W. F. SHAW.

Sad Iron.

No. 18,108. Patented Sept. 1, 1857.

Fig. 1

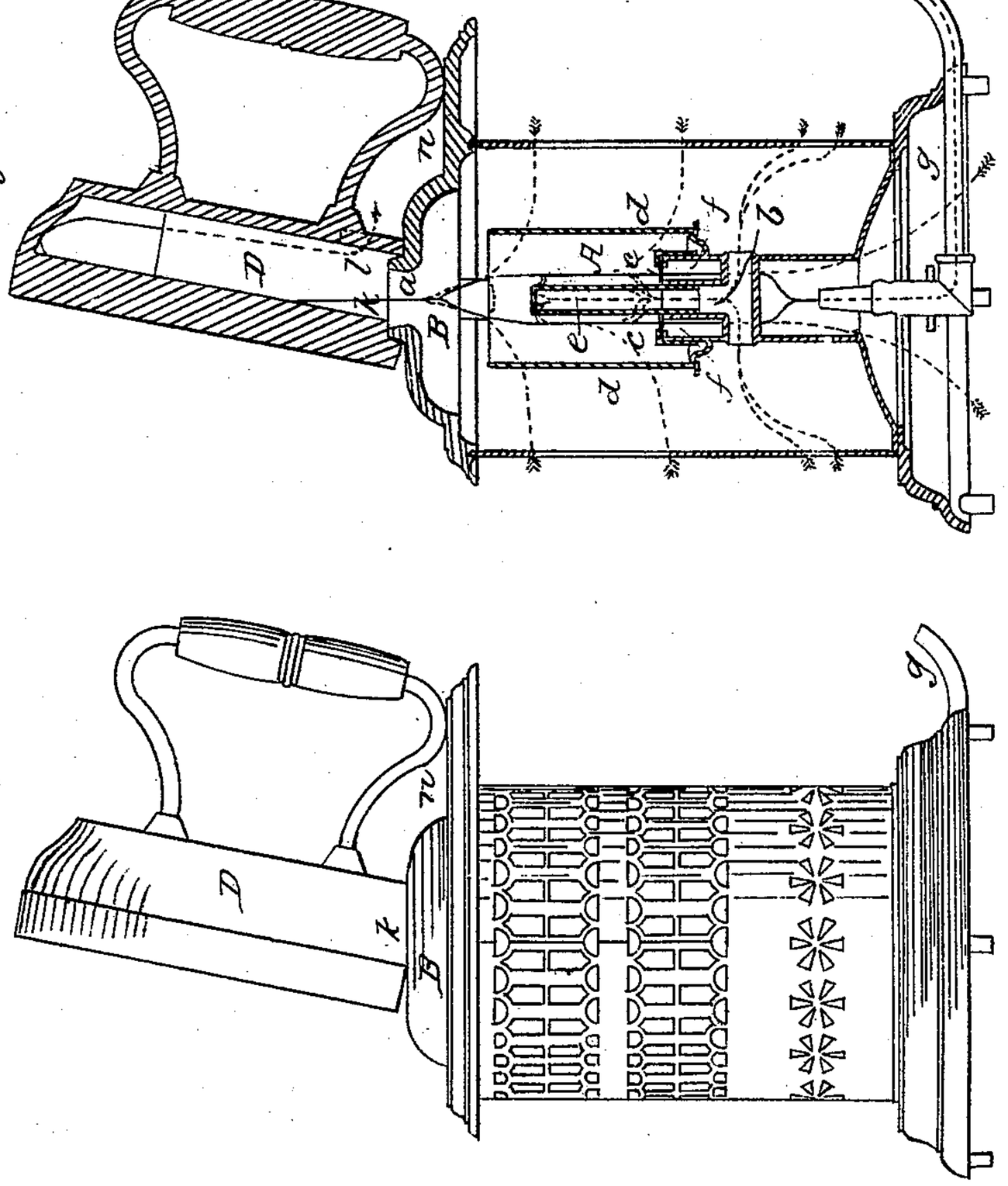


Fig. 2

Fig. 3

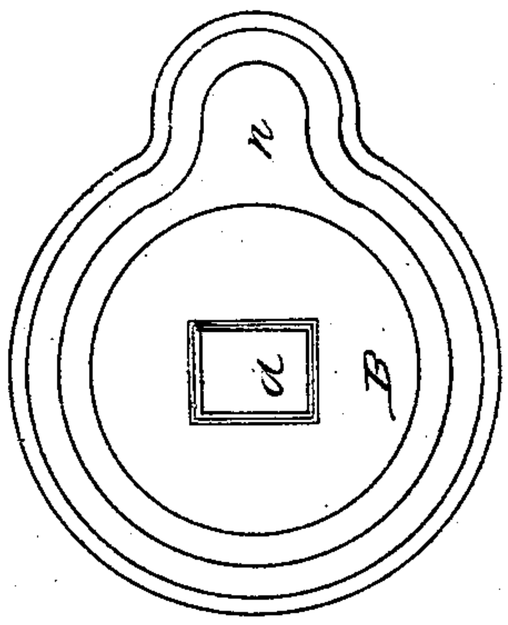


Fig. 4

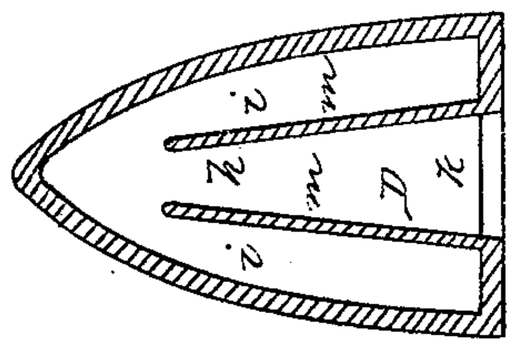


Fig. 5

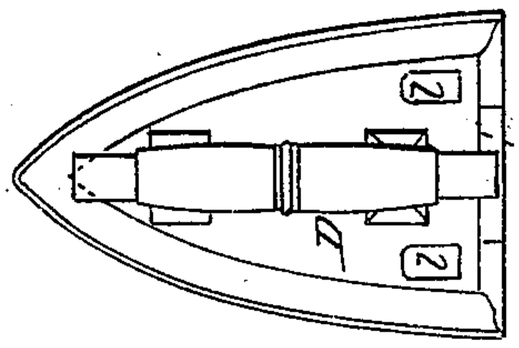
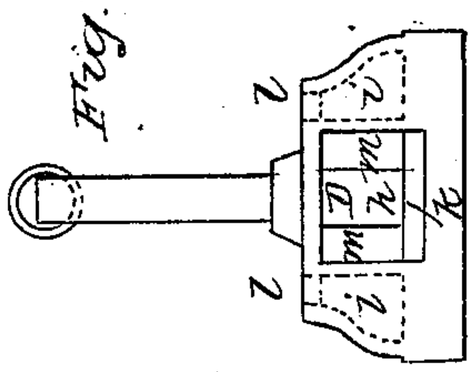


Fig. 6



UNITED STATES PATENT OFFICE.

WM. F. SHAW, OF BOSTON, MASSACHUSETTS.

SMOOTHING-IRON.

Specification forming part of Letters Patent No. 18,108, dated September 1, 1857; Reissued January 31, 1865, No. 1,859.

To all whom it may concern:

Be it known that I, WILLIAM F. SHAW, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful or Improved Apparatus for Heating a Flat-Iron; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 denotes an elevation of the said apparatus. Fig. 2, a vertical and transverse section of the same. Fig. 3, a top view of the stand on which the flat-iron is supported. Fig. 4, a longitudinal section of the flat-iron, the same being taken through its flues and parallel with its smoothing face. Fig. 5, is an elevation of the flat iron and exhibits its outlet passages. Fig. 6, is a rear elevation of the flat-iron made to show the inlet passage.

In these drawings, A represents an air and gas burner inclosed within a case or placed directly under a stand B, which is made with a discharge opening or neck as shown at *a*. The burner is of the Argand kind or constructed so as to have an inner air tube *b*, by which air may be conducted into the interior of the flame, caused by the combustion of air and gas on an annular perforated or wire gauze cap *c*, situated on the top of an air and gas receiving chamber *f*, surrounding the tube *b*, and made open at the bottom to receive air. A tube *g* for supplying the chamber *f*, with inflammable gas may lead into it in any proper manner. The cap *c* is surrounded by a perforated or wire gauze tube *d*, which extends from it as shown in Fig. 2. It also has another wire gauze or perforated tube *e*, extending up from the inner air current tube *b*, and arranged concentrically with the tube *d*. Each of the said tubes *d* and *e* should be made with numerous holes extending through its entire sides so as to permit many small streams of air to flow through the sides of the said tube into the flame which may be on or near the cap when the apparatus is in operation. The two tubes, *d* and *e* operate together greatly to improve the heating powers of the flame and prevent the formation of aldehyde and formic acid or noxious vapors or gases. The heat and volatile products of coombustion pass off through the surface or neck of the stand and enter the body of the flat-iron placed on the stand and over the said neck, as shown at *a*, in the drawings.

