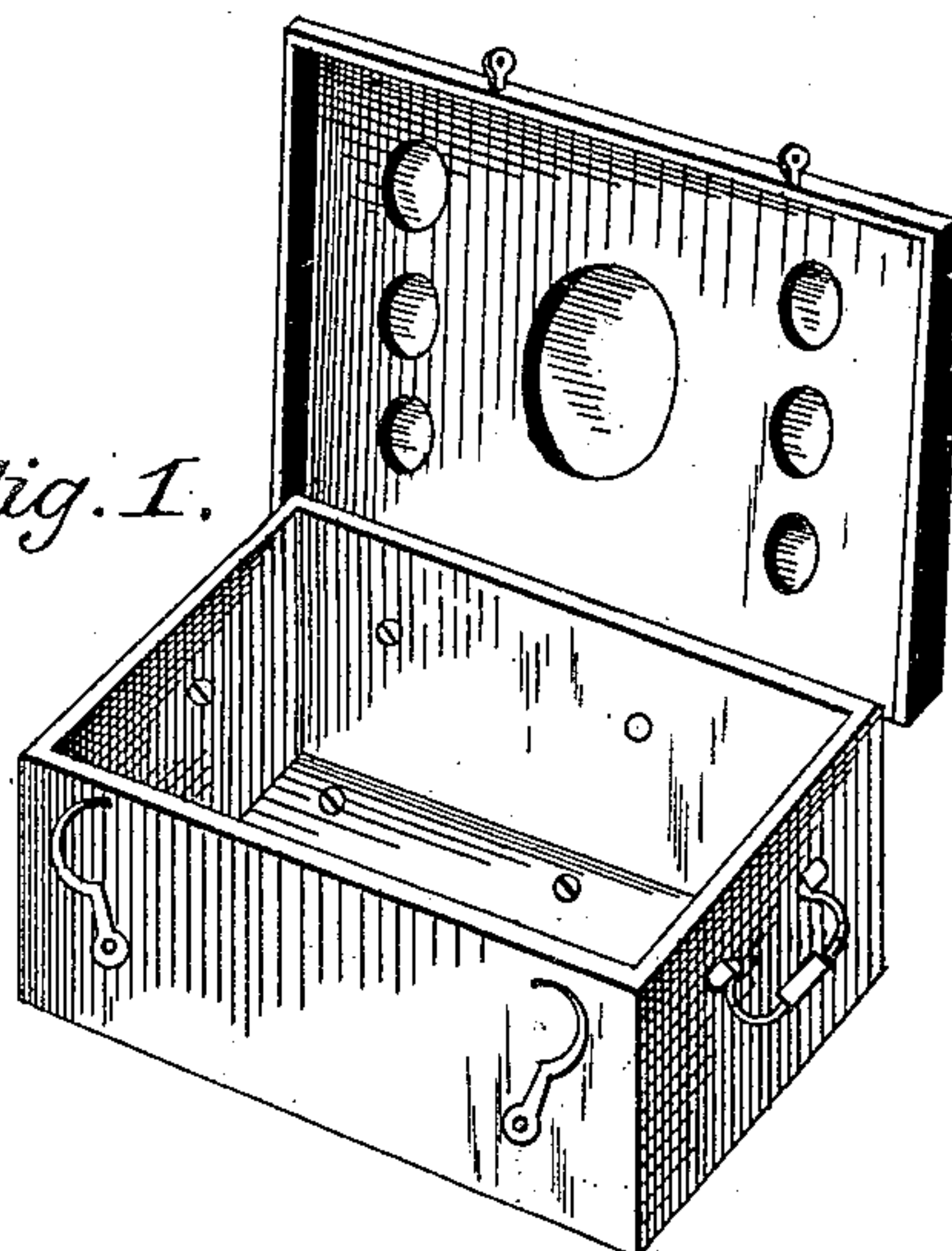


Fig. 3.

