

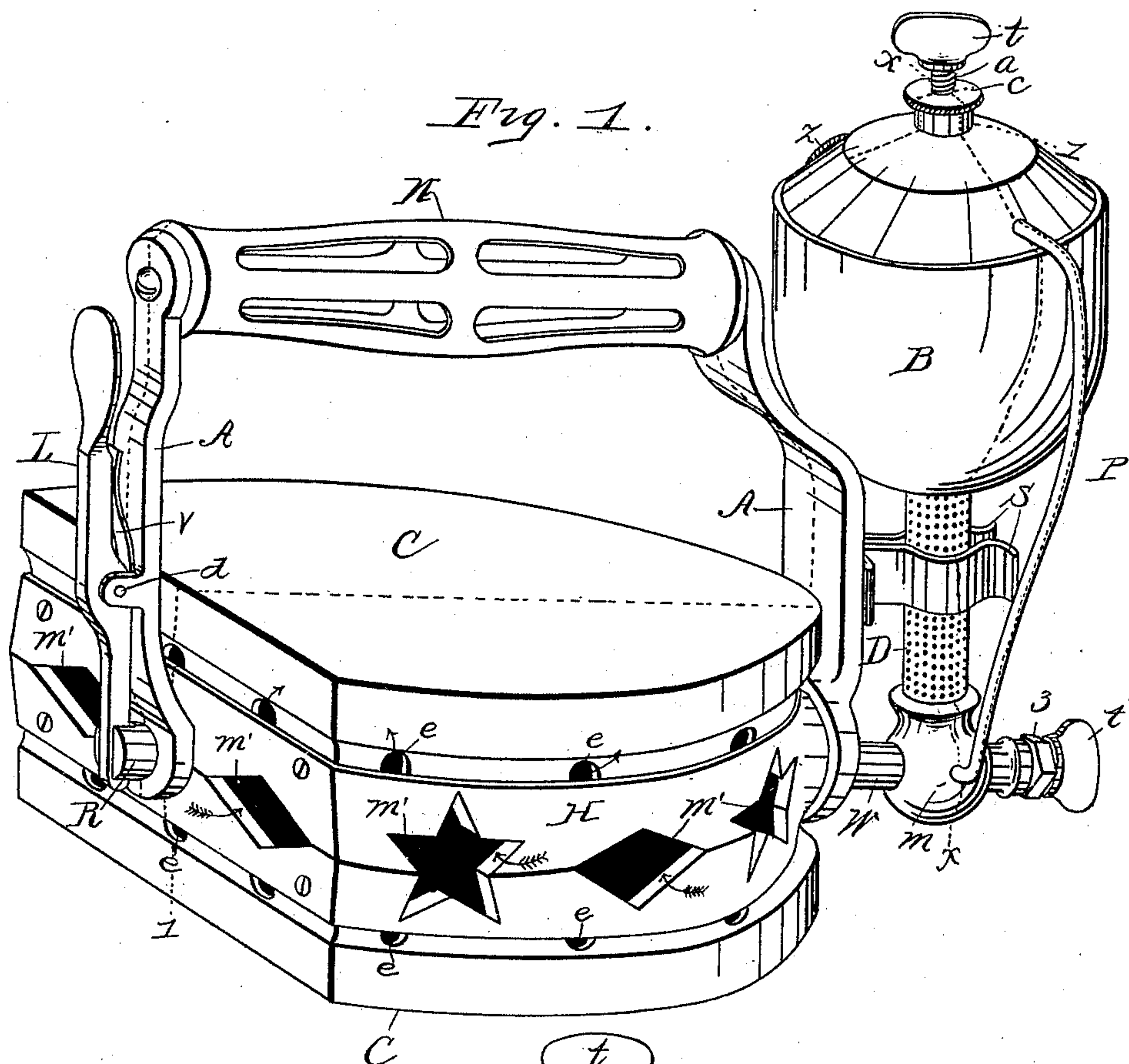
(No Model.)

