

(No Model.)

J. RINGEN.
STOPPER FOR VESSELS.

No. 377,275.

Patented Jan. 31, 1888.

Fig. I.

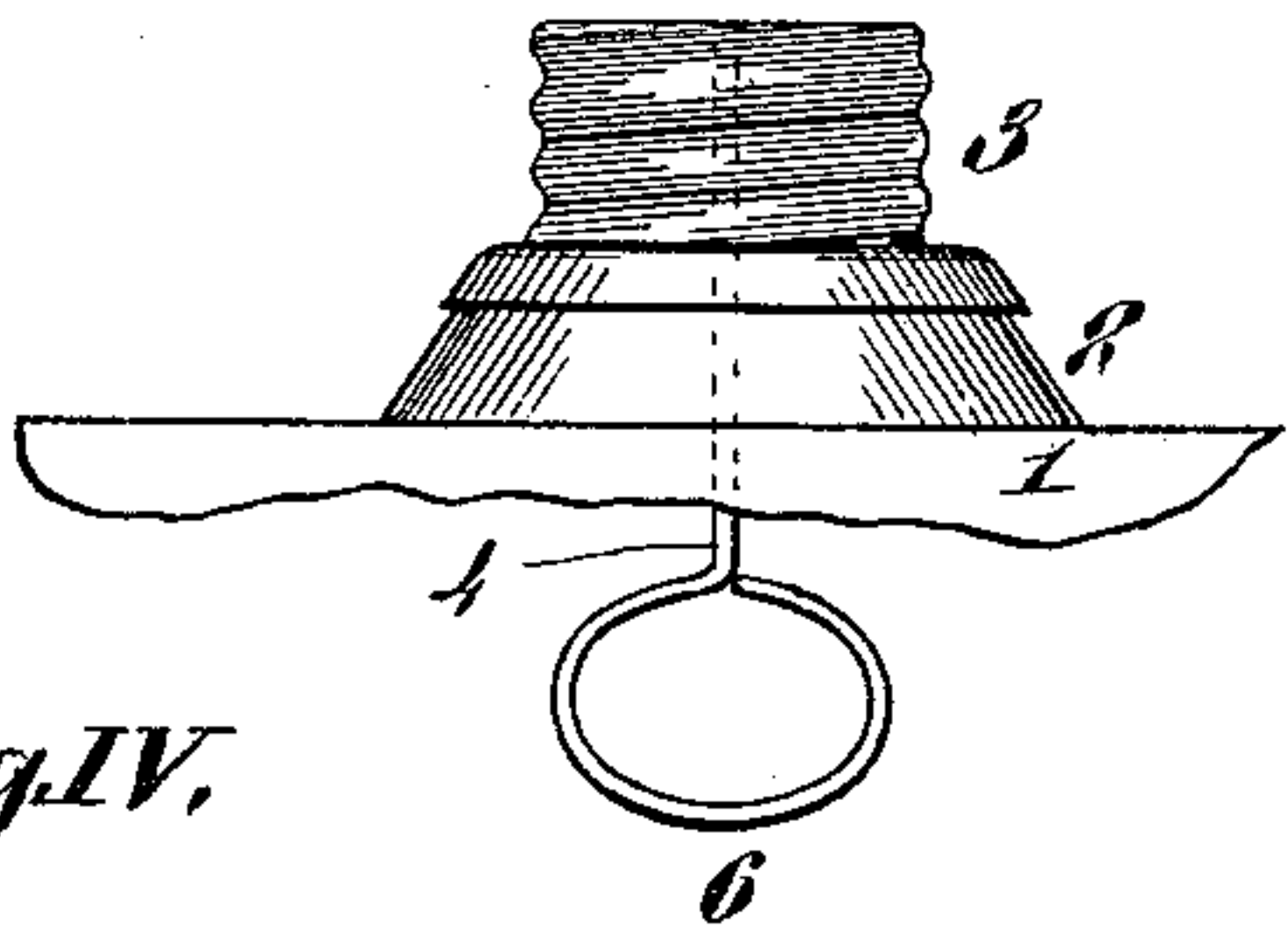


Fig. II.