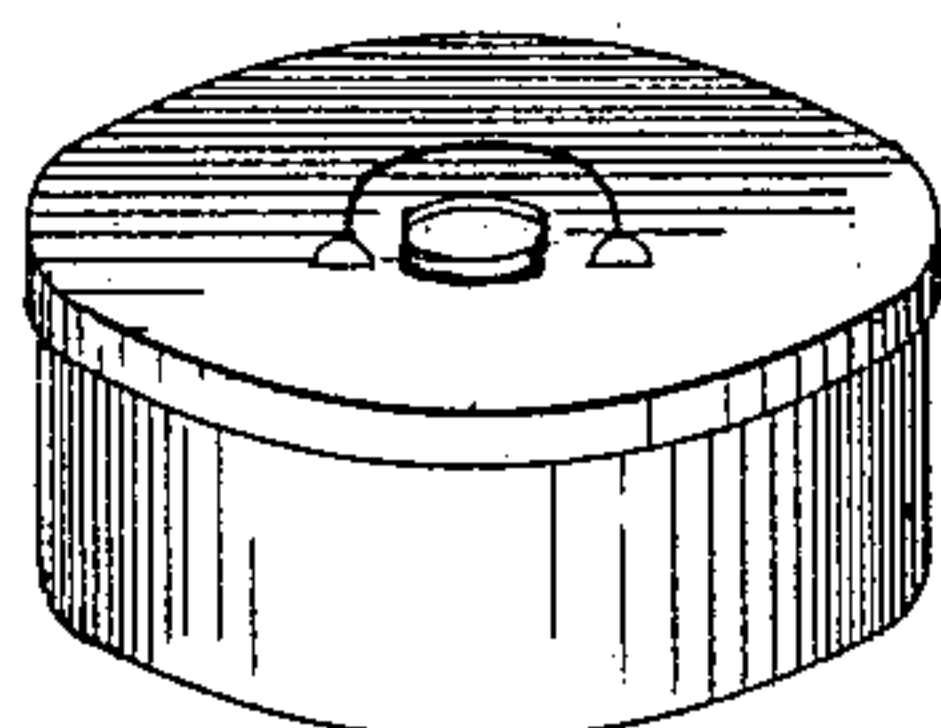


Fig. 2.

