

P. S. HOWES.

Sad Iron.

No. 10,938.

Patented May 16, 1854.

Fig. 4

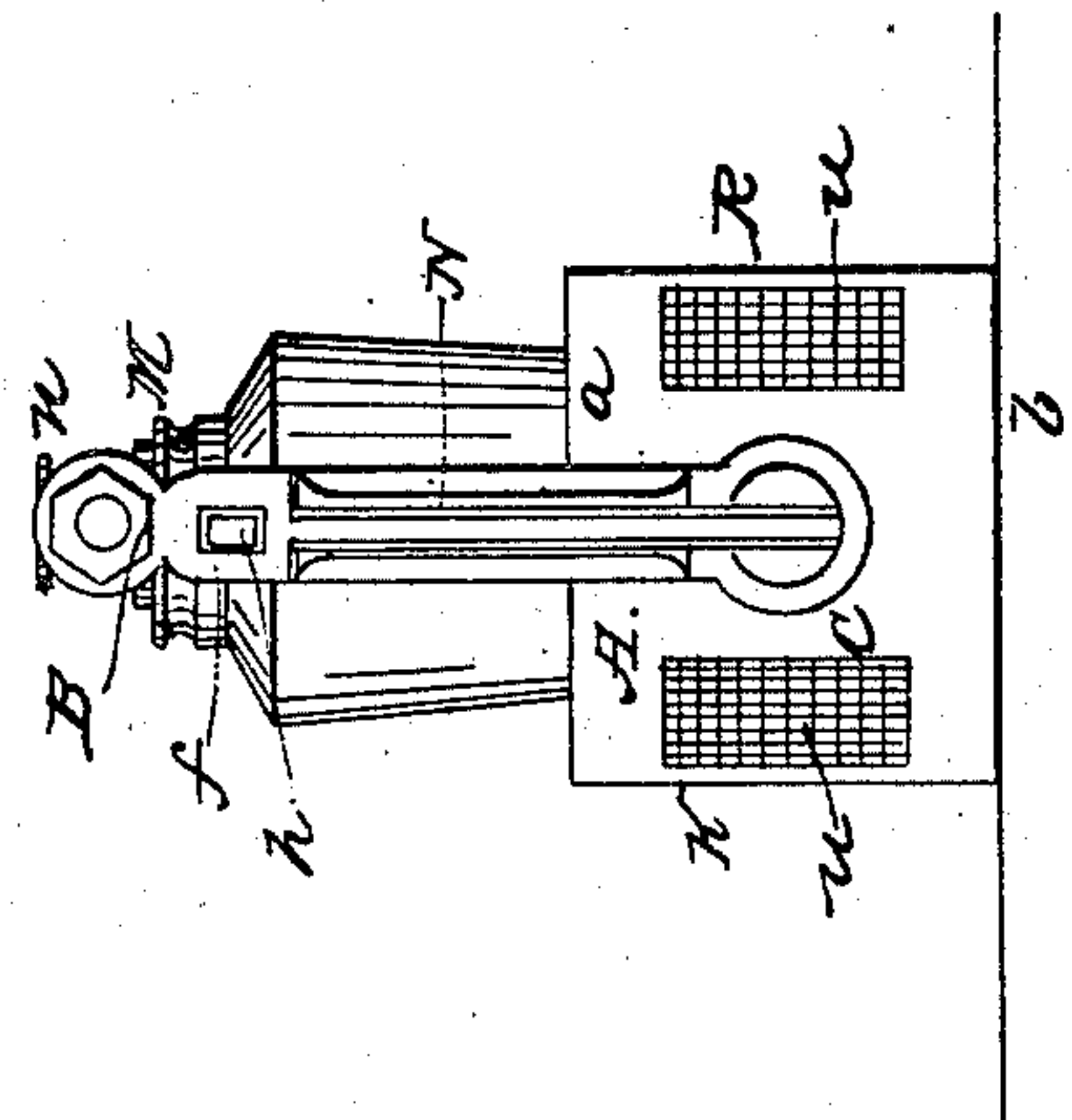


Fig. 1

