

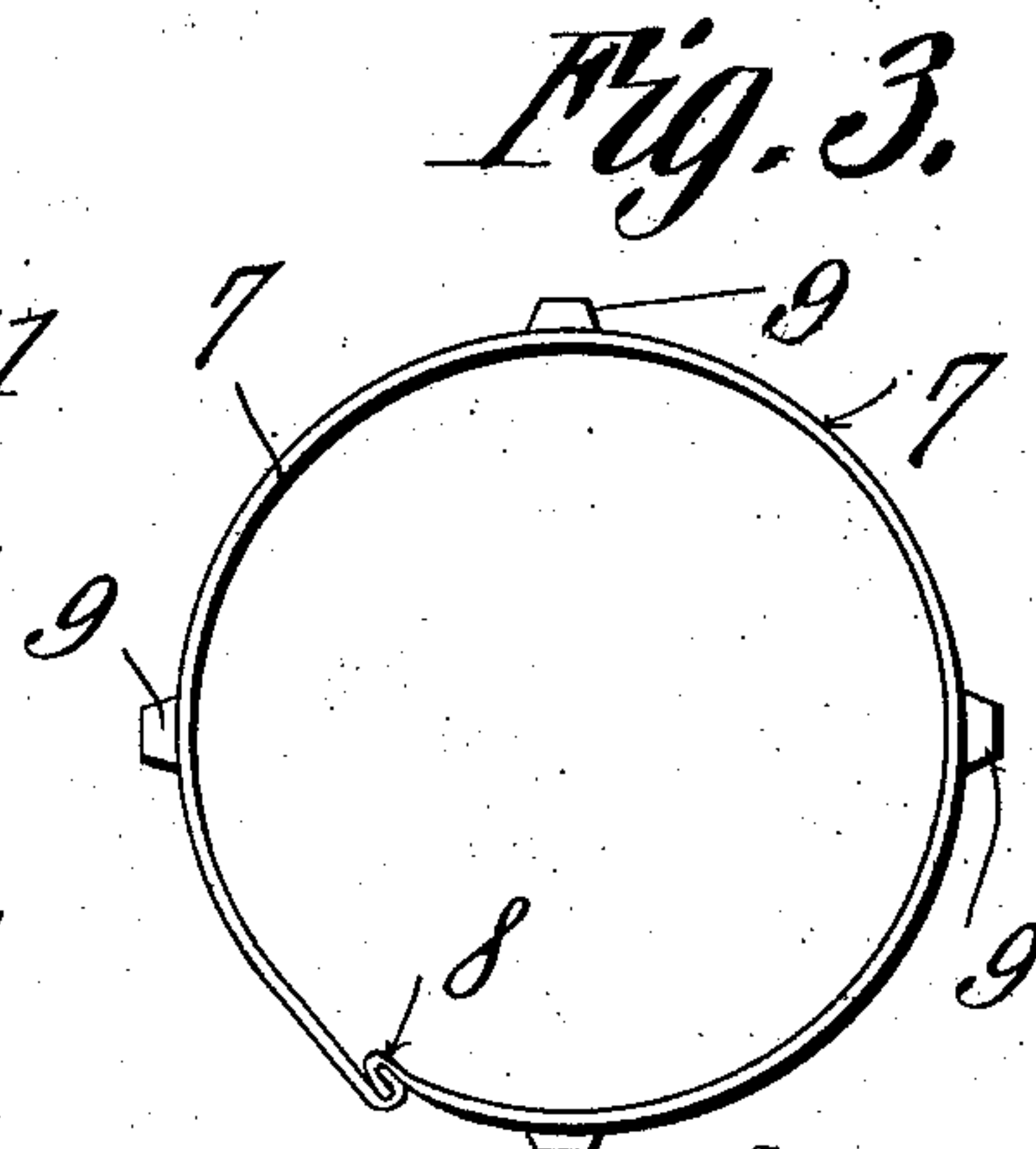
