

No. 661,095.

Patented Nov. 6, 1900.

I. WICKLAND.

SAD IRON.

(Application filed Nov. 28, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1

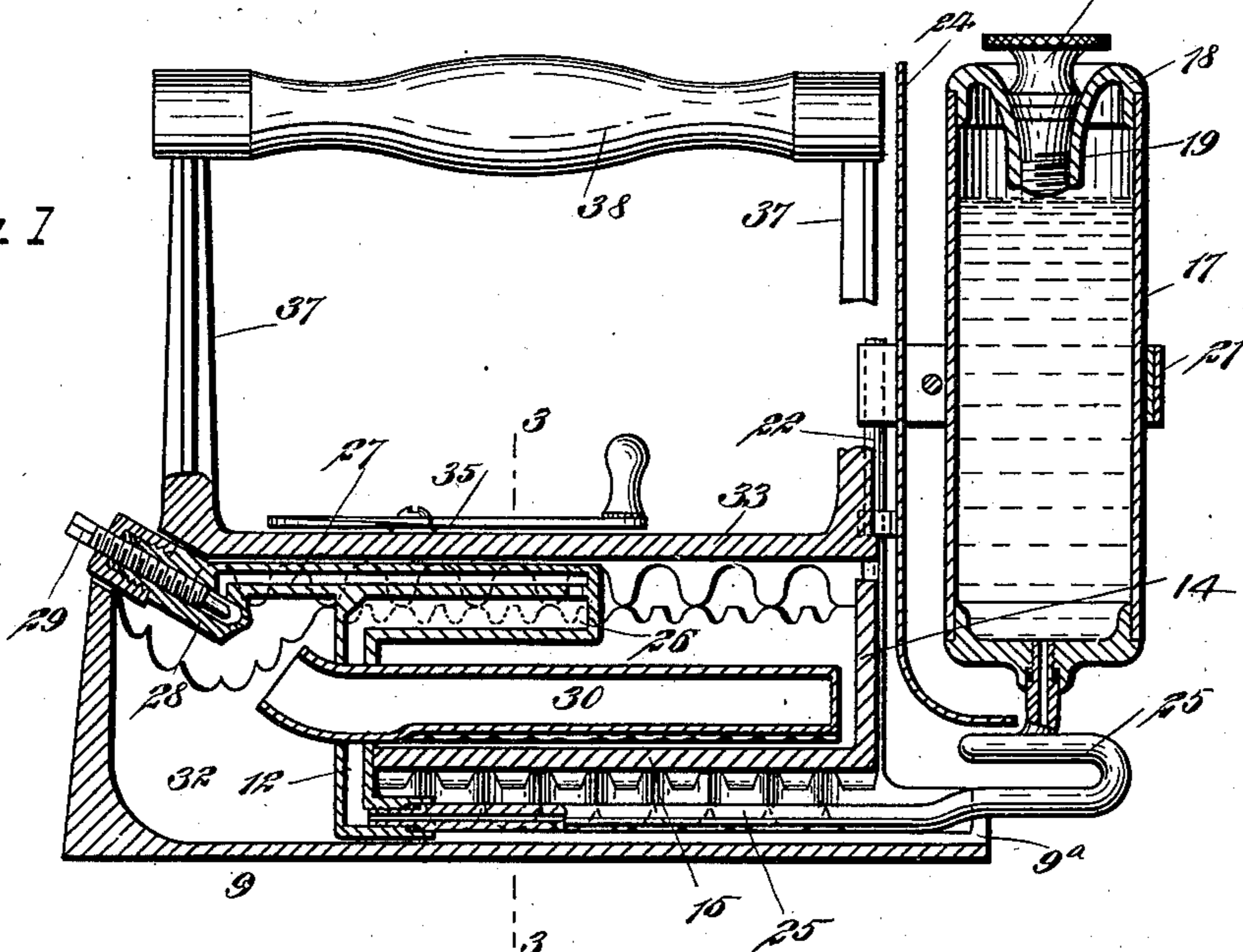


