

No. 804,770.

PATENTED NOV. 14, 1905.

J. H. ROGERS.
SAD IRON.

APPLICATION FILED MAY 3, 1904.

2 SHEETS—SHEET 1.

Fig 1.

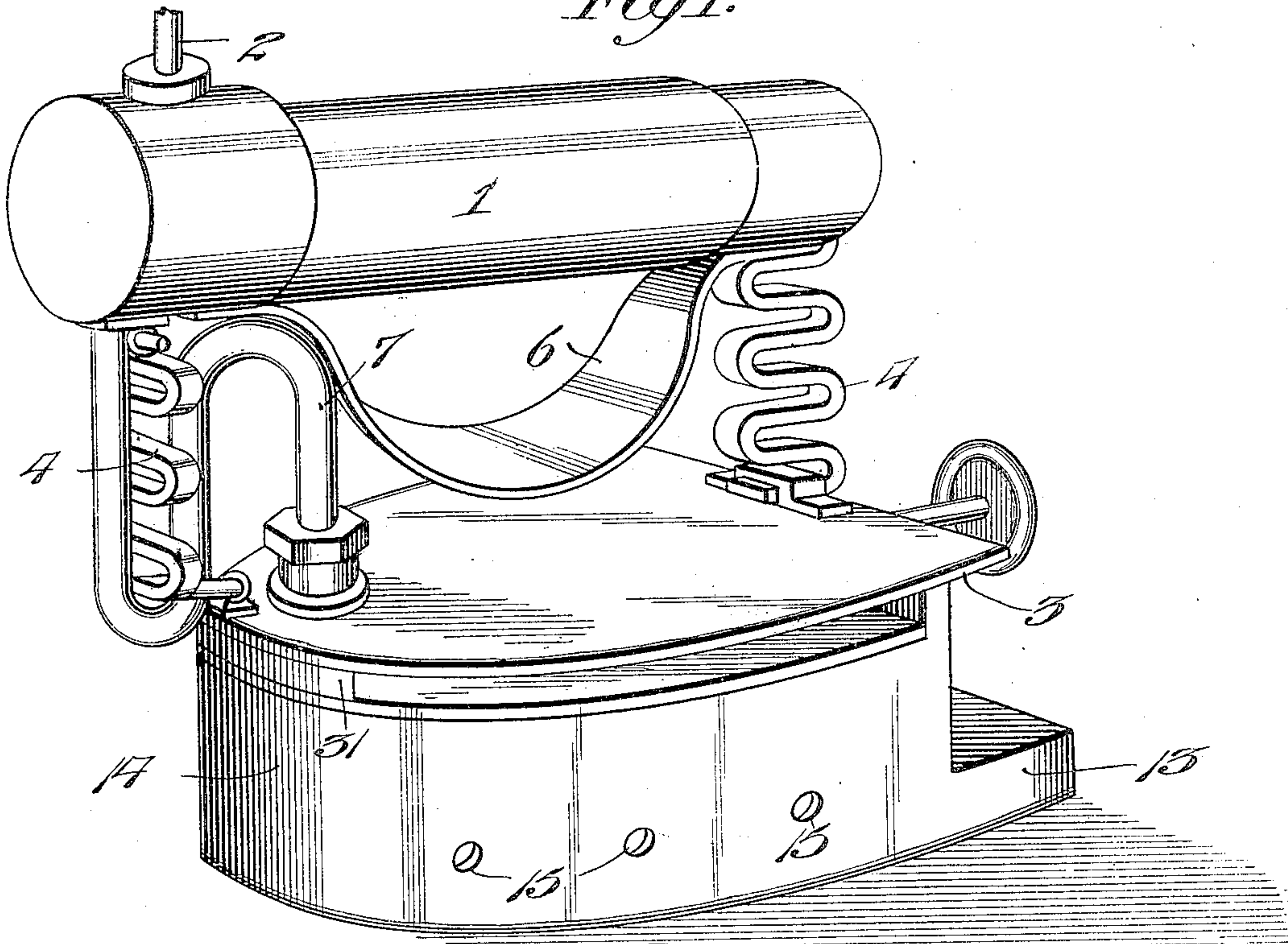
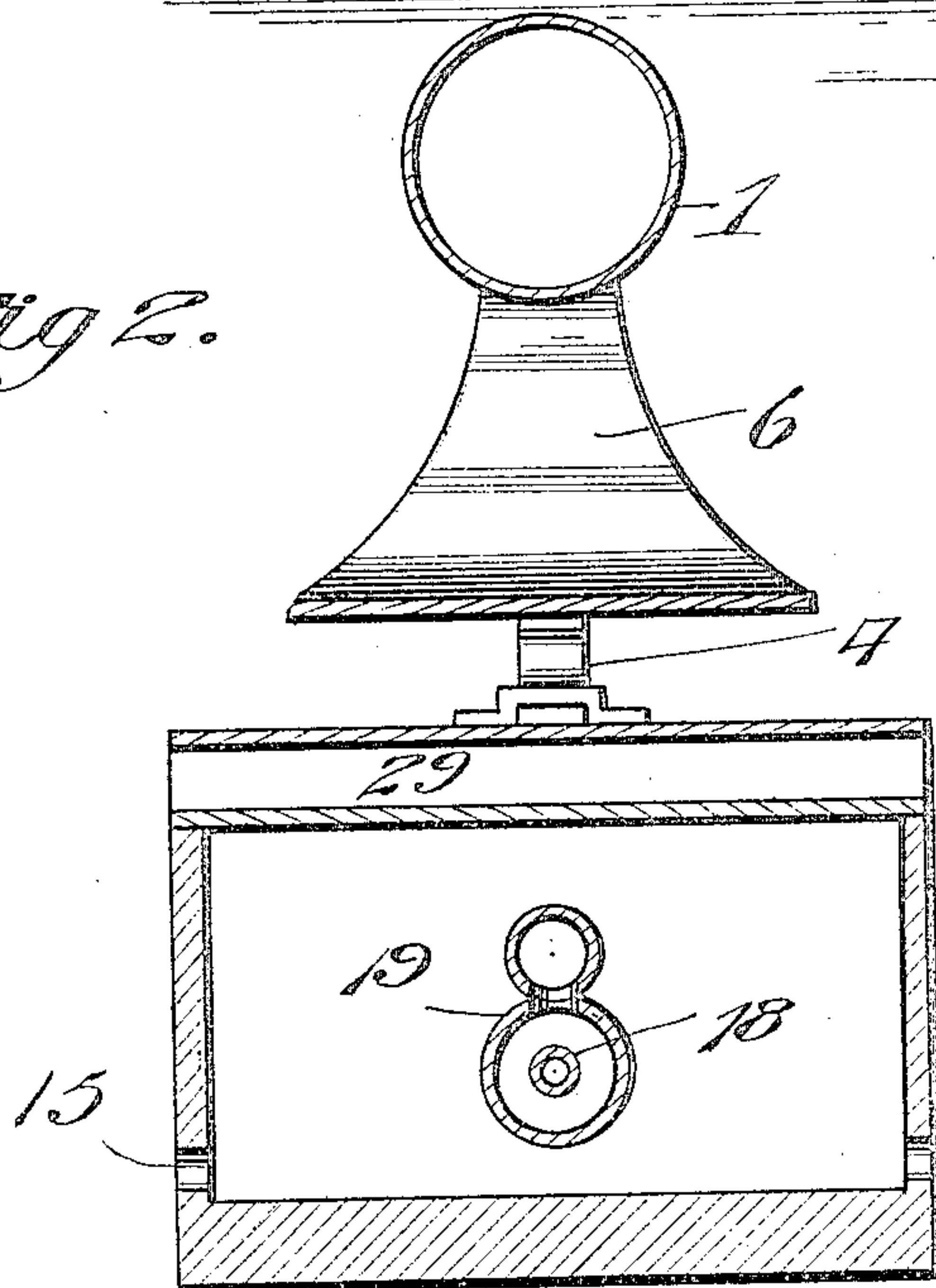


Fig 2.



