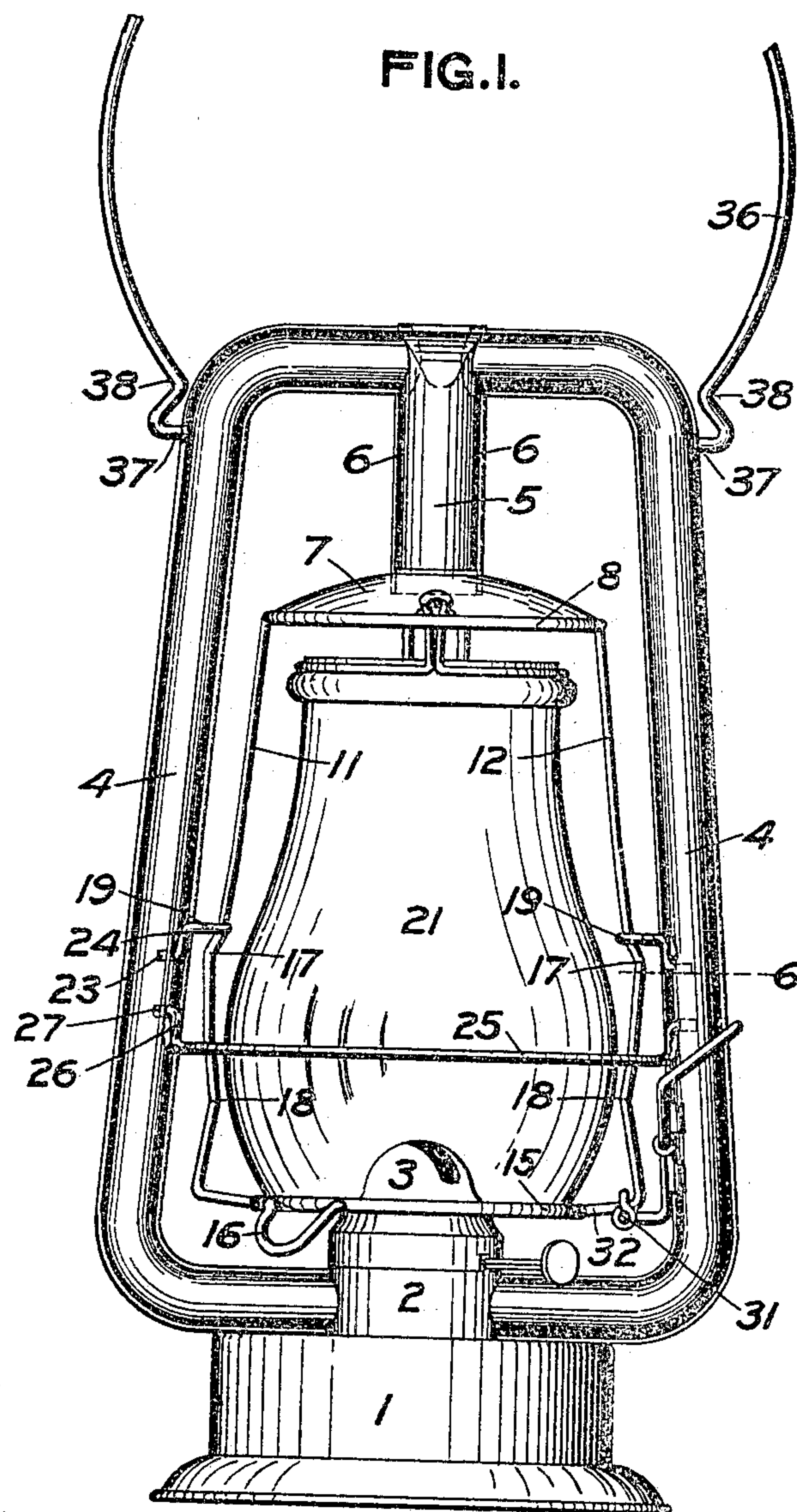


No. 819,167.

