

No. 670,499.

Patented Mar. 26, 1901.

W. E. HOYT & J. A. MINTURN.

SAD IRON.

(Application filed Dec. 13, 1900.)

(No Model.)

Fig. 1.

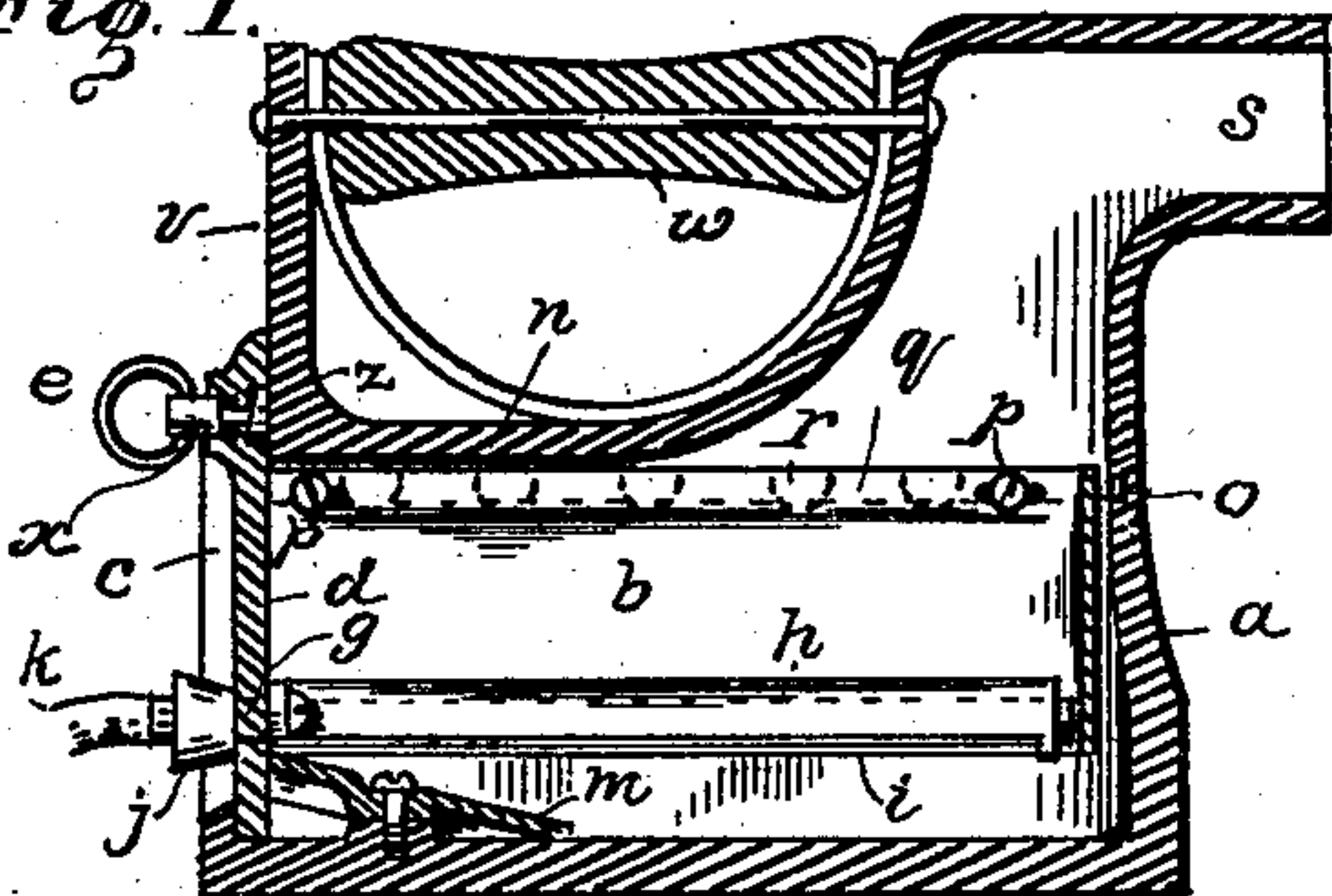


Fig. 2.