Fig. 2

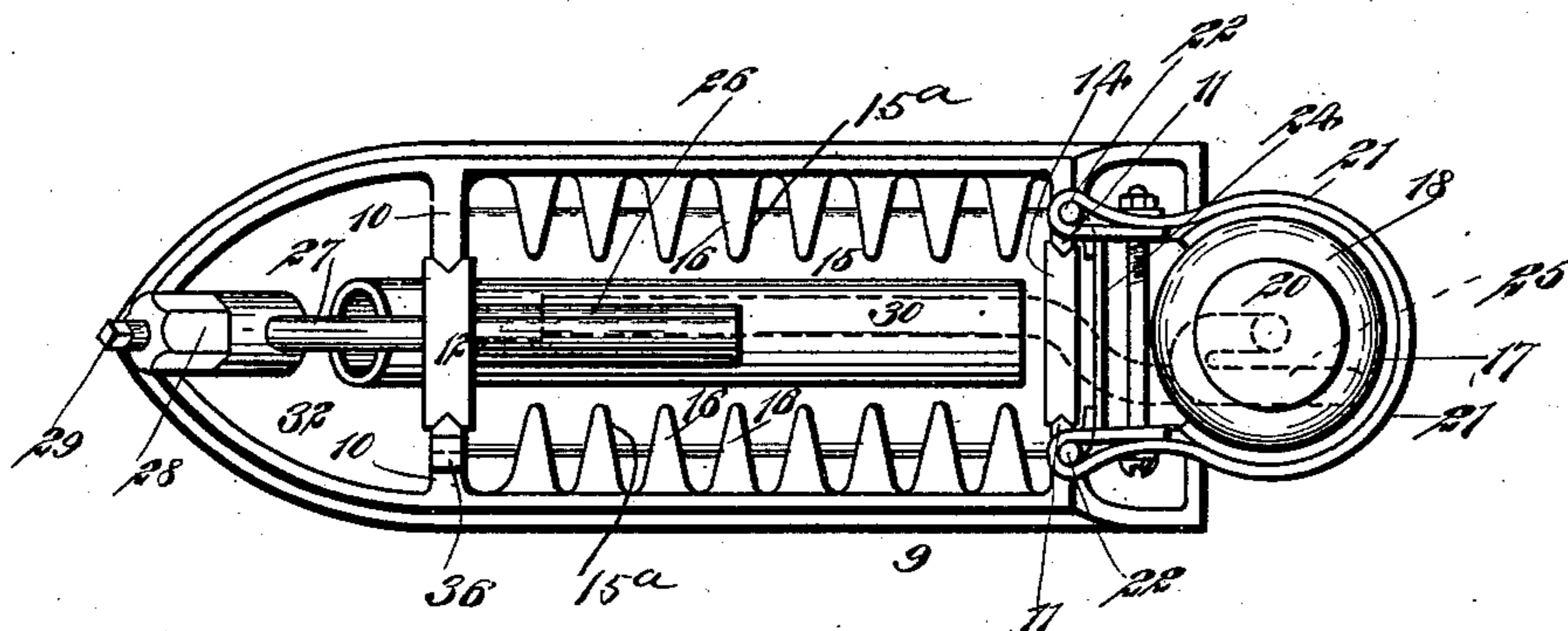
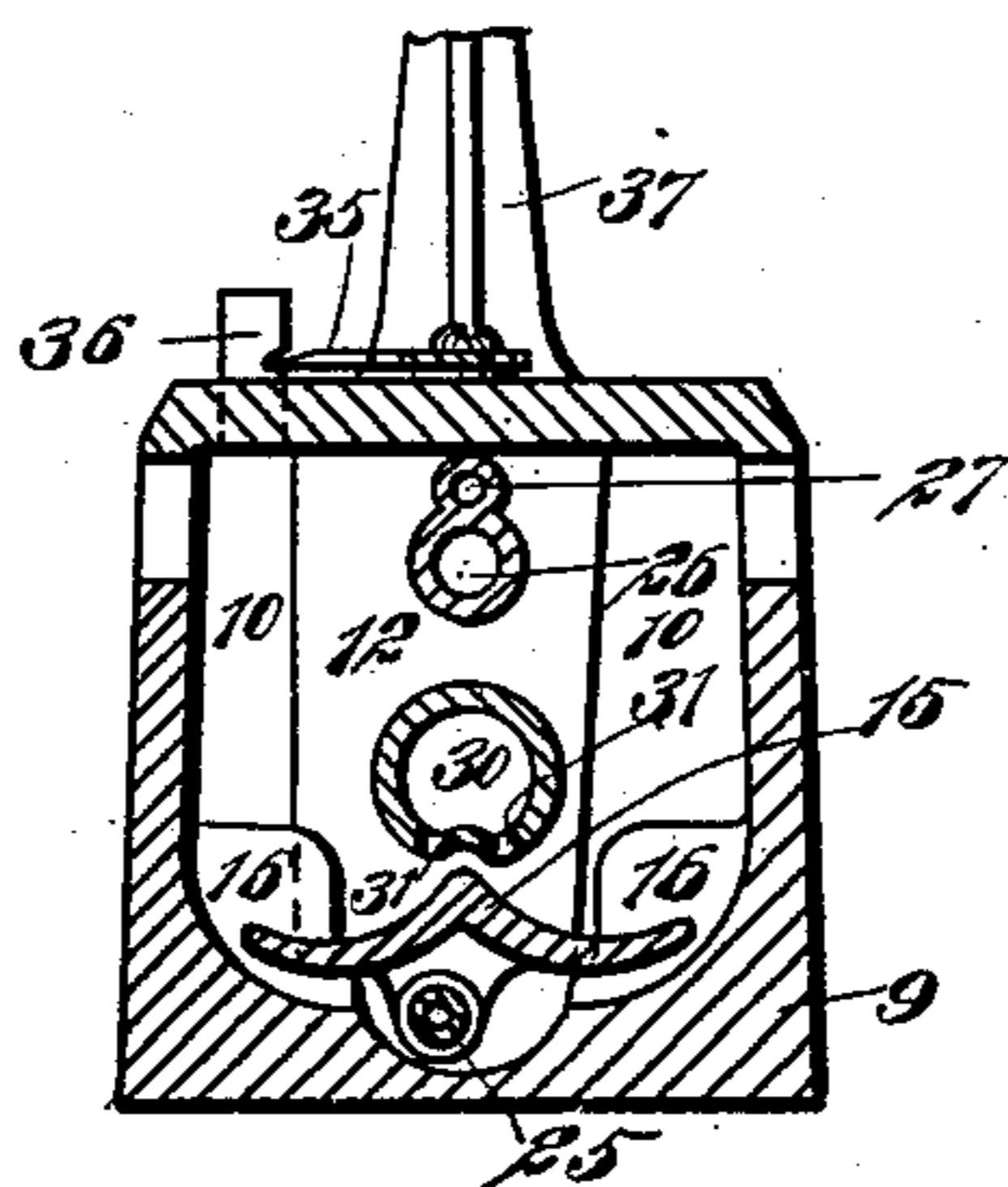


