

No. 660,055.

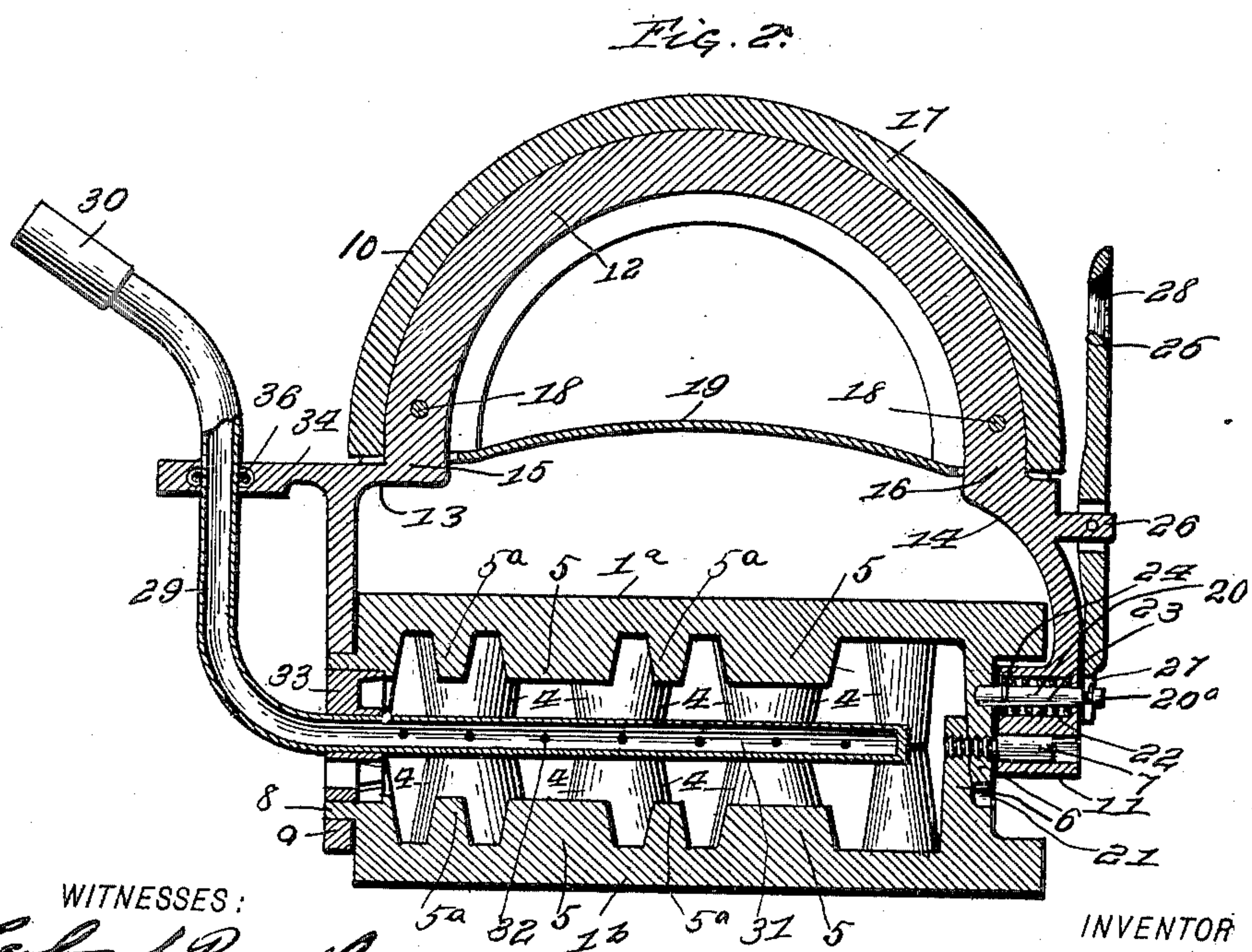