Witnesses
Phil. C. Barnes.

C. C. Hines.

By

Victor J. Evans

Inventor

Jay H. Rogers

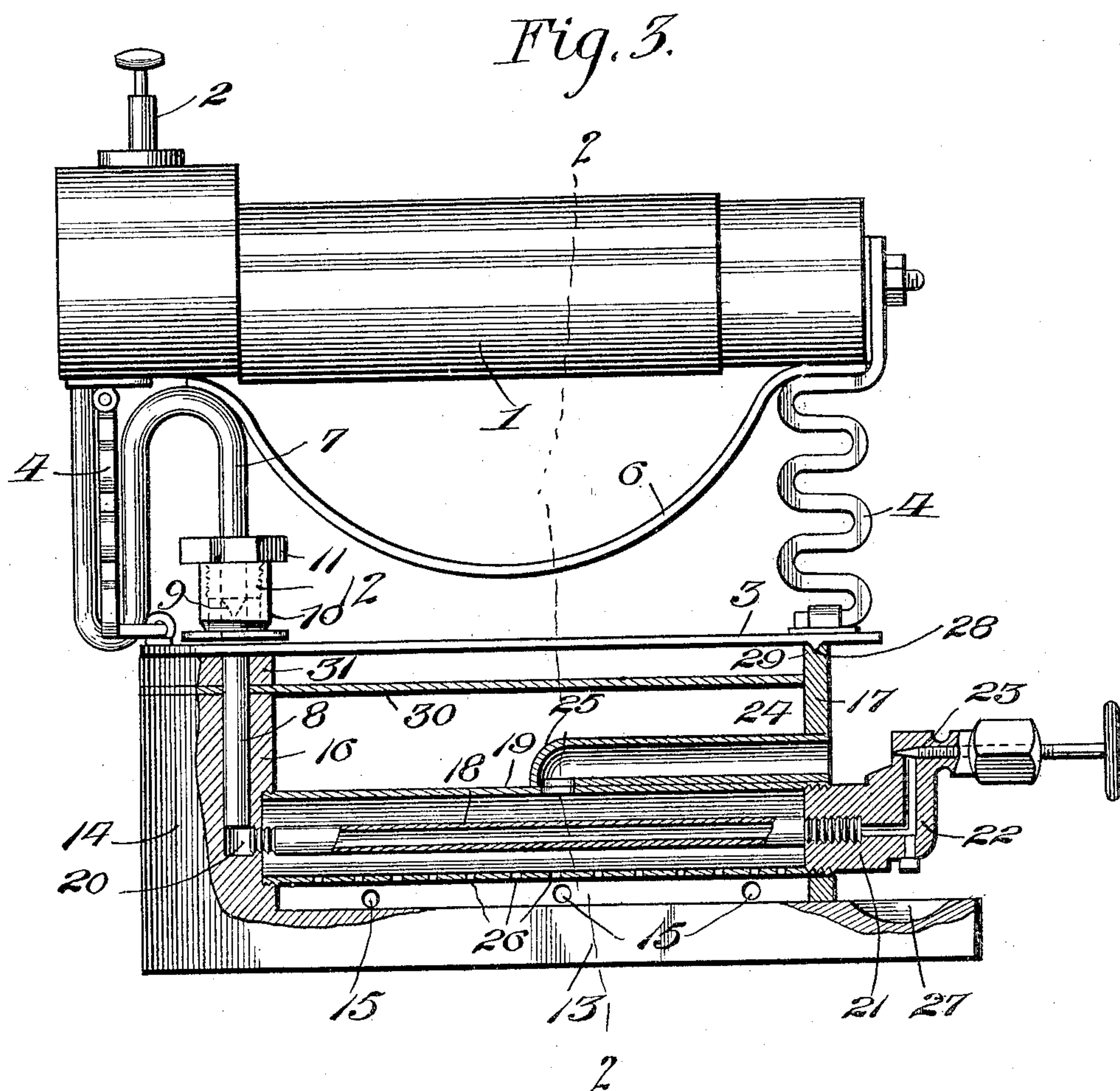
Attorney

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2 SHEETS—SHEET 2.



Witnesses

Phil E. Barnes.

Katharine Allen.

Inventor
Jay H. Rogers.

By *Victor J. Evans*

Attorney

UNITED STATES PATENT OFFICE.

JAY H. ROGERS, OF CHICAGO, ILLINOIS.

SAD-IRON.

No. 804,770.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed May 3, 1904. Serial No. 206,243.

To all whom it may concern:

Be it known that I, JAY H. ROGERS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Sad-Irons, of which the following is a specification.

This invention relates to sad-irons, the object of the invention being to provide what may be termed a "self-heating" sad-iron, in which the handle is made hollow and constitutes an oil-reservoir, from which any suitable oil, as gasoline, is fed through an oil-supply pipe and a combined retort and burner which is located within the body of the iron and inclosed thereby, the arrangement being such that a downdraft is obtained, and the flame thus projected against the bottom of the iron, which is thereby kept constantly heated and in proper condition for use.

A further object of the invention is to so combine the bottom of the iron and the handle and the oil-supply pipe that the handle may be swung around the oil-supply pipe as a center and temporarily moved away from over the retort or generator, so as to prevent the heating of the handle and reservoir during the preliminary operation of converting the oil into gas and starting the flame.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangements of parts, as hereinafter fully described, illustrated, and claimed.

Figure 1 is a perspective view of a sad-iron constructed in accordance with the present invention. Fig. 2 is a cross-sectional view thereof on the line 2 2 of Fig. 3. Fig. 3 is a part longitudinal section and part side elevational view of the iron.