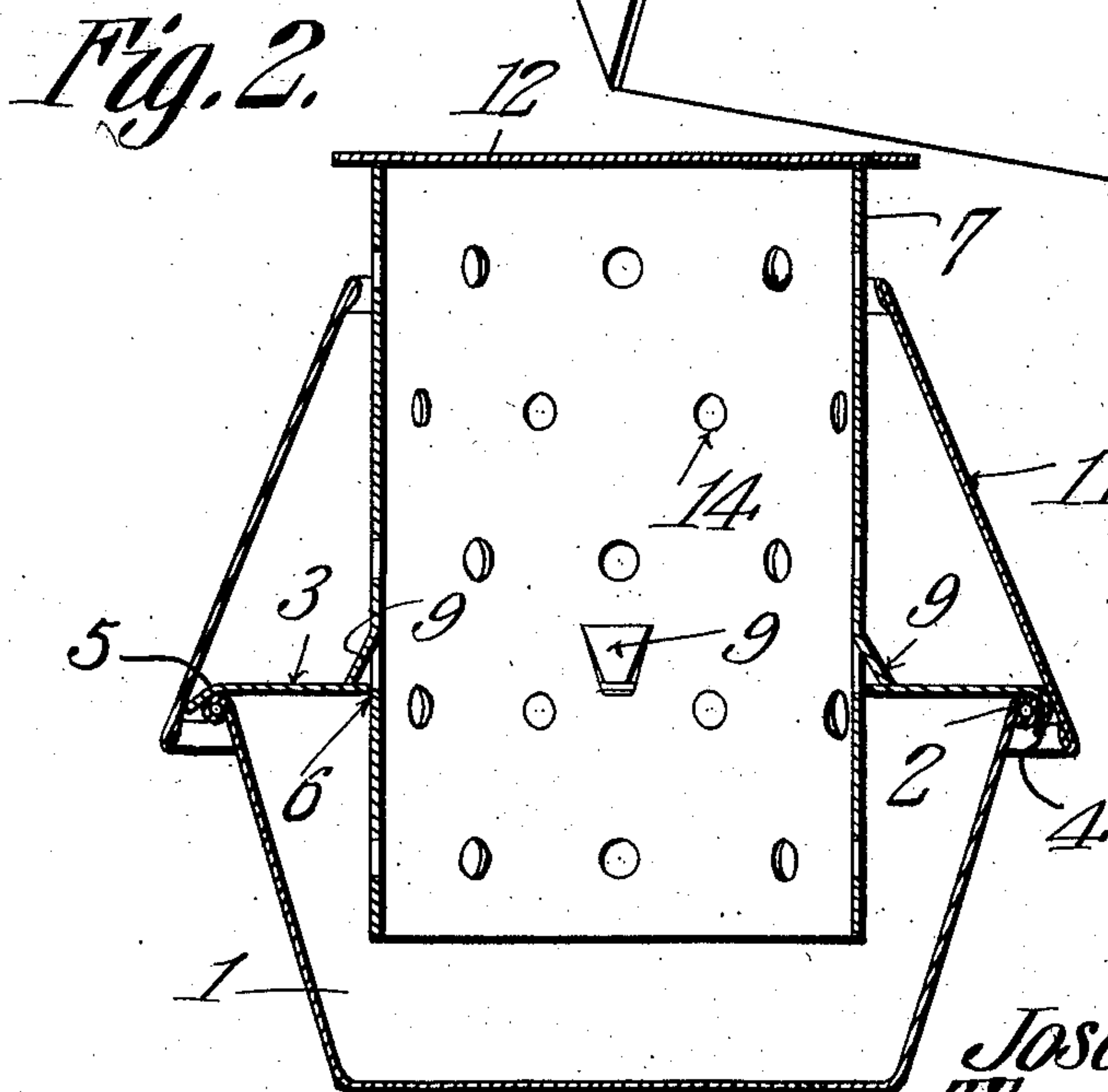