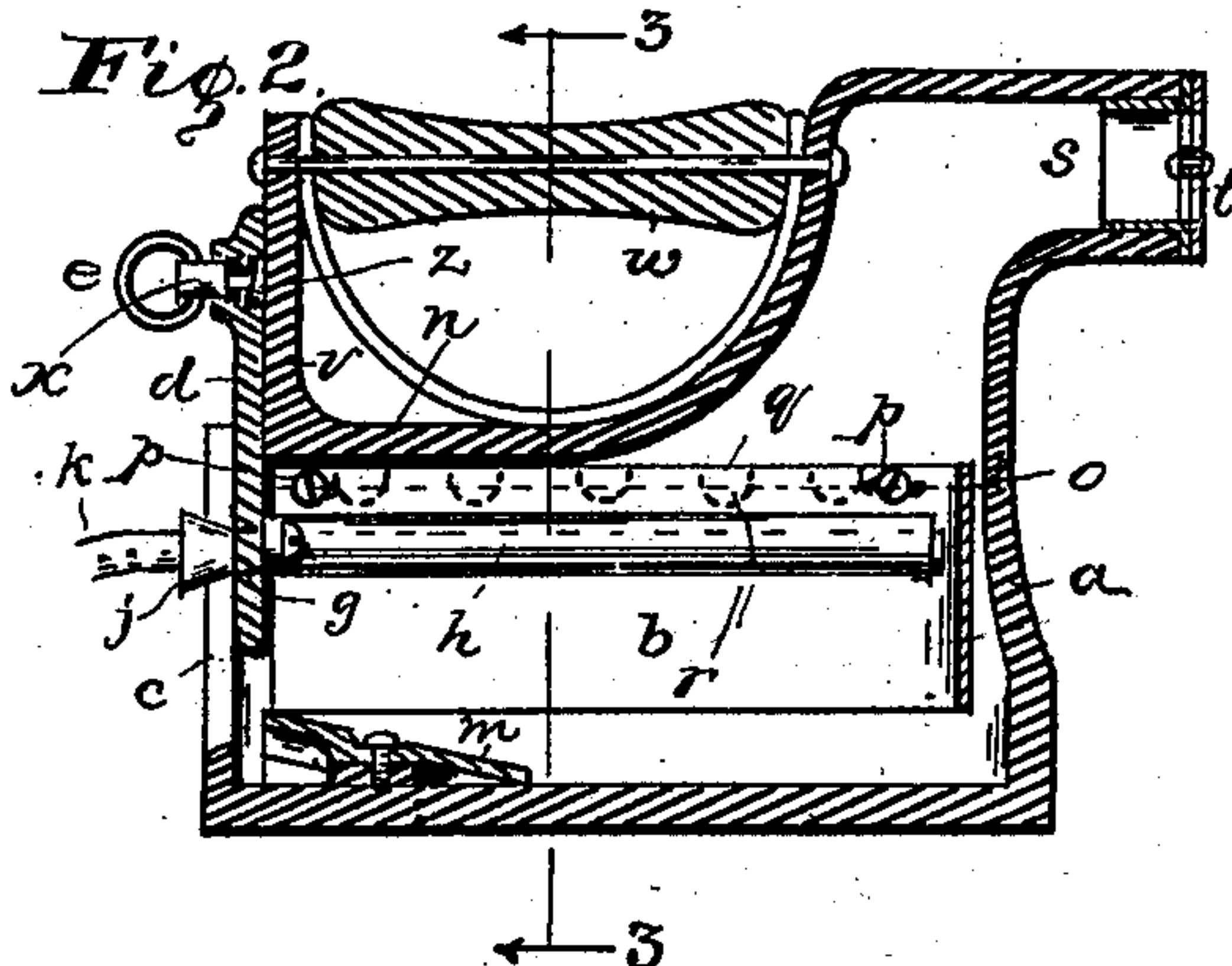


Fig. 3.

