

C. F. & W. McCARTY.
Flat Iron.

No. 230,641.

Patented Aug. 3, 1880.

Fig. 1

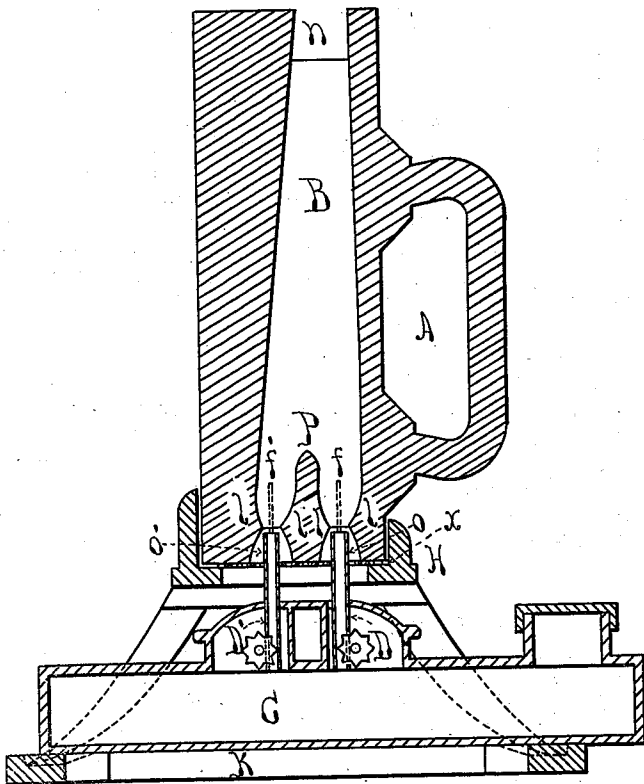
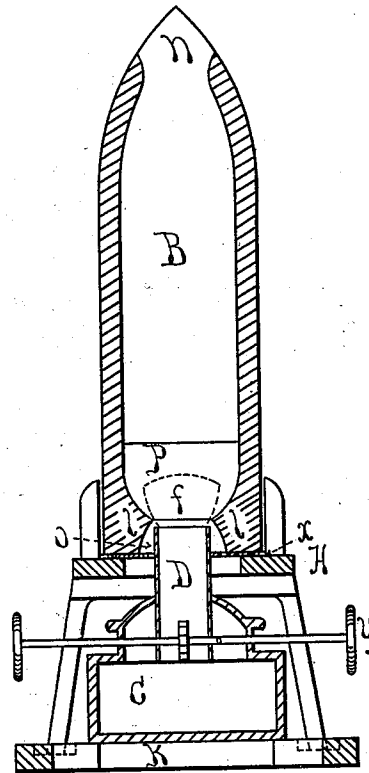


Fig. 2



Witnesses.

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Inventors

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UNITED STATES PATENT OFFICE.

CREMORA F. McCARTY AND WILLIAM McCARTY, OF BOSTON, ASSIGNORS OF
FOUR-FIFTHS OF THEIR RIGHT TO FRANCIS AMORY, OF BEVERLY, AND
SAMUEL SNOW, OF CAMBRIDGE, MASSACHUSETTS.

FLAT-IRON.

SPECIFICATION forming part of Letters Patent No. 230,641, dated August 3, 1880.

Application filed June 6, 1879.

To all whom it may concern:

Be it known that we, CREMORA F. McCARTY and WILLIAM McCARTY, both of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Flat-Irons, &c., of which the following is a specification.

Our invention relates to flat-irons and similar devices for smoothing and pressing seams and fabrics, especially to those designed to be heated internally by flame, and to the apparatus for heating the same, and are designed and found by actual use by us to overcome certain difficulties and imperfections heretofore existing in such devices, and also to go farther and make a tailor's goose as practically and successfully heated by flame of a lamp as other and smaller irons have been. The nature of these improvements will be apparent from the following description, taken in connection with the drawings, in which—

Figure 1 represents a vertical section through a goose (in the plane of its handle) and lamp and holder in position for heating, and embodying our improvements in one form; and Fig. 2 represents, in a vertical section at right angles to the other, the same apparatus, both sections being through the center.