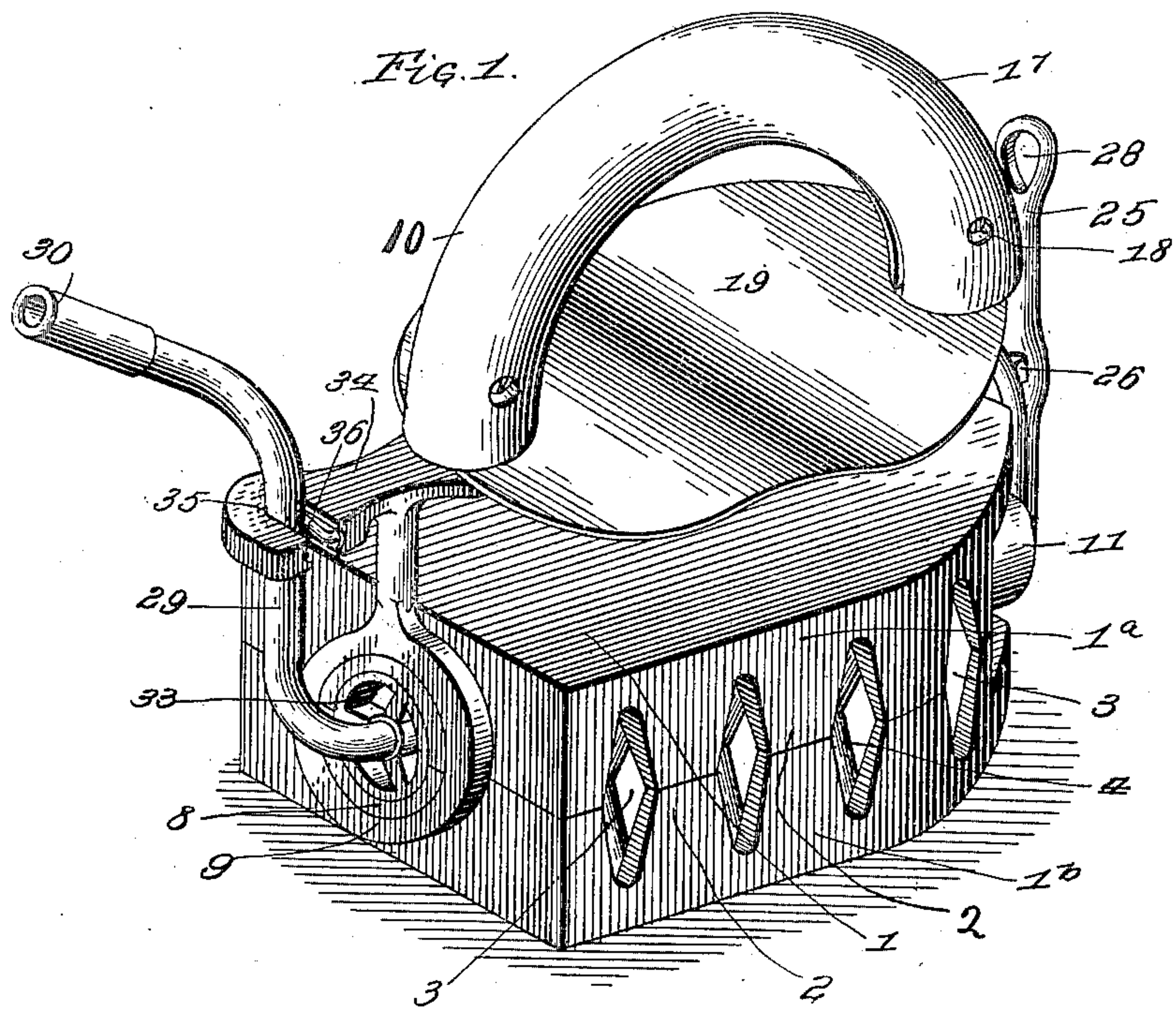
Patented Oct. 16, 1900.