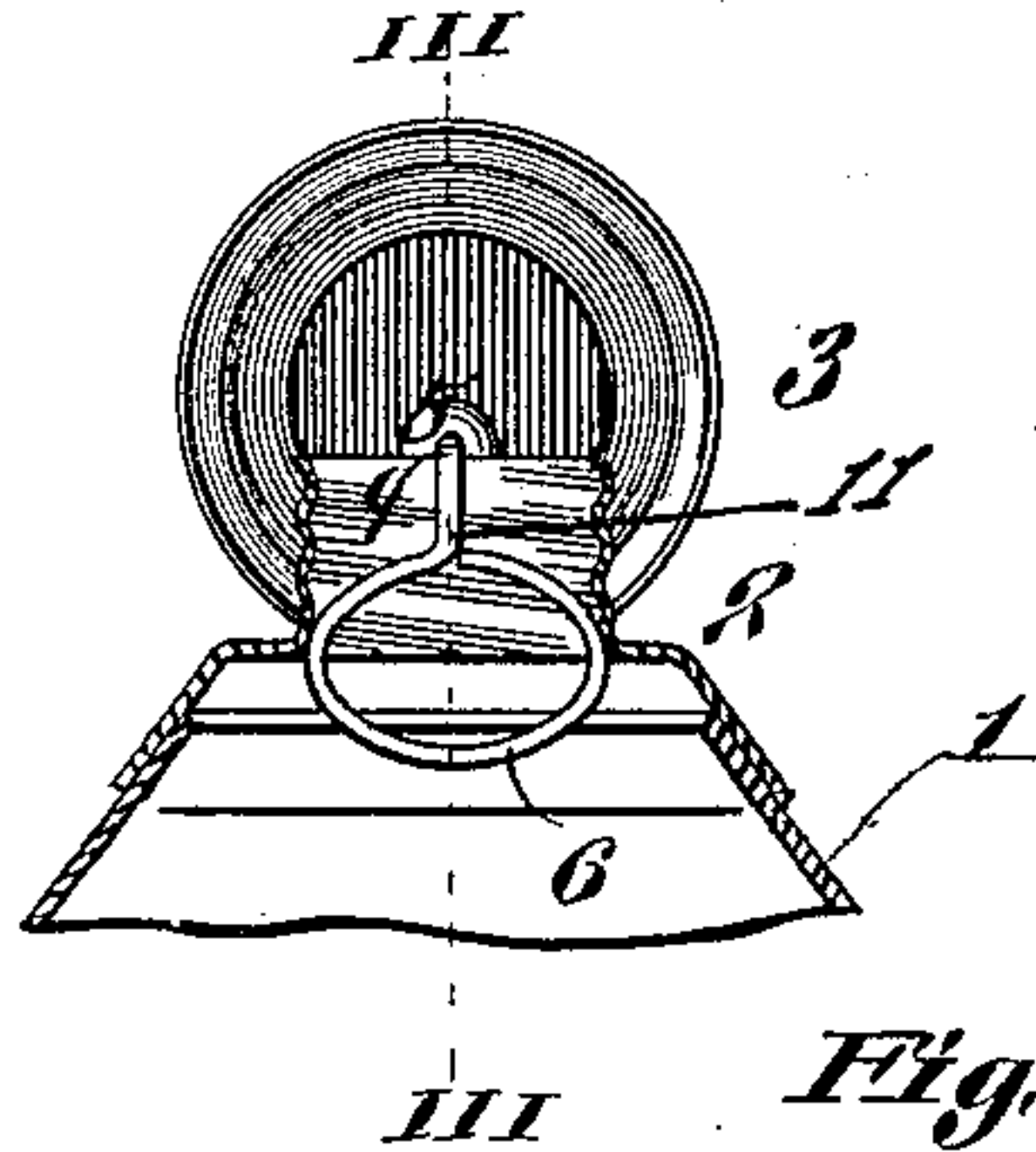


Fig. IV.