T. H. PATTERSON.  
SAD IRON.

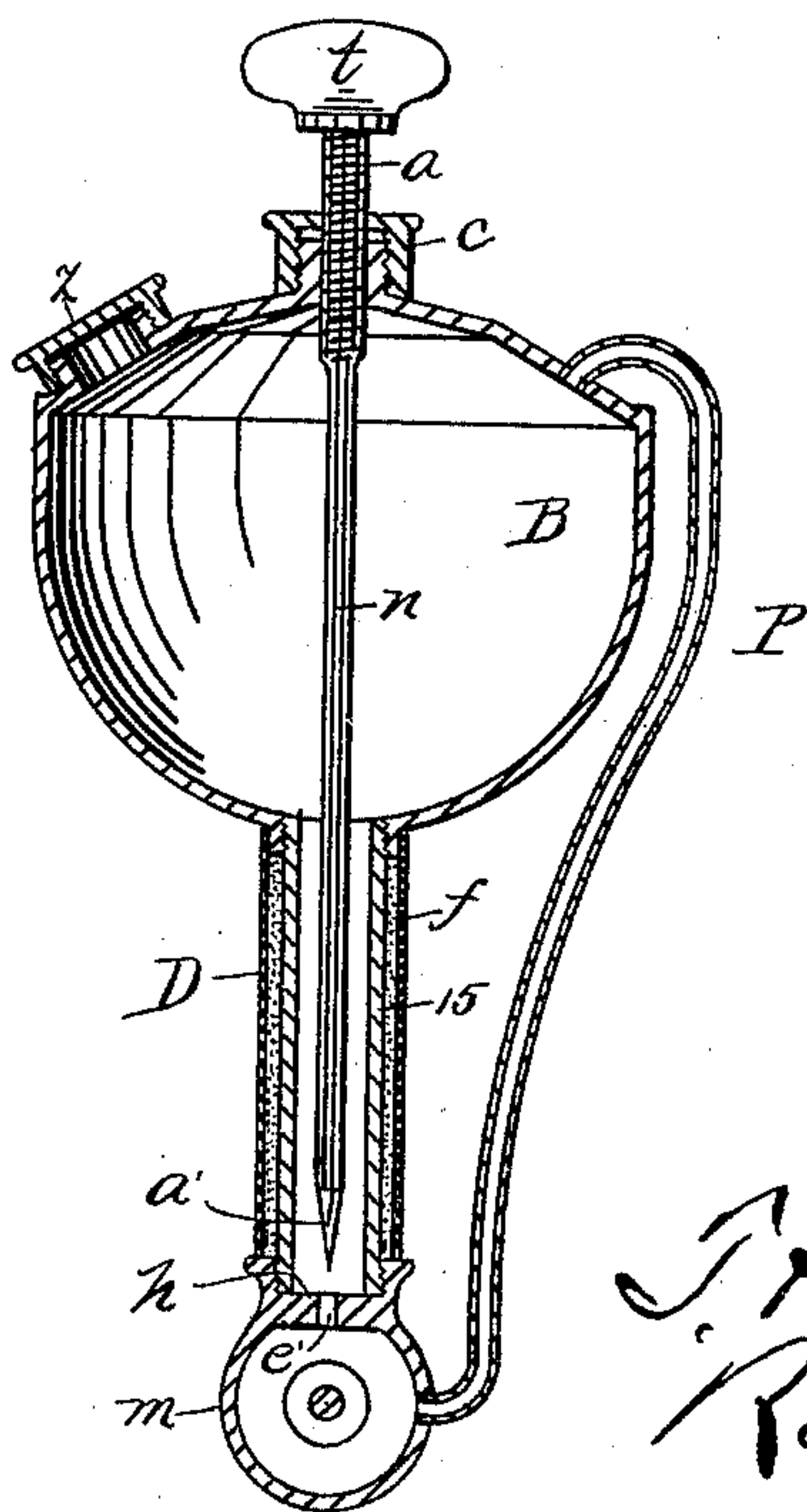
2 Sheets—Sheet 1.

No. 383,319.

Patented May 22, 1888.



*Fig. 2.*



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(No Model.)

