

No. 666,957.

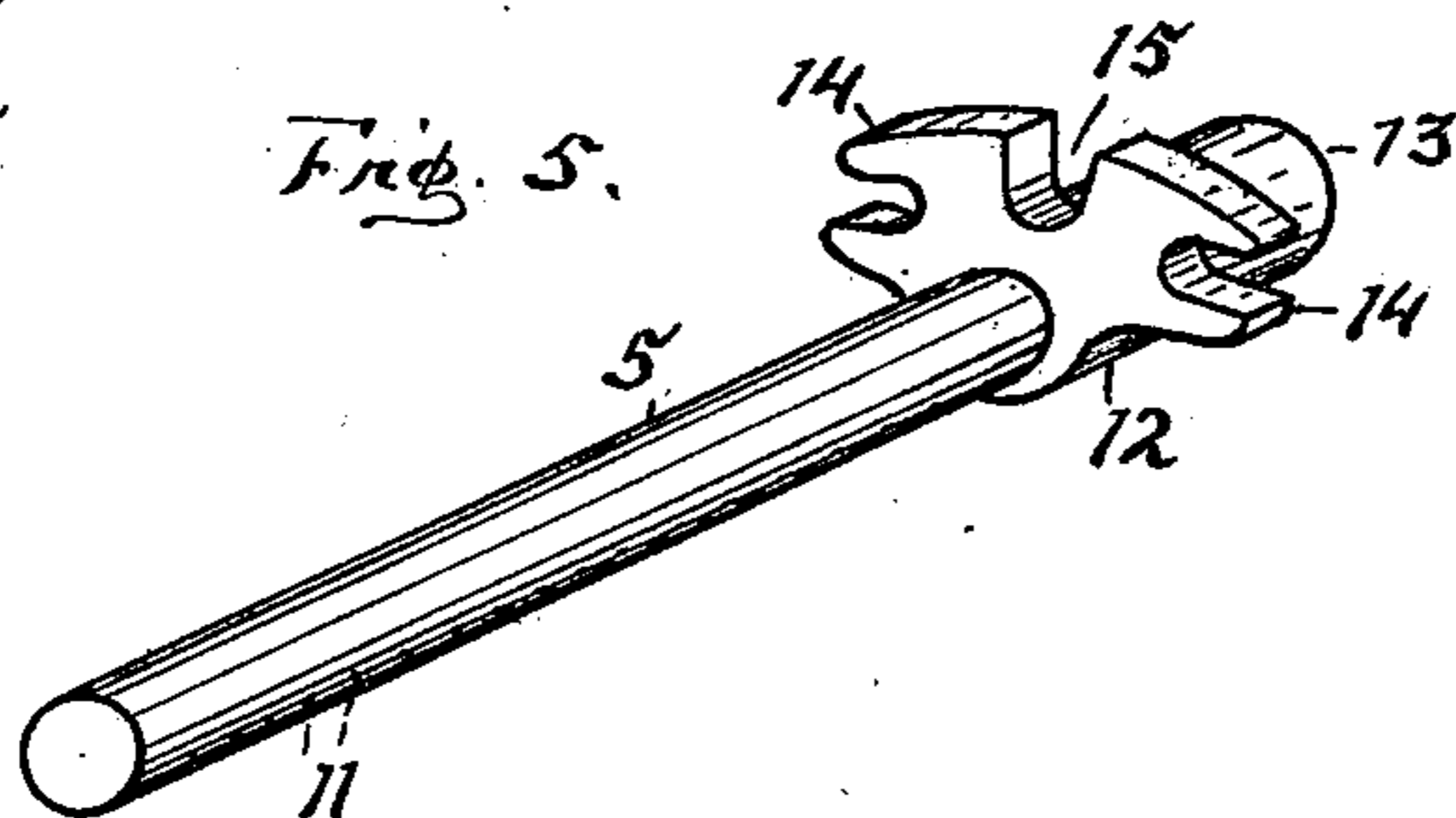