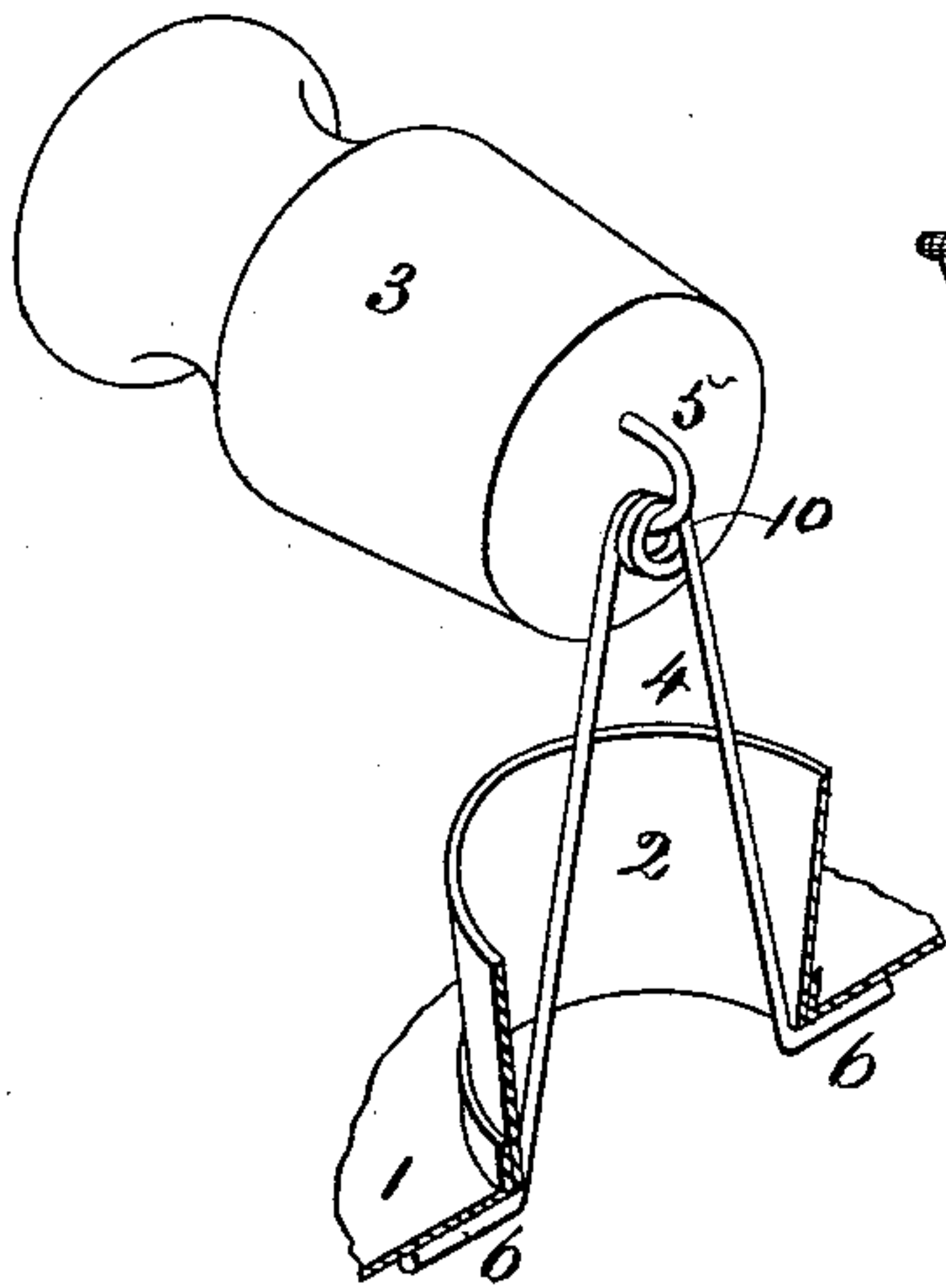


Fig. III.