T. C. EDWARDS.
SAD IRON.

(Application filed Aug. 25, 1898.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

Herbert Bradley
Anna E. Lamb

INVENTOR

Thomas Cross Edwards

BY

Knight Bros
ATTORNEYS.

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Fig. 3.

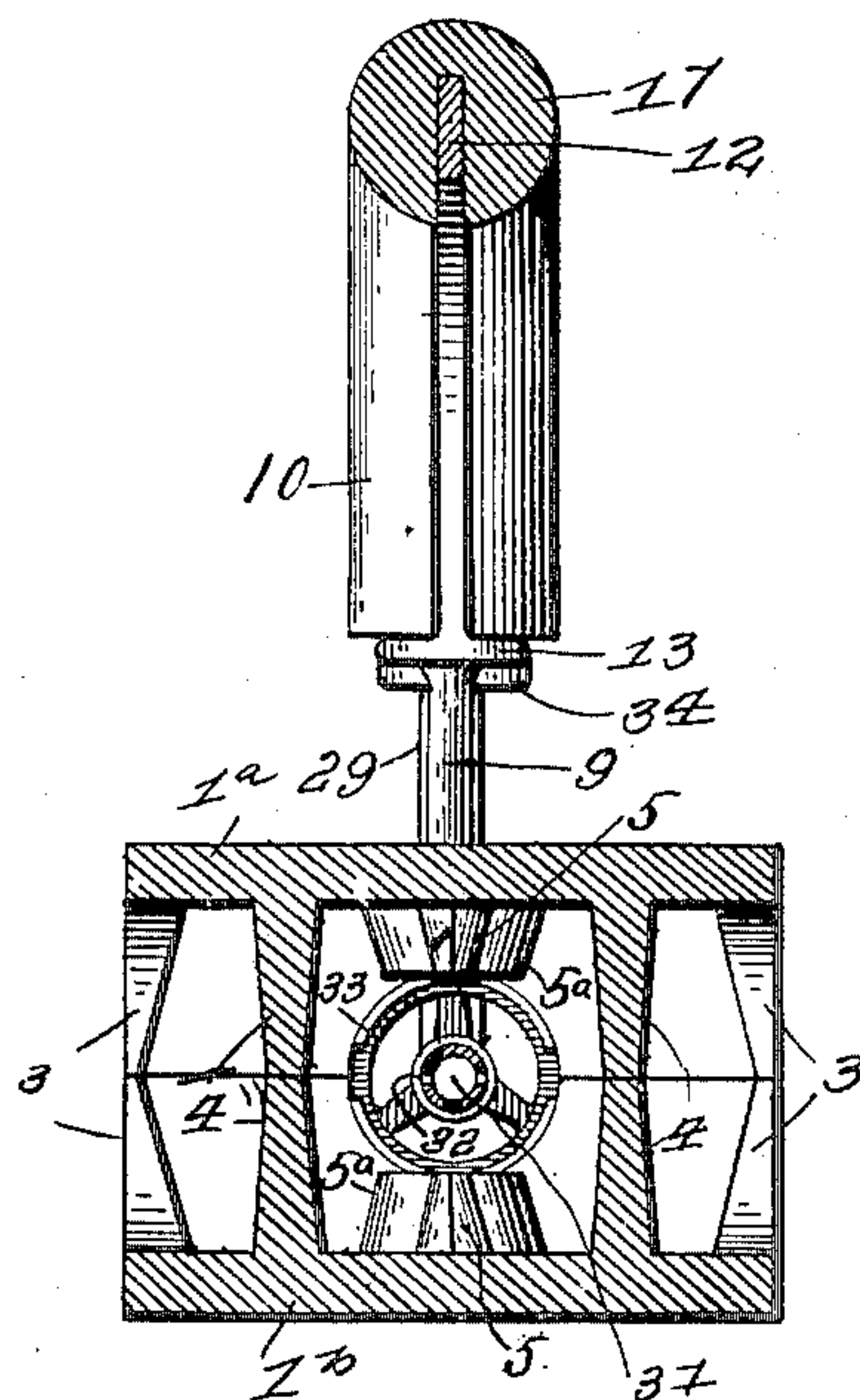
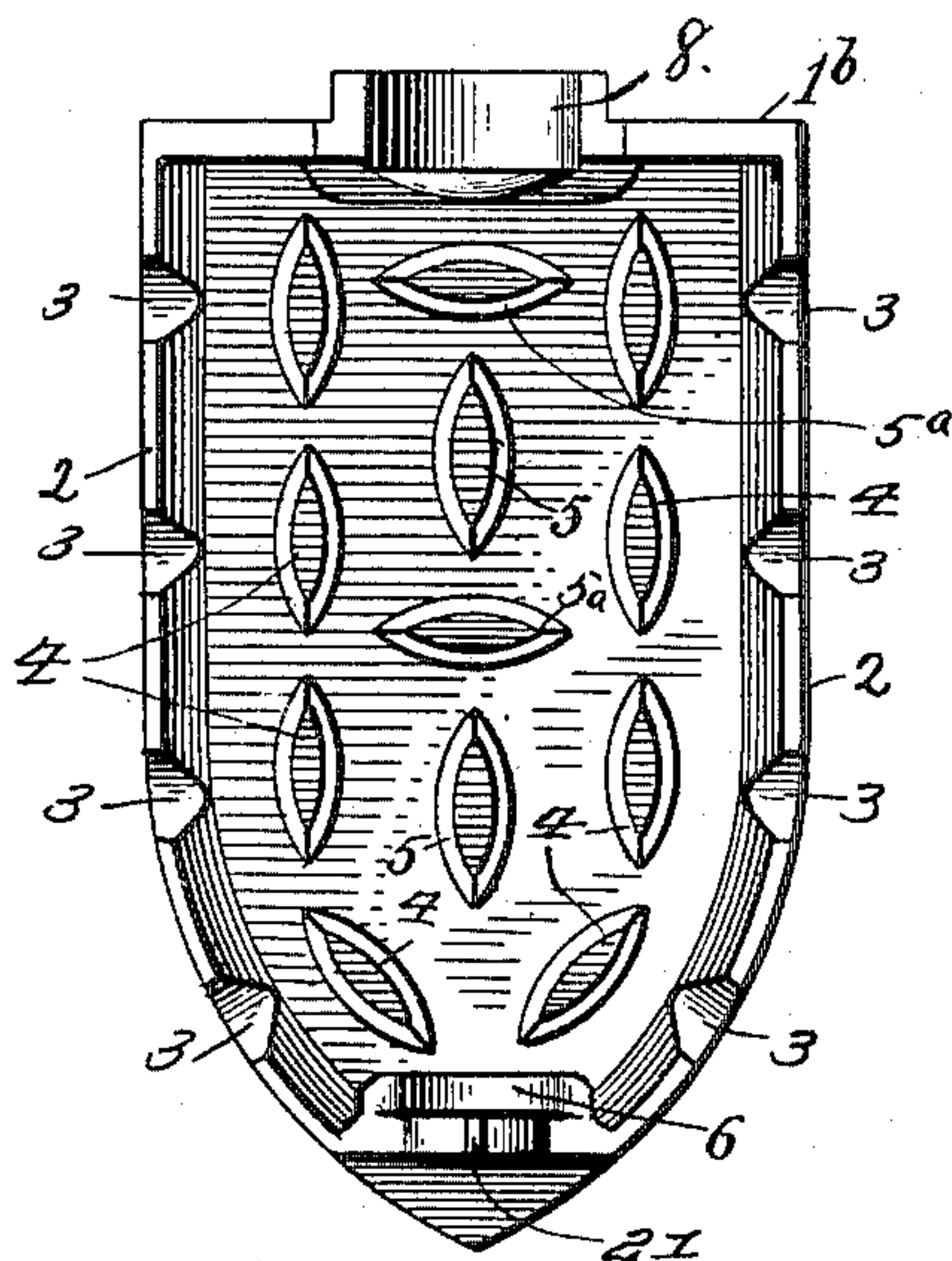


Fig. 4.