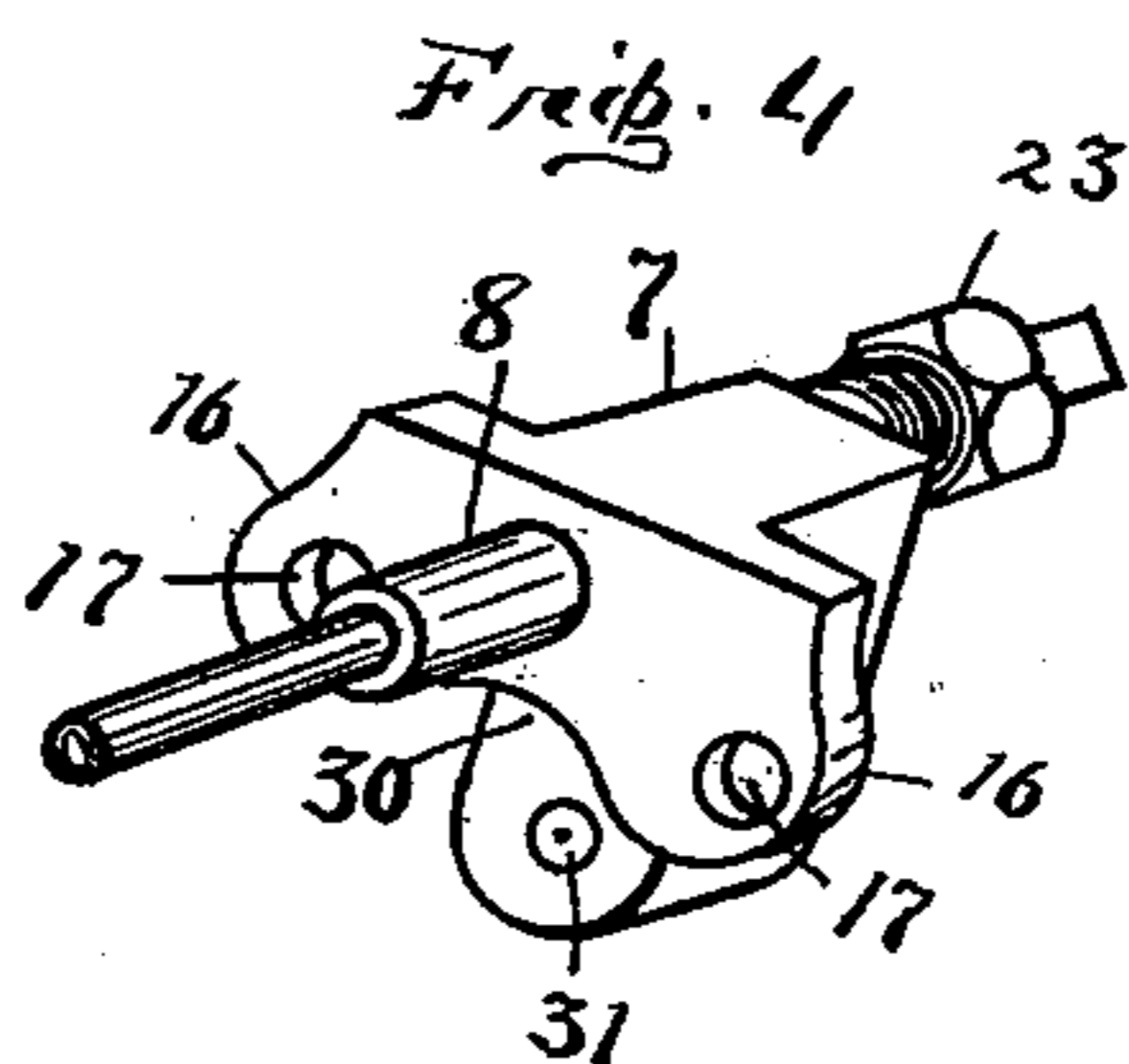
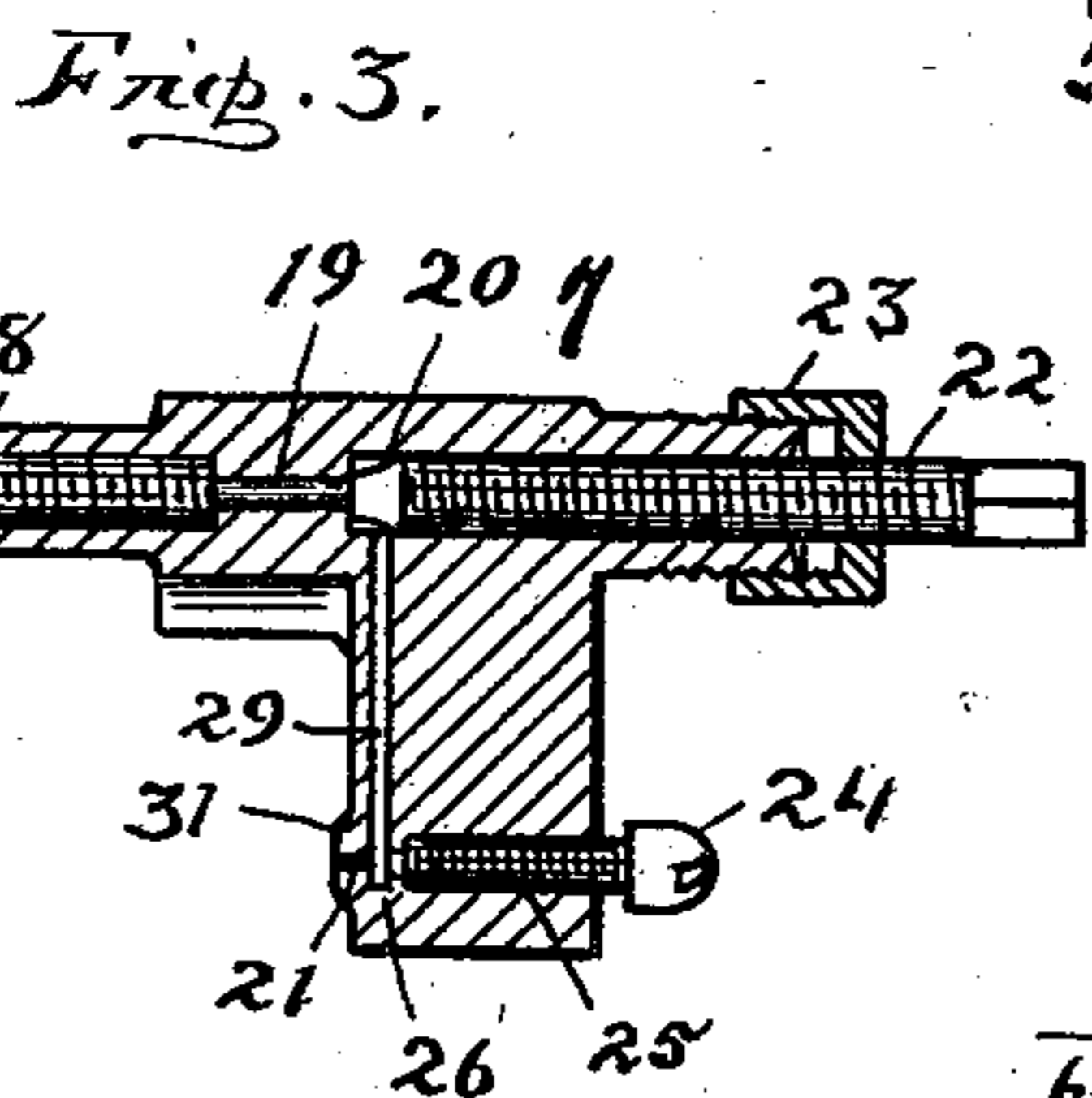