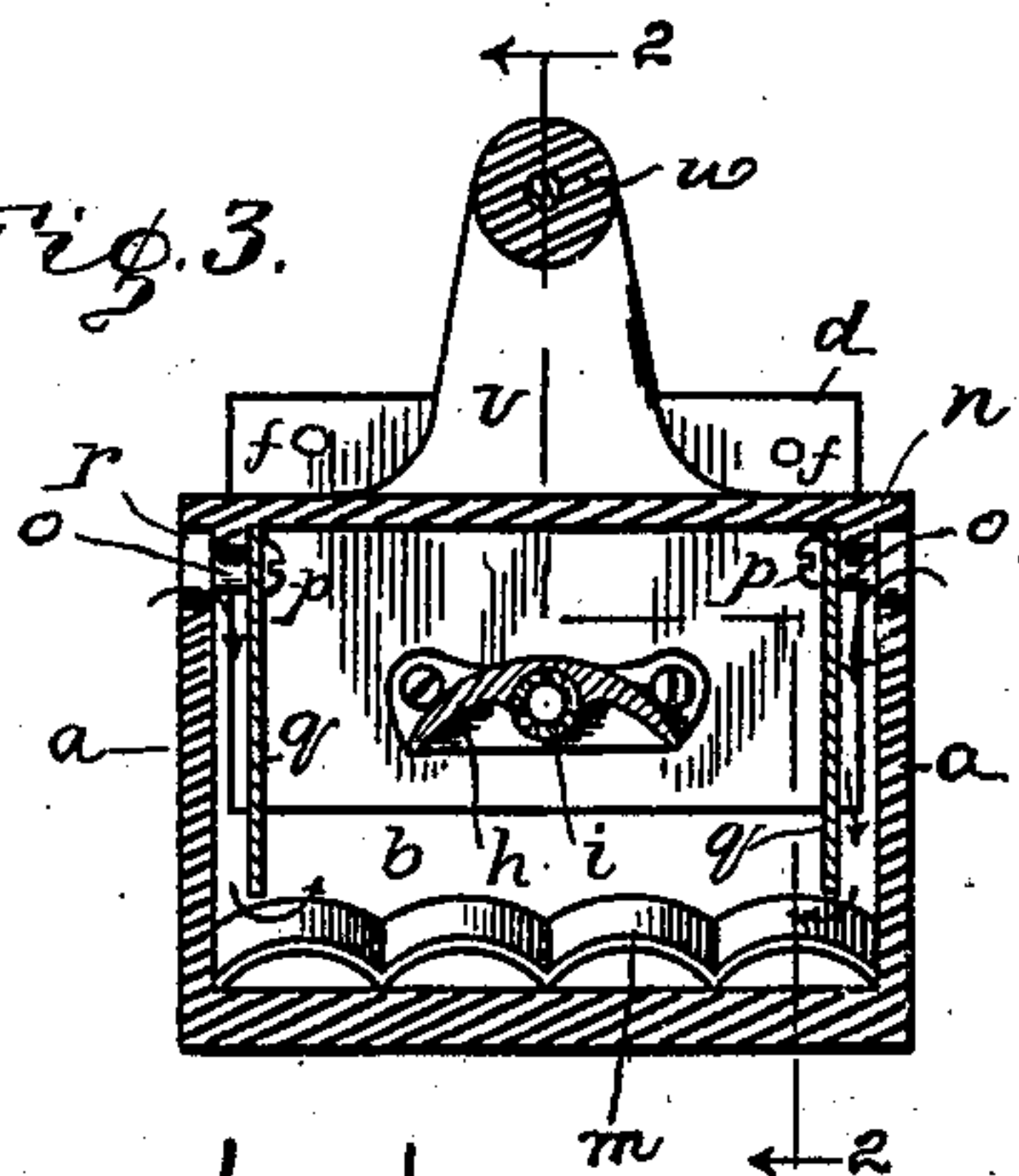


Fig. 6.

