

No. 700,439.

Patented May 20, 1902.

J. J. O'SHEA.
IRONING MACHINE.
(Application filed Oct. 7, 1901.)

(No Model.)

Fig. 2.

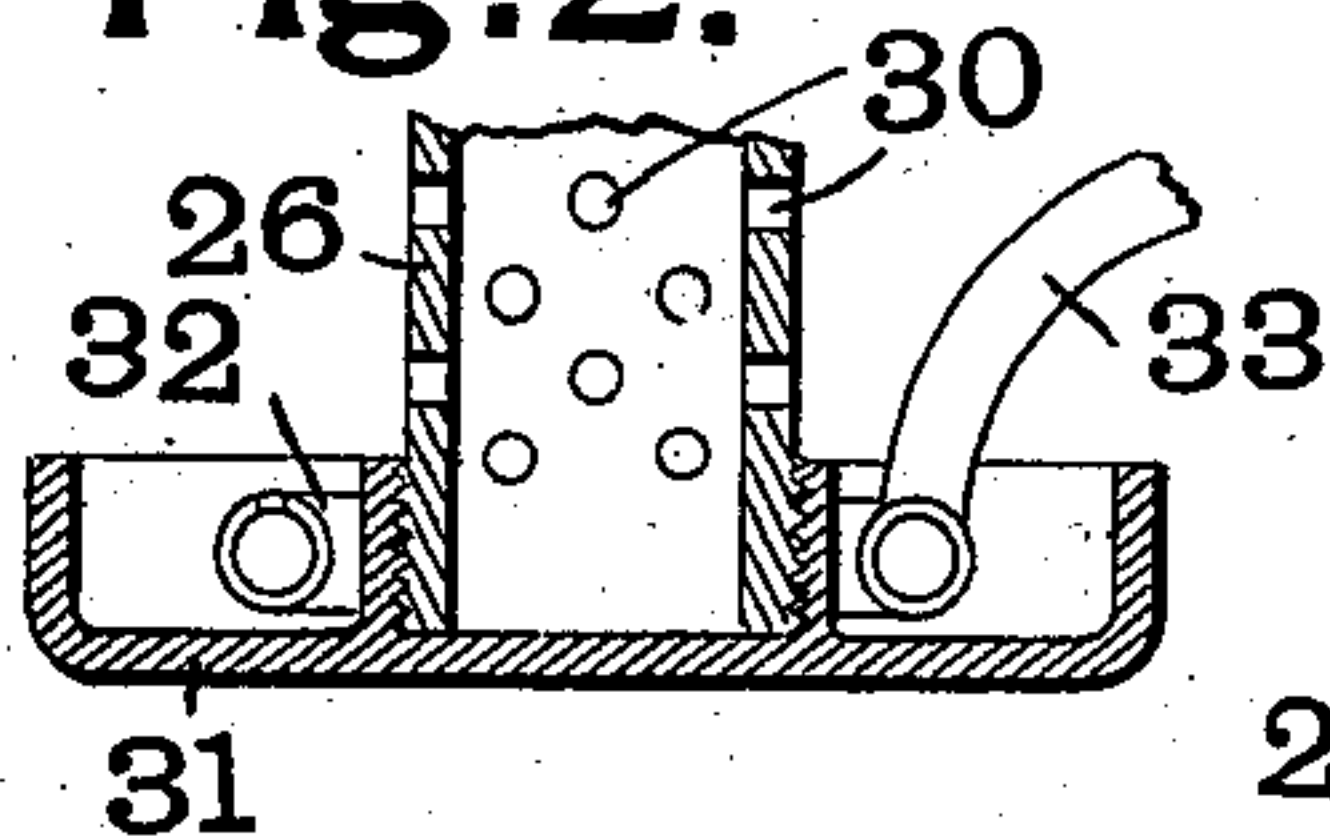


Fig. 3.