WITNESSES:

Herbert Bradley
Anna C. Lamb

INVENTOR

Thomas Cross Edwards

BY

Knight Bros
ATTORNEYS.

No. 660,055.

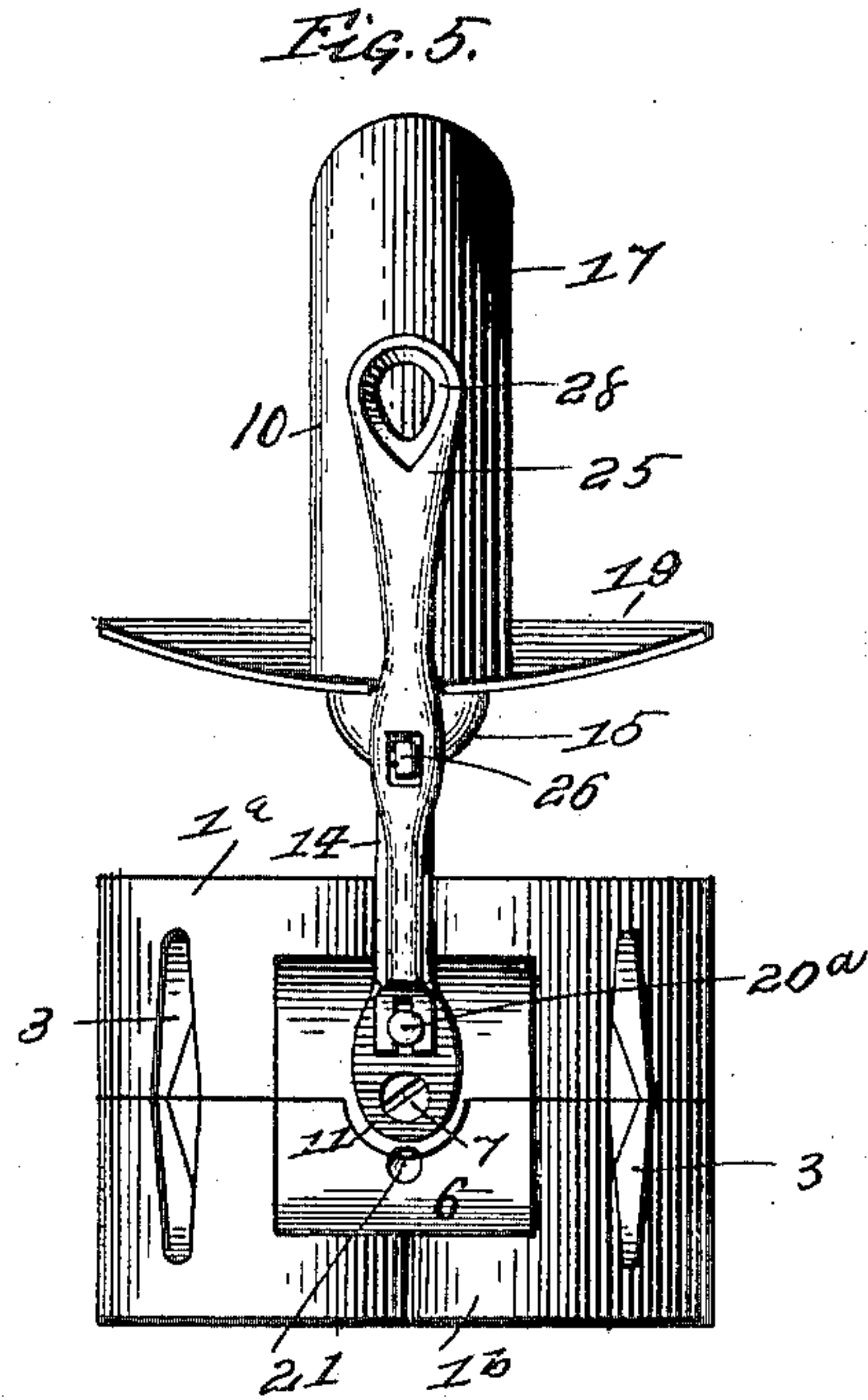
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3 Sheets—Sheet 3.