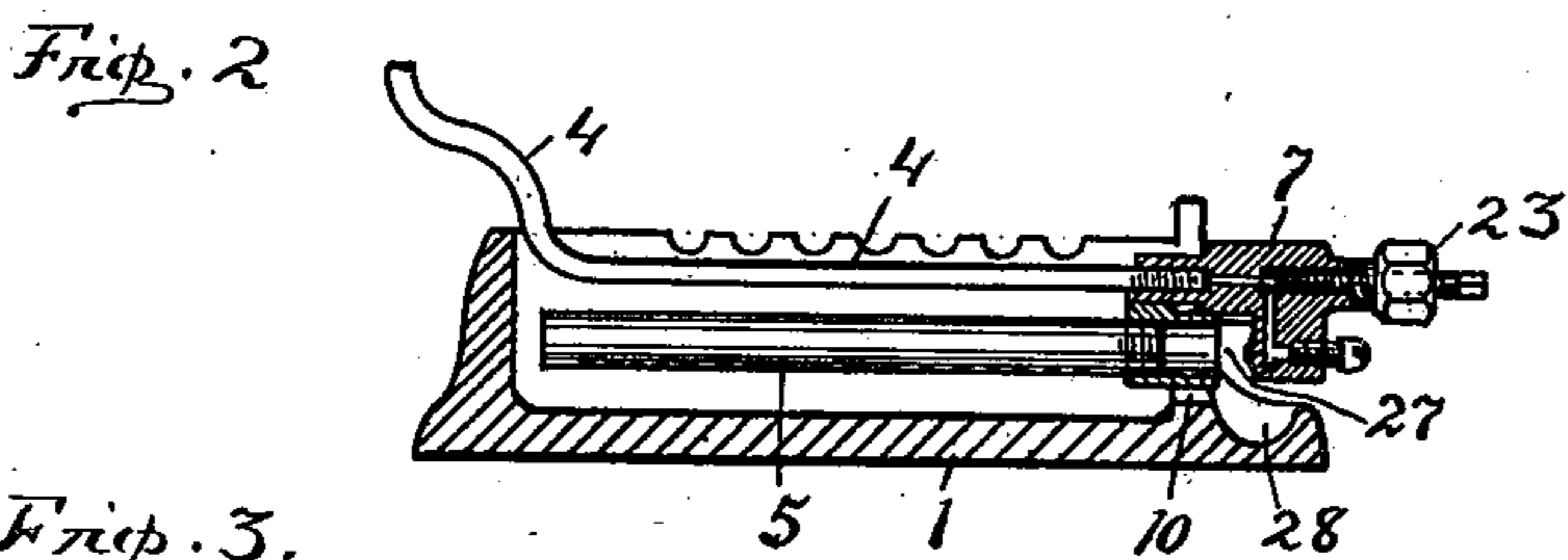