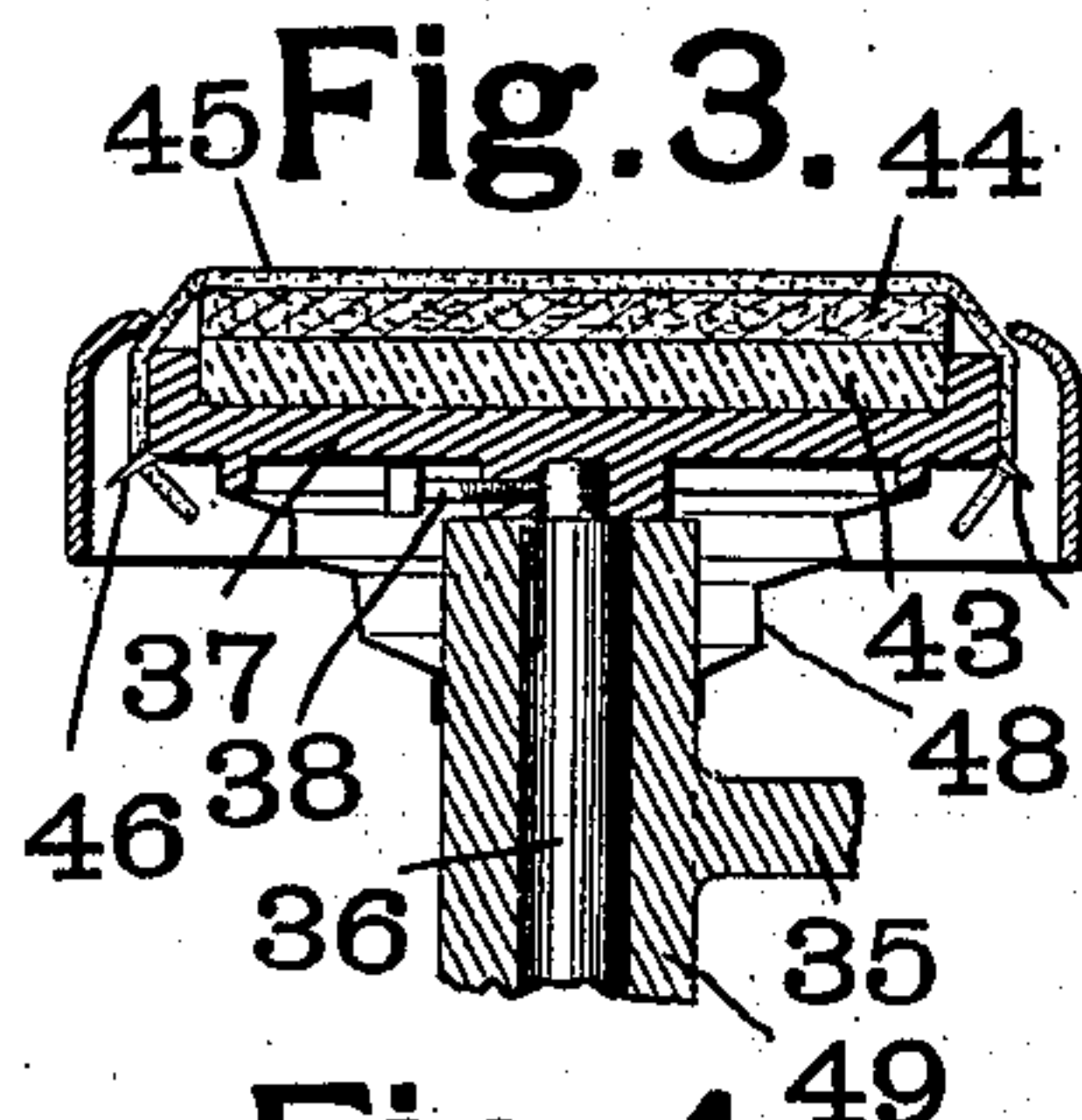


Fig. 4.