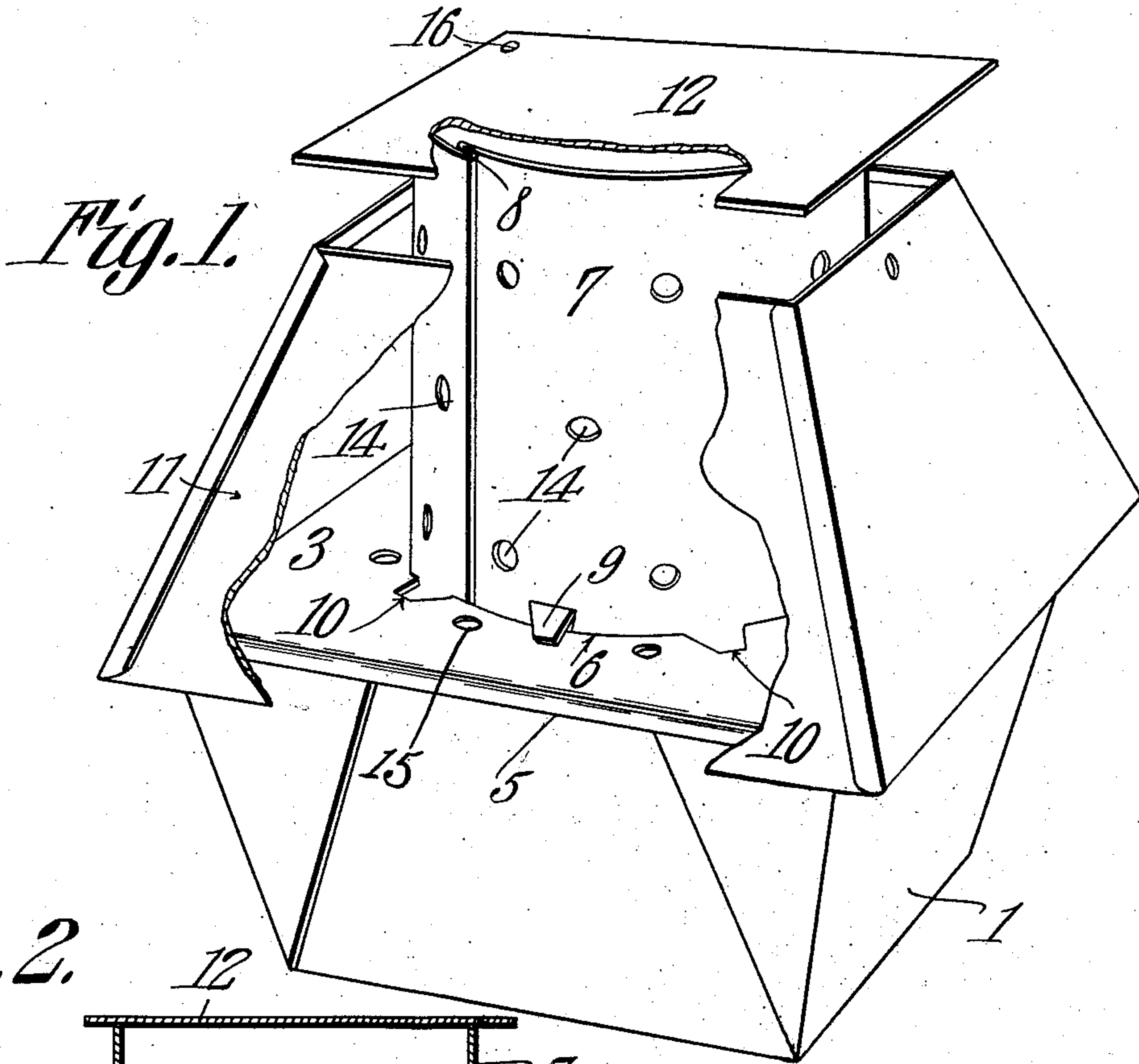
J. C. PLANK & T. E. FULGHUM.