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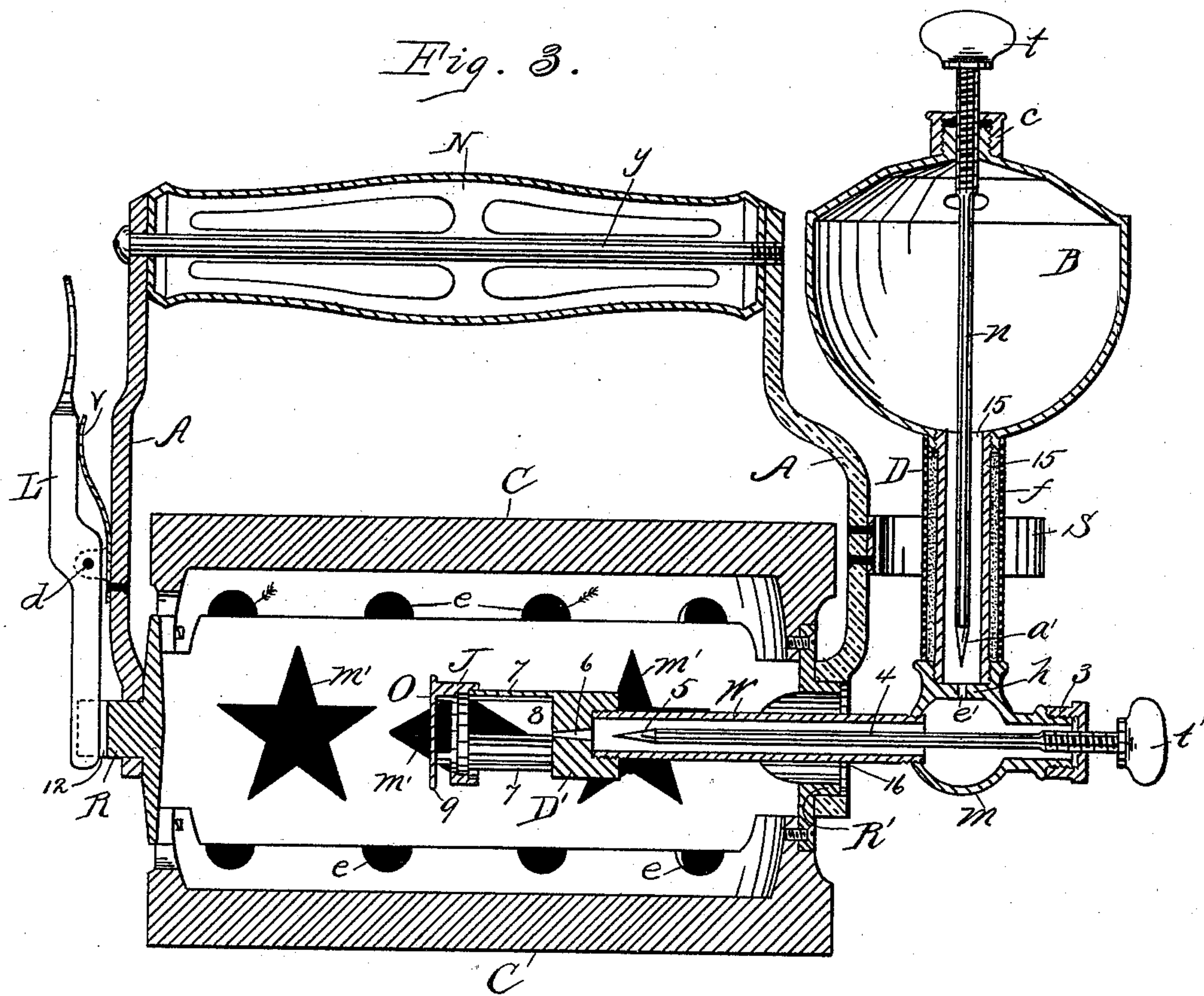


Fig. 3.

