

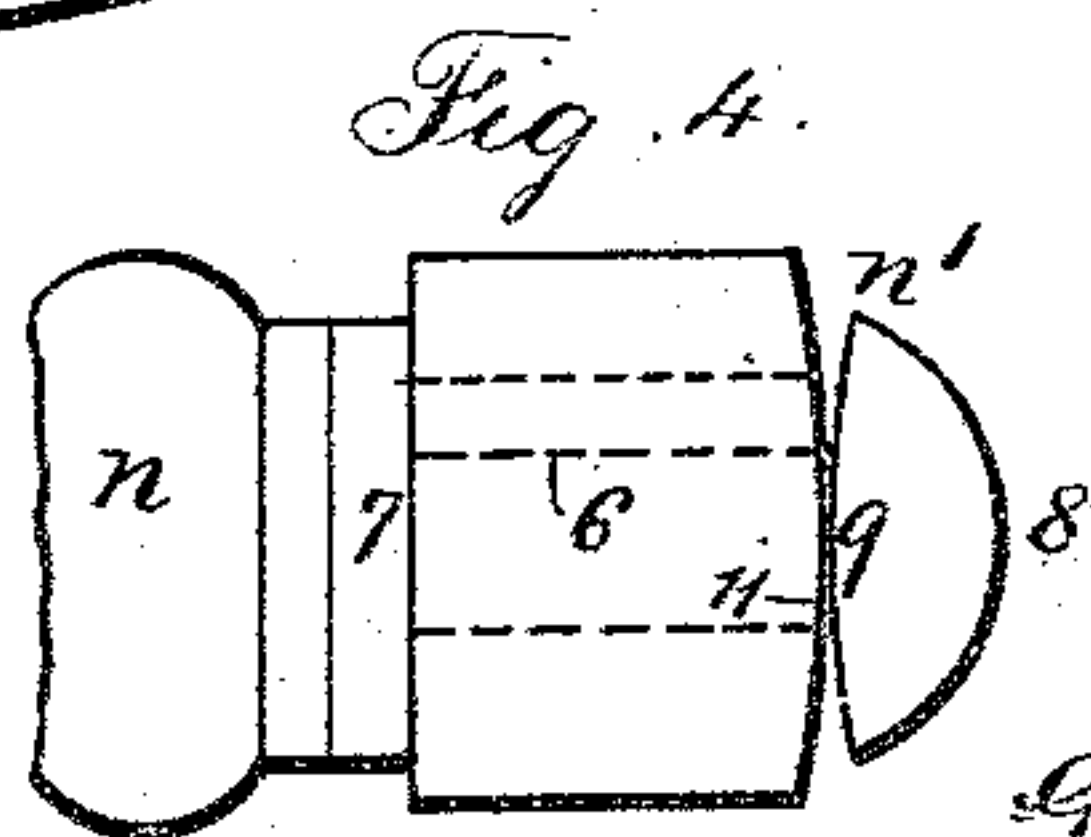
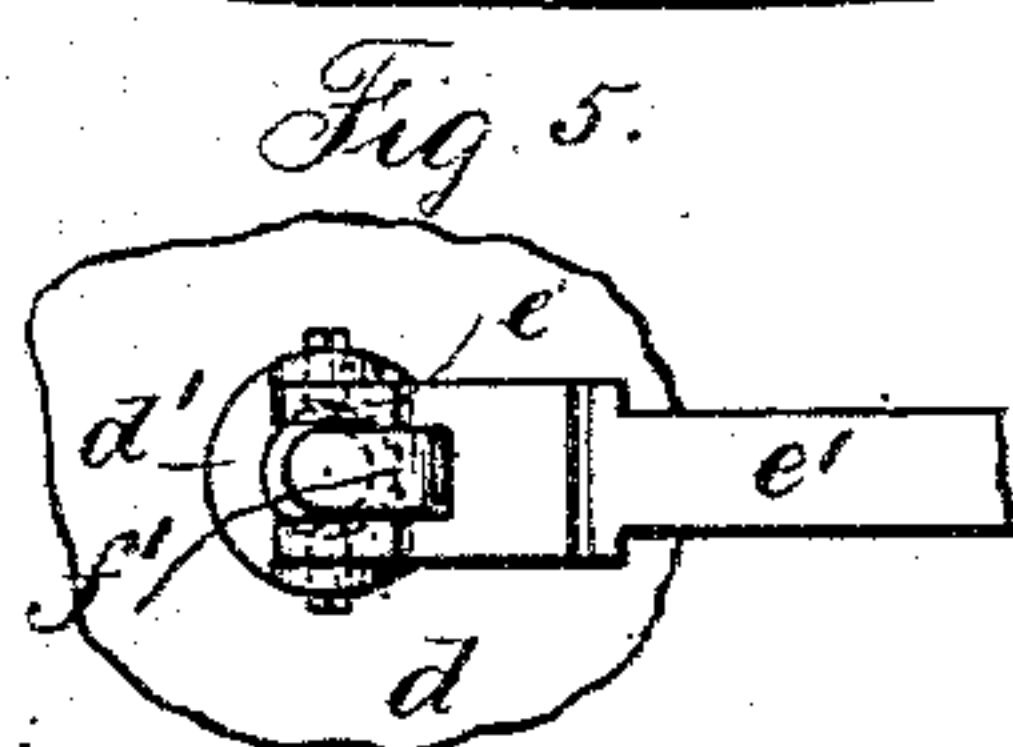