HEATER.

APPLICATION FILED JUNE 10, 1909.

944,745.

Patented Dec. 28, 1909.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPHUS C. PLANK AND THOMAS E. FULGHUM, OF GRAND JUNCTION, COLORADO.

## HEATER.

944,745.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed June 10, 1909. Serial No. 501,327.

*To all whom it may concern:*

Be it known that we, JOSEPHUS C. PLANK and THOMAS E. FULGHUM, citizens of the United States, residing at Grand Junction, in the county of Mesa, State of Colorado, have invented a new and useful Heater, of which the following is a specification.

The improved heater forming the subject matter of this application for Letters Patent, is designed primarily, although not exclusively, to be disposed in fruit orchards in time of frost, whereby the temperature of the orchard may be raised, a large number of the heaters being commonly employed.

The objects of the invention are, the provision in a merchantable form, of a device of the class described, which shall be inexpensive to manufacture, efficient in operation, and devoid of complicated parts; other and further objects being made manifest hereinafter as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for the peculiar and distinctive features of the device, it being understood, that, within the scope of what hereinafter thus is claimed, divers changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings, Figure 1 shows our invention in perspective, assembled, and operative for use, parts being broken away better to illustrate the structure; Fig. 2 shows the invention in vertical transverse section; Fig. 3 is a top plan of the burner proper.

In carrying out the invention, there is provided, primarily, an oil receptacle, which is denoted by the numeral 1. This oil receptacle 1 is open at the top and it may be of any form. In the present instance, it takes the form of an inverted frusto-tetragonal pyramid. The oil receptacle is provided

upon its upper edge, with an outstanding bead which is denoted by the numeral 2.

A cover 3 for the receptacle is provided, and this cover 3 upon three sides is overbent to form a flange 4 arranged to extend beneath and to engage the bead 2. Upon its fourth side, the cover 3 is down-bent at an acute angle to the plane of the cover, to form a lip 5 which is adapted to engage the bead 2 in yielding relation. The cover 3 is adapted to be slid into place upon the oil receptacle, the lip 5 yielding sufficiently to allow the cover to slide in place. When the cover has been thus positioned, the flange 4 upon three sides of the cover engaging the bead 2, the lip 5, assuming the position shown in Fig. 2, will hold the cover in place with sufficient security so that it cannot be removed accidentally; without, however, rendering the removal of the cover exceedingly difficult when such operation is desired.

The cover 2 is provided with a central aperture 6, in the present instance circular in form, the aperture 6 being adapted to receive removably, a tubular burner 7 which obviously may be of any cross section, the aperture 6 being fashioned accordingly. This burner 7 is fashioned from a flat strip of metal provided upon its opposite edges, with cooperating, interlocking elements, whereby the said strip of metal may be rolled into tubular form, the elements carried by the ends of the strip engaging each other to hold the strip in tubular form as shown in Fig. 3. In the present instance, as shown most clearly in Fig. 3, the opposite ends of the strip constituting the burner are bent to form hooked portions which are denoted by the numeral 8. By constructing the burner in the manner pointed out, it is possible to disengage the hooked portions and to roll the burner out into a flat strip, manually, so that the same may be readily stored when not in use, and conveniently packed for shipment.

Intermediate its ends, the burner 7 is provided with a plurality of outstanding ears 9, which, in the present instance are struck from the body of the member. These ears 9, as clearly shown in Fig. 2, are adapted to rest upon the cover 3, whereby the lower end of the burner may be spaced from the bottom of the receptacle 1. By referring to Fig. 1, it will be seen that the central open-



ing 6 in the cover 3 is provided with a plurality of radially disposed notches 10 extending outwardly from the opening 6 into the cover. By rotating the burner 7, the ears 9 may be brought to register in the notches 10 of the cover so that the burner may be lowered to rest upon the bottom of the receptacle. By this construction, when the heater is not in use, the burner may be telescoped within the oil receptacle, so that the space occupied by the device in storage, may be materially decreased.