Referring to the drawings, 1 designates a handle disposed horizontally above the iron proper and made hollow, so as to form an oil-reservoir, the said reservoir, under the preferred embodiment of this invention, being provided with an air-pump 2, by means of which air may be compressed in the reservoir for securing forced feed of oil to the burner. The handle also comprises a base-plate 3, located a considerable distance below the reservoir 1, and connected therewith by means of two or more handle-supports 4 of zigzag form to avoid the transmission of heat from the burner to the handle, the heating of the handle being also further prevented by means of a curved shield 6, which may be of metal

or asbestos, and which is arranged beneath the handle 1 and above the base-plate 3.

Adjacent to one end of the handle or reservoir 1 is an oil supply or feed pipe 7, which is reversely bent, as shown, to keep the same cool and prevent the transmission of heat to the handle. One end of the pipe 7 is arranged in alinement with a second section 8, forming a part of the feed-pipe, which section extends into the body of the iron proper, the two sections 7 and 8 of the pipe being connected by a conical joint, as shown at 9, which is rendered air-tight by means of a stuffing-box 10, which is secured to the section 8 of the pipe and a gland 11, which screws into the stuffing-box, as shown at 12, and with the addition of suitable packing contained within the stuffing-box forms an air-tight joint while allowing of the relative rotation of the sections and 8. It will be observed that the oil-feed pipe extends through the base-plate 3 of the handle and that section 8 thereof, which is fixed to the iron body, forms the pivot or journal, on which the handle as a whole, through the medium of the pipe-section 7 and stuffing-box 12, is adapted to turn, thus enabling the handle to be swung horizontally from over the generator while the latter is being heated preparatory to starting the iron in operation.