PATENTED MAY 1, 1906.

A. R. PRITCHARD.
TUBULAR LANTERN.
APPLICATION FILED NOV. 29, 1904.

2 SHEETS—SHEET 1.



WITNESSES:
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2 SHEETS—SHEET 2.

FIG. 6.

FIG.3.

FIG. 5.

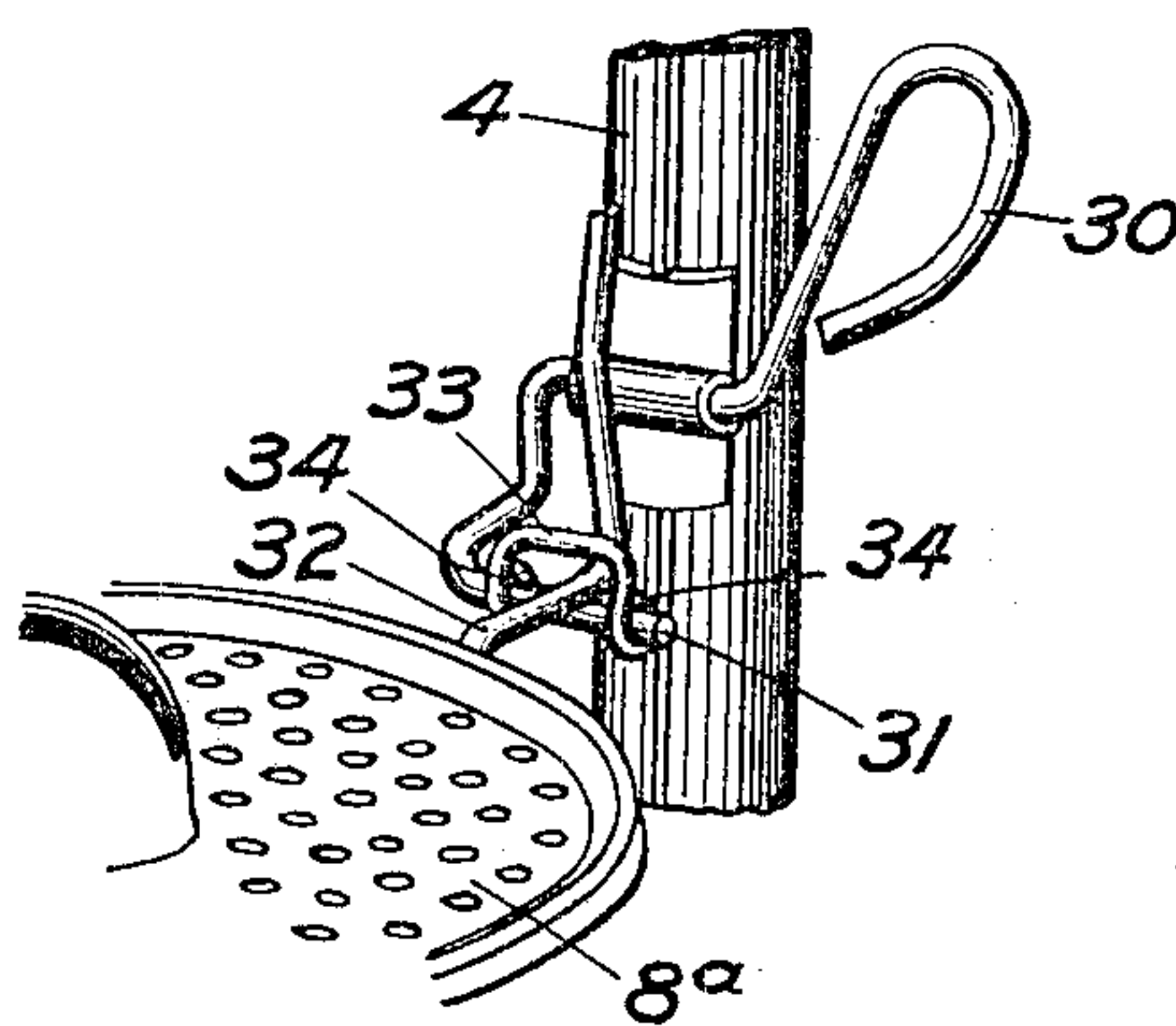
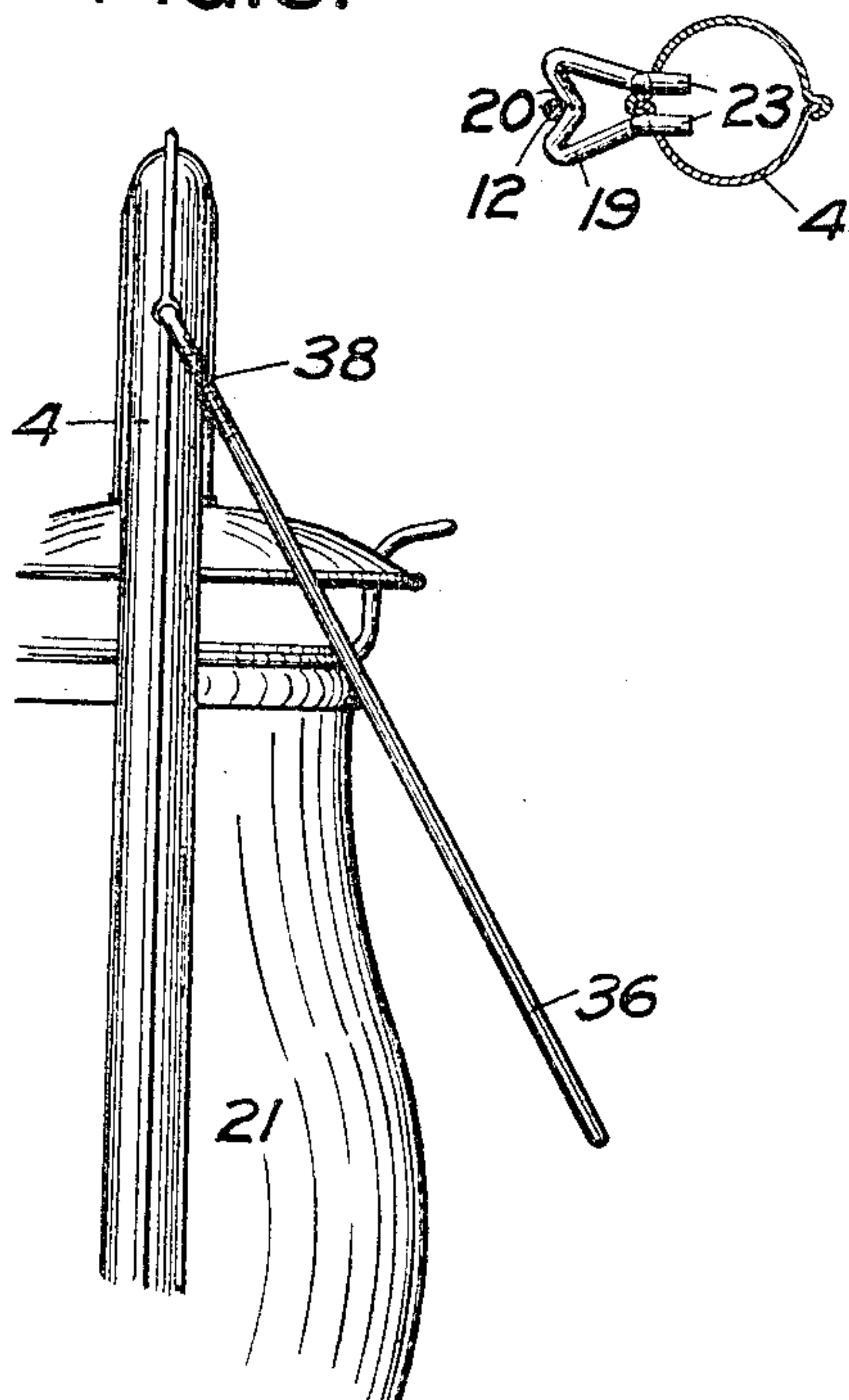


FIG. 2.