In order to protect the device and its contents from the elements, when in use, the hood 11 is provided which is adapted to inclose the burner 7 laterally throughout the major portion of its height and to extend downwardly below the periphery of the cover 3. This hood 11 is provided with sloping sides, and in its general shape, resembles the oil receptacle 1, saving that its position when in use, is reversed from the position normally assumed by the oil receptacle. The form given to this hood 11 adapts it to shed rain and at once, to protect the lower portions of the device, and to prevent rain and snow from finding its way into the oil receptacle, mingling with the fuel therein contained. The upper end of the burner 7 may be closed by a lid 12, which, in the present instance is fashioned from a flat plate of metal, provided with an aperture 16 whereby it may be suspended from a support when not in use. The burner 7 is pierced, both above and below the cover 3, with apertures 14, whereby a proper draft may be secured, and, as shown in Fig. 1, the cover 3 is provided with draft apertures 15, circumscribing the burner 7.

The operation of the device will be obvious to those skilled in the art to which the invention appertains, but it may be said, briefly, that the receptacle 1 may be filled with any suitable liquid fuel, which by means of a piece of cotton waste, a wisp of hay, or like combustible substance, may be ignited within the burner 7. The various draft apertures will secure a proper circulation of air through the device, and, when the fire is well under way, the position of the lid 12 upon the top of the burner 7 may be adjusted to regulate the rapidity with which the fuel is consumed. When the fire is once lighted within the burner, and the draft properly adjusted the same will continue to burn for a long space of time requiring no further attention until the fuel is entirely consumed, it being noted that the flame is protected by means of the hood, and that when the parts are in a heated condition, the hood will prevent the rain and snow from falling upon them, whereby, but for the hood, they would soon deteriorate.

It is obvious that the burner may rest di-

rectly upon the bottom of the oil receptacle or may be drawn up as shown in the drawings, the heat generated by the device being increased in proportion as the burner is spaced apart from the bottom of the oil receptacle. When the burner 7 rests directly upon the bottom of the oil receptacle 1, the upper end of the burner will be disposed below the plane of the upper end of the hood 11. The lid 12 is of sufficient size, to close, not only the upper end of the burner 7, but, as well, to close the upper end of the hood 11, and, when the burner 7 is made to rest upon the bottom of the receptacle 1, the lid 12 may be mounted upon the upper end of the hood 11, thereby effectively checking the device.

Having thus described the invention, what we claim as new and desire to secure by Letters Patent is:—

1. A device of the class described comprising a receptacle; a cover removably mounted upon the receptacle and provided with a central opening; a hollow burner mounted in the central opening; and a hood having uninterruptedly sloping faces laterally inclosing the burner and the periphery of the cover, the burner being spaced from the hood.

2. A device of the class described comprising a receptacle; a cover removably mounted upon the receptacle and provided with a central opening; a hollow burner mounted in the central opening; a hood having sloping faces inclosing the burner and extending below the cover; and a lid removably mounted upon the burner, the burner being spaced from the hood.

3. A device of the class described comprising a receptacle; a cover removably mounted upon the receptacle and extended to the edges thereof, the cover being provided with an opening; a hollow burner adjustably mounted in the opening in the cover; and a hood having sloping faces downwardly extended beyond the edges of the cover and of the receptacle; the hood being arranged to inclose the burner and being spaced therefrom.

4. A device of the class described comprising a receptacle; a cover removably mounted upon the receptacle and provided with an opening; a hollow burner mounted in the opening in the cover; a hood having sloping faces inclosing the burner and extending below the cover, the hood being spaced from the burner and a lid removably mounted upon the burner; the burner being slidably mounted in the cover to position the upper end of the burner below the upper end of the hood; the lid being receivable by the hood to form a closure therefor when the burner is depressed.

5. A device of the class described comprising a receptacle; a cover therefor; a hollow

burner mounted in the cover and arranged to extend into the receptacle; the burner being provided, both above and below the plane of the cover, with apertures; and the  
5 cover being provided with apertures circumscribing the burner.

In testimony that we claim the foregoing

as our own, we have hereto affixed our signatures in the presence of two witnesses.

JOSEPHUS C. PLANK.

THOMAS E. FULGHUM.

Witnesses:

J. R. WENTWORTH,

D. VOLLMER.