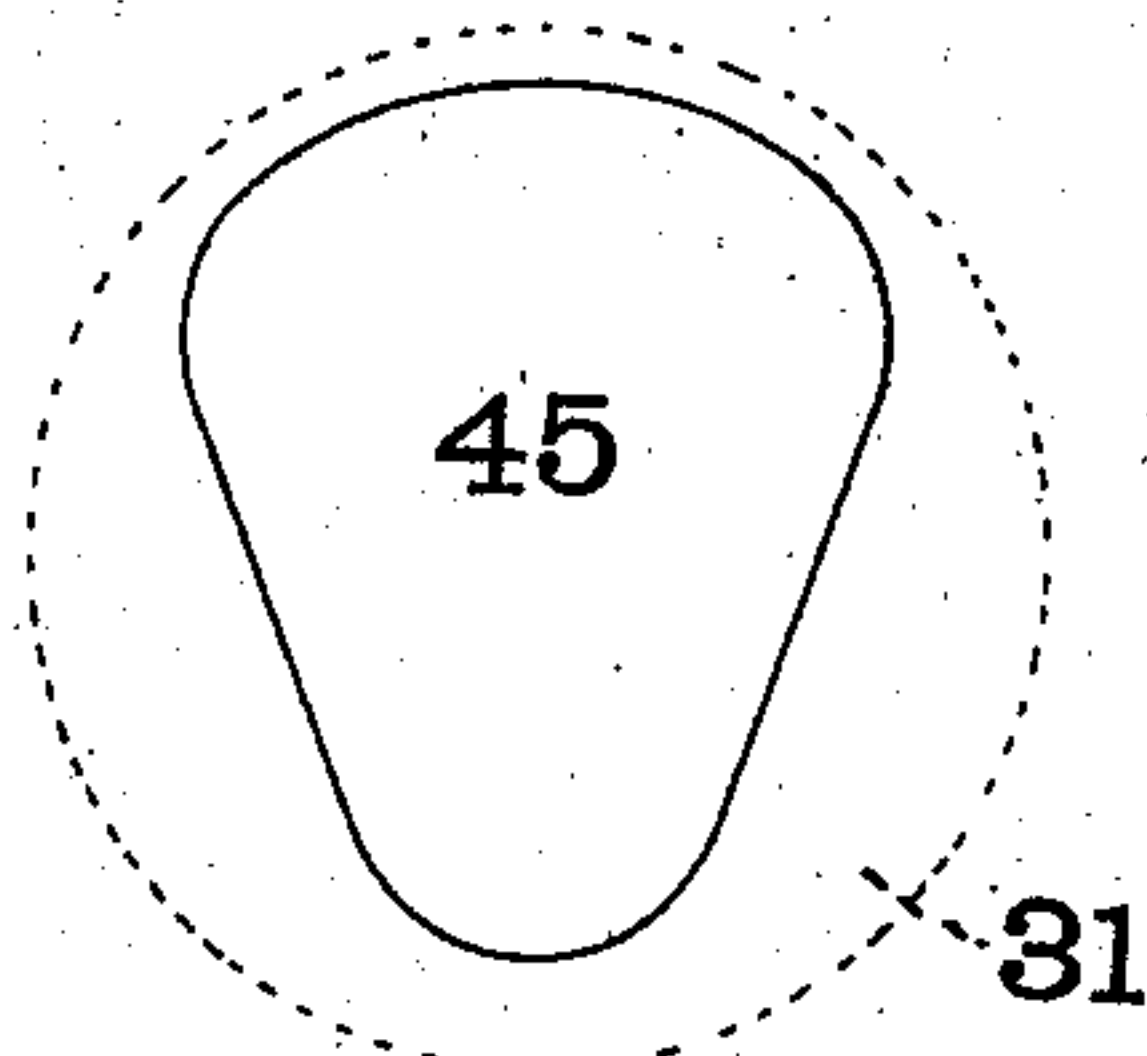


Fig. 5.