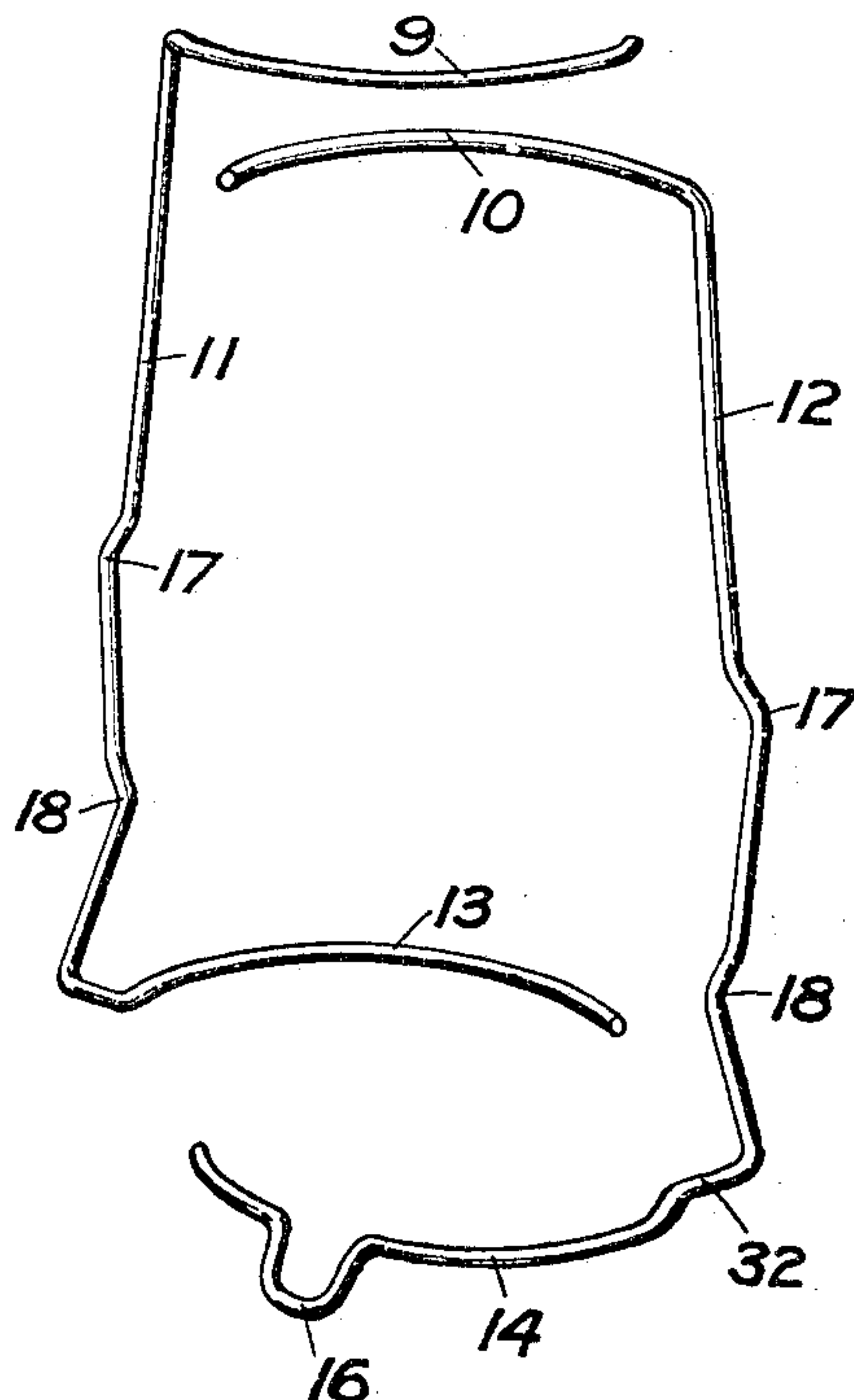