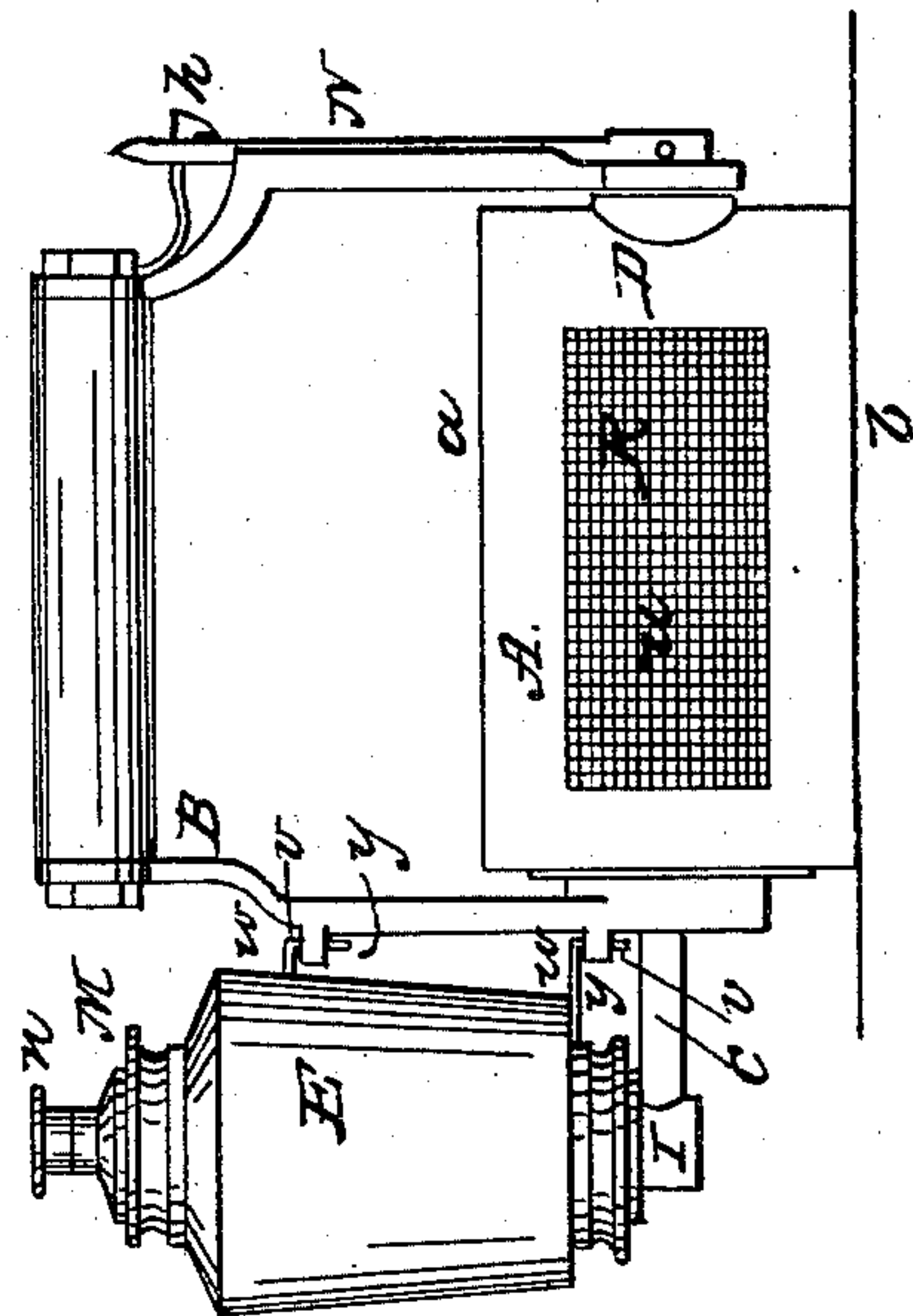


Fig. 2