The flat iron is constructed with a chamber or flue space D, arranged within its body and provided with an inlet opening *k*, disposed in the heel of the iron. The flue space is also furnished with one or more discharge passages or outlets as shown at *l*, *l*. This flue space as represented in Fig. 4 of the drawings is divided by two partitions *m*, *m*, into one ascending and two descending flues *h*, *i i*, the latter two having outlets *l*, *l* made laterally through the iron at their lower ends. The smoothing iron might be made with one single ascending and one single descending flue, but I prefer two descending flues, as they serve to effect a better or more even distribution of the heat over the smoothing surface of the iron. Without such flues that part of the iron in proximity to its nose or front end would become very much more heated than the heel of the iron, and consequently would be likely to burn an article on which it might be used.

The stand is made with a projection or rest *n*, for sustaining the handle of the iron such rest being arranged so as to cause the iron to take an inclined position as shown in Figs. 1 and 2, whereof it is caused to heat to better advantage than when it stands upright.

By my invention a flat iron or smoothing iron may be heated to great advantage and little cost by means of gas burned with air as specified.

I do not claim heating a flat iron by means of a lamp having its wick tube or the flame of its wick within the body of the iron; nor do I claim heating a flatiron by charcoal or other fuel burned in a chamber made within the body of the iron; nor do I claim herein, the application of a wire

gauze or perforated chimney to an air and gas burner, so as to surround the flame as such has heretofore been patented by me; but

What I do claim is—

Making the flatiron with ascending and descending flues, inlet and discharge openings arranged in the body of the iron and so as to be used with a burner and stand in manner substantially as specified.

In testimony whereof I have hereunto set my signature.

W. F. SHAW.

Witnesses:
R. H. EDDY,
F. P. HALE, Jr.

[FIRST PRINTED 1912.]