Fig. 3



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Fig. 4

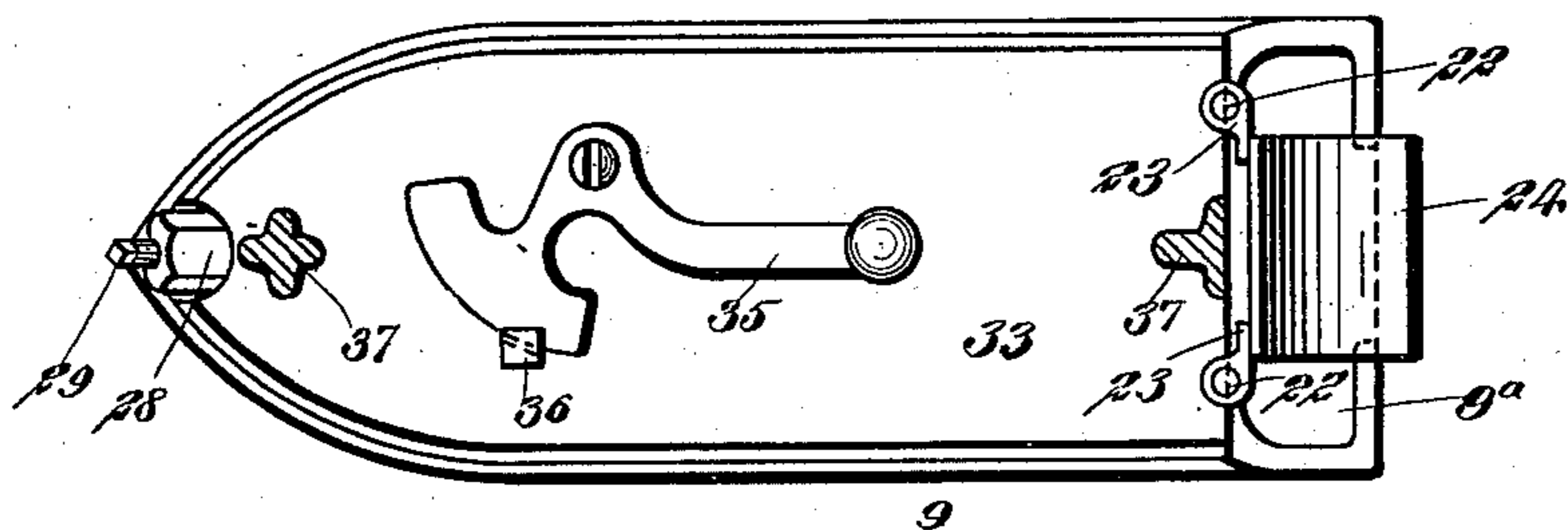


Fig. 5