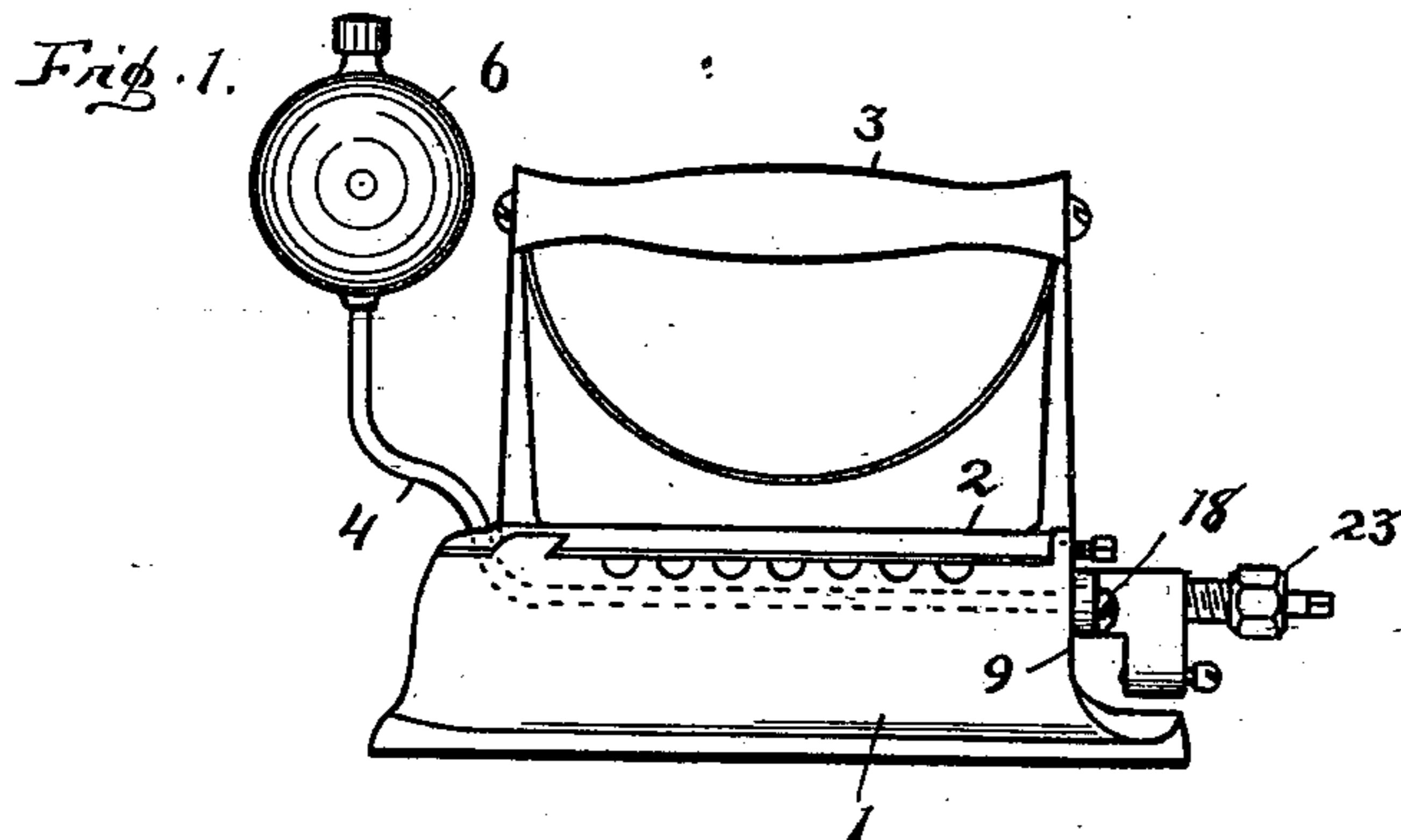
Patented Jan. 29, 1901.