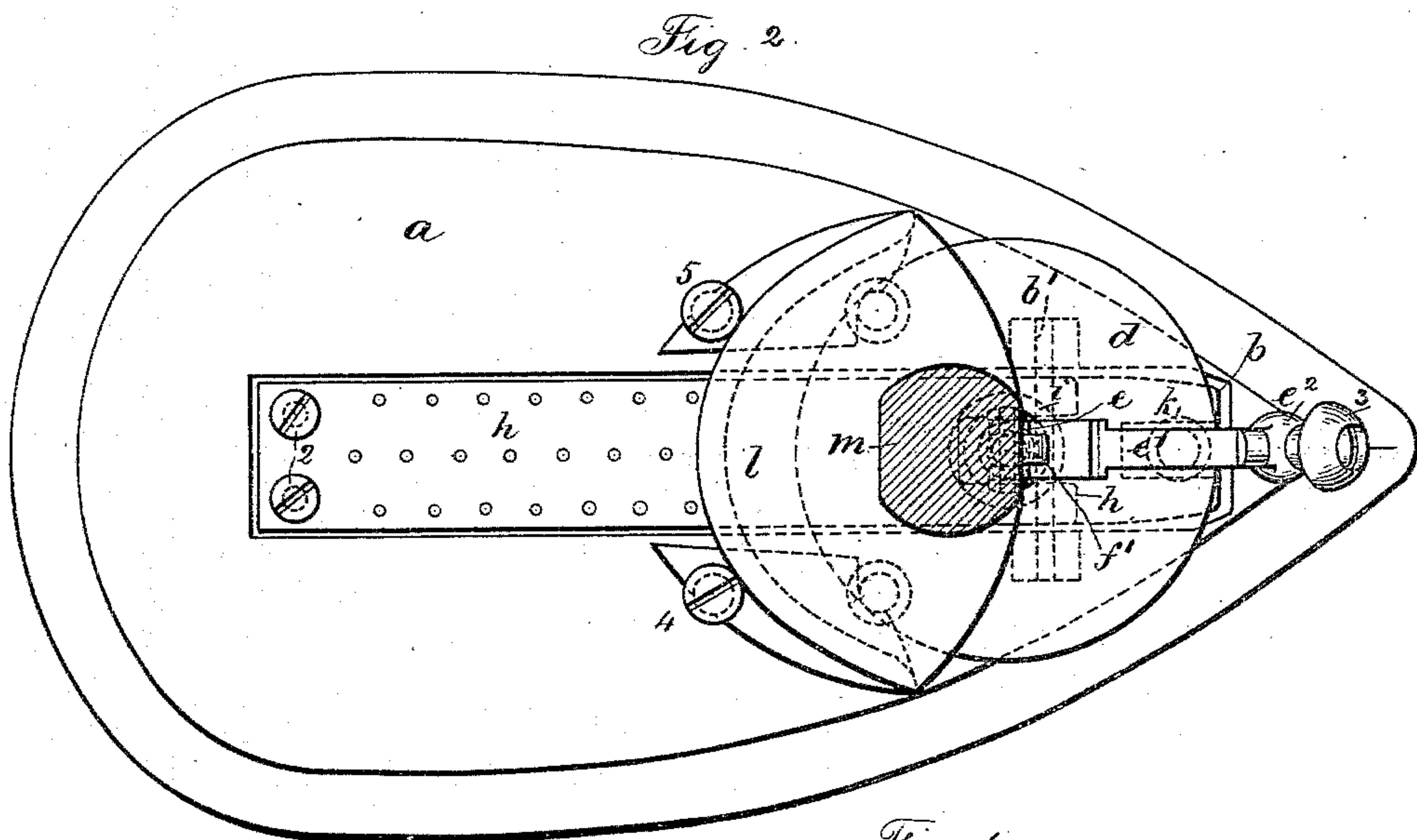
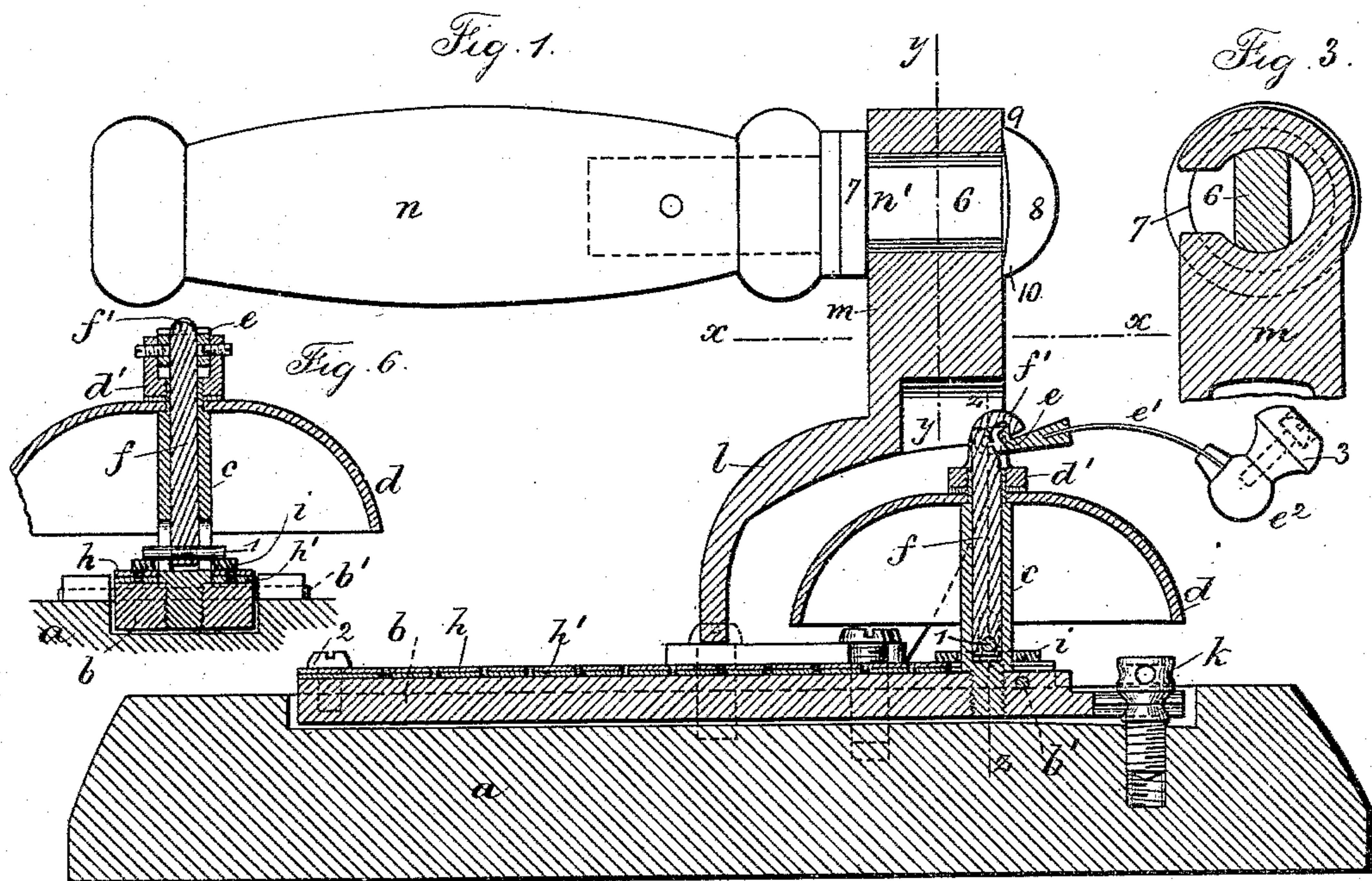
(No Model.)