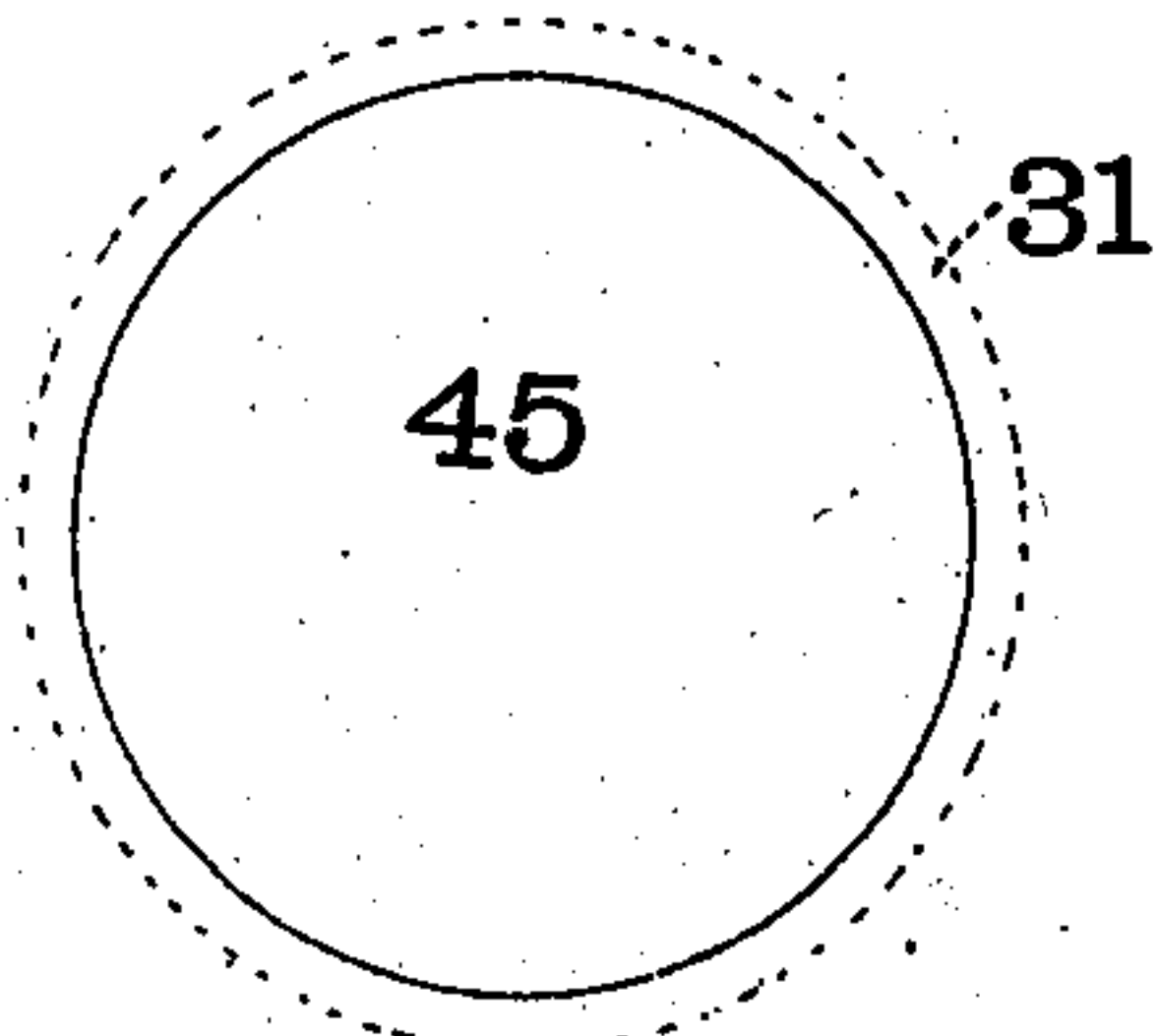
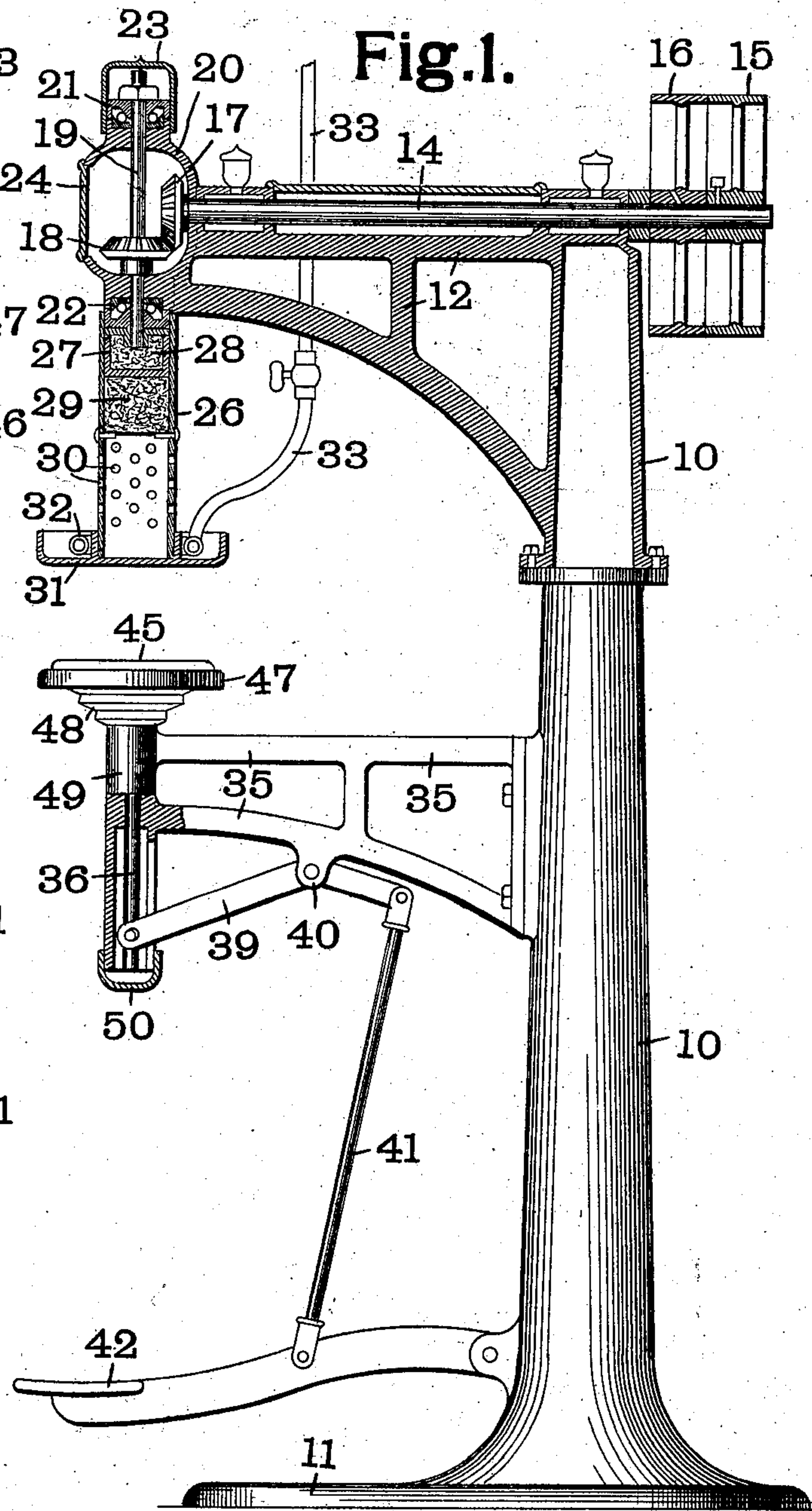