O. P. EVERSOLE.
BURNER.

(Application filed Aug. 18, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

A. J. Burns
A. Bowersock

Oscar P. Eversole INVENTOR

BY
H. C. Hartman
his ATTORNEY.

No. 666,957.

Patented Jan. 29, 1901.

O. P. EVERSOLE.
BURNER.

(Application filed Aug. 18, 1900.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 6.

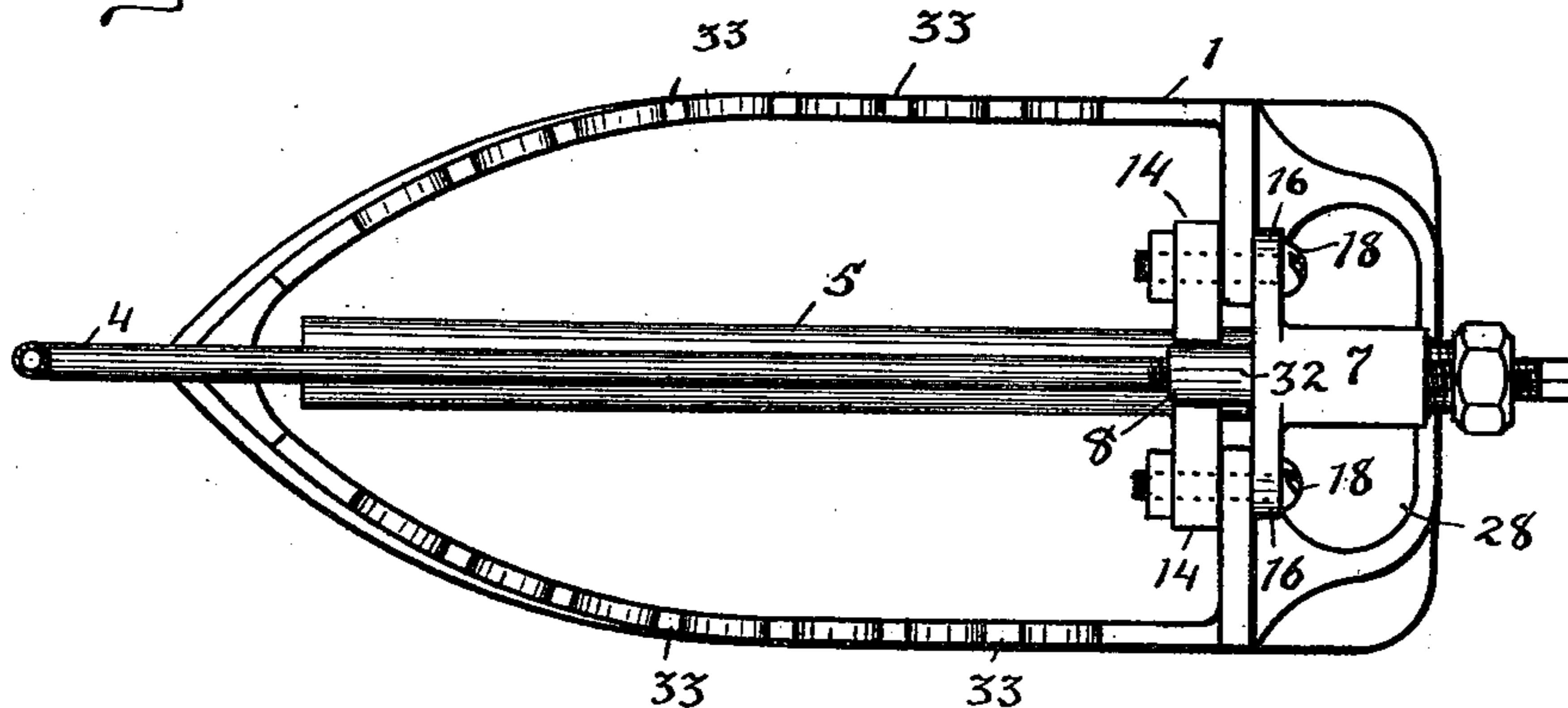


Fig. 7.