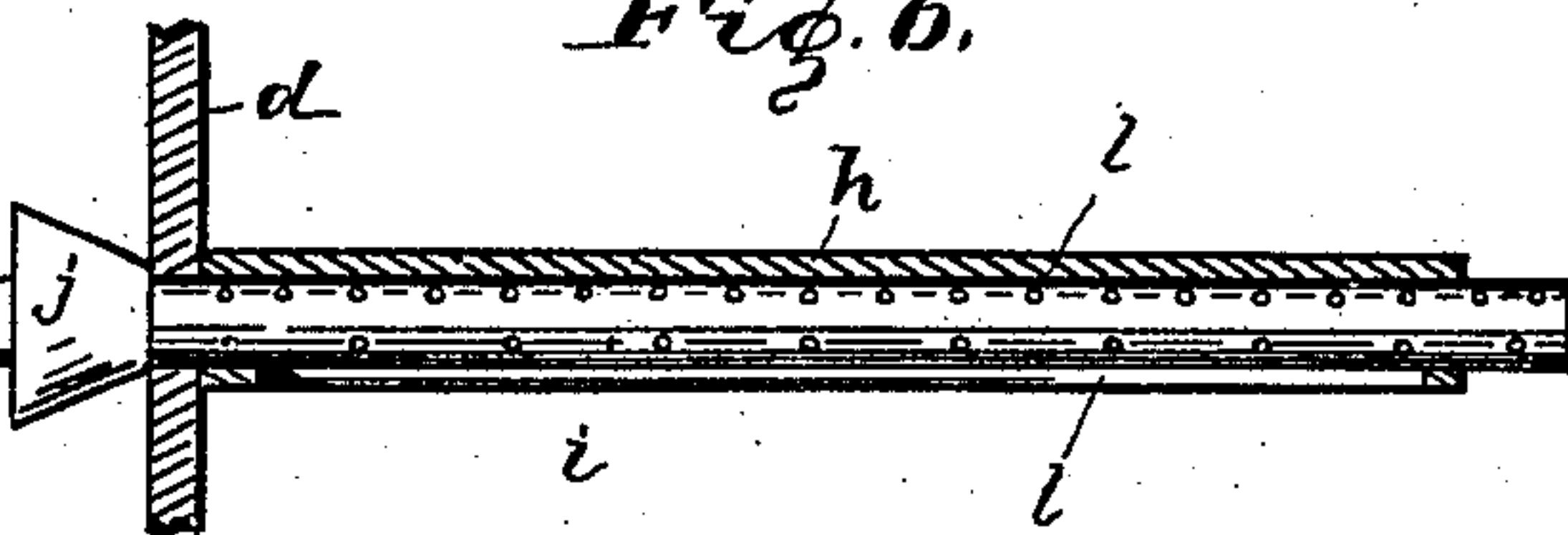


Fig. 5.