The iron proper comprises the base 13 and oppositely-arranged sides 14, extending upwardly therefrom, and provided with air-inlet or circulation ports 15 in opposite sides. The iron also comprises standards or uprights 16 and 17 near opposite ends thereof to receive the burner-tubes. The burner comprises a pair of tubes 18 and 19, arranged one within the other, as shown, the inner tube 18 forming part of the generator and having one end connected to the upright 16 and communicating with a passage 20 therein, with which the section 8 of the oil-feed pipe also communicates, whereby oil is fed into the inner tube 18. At the opposite end of the tube 18 is arranged an elbow 21, to which the tube 18 is connected, as shown. Extending through the elbow 21 is an angular oil and gas passage 22, and associated with said passage is a needle-valve 23, which points toward the outer extremity of an induction-tube 24, which leads inward through the upright 17 and is bent, as at 25, and extended downward and placed in communication with the approximate center of the outer tube 19, which surrounds the inner tube 18 and is provided

along its lower portion with one or more series of gas-ports 26.

27 designates a trough or starting-cup consisting of a depression formed in the upper side of the base 13 of the iron and located beneath the elbow 21, the generator being heated by depositing a small quantity of oil in the same and igniting it, after which the needle-valve 23 may be opened sufficiently to allow the gas under pressure to be projected through the induction-tube 24, together with a suitable amount of air to promote combustion, the combined air and gas passing about centrally into the outer tube 19 and being ignited as it passes through the escape-ports 26, thus directing the flame downward directly against the base of the iron and maintaining the same in a heated condition.

The base-plate 3 is provided with a suitable catch-lip 28, which engages a corresponding notch 29 in the upright 17 for properly holding the handle as a whole with respect to the body of the iron, while the iron is in operation. A cover-plate or partition 30 extends between the sides and the uprights 16 and 17 of the iron to form an additional shield for retaining the heat in the iron and preventing it from passing upward so as to overheat the handle 1. A washer 31 is introduced between the plates 3 and 30 so as to support the plate 3 at a suitable elevation above the plate 30 and permit the handle to be swung around while heating the generator.

In operation air is compressed in the reservoir 1 by means of the pump 2. After heating the generator by burning oil in the starting-cup 27 the needle-valve 23 is opened to any desired extent according to the intensity of the flame desired, whereupon oil or gas or a mixture of both is projected into the induction-tube together with a quantity of air, which readily finds access to the open end of said tube. The mixture is received in the central portion of the outer tube 19 of the

burner and escapes through the ports 26, where it is ignited and the flame spread against the upper surface of the base 13 of the iron. By adjusting the needle-valve 23 the flame may be increased or diminished at will. By journaling the handle on the section 8 of the oil-feed tube the turning or swinging to one side of the handle will not interfere with the flow of oil to the burner and generator.

Having thus described the invention, what is claimed as new is—

1. A sad-iron comprising an iron-body, a burner mounted therein, a vertical oil-conducting pipe communicating with the burner, and a hollow handle forming an oil-reservoir connected at one end to the pipe, the pipe forming a pivotal connection on which said handle is adapted to be swung in a horizontal plane laterally of the iron-body.

2. A sad-iron comprising an iron proper, a burner associated therewith, a hollow handle forming an oil-reservoir, and an oil-feed pipe leading from the reservoir to the burner and consisting of jointed sections connected by means of a stuffing-box which forms an air and gas tight joint, the handle being adapted to be swung in a horizontal plane around the oil-feed pipe as a center.

3. A sad-iron comprising an iron proper, a burner associated therewith, a hollow handle forming an oil-reservoir, a base-plate, handle-supports connecting the handle and base-plate, an oil-feed pipe leading from the handle to the burner and forming a pivot around which the handle is adapted to be swung, and a washer interposed between the base-plate of the handle and the iron proper, substantially as described.

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

JAY H. ROGERS.

Witnesses:

R. S. PRINDIVILLE,
ALBERT E. WILSON.