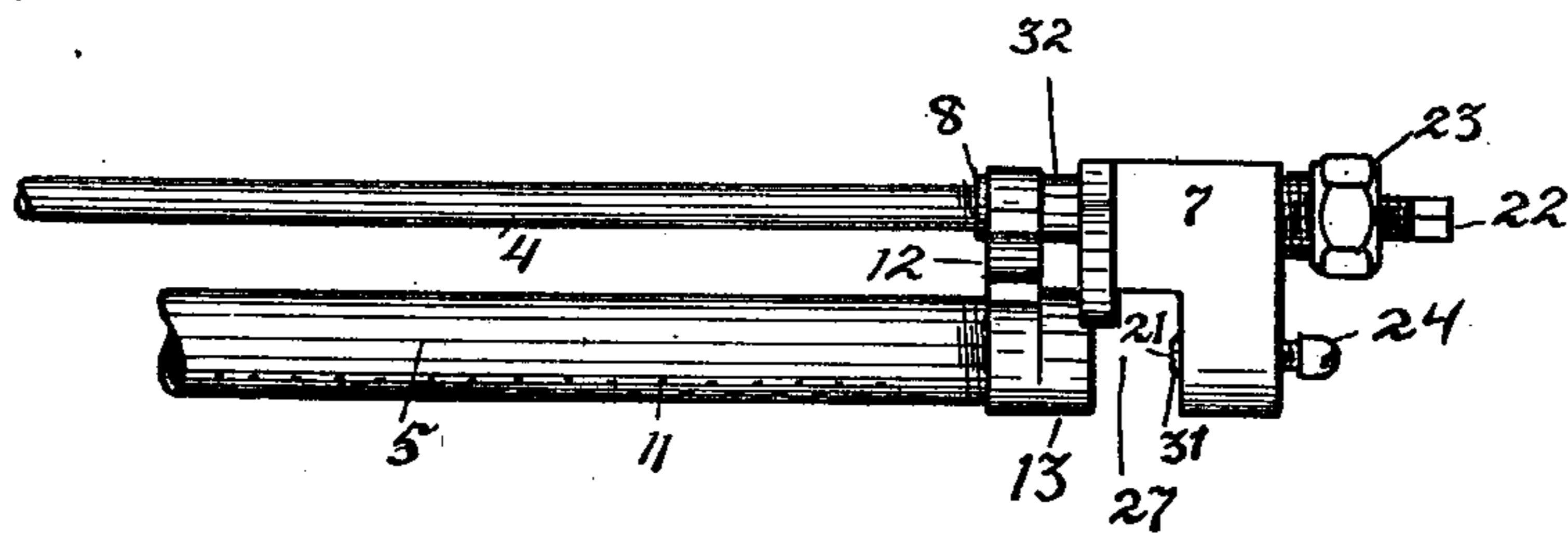
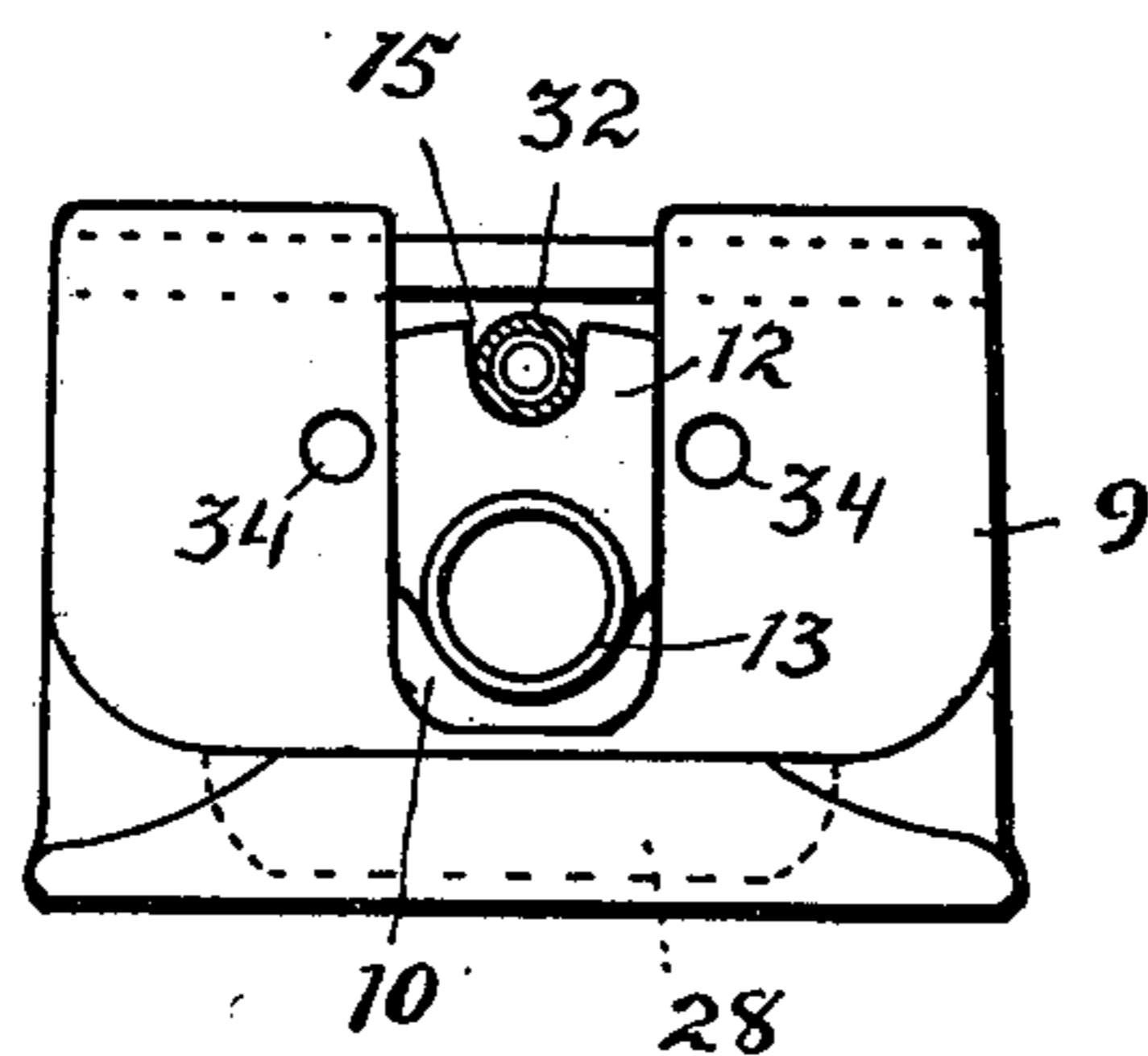