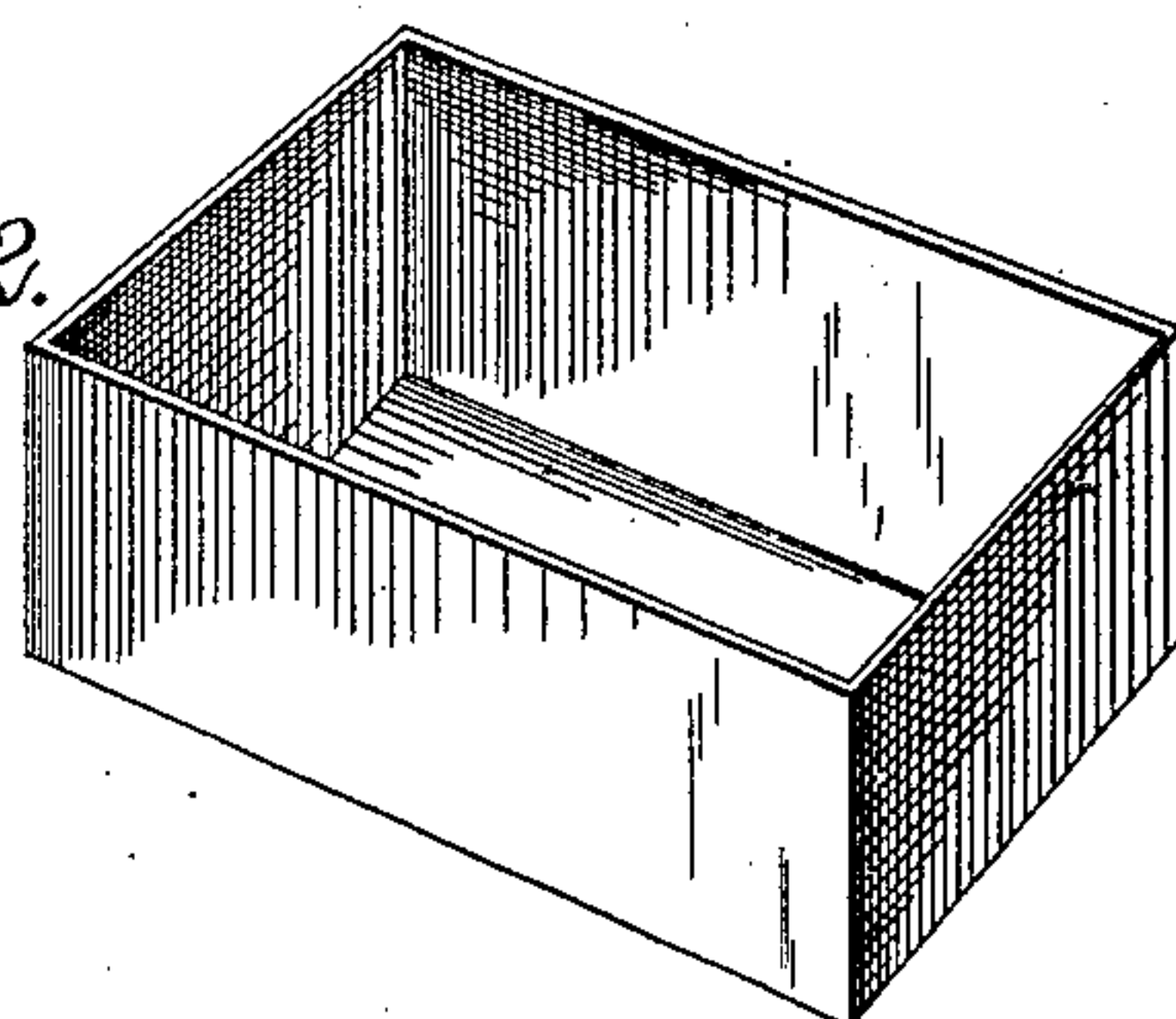
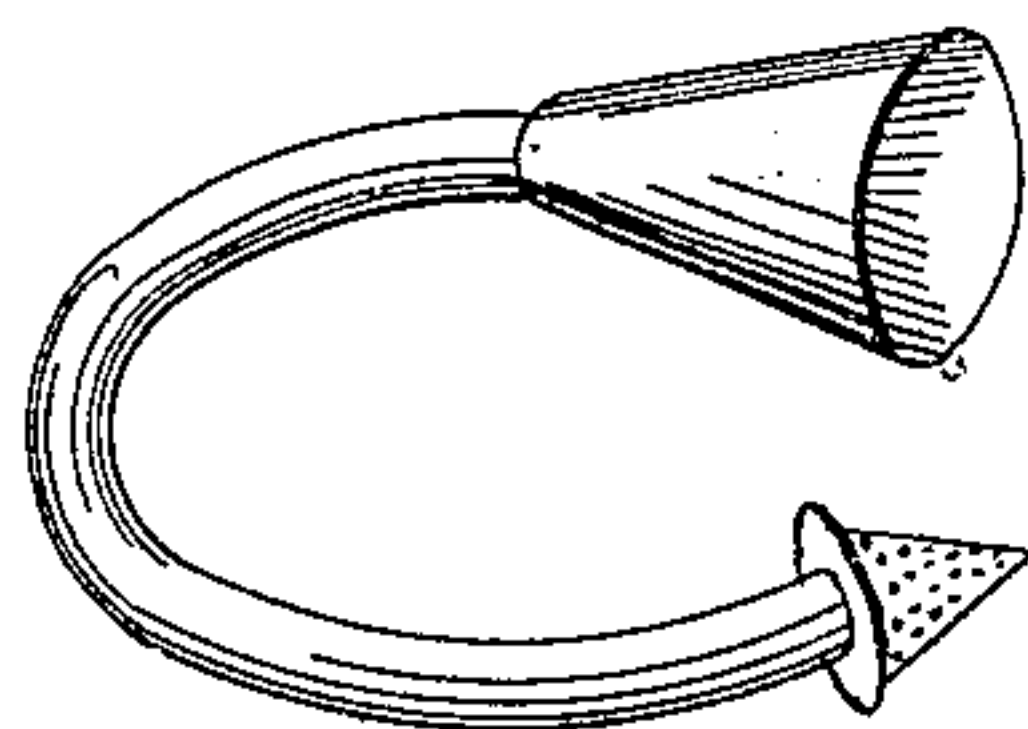


Fig. 4.



Fig. 5.



WITNESSES

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D. A. Cowley

INVENTOR

Philip O. Jenkins

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Fig. 7.