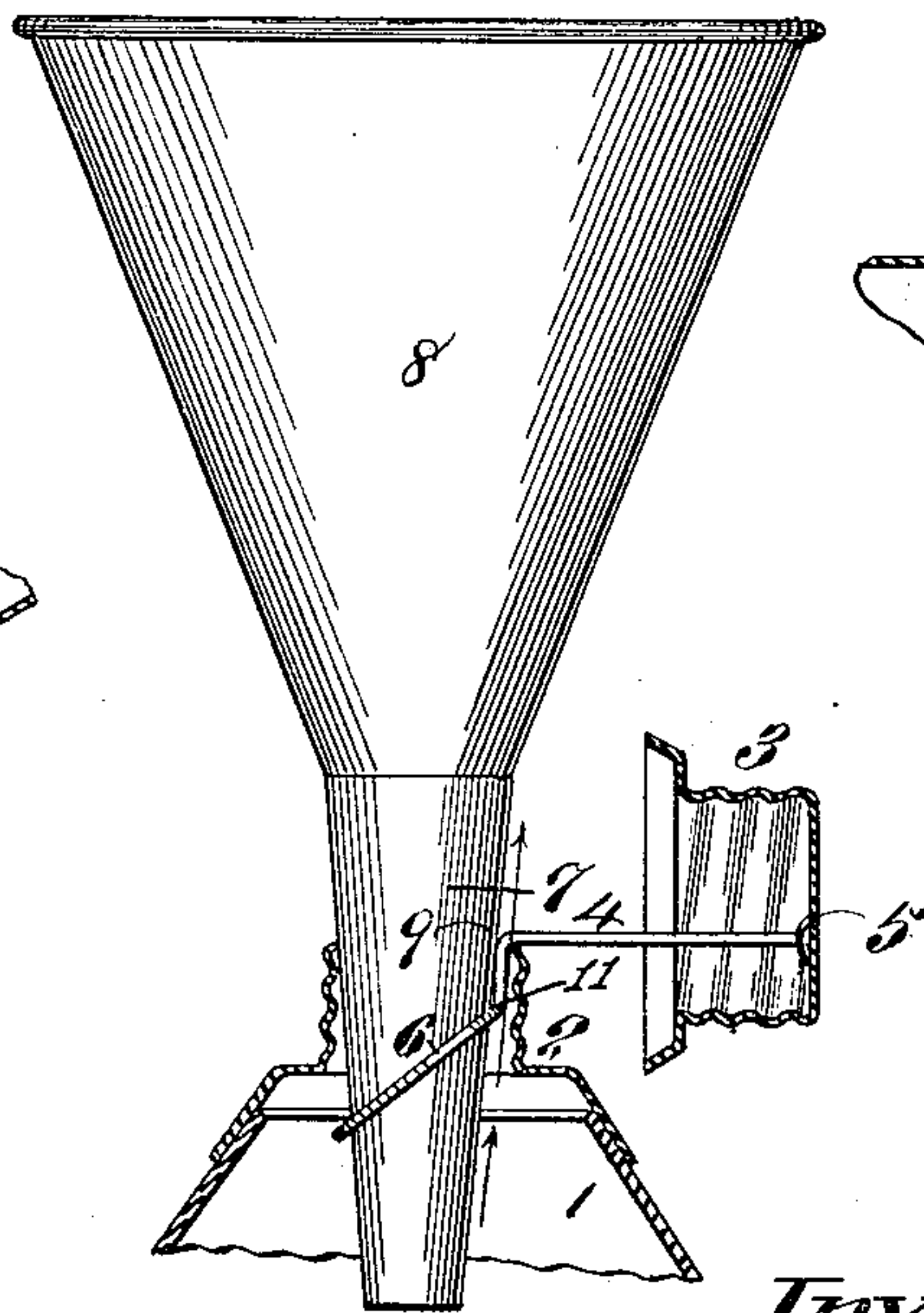