WITNESSES:

Robert Bradley
Harry A. Knight

INVENTOR

Thomas Cross Edwards

BY

Knight & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS CROSS EDWARDS, OF PHILADELPHIA, PENNSYLVANIA.

SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 660,055, dated October 16, 1900.

Application filed August 25, 1898. Serial No. 689,475. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CROSS EDWARDS, a citizen of the United States, and a resident of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Sad-Irons, of which the following is a specification.

My invention relates to self-heating reversible sad-irons; and it consists in certain novel features of construction whereby the article may be more cheaply constructed and will be more durable, convenient, and effective in use.

My invention will be fully understood upon reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a sad-iron embodying the features of my present invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a vertical transverse section of the same. Fig. 4 is a plan top view of one of the sections of the iron. Fig. 5 is an end view opposite to that shown in Fig. 1.

1 represents the body of the iron, which is made of two corresponding body-sections 1^a and 1^b. The body-sections 1^a and 1^b are formed with an exterior series of lugs or projections 2, the ends of which abut to space the faces of the iron apart and leave between them diamond-shaped inlets 3 for air required to support combustion within the iron; also, an inner series of projections 4, located at the rear of the said inlets, which receive impingement of the burning gases within the iron and which likewise abut at their ends, as shown in Fig. 3, for the purpose of assisting in conducting heat from one section to the other; also, a central series of lugs 5 5^a, which terminate short of the dividing-plane of the sections to leave a space for the burner which heats the iron. The lugs 5 are located longitudinally of the section, while the lugs 5^a are located transversely thereof. It will be seen that the lugs or projections 4, 5, and 5^a are elongated, being preferably somewhat elliptical in cross-section, and they are symmetrically arranged within the iron, and one series is staggered with reference to another for the purpose of intercepting the air-passages 3 and for dividing up the interior of the iron into a structure having constantly-deflecting passages, through which the air must

pass in support of the combustion of the gases employed for heating the iron. It will further be noted that some of the central series of projections 5^a have their longest dimension transverse to the iron, while others, 5, are longitudinally arranged. The effect of this arrangement of projections is such as to thoroughly mingle the air with the gas and assure an approximately-perfect combustion without necessitating the use of a Bunsen or other form of air-mixing burner. The sections of the iron thus formed are held together in front by means of the overlapping ears 6, through which passes a screw 7, and at rear by means of the semicircular bosses 8, upon which is fitted a trunnion-ring 9 of the handle.

The handle 10 is of peculiar construction and terminates at its respective ends in a boss 11, having a bearing for the screw 7 and the combined trunnion and securing ring 9, which fits upon the semicircular bosses 8 of the iron. The intermediate portion of the handle comprises a curved integral metallic core 12, which is joined to the ends by offsets 13 14, providing shoulders 15 16. A curved (preferably semicircular) wooden grip 17 is slotted from its inner side and straddles and fits over the metallic core 12 and has downwardly-projecting ends terminating just above the shoulders 15 16. Screws 18, inserted into the grip 17 and through the core 12, hold the parts securely in position and brace the curved structure of the grip, thus preventing the liability to break and permitting the use of a turned grip and avoiding the expense of a bent-wood grip. A handle of this construction is cheap, rigid, and durable and at the same time preserves all the advantages of a wooden handle without the disadvantages thereof. The slot in the under side of the grip permits radiation from the core 12 and assists in keeping the wooden grip cool. In addition to serving as seats for the ends of the wooden grip the shoulders 15 16 likewise support the shield 19, which may be of any suitable material—such, for instance, as indurated fiber or equivalent insulating material.