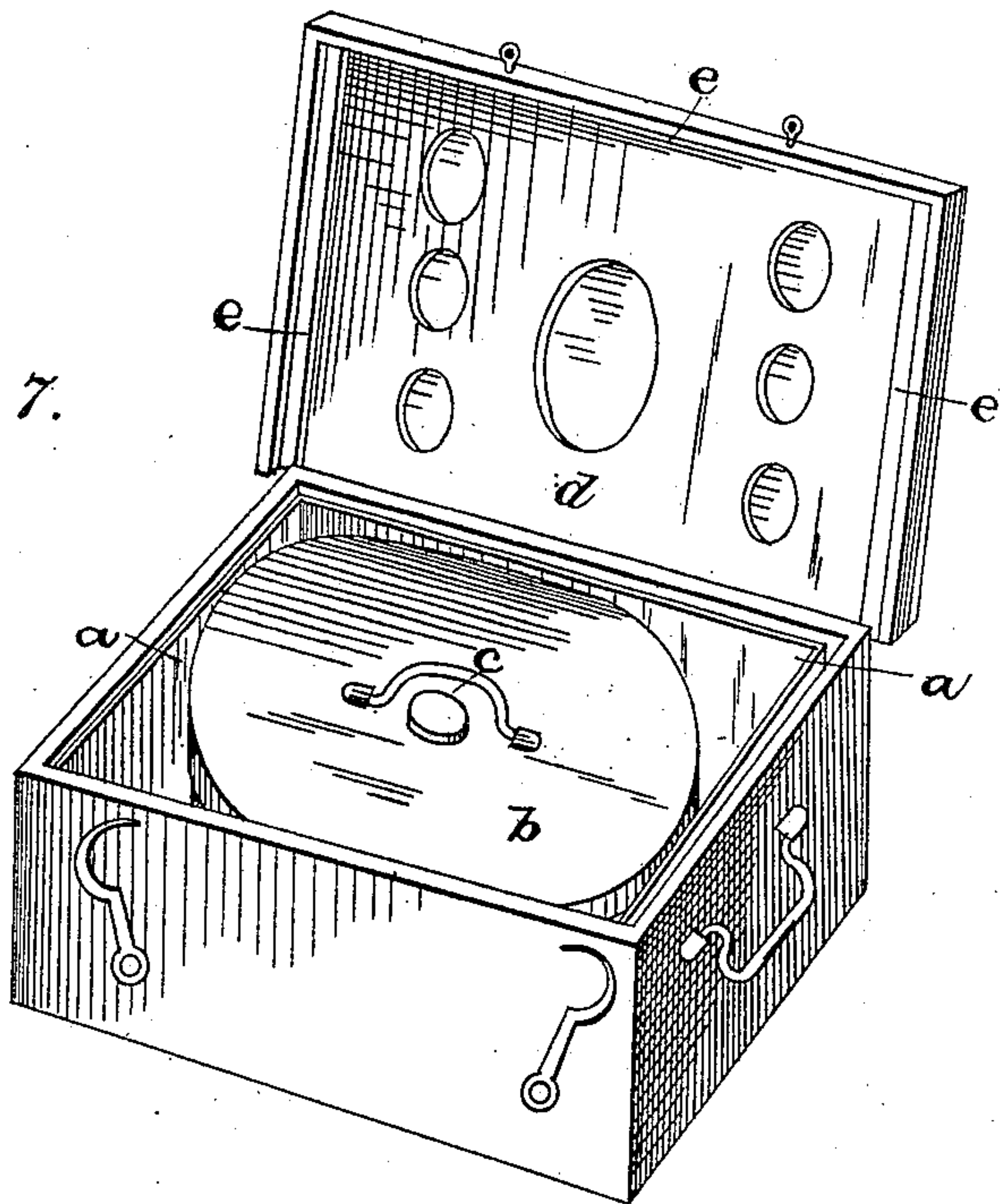
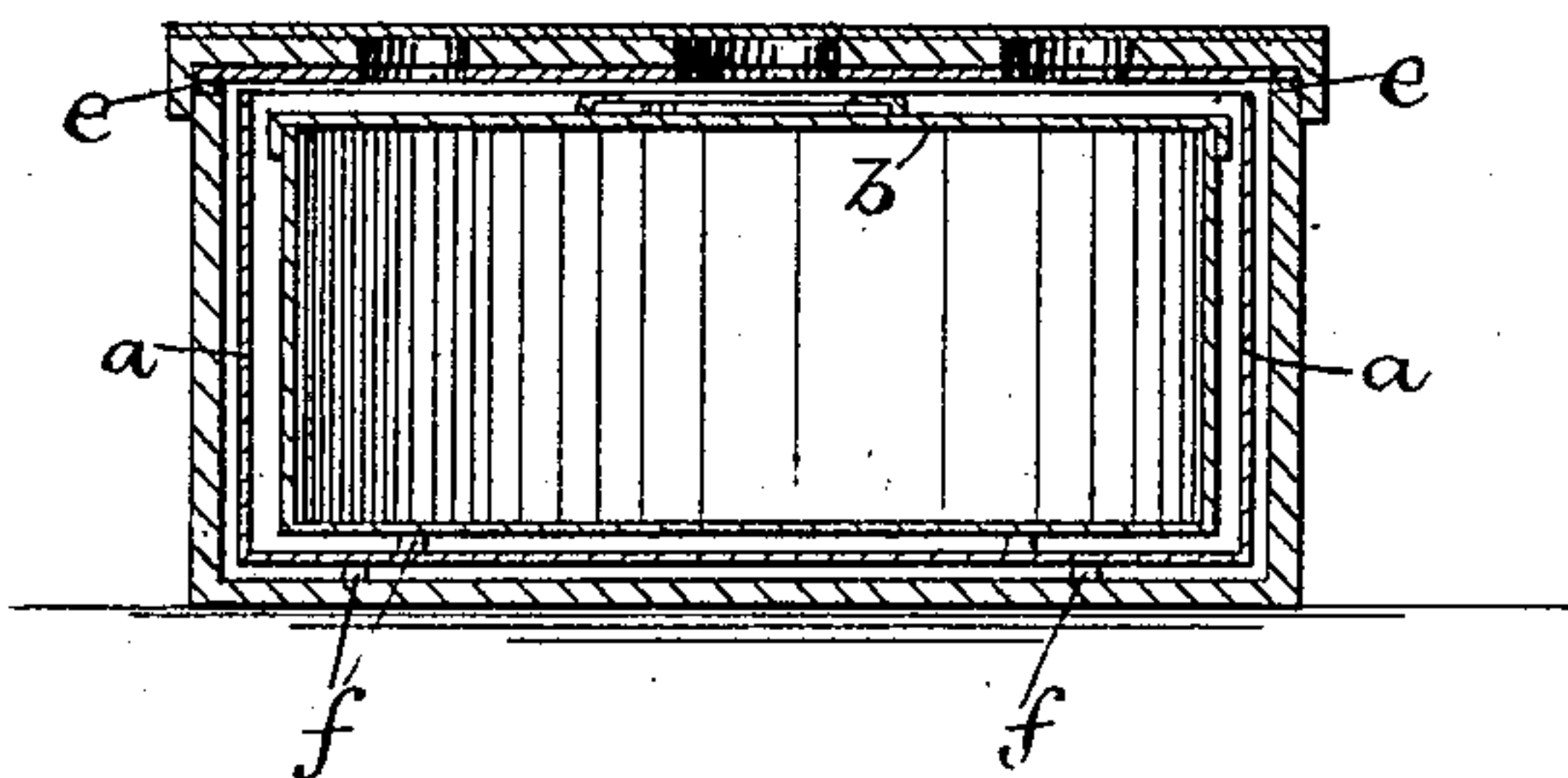


Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE.

PHILIP O. JENKINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

LIME-HEATING FOOT-STOVE.

SPECIFICATION forming part of Letters Patent No. 266,369, dated October 24, 1882.

Application filed October 12, 1881. Renewed October 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, PHILIP OSCAR JENKINS, of the city of Washington, District of Columbia, have invented a new and useful Improvement in a Device for a Lime-Heating Foot-Stove, reference being had to accompanying drawings.

The object of my invention is to furnish a foot-warmer which shall be convenient, economical, and safe, and in which heat can be improvised independent of fire, as also free from the disagreeable and unhealthy influences of smoke or gas.

I make a box (preferably of wood) of any convenient size and form, but which for ordinary use I prefer to be in dimensions about eleven inches square and about five inches deep. (See Figure 1, showing the box with lid raised.) The inside of this box I line with asbestos, or, at pleasure, with zinc or other suitable metal, and insulate (when of metal) this lining from the sides and bottom of the box by intervening projections, as small screws or other small material, fastened to the surfaces of the box; or I use at pleasure projections attached to the lining instead. I leave a space around said lining of half an inch or more. The lid of this outside box I also line (the under side) with perforated zinc as the best material, and I also perforate correspondingly the lid which it lines, so that the heat (to be spoken of farther on) may rise and be imparted without obstruction to a top covering of metallic substance, which I planish and fit closely on the upper side of the lid. To the under edges of this lid, or, at pleasure, on the upper edges of the box, I attach strips of cork, so that when the lid is pushed down firmly upon it the heat within will have no space to escape. Inside of the box-lining (see Fig. 2, showing the lining detached) I place a lime-receptacle, (see Fig. 3,) which may be made of bucket or any other convenient form. To this receptacle I attach a suitable lid, in the center of which I make an orifice with a surrounding collar and of a size adapted to the sprinkler to be introduced therein. This lime-receptacle I place inside of the lining of the box, and this I also insulate from the lining in like manner as I insulate the lining from the box. Thus I form two strata of air, which exert a double influence (the air being a non-