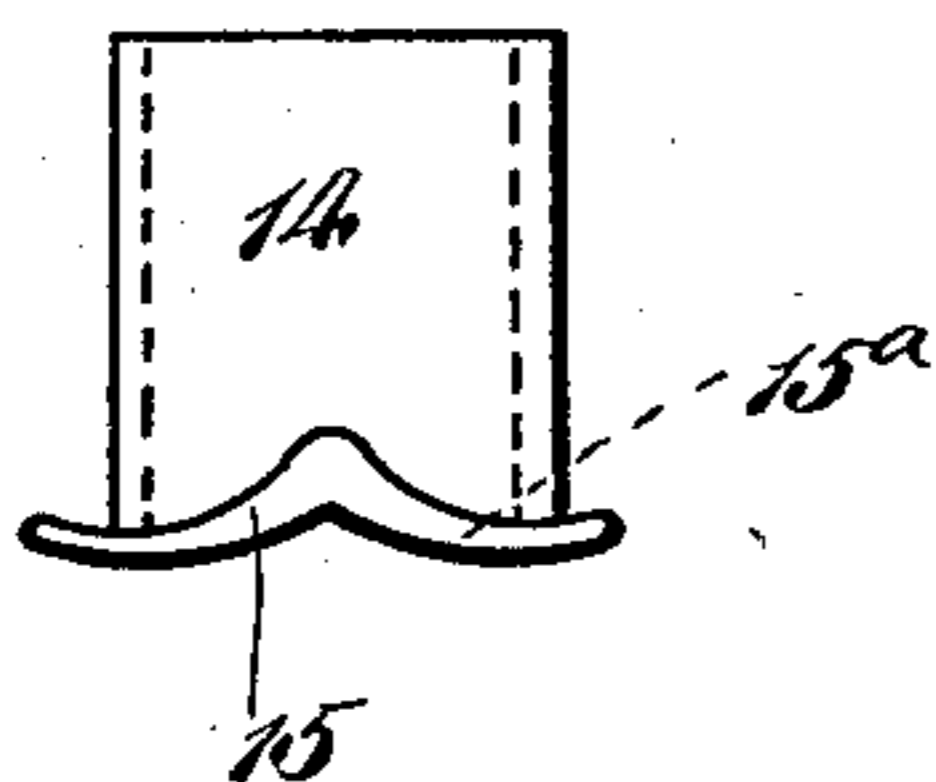


Fig. 6

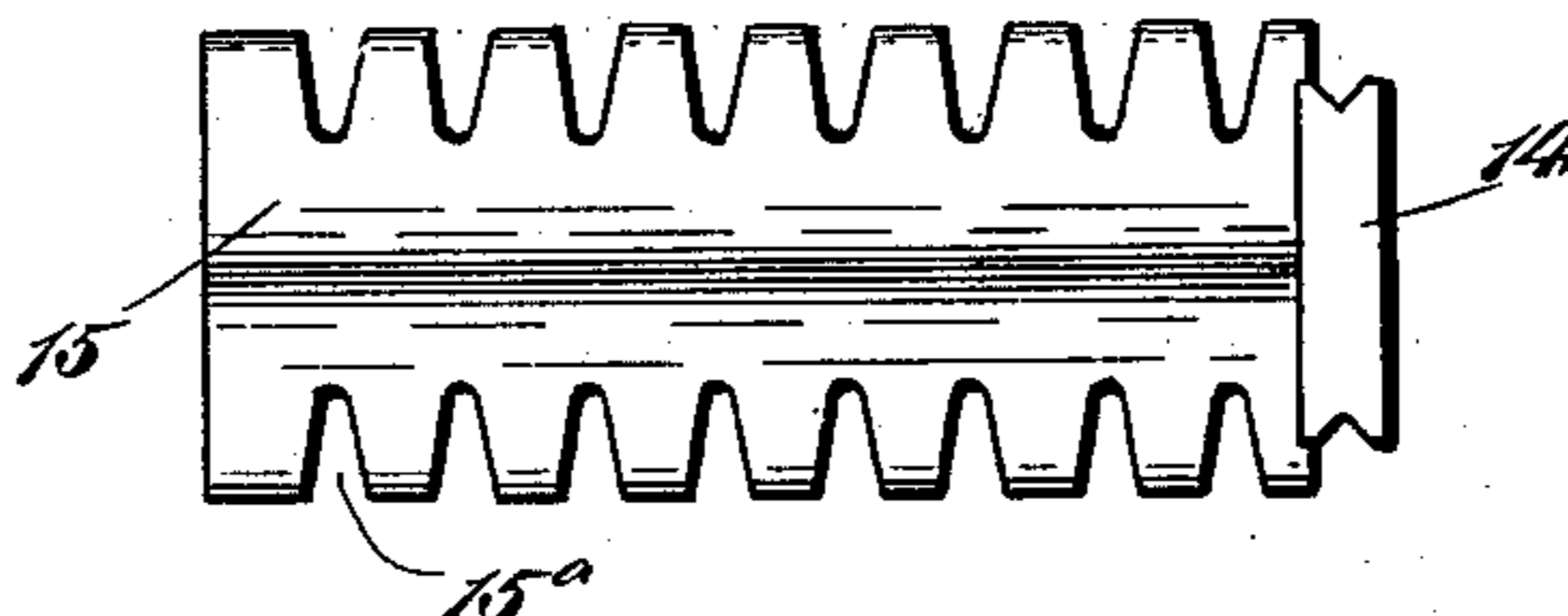


Fig. 8

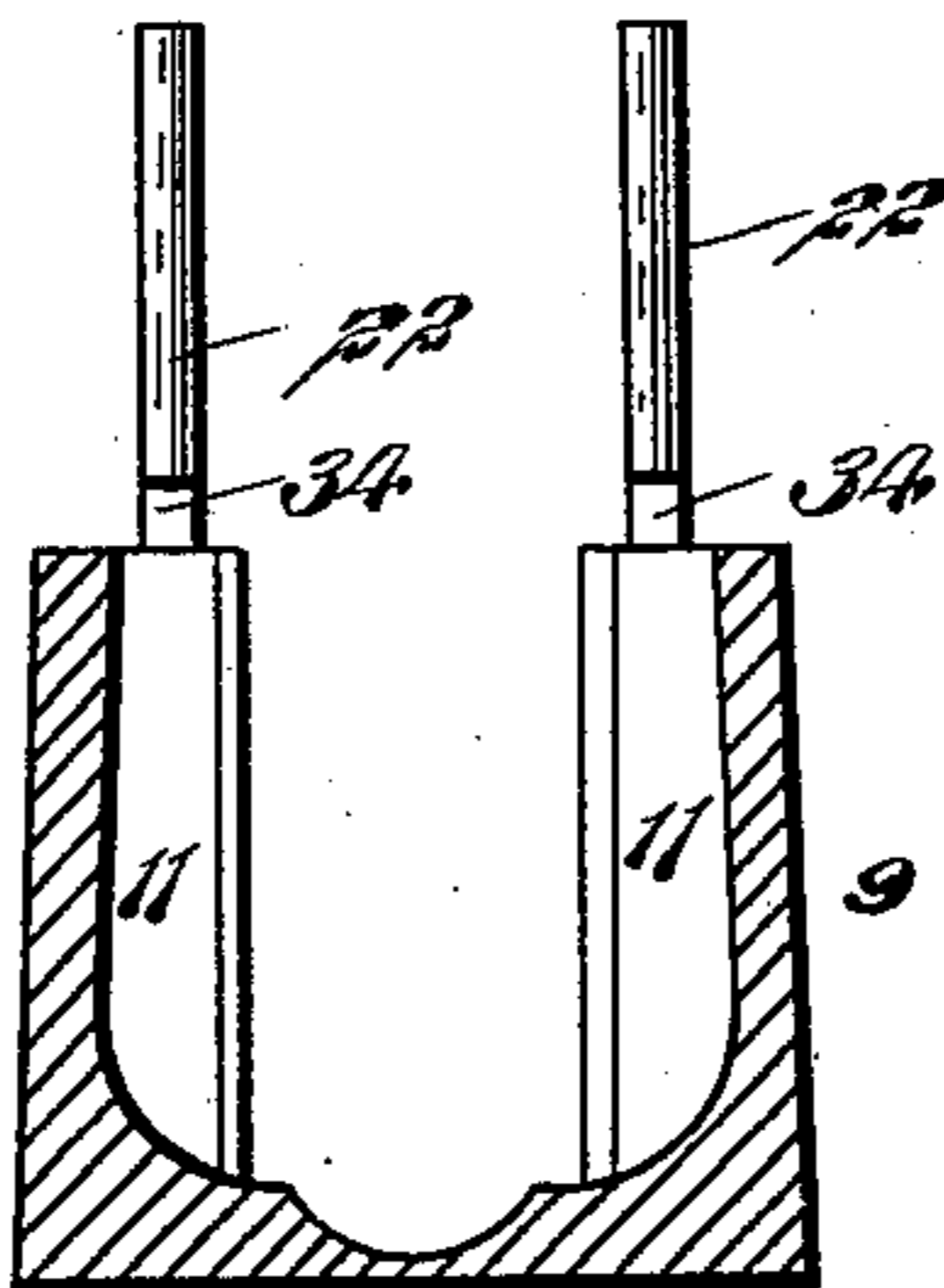