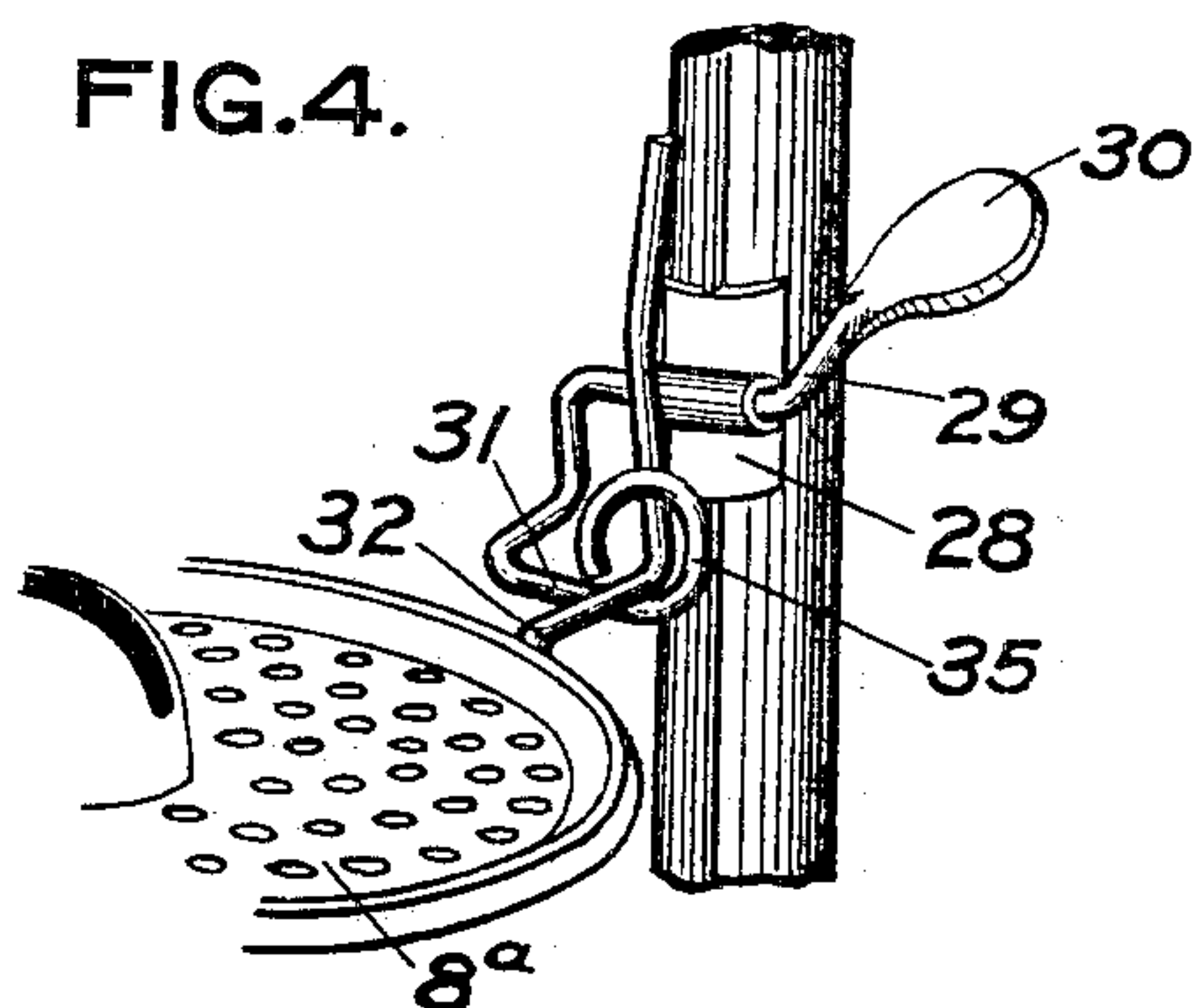