conductor) in preventing the escape of the heat, except at the top, where it will alone be required, and where, as is intended, its escape will be slow. This lime-receptacle may be made of sheet-iron, copper, tin, or any other suitable material, whether of metal or earthenware. When made of metal it should be either made by stamping or "double seamed," as the heat generated by the slaked lime would melt the solder. Upon the collar of the orifice named as on the center of this lid I place a cap, (see Fig. 4,) which should also be stamped or double seamed. The use of this cap will be named in the description to follow of the mode of heating up the device.

Fig. 5 shows a conical-formed sprinkler, to be made of tin or thin sheet-copper, as the best substance. This sprinkler may be soldered, as it will be exposed to the action of the heat only a few moments at a time. The diameter of this sprinkler at its base should be about two inches, and about two inches (or a little more) in length. At the base of the sprinkler is a narrow flange, by which it rests on the lid when introduced into the opening of the lid of the lime-holder. In the center of the base of the sprinkler, and around it, is a hollow shank-piece of about three-fourths of an inch diameter and about one inch in length. To this shank I attach a tube, (preferably of rubber,) which is made to fit tightly on it. To this tube, which should be about twenty inches long, I attach a funnel. When the tube is made of rubber it can be made with funnel and tube in one piece. This sprinkler is made of conical form, to more perfectly sprinkle over a given radius, and to sprinkle with very fine sprays I make a series of small perforations of about the size that can be made with the point of a medium-sized needle. By due attention to this arrangement the heat evolved from slaking the lime will be more intense, and, developing less steam, will be more gradual and of longer duration.

Fig. 6 shows the box closed, with its imperforate top covering.

Fig. 7 shows the device, with the lime-receptacle and the lining and the lid uncovered, in operative position.

Fig. 8 is a sectional view of the entire apparatus in operative position.

At a, Fig. 7, is seen the lining, showing its

relation to the inside surface of the box. At *b* is seen the lime-receptacle in position, showing the space between it and the lining surrounding it. At *c* is seen the orifice in the lid of the lime-containing vessel. At *d* is seen, with its holes, the lining of the under side of the box-lid, and which is preferably made of zinc. *e e e e* show the cork strips, the use of which has been described.

10 To heat up this stove I take of anhydrous lime, (quicklime,) broken up into moderately small pieces, about three pints, and place it in the lime-receptacle, covering well its bottom, so that the water sprinkled will not be wasted

15 thereon, but be almost exclusively applied to the lime. I then place the lid on this lime-receiver, and, placing the sprinkler in the orifice at *c* and holding the tube in an upright position, I pour in water by weight about one-

20 third of the weight of the lime to be slaked, and as soon as the water has become exhausted I withdraw the sprinkler, and, waiting a few moments for the escape at the orifice at *c* of what steam may be evolved, I place on

25 the cap, Fig. 4, and close down and fasten the lid of the box, and in a brief time the heat,

ascending through the perforations of the lid, is spread over the metallic top covering, and the stove is ready for use.

What I claim as my invention, and for which I ask for Letters Patent, is—

1. The combination of the lime-receptacle, Fig. 3, with the box, Fig. 1, said receptacle being surrounded by zinc or other suitable lining and the lining separated from the box by projections, as seen at *f*, and the receptacle being separated from the lining in like manner, the whole being provided with a perforated lid having a perforated lining and an imperforate top covering.

2. The combination of the perforated lid-lining with the corresponding perforated lid and its top covering.

3. The combination of the conical sprinkler with the lime receptacle, as described and set forth, all substantially as herein described, and for the purposes named.

PHILIP OSCAR JENKINS.

Witnesses:

GEO. F. GRAHAM,
JNO. BOWLES.