G. J. & J. P. MURDOCK.

SAD IRON.

No. 356,881.

Patented Feb. 1, 1887.



Witnesses:
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Chas. H. Smith

Inventors:
George J. Murdock
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UNITED STATES PATENT OFFICE.

GEORGE J. MURDOCK AND JEANNETTE P. MURDOCK, OF NEW YORK, N. Y.

SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 356,881, dated February 1, 1887.

Application filed August 6, 1886. Serial No. 210,179. (No model.)

To all whom it may concern:

Be it known that we, GEORGE J. MURDOCK and JEANNETTE P. MURDOCK, of the city, county, and State of New York, have invented a new and useful Improvement in Sad-Irons; and the following is declared to be a specification of the same.

The object of our invention is to indicate by the automatic ringing of a bell when the iron in the process of heating has arrived at the proper temperature for efficient and successful use.

Our invention consists in the combination, with a sad-iron, of a gong to be operated by a trip-lever and clapper, said lever being supported in an elevated position by a catch upon the end of a sliding rod, and said sliding rod being raised to liberate the trip-lever by the unequal expansion of a thermostat having companion plates of steel and brass or other dissimilar metals. We also provide means, as hereinafter described, for regulating the degree of heat required to expand the said companion plates and sound the alarm, and also means for connecting and disconnecting the alarm and for clamping the handle to the iron.