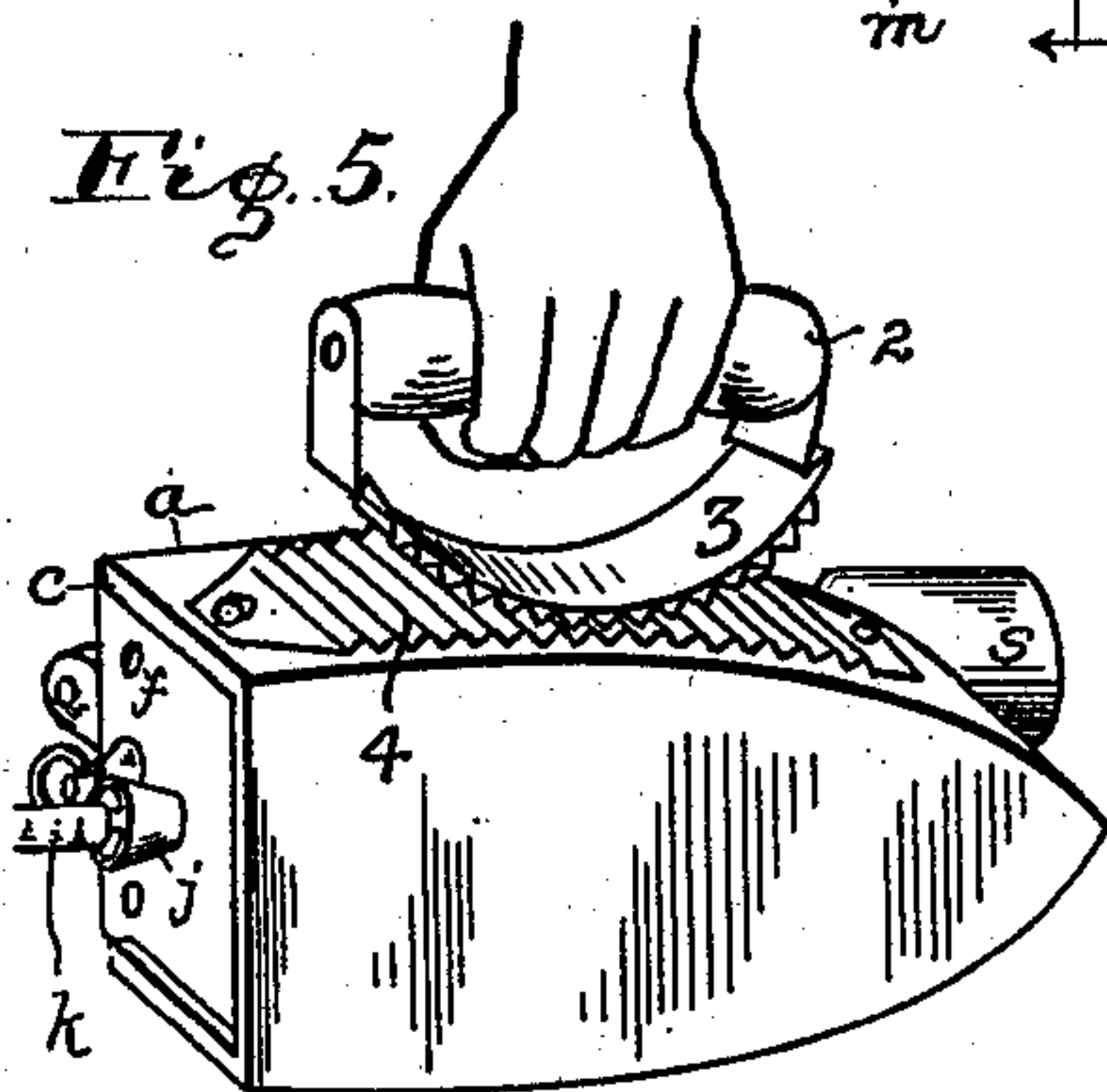


Fig. 4.

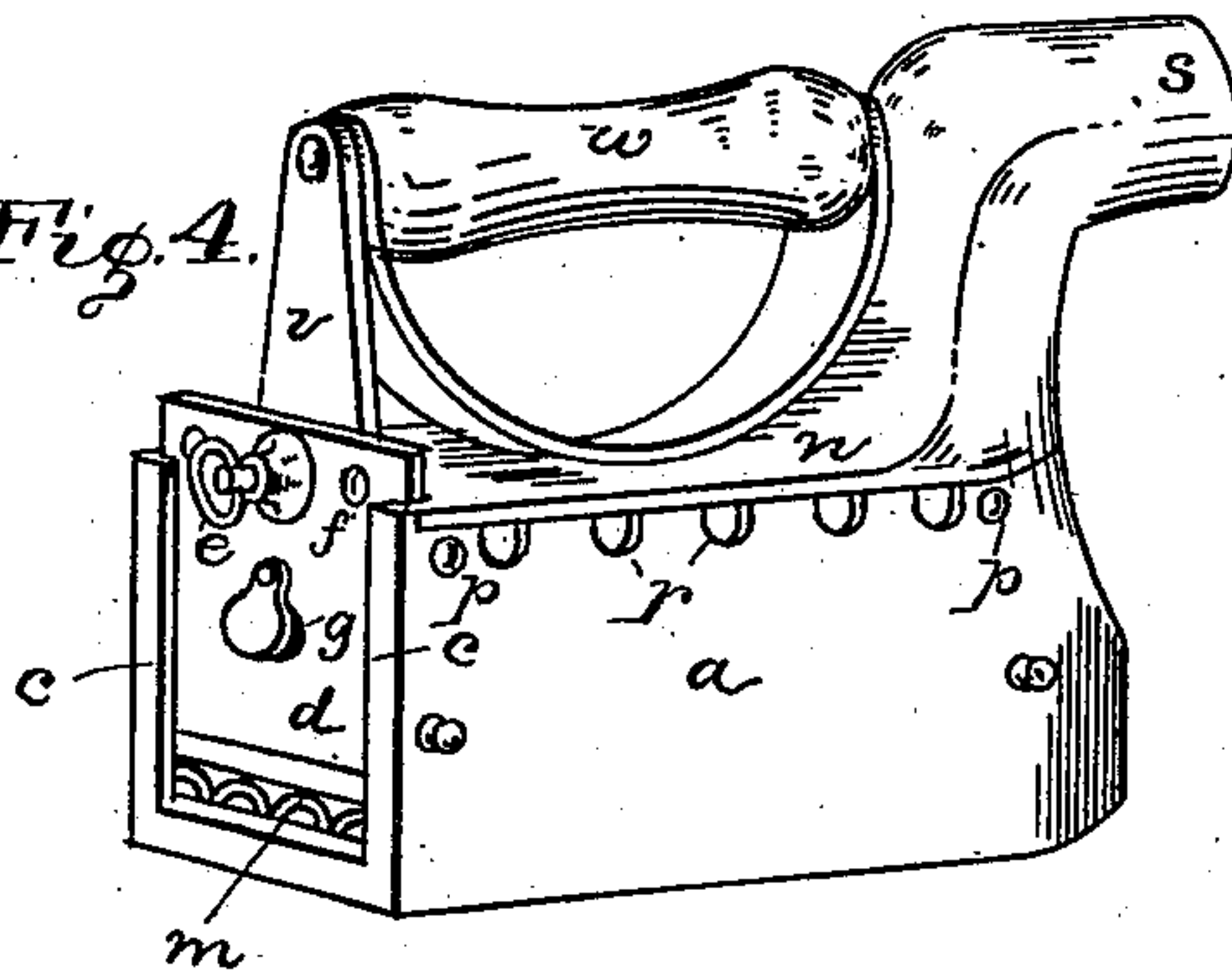


Fig. 7.