FIG.4.



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UNITED STATES PATENT OFFICE.

ALBERT R. PRITCHARD, OF ROCHESTER, NEW YORK.

TUBULAR LANTERN.

No. 819,167.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed November 29, 1904. Serial No. 234,738.

To all whom it may concern:

Be it known that I, ALBERT R. PRITCHARD, a citizen of the United States, and a resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Tubular Lanterns, of which the following is a specification.

This invention relates to tubular lanterns; and it consists in the mechanism hereinafter described and claimed.

In the drawings, Figure 1 is a front elevation of a lantern embodying this invention. Fig. 2 is a detailed view of the separated wires forming part of the globe-holder. Fig. 3 is a perspective view of the lever-lift for the globe. Fig. 4 is a perspective view of a modified form of said lever-lift. Fig. 5 is a side view showing the lantern-bail in its depressed position, and Fig. 6 is an enlarged cross-section on the bottom line 6 of Fig. 1.

In the drawings, 1 is the usual oil-font. 2 is the air chamber or gallery, and 3 is the burner-cone. The chamber or gallery 2 is connected with the lower ends of the side tubes 4 4, which are also, if desired, soldered or fastened to the font 1. The upper ends of the side tubes extend, as shown in dotted lines, into side openings in the vertical or canopy tube 5. The canopy-tube has side ribs 6 6, whereby the two parts of the tube may be fastened together and which also constitute means for preventing rotary movement of the canopy 7 upon the canopy-tube 5. A globe-plate 8^a is adapted to rest upon the burner-cone 3 when the lantern parts are in their normal positions. The canopy 7 has a rolled edge 8, in which the ends 9 and 10 of the side wires 11 and 12 are fastened. Each side wire has a lower curved portion 13 14, which rests in the rolled edge 15 of the perforated globe-plate 8^a. A loop or finger-piece 16 may project from one of the lower ends, such as 14, of a side wire. Each side wire has an outwardly-projecting bend 17, whose sides are obtuse angles, and a depression 18, whose sides are also obtuse angles. Each side tube carries a rigid projection 19, having a notch 20, (see Fig. 6,) in which the adjacent side wire rests with a little pressure in order to insure contact. When the lantern parts are in their normal position, (shown in Fig. 1,) the projections 19 rest on the upper sides of the projections 17 of the side wires, and thus hold the globe 21 and its connected parts down in place on the burner-cone 3.

When the globe-plate is lifted, the canopy 7 slides upon the canopy-tube 5 and the side wires 11 and 12 move along the projections 20 until the said projections rest in the depressions 18 in the side wires and hold the globe and its connected parts in their upper position in order to give access to the burner-cone and lower part of the lantern. The depression 18 in the side wires may be long, as shown in Fig. 1, or may be abrupt, as shown in Fig. 2. When the globe is again lowered to its normal position and the projections 19 pass the summit of the projections 17, the spring of the side wires tends to force the globe and globe-plate into place, and the pressure of the side wires against the rigid projection holds these parts in their normal position.

By the employment of the notched projections 19 and of the canopy 7 and globe-plate 8^a, having the rigidly-attached side wires 11 and 12, the globe-frame, consisting of the canopy, the globe-plate, the globe-wires, and the usual globe-spring attached to the canopy, may be manufactured complete and then inserted into the lantern-frame, consisting of the oil-pot, gallery, air-tubes carrying the notched projections 19, and the canopy-tube, by the simple process of sliding the canopy on the canopy-tube and compressing the side wires 11 and 12 until they snap into the notches 20 in the projections 19, whereupon the parts are assembled. This ability to manufacture the lantern-frame and the globe-frame each complete and separately is an important result and cannot be obtained without the open notches in the guide projections 19.