In the drawings, Figure 1 is a vertical section longitudinally of the iron. Fig. 2 is a plan of the iron below the line $x x$. Fig. 3 is a cross section of the handle and support upon the line $y y$. Fig. 4 is a plan of the end of the handle and support. Fig. 5 is a plan of the trip-lever and trip-rod, and Fig. 6 is a vertical cross section at the line $z z$ of Fig. 1.

The iron a is of any desired form or size, and the same is made with a longitudinal depression, in which the bar b is received and pivoted by the pin b' in lugs formed with the body of the iron. The bar b carries the tubular standard c , upon the upper end of which the gong d is supported and secured by a nut, d' , which nut is formed with lugs, to which are pivoted the catch e , lever-arm e' , and clapper e'' . The sliding rod f moves freely within the tubular standard c , and its upper end is made with a catch, f' , and through the lower end of said rod f a pin, 1, passes, the said pin extending outside the standard c through slots formed in opposite sides of the said standard.

When the clapper e'' is raised, the catch e engages the catch f' , and the clapper is held up

in the position shown in Fig. 1, ready to be dropped to give the alarm.

The metal plates h , of steel, and h' , of brass, or other dissimilar metals, are riveted together and secured by screws 2 to one end of the bar b , the other end being forked and passing at each side of the standard c , and there is a metal washer, i , around the standard c and between the plate h and pin 1.

The action of the parts is as follows: The bar b is tilted upon the pivot b' by moving the screw k so that the main portion of its under surface is brought either nearer to or farther from the top surface of the iron, according to the degree of heat it is wished that the iron should attain before the alarm is sounded. During the heating of the iron the brass plate h' expands more than the steel plate h , to which it is riveted. Consequently the free end of said plates (which is around the standard c) is raised, and with it the washer i , rod f , and its hook f' , and the hook e , thus liberated, allows the arm e' and clapper e'' to fall and sound the alarm. The wooden knob 3 acts as a non-conductor of heat, and will not burn the fingers when grasped and raised to reset the alarm. When the temperature of the iron is reduced, the thermostatic plates allow the rod f to descend sufficiently for the latch to hold the hammer when raised.

The concave shell l and standard m serve as a support for the handle n . The shell l is shown as secured to the iron a by screws 4 5; but we may prefer to cast the same in one with the iron.

The handle n we prefer to make of wood, with a metal end, n' , which end is formed with a central flat bar, 6, of sectional shape, (shown in Fig. 3,) and with a collar at 7 and round outer end, 8. The outer end, 8, is curved convexly on its inner surface on opposite sides, 9 10, and there is a convex surface to the standard at 11.

The standard m is slotted at the sides slightly wider than the narrowest width of the bar 6, and it is bored out of a diameter equal to the greatest width of the bar 6, so that the handle can be removed after a quarter-turn has been imparted to it, and said handle is clamped when in place by the clamping action of the convex surfaces 9 and 11, drawing the shoul-

der 7 tightly against the standard when the handle is partially rotated.

We claim as our invention—

1. The combination, with the iron *a*, of the
5 pivoted bar *b* and screw *k*, the plates *h h'*,
standard *c*, gong *d*, sliding rod *f*, pin 1, and
catch *f'*, the catch *e*, arm *e'*, and clapper *e''*,
substantially as specified.

2. The combination, with the sad-iron *a*, of
10 a pivoted bar capable of adjustment in rela-
tion to the iron, plates of dissimilar metal riv-
eted together and connected to said bar, a
gong and clapper, and means, substantially as
specified, for connecting the plates and clap-
15 per, whereby the unequal expansion of the
plates will operate the clapper and sound the
alarm, substantially as specified.

3. The combination, with the iron *a*, shell *l*,
and standard *m*, having a convex portion, 11,
20 of the handle *n* and end *n'*, having a bar, 6,

shoulder 7, end 8, and convex portions 9 and
10, substantially as specified.

4. The combination, with the iron *a*, shell *l*,
standard *m*, handle *n*, and end *n'*, of the bar *b*,
plates *h h'*, standard *c*, gong *d*, rod *f*, catches 25
f' e, arm *e'*, clapper *e''*, and adjusting-screw *k*,
substantially as specified.

5. The combination, with a sad-iron and
its handle, of an alarm-bell, a hammer for the
same, a latch to hold the hammer, and a thermo- 30
stat to liberate the hammer and give the alarm,
substantially as specified.

Signed by us this 2d day of August, A. D.
1886.

GEO. J. MURDOCK.
JEANNETTE P. MURDOCK.

Witnesses:

FRED. J. BEALE,
WM. B. KRUG.