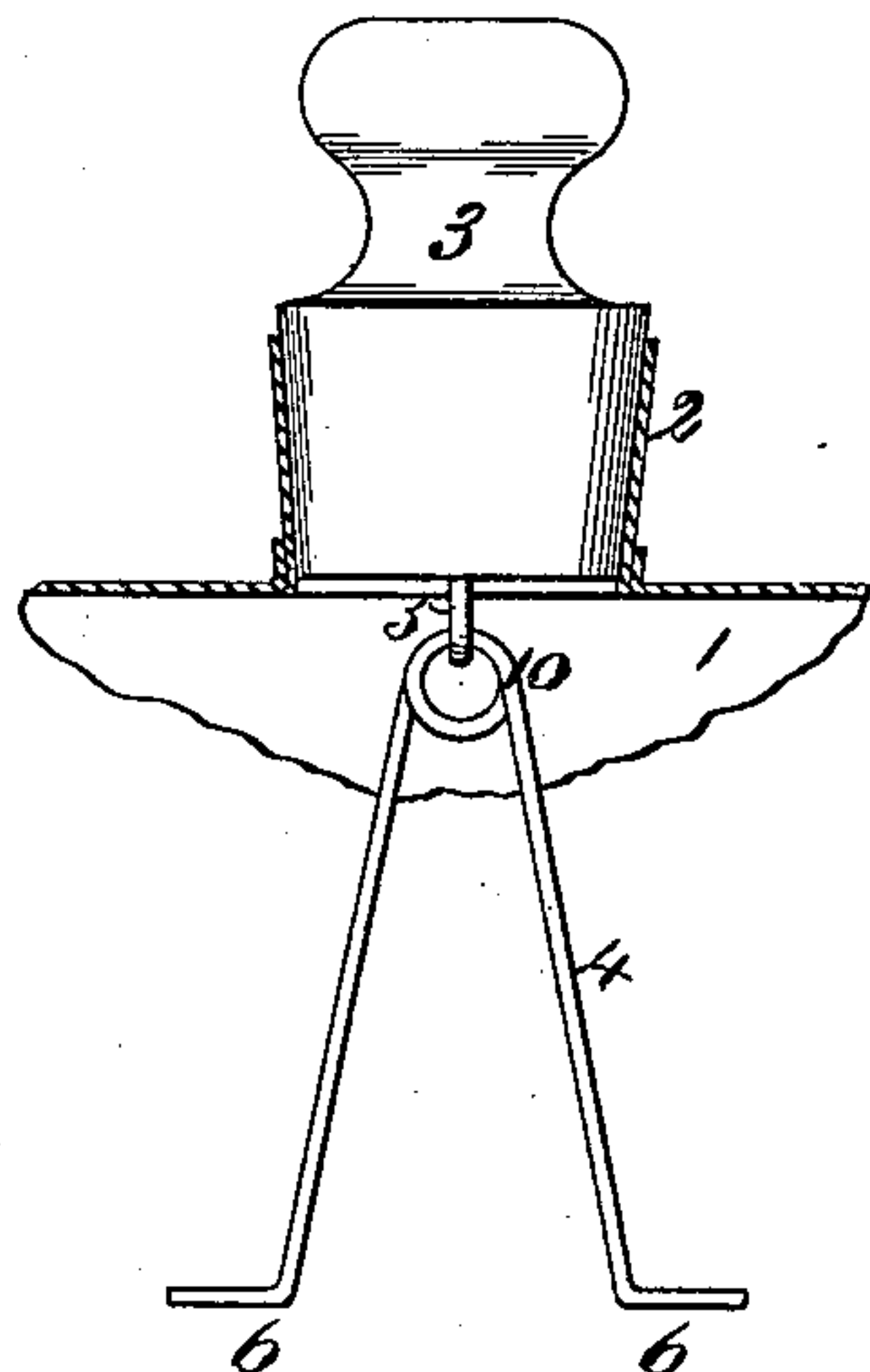