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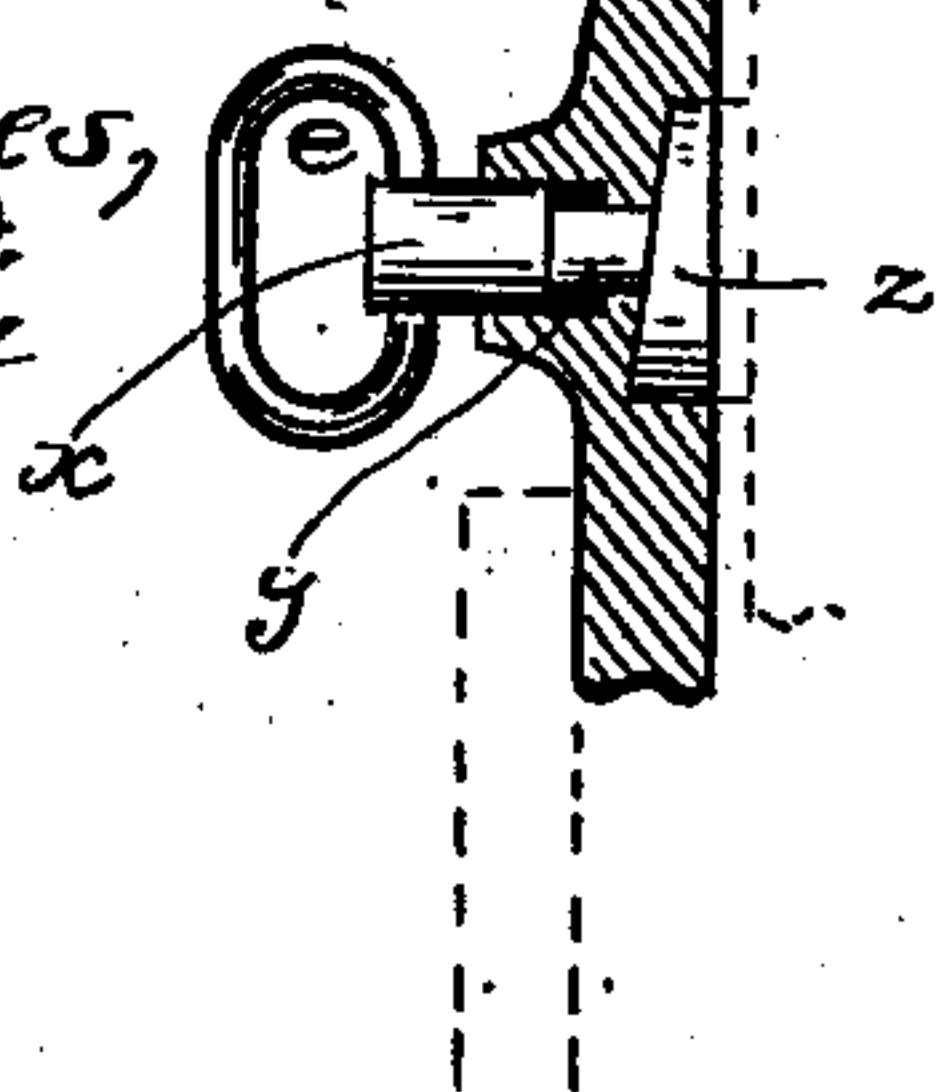
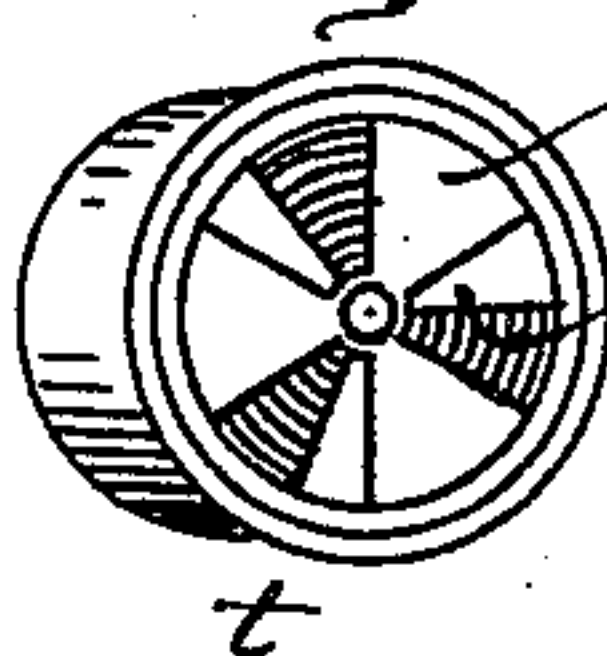