Fig. 8.



WITNESSES:

Oscar P. Eversole

INVENTOR

Halter G. Burns

BY

George K. Torrance

H. C. Hartman his ATTORNEY.

UNITED STATES PATENT OFFICE.

OSCAR P. EVERSOLE, OF FORT WAYNE, INDIANA.

BURNER.

SPECIFICATION forming part of Letters Patent No. 666,957, dated January 29, 1901.

Application filed August 18, 1900. Serial No. 27,256. (No model.)

To all whom it may concern:

Be it known that I, OSCAR P. EVERSOLE, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented new and useful Improvements in Burners, of which the following is a specification.

My invention relates to burners in which gasoline or other inflammable fluid is used for fuel, and it is especially adapted for use in heating hollow sad-irons; but I do not confine myself to such use; and the objects thereof are to produce a new apparatus of the class named which shall be more prompt in action and be more available for the purposes required, including the handling and cleaning thereof; and the invention consists in the construction and novel combination of parts hereinafter described, pointed out in the appended claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my device adjusted to a hollow sad-iron. Fig. 2 is a longitudinal section thereof. Fig. 3 is an enlarged longitudinal section of the vapor-regulator. Fig. 4 is a perspective view of the vapor-regulator. Fig. 5 is a perspective view of the burner and its frame. Fig. 6 is a plan view of the parts in place in a sad-iron. Fig. 7 is a detail showing the burner frame and seat and the regulator in operative relation to each other; and Fig. 8 is an end view of the parts in place in the sad-iron with the regulator removed, but with the tubular projection in place.

Similar numerals of reference refer to similar parts throughout the several views.

In the drawings numeral 1 indicates a hollow chamber in form of a sad-iron having a cover 2, which is provided with a handle 3. The device is arranged partly within the hollow chamber thus formed. The construction is as follows: The supply-pipe 4 and burner 5 are arranged parallel, one over the other, as shown, within the hollow chamber. The supply-pipe 4 is extended at one end out through the cover 2 and attached to a source of supply, such as a tank 6. By this construction the flame of the burner acts on that portion of the supply-pipe which is within the chamber, and thereby vaporizes the gasoline passing through it. The vapor-regulator 7

is provided with a thin tubular projection 8 just large enough to receive and support the supply-pipe, which is attached to it by a threaded connection. The rear end 9 of the sad-iron is cut out to form a U-shaped opening 10, which extends nearly to the bottom of the hollow chamber to form space for placing the device and for other purposes hereinafter stated.

The device is in two parts: first, the burner 5, consisting of a hollow tube provided with perforations 11 for escape of gas-jets, a burner-frame 12, to which the burner is rigidly attached, with its outer end 13 projecting so as to rest slightly—about a sixteenth of an inch—against the under side of a saddle 30 of the regulator 8 when in place, and means to secure the burner-frame in place, consisting, preferably, of two notched ears 14, through which bolts may be passed. This frame 12 is also provided with a seat 15 for the tubular projection 8 to rest in. The other or second part of the device is the vapor-regulator 7, which consists of a solid piece of metal having certain passages, as hereinafter described. Its main features are means to hold it in place, preferably the flanges 16, provided with orifices 17 for the passage of bolts and adapted to coincide with similar orifices 34 in the end of the sad-iron and the notched ears of the burner-frame, whereby bolts 18 clamp the parts in place. It is also provided with the tubular projection 8, above described, and an orifice 19, extending from the end of the supply-pipe 4 to a chamber 20, directly over the inner end of a minute discharge-passage 21, constructed below it in longitudinal line with the burner 5. A small nipple 31 is placed at the outer end of this passage 21 to give a more direct guidance of the vapor into the burner and to furnish a convenient point for adjustment and alinement. A threaded valve-pin 22, adapted to close and regulate the passage of vapor into said chamber 20 and furnished with a threaded stuffing-box 23, is constructed in longitudinal line with the inlet-orifice 19, and a vertical passage 29 is made from said chamber 20 to the discharge-passage 21. A tubular opening 25 communicates with the inner end of the discharge-passage 21 for the purpose of affording access thereto for cleaning, and