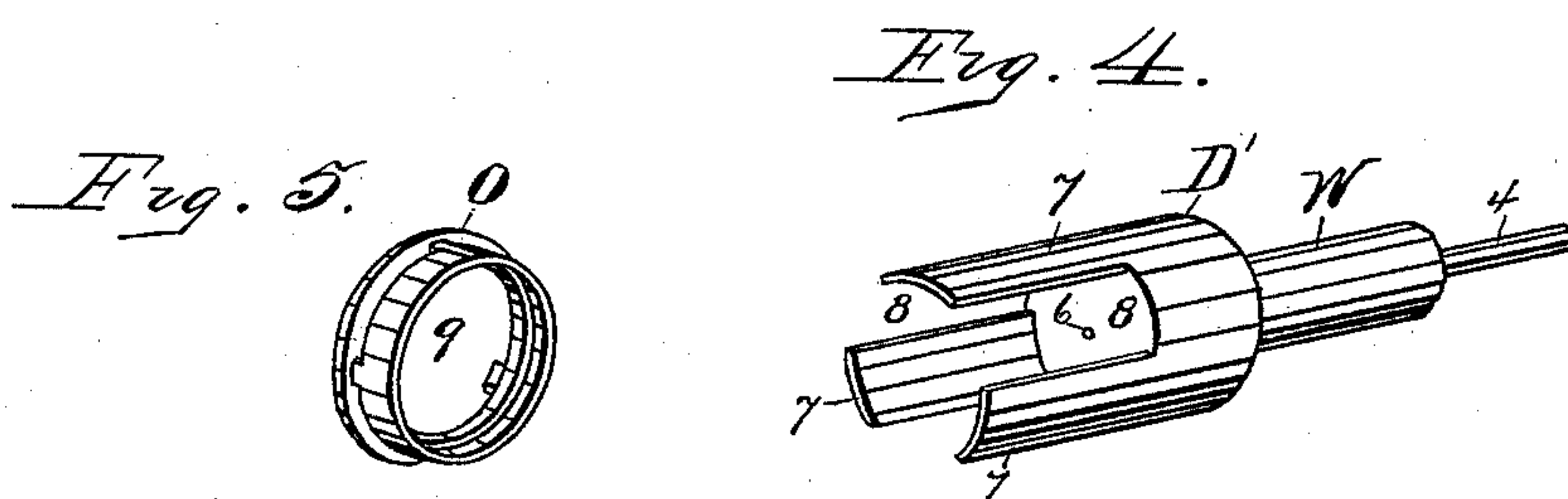


Fig. 4.

Fig. 5.

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# UNITED STATES PATENT OFFICE.

THOMAS H. PATTERSON, OF EAST SAGINAW, MICHIGAN.

## SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 383,319, dated May 22, 1888.

Application filed June 29, 1887. Serial No. 242,852. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS H. PATTERSON, a citizen of the United States, residing at East Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Sad-Irons; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of sad-irons known as "double-faced" or "revolving" irons. The face of the idle side of the iron is heated by the flames from a burner which is fed from a vessel containing fluid or oil, and is revolved or turned under as a hot ironing-surface is required, as is the common practice.

The special features of this invention consist in the peculiar construction of the reservoir, the manner of attaching it to the iron, and the special devices for controlling the flow of the fluid.

In the accompanying drawings, forming a part of the specification, Figure 1 is a perspective of my improved device. Fig. 2 is a vertical central section of the vessel and joining parts, taken on the dotted line *xx* of Fig. 1. Fig. 3 is a longitudinal section of Fig. 1, taken on the dotted line *ll*. Figs. 4 and 5 are enlarged details, as will be hereinafter set forth.

In the drawings, F represents the sad-iron, having the ironing-faces or surface-plates C C, the edges of which are provided with a series of vent-holes, *e*, or hot-air passages.

The central or body iron, H, is provided with a series of inducts or air-feeding holes, *m'*. Through said holes the air enters in feeding the flames of the burner J, located in the hollow of the central iron, H. (See Fig. 3.) The central iron is provided with journals R R' at the ends. Said journals turn in the lower ends of the handle-arms A A. The upper ends of said arms are attached to the hollow handle N by means of the rod or bolt *y*. (See Figs. 1 and 3.)