Fig. 8.



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## SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 670,499, dated March 26, 1901.

Application filed December 13, 1900. Serial No. 39,748. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM E. HOYT, residing in the city, county, and State of New York, and JOSEPH A. MINTURN, residing at Indianapolis, Marion county, Indiana, citizens of the United States, have invented certain new and useful Improvements in Sad-Irons, of which the following is a specification.

10 This invention relates to improvements in sad-irons; and one object of the invention is to provide a sad-iron which will embody within itself a chamber which will diffuse the heat properly to the iron and which will remain heated for a long period.

15 Another object of this invention is to provide a self-heating sad-iron which will embody a fluting device which will not render the iron cumbersome or inconvenient to handle and which fluting device will be thoroughly practical.

20 Another object of this invention is to provide a sad-iron which will be thoroughly efficient and practical and which can be produced at a moderate cost.

25 Another object of this invention is to provide a self-heating sad-iron which can be heated with charcoal or with gas, or with both fuels combined, and to provide means whereby the burner for burning the gas can be adjusted to burn a greater or less quantity of gas at a greater or less distance from the bottom of the iron.

30 To attain the desired objects, the invention consists of a sad-iron embodying novel features of construction and combination of parts substantially as disclosed herein.

35 Figure 1 represents a vertical longitudinal sectional view of our improved iron with gas-burner at its lowest position; Fig. 2, a like view with the gas-burner in an elevated position, the section being on the dotted line 2 2 of Fig. 3; Fig. 3, a vertical transverse sectional view on the dotted line 3 3 of Fig. 2; 40 Fig. 4, a perspective view of our iron with gas-burning appliances removed; Fig. 5, a perspective view of the fluting devices in operative positions to clearly show the manner of use for fluting; Fig. 6, a detail in vertical 45 section of a portion of the door of the iron with its attached burner-supporting bracket and burner for gas connected therewith; Fig. 7, a detail in vertical section of a portion of

the door, showing the cam-lock; and Fig. 8, a perspective view of the flue-damper detached 55 from the iron.

Like characters of reference indicate like parts throughout the several views of the drawings.

Referring to the drawings, *a* designates the 60 body of the iron, which is of usual shape or form and is made hollow to form a chamber *b*, having at one end the guides formed by a single outer flange *c* at each side, against which is fitted and slides the end-gate or 65 door *d*, having the handle *e*, and air-supply openings *f* near the upper edge thereof. This door also has the opening *g*, and secured to the inner side of this door (preferably in a removable manner) by means of screws or 70 bolts, although the same may be cast as an integral part of the door, is the bracket *h*, which is crescent-shaped in cross-section, as shown in Fig. 3, and has transverse perforated flanges to support the gas-pipe *i*. The 75 under side of the bracket is channeled longitudinally to fit close upon the said gas-pipe when the latter is inserted, and the bracket is so placed that the perforations of the flanges will register with the perforation 80 or opening *g* of the door, whereby the gas-pipe is extended through the door, and to its outer end a mixer *j* is secured. The mixer is connected with any suitable gas-supply by means of the flexible tube *k*, and by grasping 85 the mixer it and the gas-pipe can readily be rotated to bring any desired portion of the gas-pipe in contact with the walls of the groove of the bracket. The pipe *i* is provided with several longitudinal rows of holes 90 *l*, different distances apart in each row. The pipe thus perforated forms a gas-burner and can be turned to emit more or less gas, according to which rows of holes are against the walls of the bracket, and thereby covered or 95 are free from said walls and hence open. This can be varied by rotating the pipe *i*, as above described.