In these drawings, A is a tailor's goose or large and heavy flat-iron, having an internal cavity, B, and an opening, *n*, at the top, with its base or rear end downward. C is a lamp of any convenient form, but which we usually make long and low and with a water compartment or tank thereon to keep it cool and safe, and which has the wick-tubes or simple burners D D'. H is a holder or stand, having a table or flat part to receive the base of the iron, legs to support it at a suitable height, and, as we generally make it, with lugs or keeps projecting upward from the table or flat part to adjust and hold the iron in position. The flat part of the holder is made open, so as to admit of the air passing freely upward through it and around the wick-tubes, and may be made in skeleton, with a piece of perforated sheet metal, *a*, on it for the iron to rest on, and which the tubes D' D may pass up through. K is a base or flat frame which sup-

ports the whole, the lamp resting on it, and the legs of the holder H resting in grooves or slots therein, and the whole is so constructed as to bring as little metal as possible in contact with the iron or goose and the lamp, as the latter must not be overheated. *y* is a thumb-wheel, spindle, and ratchet in usual form for turning the wick up or down, and the dotted lines at *f* and *f'* indicate the lamp-flame.

Three objects of our improvements may now be adverted to—viz., to utilize all the heat produced by the flame as far as possible, to increase the heating capacity, and economy of construction; and these objects are to be attained by preserving complete combustion of the flame at the same time, so as to avoid smokiness, &c. The object of securing stability and adjustment of a heavier iron is attained by the holding device already described.

One difficulty hitherto found with this class of devices was the impracticability of bringing the flame up into the iron far enough to allow the latter to take all the heat. Another was that the tailor's goose, which often weighs twenty-five pounds or more, would not heat quickly and sufficiently with one flame or one burner, and merely bringing two common burners together at or in the base of the iron would result in the running together of the flames into one of imperfect combustion, and the opening in the iron must also be larger, which allows of too much cooling of the iron in the use of it; and another difficulty was the expensiveness of a complex burner with dome to collect the flame and the added fact that with a large lamp and iron and strong heat this dome burns out and melts down. These and other difficulties are overcome and results hitherto unattained are reached by the following features and modifications in our contrivance: We make the burner D simple and strong in the parts connected with the lamp, and so as to reach just within the base of the flat-iron when in position for heating, and we make the rest of it in the base of the iron, *o* being a rounded cavity about the tube D, defined by the ledge or projection *l*, which divides the cavity *o* from the cavity B, the latter being shaped for and operating as a

chimney, and the former as a cone or dome to collect and direct the draft and flame, thus completing the burner.

P is a partition or standing wall within the goose and having the ledge *l* continued along it on either side, and which separates the flames and drafts, where two or more burners are desired, for a sufficient distance upward to allow of complete combustion. We usually make the cavities *o* about an inch in height, and the partition P about one-fourth or one-fifth the height of the iron.

It is desirable, we find, in these hollow irons to have the openings at either end as small as possible to prevent too much current of cold air in using them, and we find by experiment that this arrangement of the partition is better than carrying it entirely through. The ledges *l*, with the properly-shaped cavities above and below, as well as the partition P, can be cast in the iron with no appreciable increase in difficulty or cost; and the contrivance so made, even with a single burner, is much more effective, durable, and economical, while with two burners, as shown in Fig. 1, a goose of fifteen pounds weight can be heated in fifteen minutes without danger or destruction of the lamp to a degree impossible with any contrivance we know of.

The perforated sheet *x* is shown in the drawings as below the support of the goose; but when we have it in operation we place it above, and so that the base of the goose rests on it.

We do not claim any novelty or invention in the form of the lamp apart from the burner,

nor in the suggested arrangement of a water-tank thereon, nor in the perforated sheet *x*, or its position when in use, these being incidental and well-known parts of related devices.

We claim as new and of our invention—

1. A hollow flat-iron adapted to be heated by flame, constructed with a ledge, *l*, so formed inward as to bound and combine with the cavities *o*, *o'*, and B, substantially as and for the purposes set forth.

2. The described goose or flat-iron, adapted to be used with a lamp for heating, consisting internally of the cavity B, opening *n*, cavities *o* *o'*, and ledges *l* *l*, and the partition P.

3. The cone or dome *o* for a wick-tube, D, cast or made in and continuous with the metallic base of a hollow flat-iron or tailor's goose adapted to be heated by flame from such wick-tube, said dome *o* being constructed with a contraction, as at *l*, so as to gather and direct the air-current about the flame, and to operate as and take the place of the usual dome of the burner, of which the wick-tube D is a part, substantially as set forth.

4. In a hollow flat-iron or tailor's goose adapted to be combined with a wick-tube and heated by flame, a partition, P, and openings *o*, *o'*, and *n*, constructed and arranged substantially as shown and described.

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Witnesses:

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