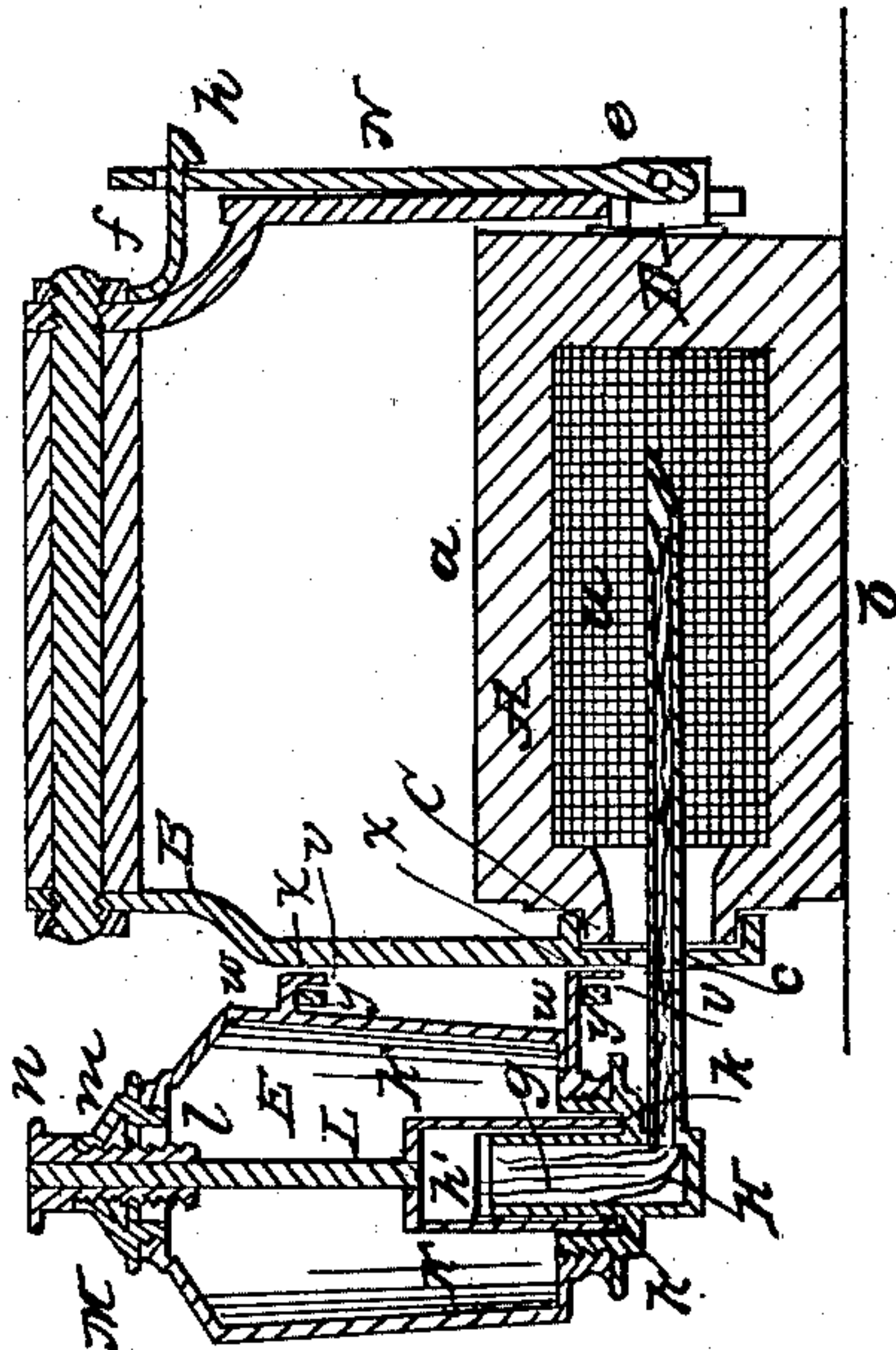
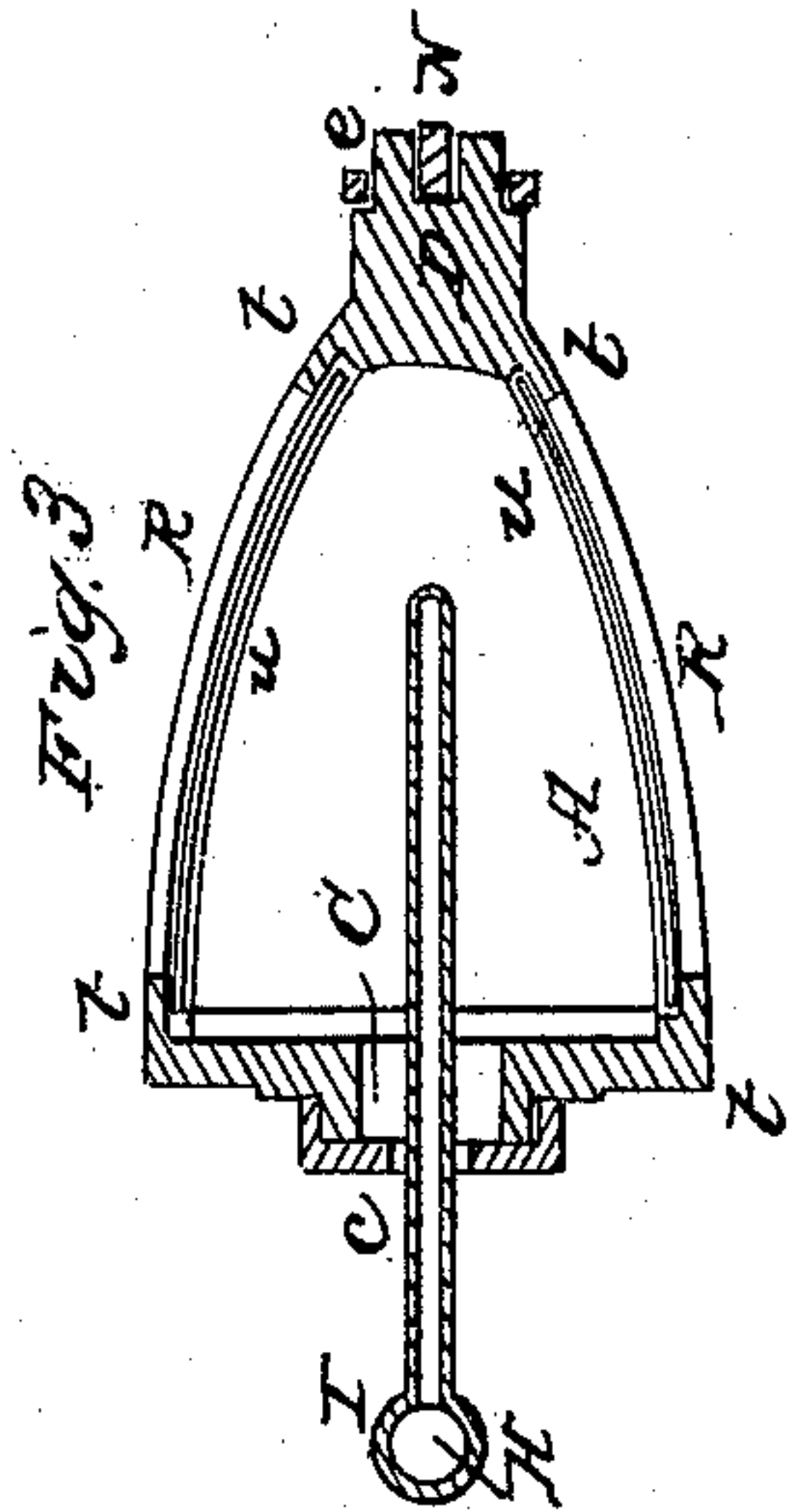