The iron being readily revoluble in the handle as a result of the construction above described is brought under control and fixed in its two positions by which its ironing-sur-

faces are respectively presented downward by means of a spring-pressed plunger 20, located in a housing formed eccentrically in the boss 11, the plunger being forced into one
 5 or another of the sockets 21 of the iron by means of a spring 22, which bears at one end against a shoulder in the socket 23, formed in the boss 11, and at its other end against a shoulder or collar 24, formed on the pin. The
 10 pin thus arranged is controlled by a lever 25, fulcrumed upon a lateral projection 26 of the handle end and having a slotted connection 27 with the head of the pin 20. The upper
 15 end of lever 25 is provided with an opening 28, that it may be kept cool by the passage of air through it.

The iron may be heated either by means of a gas-burner or by means of a burner supplied from a reservoir carried by the iron. For the
 20 use of gas as the heating fuel I prefer to employ a burner substantially as shown in Figs. 1 and 2, wherein 29 represents a tube of relatively-small diameter having at its upper end an attaching-nipple 30 for a gas-connecting
 25 tube and bent downward and then horizontally, so as to provide a projecting end 31 approximately the length of the inner dimension of the iron, and there provided with discharging jet-openings 32. The gas-burner is centered
 30 within the iron by means of the spider 33, which fits the semicircular bosses 8 and spaces the burner-tube away from the boss in such a manner as to give free admittance for air around the burner. The upper end of the
 35 burner is secured by a laterally-extending bracket 34, projecting from the offset 13 of the handle and provided, as shown in Figs. 1 and 2, with a lateral socket 35, in which the tube is retained by means of a spring-clip
 40 36, housed in a slot in the wall of the socket. The spring-clip 36 is such that the tube, while normally held rigidly in position, may readily be displaced by deflecting it laterally with
 45 slight force, after which the burner may be withdrawn from the iron. The lighting of the burner is thus facilitated and the parts are readily replaced after lighting.

The effect of the burner shown in Fig. 2 is to present fine jets of flame, which jets, together with the burning gases, impinge against
 50 the lugs and heat the same thoroughly. The heat thus developed in the lugs is conducted rapidly to the ironing-surfaces. Moreover, the symmetrical and staggered arrangement
 55 of the lugs within the iron effects a thorough mixing of the gases and air, which results in

an approximately-perfect combustion within the inner spaces of the iron, and the heating effect is greatly improved. A further effect of the arrangement of the abutting lugs upon
 60 which the flame impinges is to conduct heat downwardly to the section which is in position for use, and thereby maintain the latter at a sufficient temperature for effective work for a longer period.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. An iron including two sections each having a smoothing-face, a handle having a hanger
 70 at one end provided with a ring, a journal in two parts rigid with the respective sections of the iron to receive said ring for turning movement, a hanger at the other end of the
 75 handle provided with a hub, and a pivot-screw extending through the hub and uniting the two sections of the iron.

2. An iron including two sections each having a smoothing-face, a handle having a hanger
 80 at one end provided with a ring, a journal in two parts rigid with the respective sections of the iron to receive said ring for turning movement, a hanger at the other end of the
 85 handle provided with a hub, a pivot-screw extending through the hub and uniting the two sections of the iron, a lock upon said hub, and means upon the hanger that carries said lock to actuate the latter.

3. In a self-heating sad-iron, the combination of a suitable burner and a body portion
 90 provided with an outer series of lugs arranged with air-spaces between them, an inner series of lugs located in staggered relation to the outer series to bring them opposite to the air-spaces thereof, and a central series of lugs
 95 terminated in planes to leave a central space for the burner of the iron; substantially as herein explained.

4. In combination with a self-heating sad-iron having a suitable handle, a burner for
 100 heating the iron having an upwardly-projecting portion, a bracket carried by the handle and formed with a recess which receives the upwardly-projecting portion of the burner, and a spring-clip within the recess of said
 105 bracket for holding the burner in place; substantially as herein described.

THOMAS CROSS EDWARDS.

Witnesses:

J. L. HARBISON,
 GEO. W. FRANK.