Base-flues opening rearwardly of the iron are formed by the inclined false bottom *m*, shaped 100 as shown and secured to the bottom of the combustion-chamber just inside of the door. When the door is raised, air will be admitted into the mouths of the funnel-shaped flues, and the movement of the iron to and fro in 105 the operation of ironing will force the air into



the open mouths of the funnels, from whence it will be delivered under the fuel at the bottom of the iron. The faster the operator works the greater will be the draft and the greater the combustion, which is as it should be, as the iron will be cooled more rapidly as the work is accelerated.

The cover *n* of the iron fits upon the body *a* and has the under side flange *o*, which extends down on the inside of the side walls of said body, as shown in Fig. 3. The flange is connected to the wall of the body by the bolts or screws *p*, and the same bolts retain a lining *q* in position, as shown, said lining being separated from the walls of the body by the thickness of the flange, whereby an air-passage is produced, which passage has outside communication through the openings *r* in the top edge of the walls of the iron-body. This construction forms a side air-draft.

The snout *s* of the iron is of usual construction and is formed integral with the cover, and as the draft obtained through an opening suitable for hard fuel is too great for burning gas we will provide the detachable damper *t*, consisting of the two radially-slotted wheels *u u'*, one of which is rotarily mounted on an axis concentric with the other and adapted to be turned to cause its solid portions to close the openings in the other, as desired, this device having a sleeve to fit into the end of the snout. The cover *n* also has the rear end post *v*, between which and the snout the handle *w* is fixed.

Referring now to the door *d*, the handle *e*, previously mentioned, has an integral sleeve portion *x*, into the bore of which the stem *y* of a disk *z* is fastened. This disk has a sloping inner side made by a thickening of one edge of the disk, and it is seated in a depression or socket in the door, which also has a correspondingly - sloped bottom, whereby in one position the outer face of the disk will be flush with the inside face of the door; but when the disk is turned a half-revolution, bringing the thick side of the disk over the shallow side of the socket, the disk will be forced to a position (shown in Figs. 1 and 7) with the disk against the post *v*, clamping the door between the disk and the flanges *c*, thereby locking it in place.

We provide in connection with our iron fluting devices, which consist of the separate handle 2, to which is connected the curved fluting-plate 3, which operates in connection with the fluting-plate 4, which plate 4 is secured to the side of the iron.

It will be noted that the longitudinal edges of the crescent-shaped bracket holding the gas-burner project laterally of the said burner a considerable distance, and the concave under side surface serves as a deflector to direct the gas-flames down into contact with the bottom of the iron. Besides the turning of the gas-pipe rotarily to vary the heating capacity of the burner the action on the iron-bottom may be regulated by changing the al-

titude of the said burner above the said iron-bottom. This is done by raising or lowering the door *d*, whereby the burner is raised or lowered with it. The position of the door will be made certain by means of the disk *z*.

Having thus fully described our invention, what we claim as new, and wish to secure by Letters Patent of the United States, is—

1. In a sad-iron, a hollow body having side and end openings for the admission of air, the side openings being near the top of the iron, conduits inside of the iron leading from the side air-openings and discharging near the bottom of the iron, a vertically-sliding door to open and close the end opening of the iron, means for securing the door at any desired position of its vertical adjustment and a gas-burner attached to and adjustable vertically of the iron with said door, substantially as described and shown.

2. In a sad-iron, a body having a bottom and integral sides but no end and having flanges at the open end, a top having a snout at its front end and a post at its rear end and having an under side flange to fit into the body, a lining placed against the flange on the inside of the body and separated by the flange from the walls of the body said body, flange and lining being bolted together and said body having notches at its upper wall edges, a false bottom with funnel-shaped draft-openings, a vertically-sliding door to close the end opening, said door having a fastening to hold it at any desired adjustment and a bracket carrying a gas-burner, removably secured to the door.

3. In a sad-iron, a hollow body having side and end openings for the admission of air and a top opening or flue for the discharge of waste products of combustion, a vertically-sliding door to open and close the end opening, said iron-body having flanges at the end opening forming runs for the sliding door, said door having a socket with a bottom oblique to its sides, a cam in said socket and a spindle extending through the door to the opposite side of the latter, said cam being adapted by rotating the spindle, to be brought into contact with the post to force the door against the flanges on its opposite side and lock it, and a bracket secured to the inner side of the door and a gas-burner supported by said bracket, substantially as described and shown.

In witness whereof we have hereunto set our hands and seals at New York city, New York, and Indianapolis, Indiana, respectively.

WILLIAM E. HOYT. [L. S.]  
JOSEPH A. MINTURN. [L. S.]

Witnesses to signature of William E. Hoyt:  
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