Fig. V.



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UNITED STATES PATENT OFFICE.

JOHN RINGEN, OF ST. LOUIS, MISSOURI.

STOPPER FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 377,275, dated January 31, 1888.

Application filed July 5, 1887. Serial No. 243,407. (No model.)

To all whom it may concern:

Be it known that I, JOHN RINGEN, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Stoppers for Vessels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in stoppers for vessels; and it consists in features of novelty to be hereinafter described, and then pointed out in the claims.

Figure I is a side view of the device applied to a screw cap, showing the neck closed. Fig. II is a section showing the cap open. Fig. III is a section at III III, Fig. II, showing a funnel inserted in the neck of the can. Fig. IV is a perspective view, partly in section, showing the improvement in a modified form connecting a solid stopper to the can, the neck being open; and Fig. V is a section of the same, showing the neck closed.

The application of the device, as shown in Figs. I to III, inclusive, will first be described.

1 is part of a can or other vessel.

2 is a neck, which is screw-threaded, and upon which fits the screw-cap 3. This is a common construction and needs no further explanation.

4 is a wire or rod, one end of which is shown soldered to the cap at 5. It may be connected to the cap in any suitable way. The rod extends through the neck and has at the end an eye, 6, whose diameter is greater than that of the neck, so that it cannot be drawn through the neck by accident. When the cap is removed from the neck, (see Figs. II and III,) the eye 6 engages against the lower end of the neck and limits the distance to which the cap may be removed from the neck. The rod or stem 4 is bent at or near the point where it joins the eye 6, as shown at 9 and 11, so that when the cap or stopper is elevated the eye 6 will be in a plane across the opening in the can, and thus permit the nozzle 7 of a funnel, 8, to be passed through it, as seen in Fig. III. A part of the rod or stem 4 is thus interposed between the nozzle 7 and the neck 2, so as to give free escape of air from the vessel, as indicated by arrows in Fig. III. Instead of bending the wire into an eye, 6, it may be bent

into any other form which will prevent the cap from becoming accidentally detached from the vessel, but permit its elevation in order that the nozzle of a funnel may be inserted.

The cap and neck are generally made separate from the can or other vessel and furnished to makers of cans, &c., by whom they are soldered to the cans. In applying my improvement to the caps and necks the end of the wire 4 may be passed through the neck and soldered fast to the cap; or the wire may be fixed to the cap and then passed through the neck and the eye 6 then formed.

In the modification shown in Figs. IV and V the device is attached to a solid stopper, 3, which fits in the neck 2. In this case the wire is bent into a spiral, forming an eye, 10, through which is passed a staple, 5, and the staple driven into the stopper, being thus constructed for lateral extension to permit the cap or stopper to be moved to one side of the neck of the vessel, as is the case with the principal form. The ends 6 of the wire are bent outward to engage the lower end of the neck. This wire may be drawn out of the neck, if desired, by springing the ends 6 inward, so as to disengage them from the lower end of the neck, the spiral eye 10 allowing this to be done without giving a set to the wire.

I prefer to form the wire 4 with a bend where it lies on the top of the neck, as shown at 9, so that the cap may be out of the way of the funnel and the device shall be self-supporting in its outer position. (See Fig. III.)

I claim as my invention—

1. The combination of a vessel, a cap or stopper for closing the mouth thereof, and a support for the stopper formed of wire and secured to the cap or stopper and extending through the neck of and into the vessel, the portion of the wire support within the vessel being bent laterally, so as to engage within the said vessel for preventing its withdrawal therefrom, and also being constructed for lateral extension to permit the cap or stopper to be moved to one side of the neck of the vessel, while the portion of the support within the neck lies against the side thereof, thereby permitting the insertion of the nozzle of a funnel, substantially as set forth.

2. The cap or stopper for the mouth of a

vessel, having a wire or stem attached to it, said wire or stem being provided with an eye, and bent so as to adapt said eye to receive the nozzle of a funnel when the cap or stopper is removed from the vessel, substantially as set forth.

3. The combination, with a vessel having a neck surrounding the filling-orifice, of a cap or stopper, a rod consisting of a single continuous piece of wire attached to the cap or stopper and extending through the neck into the vessel, the portion of the wire rod within the vessel being bent into an eye of greater diameter than the neck of the vessel for preventing the withdrawal of the rod, the portion of the wire rod

adjoining the eye being bent, so that the eye may receive the nozzle of a funnel, and the portion of the rod outside of the neck being bent so that the cap or stopper may be moved to one side of the neck, substantially as set forth.

4. The combination of the can 1, neck 2, cap 3, and wire 4, the wire having a loop or eye, 6, on its inner end, and being bent at 9 and 11, as shown, substantially as and for the purpose set forth.

JOHN RINGEN.

In presence of—

SAML. KNIGHT,
JOS. WAHLE.