L is a lever which is pivoted to the lugs *d* on one of the arms A, having on its back face a

spring, V, whereby the lower end of the lever is forced into the slotted journal R, as shown in Fig. 1. Pressing said lever L toward the arm A causes the lower end of said lever to draw out of the channel 12 of the journal R, when the iron F may be turned or revolved and locked in position by the lever L, as shown in Figs. 1 and 3.

The burner consists of the head D', having the central conical discharge-port, and series of projecting blades 7, having spaces 8 between them, and cap O, having the closed head 9, which is made to snugly slide over the blades 7, as shown in Fig. 3.

W is a feed-pipe screw-threaded to the head D', and passes freely through the hollow journal R' at 16. (See Fig. 3.) Attached to the other end of the pipe W is a three-way coupling-head, *m*, having the cap or stuffing-box 3, to which is screw-threaded the rod 4, having the thumb-button *t'*. The opposite end of said rod is pointed or conical, as shown at 5. (See Fig. 3.) By turning the thumb-button *t'* the conical end of the rod 4 is projected into and drawn from the conical port 6, to increase and decrease the flow of fluid into the burner. The coupling-head *m* is provided with a diaphragm, *h*, having a discharge-port, *e'*.

B is the vessel or tank for the fluid, and has a hollow standard, 15, coupled to the head *m*, forming a passage for the fluid to the head *m*.

*f* is a non-conducting substance (preferably asbestos) which encircles the standard 15, and D is a perforated jacket or gauze-wire covering surrounding the asbestos, as clearly shown in Figs. 2 and 3.

Passing through the vessel B and screw-threaded to the cap C thereof is a rod, *n*, having at one end the thumb-button *t*; at the other end the conical point *a'*. Said point is projected into and drawn from the discharge-port *e'*, for the purpose of regulating and to cut off the flow of oil into the coupling-head *m*.

SS represent curved springs, which are made fast to one of the arms A and so shaped as to receive and firmly grasp the covered standard 15, holding the vessel B in an upright position, thereby securing the vessel and its burner in position on the iron.

P is a relief-pipe, one end of which has communication with the coupling-head, the other



with the vessel B, as clearly shown in Figs. 1 and 2.

5 Z is a filling-cap located in the top of the vessel. By its removal the vessel may be charged with oil or fluid, and when the iron is in use said cap must be kept closed tight to prevent the escape of the fluid at said point.

10 The operations are as follows: To allow the fluid to pass from the vessel B into the coupling-head *m*, the thumb-button *t* is turned so as to draw the point *a'* of the rod *n* out of the port *e'* of the diaphragm *h*. Then, to start the flow of fluid into the burner J, the thumb-button *t'* is turned, drawing the conical point 5 of the rod 4 from the conical discharge 6 in the head D', the discharge being cut off by turning the thumb-button *t'* in a reverse direction. The heat from the burner and from the iron surrounding the inflow-pipe W causes said pipe to become sufficiently hot to generate gas therein more rapidly than it can escape into the burner. As a relief for said gas the pipe P is coupled to the head *m*, leading into the top of the vessel B. Through said pipe the surplus gas escapes into the vessel, being therein retained, and preventing explosion of the generating-

pipe W, and allowing a free inflow of oil to said pipe.

The object of the metal jacket D and non-conducting covering *f* around the pipe 15 is to prevent the heating of said pipe from the iron, thus keeping the fluid in said pipe cool. The metal jacket D forms a strong and durable cylinder, to be forced between the supporting-springs S, whereby the vessel is held in position.

35 Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination with the said iron, the burner, the vessel, the coupling-head, the pipes joining said parts, the rod 4, having the thumb-button *t'*, the rod *n*, adapted to close the port *e'*, the non-conducting material surrounding the pipe 15, with perforated metal jacket D, and springs S, mounted on the arm A of the handle, as and for the purposes specified.

45 In testimony whereof I affix my signature in presence of two witnesses.

THOMAS H. PATTERSON.

Witnesses:

M. V. MEREDITH,  
CHAS. LEESCHE.