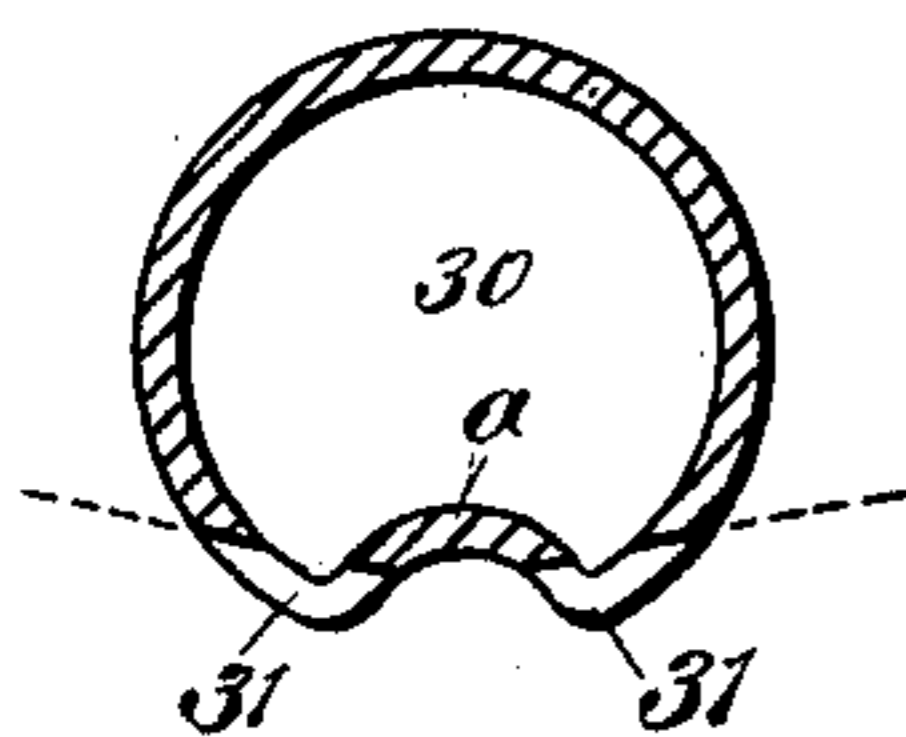


Fig. 7

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UNITED STATES PATENT OFFICE.