The rigid projections 19 may be formed of wire, in which case the free ends 23 of a single piece of wire pass through holes in the side tube 11 or 12, and a portion 24 of said wire lies against the face or side of the side tube 4, so that when solder is applied to the parts the projection 19 will have a long bearing against the side tube, and the projection 19 is firmly held in position. So, too, the guard-wires 25 have portions 26 at their ends bent at right angles to the plane of the main portion of the guard-wire, so as to lie against the face or side of the side tube and terminal portions 27, projecting through holes in the side tubes. When solder is applied to the side tubes, the adjacent portions of the guard-wires are held most firmly in position.

The lever-lift apparatus has a bearing 28

on one of the side tubes, which may, as shown, form an axis at right angles to the plane of the side tube. In this bearing turns the lever 29, having the handle end 30 and the operating end 31, the latter of which is, as shown, parallel to the axis of the bearing 28. The operating end 31 may have upon it a loop of any suitable form passing around the short horizontal portion 32 of one of the side wires, so that as the lever is tilted in one direction it will raise the globe-plate and its connected parts and when tilted in the other direction will lower said globe-plate and its connected parts. In Fig. 3 the loop mentioned is a loop 33, formed of a separate piece of wire having its ends 34 turned around the operating end 31 and inclosing or spanning the horizontal portion 32 of the side wire. The loop 33 is adapted to swing upon the operating end 31, so that as the lever is raised and lowered the loop swings and there is little lost motion. It is, however, possible, by making a large loop 35, Fig. 4, integral with the operating end 31, to reduce the number of parts. The handle or bail 36 is made of a single piece of wire, as usual, whose ends 37 project through perforations in the outer sides of the upper ends of the vertical side tubes. It is common to break globes by allowing the handle to fall and strike the globe. In order to prevent this, the bail 36 close to each terminal portion 37 has an inward sharp bend 38, which is adapted to strike the side tube before the bail 36 can strike the globe 21. (See Fig. 5.)

What I claim is—

1. In a globe-frame for tubular lanterns, a canopy having a rolled edge, a globe-plate having a rolled edge, and two side wires, each having a vertical portion, and end portions turned at an angle to the vertical portion, one end portion of each side wire being inclosed in the rolled edge of the canopy, the other end portion being inclosed in the rolled edge of the globe-plate, whereby the globe-plate and the canopy are held rigidly in position in combination with a lantern-frame, and guides thereon for said side wires having open notches for said side wires.

2. In a globe-frame for tubular lanterns, a canopy having a rolled edge, a globe-plate having a rolled edge, and two side wires, each

having a vertical portion, and end portions turned in opposite directions and at an angle to the vertical portion, one end portion being inclosed in the rolled edge of the canopy and the other end portion being inclosed in the rolled edge of the globe-plate, whereby the globe-plate and the canopy are held rigidly in position in combination with a lantern-frame, and guides thereon for said side wires having open notches for said side wires.

3. In a tubular lantern having side tubes, a rigid projection on a side tube, a globe-frame having the usual vertical side wires, one of which has a depression and a long gradual outwardly-projecting portion and adjacent to the upper end thereof a short steep inwardly-projecting portion for engagement with said rigid projection, whereby the globe-frame is held downward by the engagement of said steep inwardly-projecting portion with said rigid projection and the upward movement of the globe-frame is made smooth and easy by the pressure of said long and gradual portion against said rigid projection and is held in the raised position by engagement of said projection in said depression.

4. In a tubular lantern having side tubes, a rigid projection on a side tube, a globe-frame having the usual vertical side wires, one of which has a depression and a long gradual outwardly-projecting portion and adjacent to the upper end thereof a short steep inwardly-projecting portion for engagement with said rigid projection, whereby the globe-frame is held downward by the engagement of said steep inwardly-projecting portion with said rigid projection and the upward movement of the globe-frame is made smooth and easy by the pressure of said long and gradual portion against said rigid projection and is held in the raised position by engagement of said projection in said depression, and a lifting-lever pivoted on one of the side tubes and having a loop around one of said side wires.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT R. PRITCHARD.

Witnesses:

D. GURNEE,
L. THON.