Fig. 3



UNITED STATES PATENT OFFICE.

PETER S. HOWES, OF BOSTON, MASSACHUSETTS.

SELF-HEATING SMOOTHING-IRON.

Specification of Letters Patent No. 10,938, dated May 16, 1854.

To all whom it may concern:

Be it known that I, PETER S. HOWES, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Rotary Smoothing-Iron; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 represents a side elevation; Fig. 2, a vertical, central and longitudinal section. Fig. 3 is a horizontal section taken through the journals of the rotary smoothing chamber. Fig. 4 is a front end view of my improved smoothing iron.

This smoothing iron like others in use consists of a metallic box A, formed with two smoothing faces or flats *a*, *b*, and connected to a handle or bail B, by journals C, D, that project from the ends of the box and extend through bearings made in the lower parts of the vertical slides of the handle. One of these journals, viz., D, is made hollow or tubular in order to admit the wick tube *c* of the spirit lamp E to pass into it. The other journal extends through and beyond the handle, as seen at *e*, and has a turning lever N, jointed to it so as to be capable of being turned in an arc of one hundred and eighty degrees in a vertical plane made to pass through the axial line of the two journals. This lever when pressed up against the handle is made to enter a recess *f* formed in the handle, and to pass upon a spring catch *h*, arranged and applied to the handle as seen in Figs. 1, 2, and 4. The spring catch serves to hold the lever in place when standing upward. By unlatching the spring catch and moving the lever out of the recess of the handle, the said lever may be turned around in a plane perpendicular to the radial line of the journals, and so as to produce the rotation of the ironing box one hundred and eighty degrees of a circle, whereby the positions of the flats or smoothing surfaces may be reversed as occasion may require.

The wick tube *c* of the lamp is made to lead out of a cylindrical or other proper shaped chamber, H, formed in a tube, I, that extends upward from the bottom of the lamp and is closed at its bottom and made open at its top. The wick, *g*, is led into the chamber, H, and up to and in contact with a tube of cloth or capillary cover, *h'*, which

is made to surround and fit close upon the tube, I, and to extend down to a seat or shoulder, *k*, *k*, that is formed around the tube, I, and within the body of the lamp. Inclosing and closely fitting to the said tubular cloth or cover and the tube I on which it is placed is a cylindrical or other proper shaped air vessel, K, that is attached to a rod, L, extending down through the screw or filling cap, M, of the lamp. When the rod extends through said filling cap, it is provided with a male screw, *l*, which screws into a female screw, *m*, attached to or formed in the filling cap. Attached to the top of the rod is a milled nut *n*, by which the rod may be rotated. The screw on the screw rod shall be so arranged or made and applied to the rod as to enable the bottom of the air vessel, K, to be depressed upon the seat or shoulder surrounding the tube, I, or to be elevated to some distance above the said shoulder.

The object of the air vessel K and the tube I is to prevent the swash of the alcohol in the lamp or that movement of it which takes place during, or is produced by the operation of ironing, from causing too great a flow of the alcohol into the wick, which difficulty occurs when the flow is attempted to be regulated by a screw so applied to the wick tube as to pinch the wick in order to overcome its capillary attraction. By screwing down the air vessel so that its bottom or lower edge shall rest upon the shoulder or seat above mentioned, the flow of the alcohol from the reservoir of the lamp to the wick or tubular cloth surrounding the tube I, will be intercepted or prevented. Next, by raising the air vessel above its seat by means of its screw rod we can expose a greater or less amount of surface of the tubular cloth to the fluid so as to regulate the amount of fluid taken up by said cloth by capillary attraction, and delivered to the wick, and this without any injurious pinching of the tubular cloth or wick. By my contrivance I avoid such a pressure on the wick as will tend to condense it and thereby injure its powers of capillary attraction, and I prevent sudden increase of flowage such as would cause the alcohol to pass out of the wick tube and into the chamber surrounding the wick tube.

Instead of making the rotary chamber in two parts as has been customary heretofore to make it, I cast it with its journals in one entire piece and with openings in its oppo-

site sides as seen at R, R, and with a groove, *t*, extending entirely around in the inner edges of said openings, into which groove is to be sprung a sheet of wire gauze or net *u*,
5 the groove serving to sustain the same in place.

The lamp reservoir is attached to the handles by tenons *v*, *v*, that extend down from projections *w*, *w*, from the lamp and
10 into corresponding mortises or holes *x*, *x*, formed in projections or shelves *y*, *y*, extending from the handle as seen in Figs. 1 and 2. Said lamp however may be attached to the handle in any other suitable manner.

15 I do not claim the combination of a rotary box, a supporting bail or handle and a spirit lamp, the box being provided with two smoothing faces or surfaces or flats and made to turn around within the handle so
20 as to bring either of them downward after

it has been heated by the flame of the wick of the spirit lamp, but

What I do claim as my invention is—

The mode by which I prevent the swashing of the alcohol in the lamp, from causing
25 too great or sudden a flowage of the alcohol through the wick, meaning to claim the air vessel K in combination with the tube I, its seat and the capillary covering, the same being applied together and in the reservoir
30 of the lamp and to the wick thereof and made to operate substantially as specified.

In testimony whereof I have hereto set my signature this seventh day of November A. D. 1853.

PETER S. HOWES.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.