IVER WICKLAND, OF SOUTH SUPERIOR, WISCONSIN, ASSIGNOR TO CARL OSCAR CARLSON, OF SUPERIOR, WISCONSIN.

SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 661,095, dated November 6, 1900.

Application filed November 28, 1899. Serial No. 738,539. (No model.)

To all whom it may concern:

Be it known that I, IVER WICKLAND, a subject of the King of Sweden and Norway, and a resident of South Superior, in the county of Douglas and State of Wisconsin, have invented a new and Improved Sad-Iron, of which the following is a full, clear, and exact description.

This invention relates to a sad-iron heated by gas or vapor derived from oil in a tank or reservoir carried by the sad-iron.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal section of the invention. Fig. 2 is a plan view thereof with the top removed. Fig. 3 is a cross-section on the line 3 3 of Fig. 1. Fig. 4 is a longitudinal section of the invention with the reservoir removed. Fig. 5 is a front view of a shield employed. Fig. 6 is a plan view thereof. Fig. 7 is a section taken through the body of the iron, the removable parts not being shown, the section looking toward the rear of the sad-iron; and Fig. 8 is a detail sectional view showing the preferred manner of forming the burner-tube.

The body 9 of the sad-iron is of the usual exterior form and is provided interiorly, near its front end, with two walls 10, extending inwardly opposite each other and formed with double-beveled inner edges. The rear portion of the body has two similar walls 11 formed therein. Between the walls 10 a box 12 is slidably fitted, the box extending downward to the bottom of the body and upward to the top of the walls 10. Between the walls 11 a plate 14 is mounted to slide, the plate being similar to the box 12, except that the plate 14 is solid. To this plate 14 is rigidly attached a shield 15, which extends forward to the box 12 and is preferably of the cross-sectional form shown best in Figs. 3 and 5. The interior of the body 9 is constructed with a number of inwardly-projected webs

or ribs 16, and the side edges of the shield 15 are provided with notches 15^a, as best shown in Fig. 6, which notches receive the ribs or webs 16, the ribs having inclined edges bearing against the innermost walls of the notches 15^a, thus holding the plate 14 and shield 15 securely in position and also forming an air-space between the bottom of the body and the shield 15, such air-space having outlets at the side edges of the shield 15 between the ribs 16, permitting the air to enter beneath the plate 14 and pass forward under the shield 15 and upward at the sides thereof.

The oil-reservoir 17 is provided at its top with a cap or head 18, having a funnel 19 formed therein and integral therewith, the funnel extending downwardly into the reservoir and being provided with a screw-closure 20. By means of this funnel the reservoir may be readily filled with oil without the necessity of employing devices for guiding the oil into the reservoir, the funnel 19 serving this purpose. The reservoir is held in place by a strap 21, attached to rods 22, which are mounted rigidly on the walls 11 and extend upward, as shown. Also attached to the rods 22 are brackets 23, which support a shield-plate 24, the plate extending from below the reservoir upward along the front side thereof to protect the same against the heat of the burner, which will be hereinafter described.

The reservoir 17 has a pipe 25 communicating with its bottom, and this pipe passes over the heel 9^a of the body 9 of the sad-iron and into such body beneath the shield 15. The pipe 25 extends forward to the box 12 and communicates with the interior thereof, thus conducting the oil to the box. This box in turn communicates with a retort 26, in which the oil is received for the generation of the gas, and from the retort 26 a tube leads, the tube communicating with the retort and passing forwardly to a valve-casing 28, in which is arranged to work a needle-valve 29. The valve-casing 28 discharges the vapor into a burner-tube 30, which is secured rigidly in the box 12, the tube passing through the box, but being out of communication with the interior thereof. This burner-tube ex-

tends rearwardly over the top of the shield 15 and has its rear end closed. Two rows of orifices 31 are formed in the bottom of the burner-tube 30, permitting the gas to be ejected downward on each side of the shield 15, at which point the gas is consumed, thus heating the shield and all of the surrounding parts, including the body 9 of the sad-iron. A preferred manner of constructing the tube 30 is shown in Fig. 8, and this consists, first, in forming a groove *a*, which extends longitudinally throughout the length of the tube at points over the shield 15. The tube 30 is formed with a number of slits which constitute the openings 31 before described, these slits extending transversely and being arranged in two rows, one on each side of the groove *a*. This is most effectively done by means of a saw, as indicated by the dotted lines in Fig. 8. By such construction a thoroughly effective burner-tube is provided, and at the same time this tube may be constructed very cheaply.