it is closed by a screw-plug 24. A lower chamber is formed by a slight extension of the vertical passage 29 and by a short tubular opening from the seat of the plug 24 to
 5 said vertical passage. This lower chamber provides a receptacle for the paraffin and other carbonaceous substances which may be mingled with the vapor. A recess 27 is provided by the construction of the parts, across
 10 which the vapor passes from the discharge 21 into the burner 5, thereby forming a mixer-space for the outside air to commingle with the vapor before it passes into the burner.

The operation of the device is obvious from
 15 the above description; but I wish to call attention to the functions of the thin tubular projection 8 and the method of bracing the parts in place. To start the generation of vapor, a cup 28 is located below the recess 27
 20 and filled with gasolene, and then the fluid in the cup is ignited. By the construction of the ports and their arrangement the U-shaped opening 10 in the end of the sad-iron is occupied only by the projecting end 13 of the
 25 burner and the thin tubular projection 8 crossing it, thereby leaving a space all around these portions. The flame and heat from the combustion of the gasolene in the cup 28 pass up not only against the regulator, but a part
 30 also up into this space, and thereby pass against, around, and over the portions of the burner and of the projection 8 crossing such opening 10. From thence the heat and flame pass on over into the sad-iron and out through
 35 the openings 33 in the edges of the sad-iron placed just beneath the cover 2, a suction or draft being caused thereby. This subjects the portion 32 of the thin tubular projection directly to the action of said heat and flame,
 40 whereby the fluid in that portion is quickly and certainly vaporized. When thus started, the further vaporization is continued by the action of the heat against the supply-pipe within the sad-iron, and the passage of the vapor
 45 to the burner is regulated by the threaded valve-pin 22. The advantages are obvious.

Heretofore it was necessary in this class of burners to consume enough gasolene in starting to heat the comparatively large amount
 50 of metal forming the regulator. This required longer time, and it often happened that more than one cupful was necessary for the purpose, which was the occasion of much annoyance. The portion 32 of the thin tubular projection avoids the heating of a large amount
 55 of metal and obviates both of these difficulties.

The two separable parts of my device, as above described, are placed and braced together as illustrated in Fig. 6 and in other
 60 views. The tubular projection 8 of the regulator rests in and on the curved seat 15 of

the burner-frame, and the saddle 30, formed on the inner end of the regulator, rests on the end of the projection 13 of the burner-tube
 5, whereby when the two parts are clamped in place by the bolts 18, as shown in Fig. 6, the parts are firmly braced to hold the burner
 5 more securely in a horizontal position and in line with the discharge-orifice 21. 70

Another difficulty has been in the means for cleaning the discharge-passage. For this purpose it will be seen that the regulator 7 and burner 5 are separable parts, removed by simply unscrewing the bolts 18, which hold
 75 them in place, and when removed the discharge-passage is fully exposed for cleaning, and an additional convenience for the same purpose is provided by the opening 25 with its closing screw-plug 24, which when re-
 80 moved gives free access to the other end of the discharge-passage.

Having thus described my invention, what I claim as new, and desire to secure by Letters
 85 Patent, is—

1. A burner apparatus of the class named, consisting of four separate parts: first, a hollow chamber provided with a closable opening: second, a burner attached to a burner-frame provided with a curved seat on its upper
 90 surface, the outer end of the burner projecting beyond the frame, as 13: third, a vapor-regulator provided with a thin tubular projection, as 8, its end resting in said curved seat, and also provided with a saddle, as 30, 95
 resting on said projecting end of the burner, and also provided with a discharge-passage in line with said burner, and with passages from the inner end of said tubular projection communicating with said discharge-passage, and
 100 also provided with means to regulate the passage of vapor: fourth, a supply-pipe passing through said hollow chamber over said burner placed therein below it, and connected with said tubular projection: and means to re-
 105 movably secure the parts in place.

2. In a burner of the class named, the combination of a separate burner-frame provided with a curved seat on its upper surface a
 110 burner secured to said frame with its end, as 13, projecting: a vapor-regulator provided with a tubular projection, as 8, adapted to rest on said curved seat, and also provided with a saddle adapted to rest on said projecting
 115 end of the burner: a hollow chamber: and means to removably secure the parts in place substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two witnesses, this 16th day of August, 1900. 120

OSCAR P. EVERSOLE.

Witnesses:

A. BOWERSOCK,
 H. C. HARTMAN.