Fig. 1.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES J. O'SHEA, OF ST. LOUIS, MISSOURI.

IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 700,439, dated May 20, 1902.

Application filed October 7, 1901. Serial No. 77,798. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. O'SHEA, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have invented a certain new and useful Ironing-Machine, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My ironing-machine is primarily intended for ironing shirt-waists and other similar articles which, so far as I am aware, have been heretofore successfully ironed only by hand. It is obvious, however, that my machine may be adapted for ironing various other articles.

My invention consists, in part, in the combination, with an ironing-board, of a rotary iron adapted to cover the entire working face of said board and means for moving said board and iron together.

My invention also consists in various other novel features and details of construction, all of which are described in the following specification and pointed out in the claims affixed hereto.

In the accompanying drawings, which illustrate one form of ironing-machine made in accordance with my invention, Figure 1 is a side view, partly in section and partly in elevation. Fig. 2 is an enlarged section through the iron. Fig. 3 is an enlarged section through the ironing-table, and Figs. 4 and 5 are diagrammatic views showing two forms of ironing-board.

Like marks of reference refer to similar parts in the several views of the drawings.

10 is a column or standard supported on a suitable base 11. Carried by the column or standard 10 is a rigid arm 12, in which is journaled a shaft 14. The shaft 14 is provided with tight and loose pulleys 15 and 16, respectively, for the reception of the driving-belt. Secured to the opposite end of the shaft 14 is a beveled gear-wheel 17, which meshes with a beveled gear-wheel 18 on a vertical shaft 19. The shaft 19 is journaled in a casing 20 and is provided with bearings 21 and 22, preferably ball-bearings. The upper bearing 21 is protected by a removable cap 23, and access

is given to the interior of the casing 20 by means of a lid or door 24.

Rigidly carried by the movable cone of the lower bearing 22 is a metal sleeve 26. Within the upper end of the sleeve 26 is a cup-shaped part 27, the interior of which contains a filling 28 of asbestos or other non-heat-conducting material. Below the cup 27 is a second filling 29 of asbestos or other non-heat-conducting material. Below the filling 29 the tube 26 is provided with perforations 30 for giving free circulation of air through the lower end of the sleeve 26.

Removably secured to the lower end of the sleeve 26 is the iron 31. The iron 31 is preferably secured to the sleeve 26 by screw-threads, as shown in Fig. 2 of the drawings. The iron 31 is made cup-shaped, as is clearly shown in Figs. 1 and 2, and contains a stationary annular burner 32. The burner 32 is supported by a pipe 33, which also serves to furnish the burner with a suitable gas or vapor. Below the arm or bracket 12 is a second stationary arm or bracket 35, in which is slidingly mounted a vertical rod 36.

Removably secured to the upper end of the rod 36 is the base 37 of the ironing-table. The base 37 may be secured to the rod 36 by means of a set-screw 38, as shown in Fig. 3, or in any other suitable way.