In front of the box 12 a space 32 is provided, which constitutes an oil-cup, in which oil may be placed when the burner is to be started. This oil when ignited will heat the retort and the adjacent parts sufficiently to generate vapor therein, and then by opening the needle-valve 29 this vapor may be mixed with air and simultaneously ejected into the burner-tube 30. From here the vapor is thrown out through the openings 31, and if ignited it will burn in the manner described.

The top 33 of the sad-iron has its rear edge adapted to removably engage in notches 34, formed in the rods 22, (see Fig. 7,) and the front portion of the top 33 is provided with a latch 35, pivoted thereon on a vertical pivot and adapted to engage in a recess formed in a stud 36, which is attached to one of the walls 10. (See Figs. 3 and 4.) Standards 37 are attached to the top 33 and carry a handle 38, by which the iron may be manipulated.

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

1. A sad-iron, having a body, a box mounted vertically therein and forming an oil-cup in front thereof, a reservoir having communication with the box, a retort communicating with the box, a tube communicating with the retort, a valve controlling the outlet from the retort, the said tube being extended forward over the oil-cup, and a burner in which said valve discharges.

2. A sad-iron, having a body, a box fitted vertically therein and forming an oil-cup in the front thereof, a burner extended through the box and having openings therein rearward of the box, a retort communicating with the box, a tube passing from the retort forwardly over the oil-cup, and a valve controlling the outlet from the second-named tube and discharging into the burner.

3. A sad-iron, having a body, a reservoir

sustained thereon, a shield mounted in the body near the bottom thereof, a tube passing from the reservoir beneath the shield, a box mounted in the body and communicating with the tube, the box being situated forward of the shield and forming an oil-cup in the forward part of the body, a burner-tube mounted in the box and extending over the shield, a retort communicating with the box, a tube leading from the retort forwardly over the oil-cup, and a valve controlling the outlet of the tube and discharging into the burner-tube.

4. A sad-iron comprising a body, a plate fitted to slide therein at the rear thereof and disposed vertically, a shield attached to the plate and extending forward over the bottom of the body, a box mounted vertically in the front portion of the body and forming an oil-cup forward thereof, a burner-tube mounted in the box and extending rearwardly over the shield, the burner-tube extending forward of the box, an oil-supply tube passing into the body beneath the shield and communicating with the box, a retort communicating with the box, and a valve controlling the outflow from the retort, such valve discharging into the open front end of the burner-tube.

5. A sad-iron, having a body with internal lugs or webs projecting from the side walls thereof, a shield with notched side edges receiving the lugs or webs, spaces being left between the side edges of the shield and the side walls of the body, an oil-supply pipe passing into the body beneath the shield, and burner devices located in the body above the shield.

6. In a sad-iron, the combination with a body and vapor generating and burning devices, of a plate slidably fitted in the body and disposed vertically, and a shield attached to and supported by the plate, the shield extending horizontally beneath the burner devices.

7. A sad-iron, having a body, a shield to be mounted therein in proximity with the bottom thereof, an oil-supply tube passed over the bottom beneath the shield, a burner located above the shield, and a retort in communication with the oil-supply tube and discharging to the burner.

8. A sad-iron, having a body, a shield fitted therein and extending horizontally in proximity with the bottom of the body, an oil-supply tube extending under the shield, and vapor generating and burning devices communicating with the supply-tube and situate over the shield.

9. A sad-iron, having a body formed with vertical guides thereon, a plate slidably fitted in the guides, a shield carried horizontally by the plate in proximity to the bottom of the body, a supply-tube passed beneath the shield, and vapor generating and burning devices communicating with the supply-tube and situate above the shield.

10. A sad-iron, having a body, a box fitted
in the front portion thereof and forming an
oil-cup in front of the box, the box being in
communication with the oil-supply, a retort
5 communicating with the box, and a burner
situate rearward of the box.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

IVER WICKLAND.

Witnesses:

BEN SWANLUND,

ANTHON ANDERSON.