Pivoted to the lower end of the rod 36 is a bent lever 39, Fig. 1, which is pivoted to the arm or bracket 35 at 40. The lever 39 is connected by means of a rod 41 with a treadle 42, pivoted to the column or standard 10.

Carried in the base 37 of the ironing-table is a block 43, Fig. 3, of hard rubber, upon which is placed a pad 44 of felt. The felt pad 44 is provided with a suitable flexible covering 45, forming the working face of the ironing board or table. This flexible covering 45 preferably consists of three or four layers of canton-flannel. The covering 45 is secured to the base 37 by means of pins 46, and the said pins 46 are protected by a shield 47.

In order to prevent the material to be ironed from coming in contact with the sliding rod 36, I provide an extensible guard 48. This guard is made of cloth, leather, or other flexible material capable of being folded upon itself in such a manner as to permit the guard

to expand and contract with the movement of the rod 36, something in the manner of a bellows. The guard is preferably tapering in form, as shown in the drawings, and has its lower and smaller end attached to the bearing 49 and its upper and larger end secured to the lower face of the base 37.

The lower end of the bearing 49 is provided with a cap 50 for catching any oil which may drip from the said bearing.

The rotary iron 31 is made of such a size as to completely cover the working face 45 of the ironing table or board, as is shown in Figs. 4 and 5, in which the dotted lines represent the iron and the full lines the working face of the board or table. In these views two shapes of table are shown, that in Fig. 4 being pear-shaped and that in Fig. 5 being circular. It will be obvious that any suitable shape of table may be used.

In the operation of my machine the rotary iron 31 is driven from any suitable source of power through the pulley 15 and shafts 14 and 19. The iron is heated by means of the burner 32. The material to be ironed is placed over the working face 45 of the table and the table is raised against the iron 31 by depressing the treadle 42. As the face of the iron is larger than the working face of the table, it is unnecessary to either move the iron over the table or to move the table under the iron, as has been customary in all forms of ironing-machine with which I am acquainted. At the same time the edges of the iron are prevented from coming in contact with the goods to be ironed, as would be the case if the ironing-table were larger than the iron. This prevents the formation of circular marks on the material due to the contact of the edge of the iron with the material. As soon as the goods are sufficiently ironed the treadle 42 is released to allow the table to recede from the iron. The use of the perforated sleeve 26 for supporting the iron allows the air to circulate freely through the sleeve, and thus prevents the bearing 21 from being unduly heated. This end is also attained by means of the fillings 28 and 29 of non-heat-conducting material.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an ironing-machine, the combination with an ironing-board, of a rotary iron adapted to cover the entire working face of said

board, and means for moving said board and iron into contact.

2. In an ironing-machine, the combination with an ironing-board, of a rotary iron having its working face at right angles to its axis and adapted to cover the entire working face of said board, and means for moving said board and iron into contact.

3. In an ironing-machine, the combination with a standard, of an arm carried thereby, a shaft journaled in said arm, an antifriction-bearing having its movable part secured to said shaft, a sleeve attached to the movable part of said bearing, a rotary iron carried by said sleeve, and a filling of non-heat-conducting material in said sleeve.

4. In an ironing-machine, the combination with a standard, of an arm carried thereby, a shaft journaled in said arm, an antifriction-bearing having its movable part secured to said shaft, a sleeve carried by the movable part of said bearing, a rotary iron carried by said sleeve, a cup within said sleeve, and a filling of non-heat-conducting material within said cup.

5. In an ironing-machine, the combination with a rotary iron, of a bearing for said iron, a table cooperating with said iron, a burner for heating said iron, a perforated metal sleeve supporting said iron and protecting said bearing, and a filling of non-heat-conducting material in said sleeve.

6. In an ironing-machine, the combination with a rotary iron, of a movable table cooperating with said iron, a support for said table, and an extensible guard connecting said table and support.

7. In an ironing-machine, the combination with a standard, of an arm rigidly carried thereby, a rotating iron carried by said arm and having its working face at right angles to its axis, said iron being mounted to be immovable laterally, a second arm rigidly carried on said standard, a table mounted on said arm, said table being immovable laterally under the iron, and operating means for forcing said iron and table into contact.

In testimony whereof I have hereunto set my hand and affixed my seal in the presence of the two subscribing witnesses.

JAMES J. O'SHEA. [L. S.]

Witnesses:

JAMES H. BRYSON,
W. A. ALEXANDER.