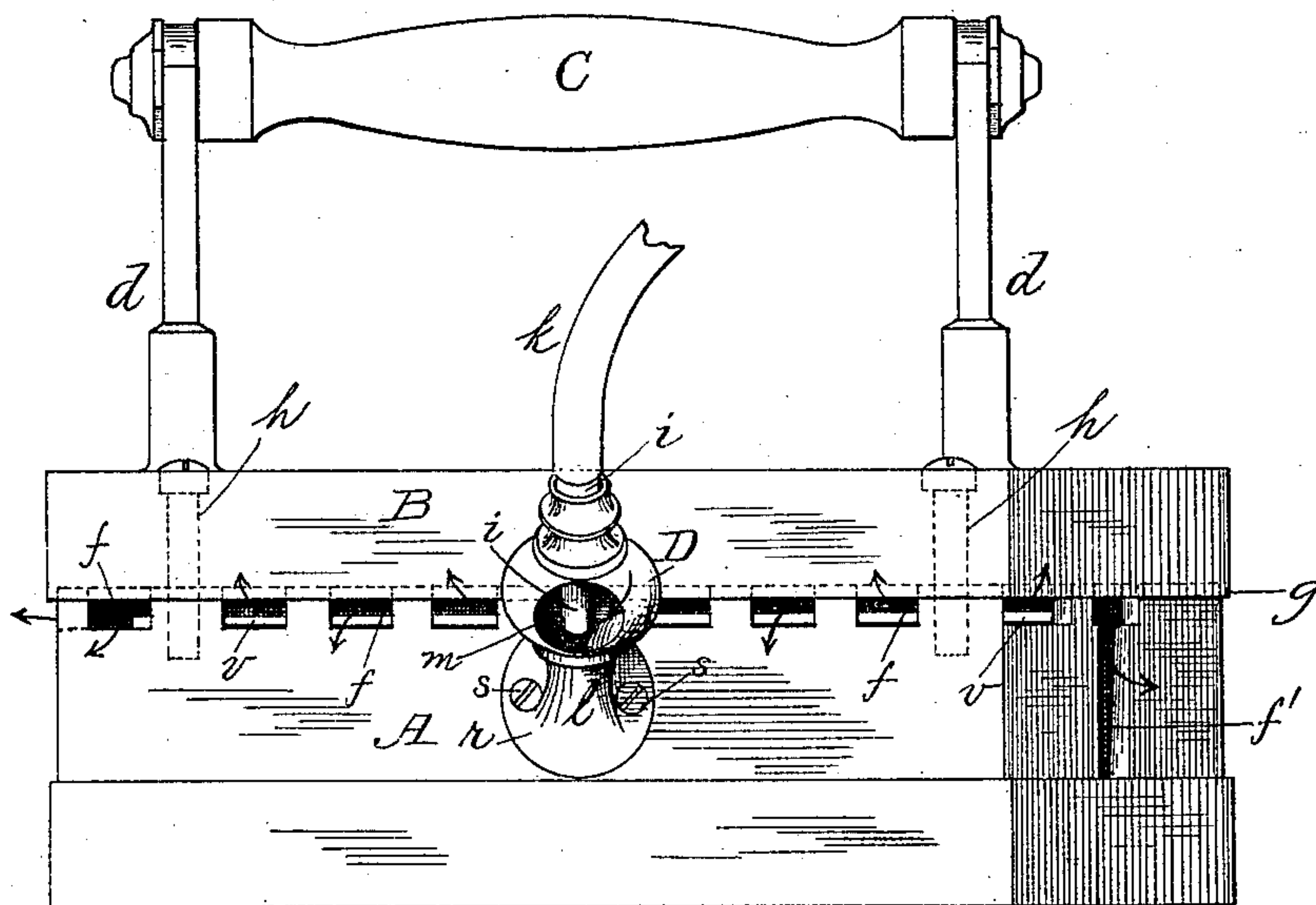
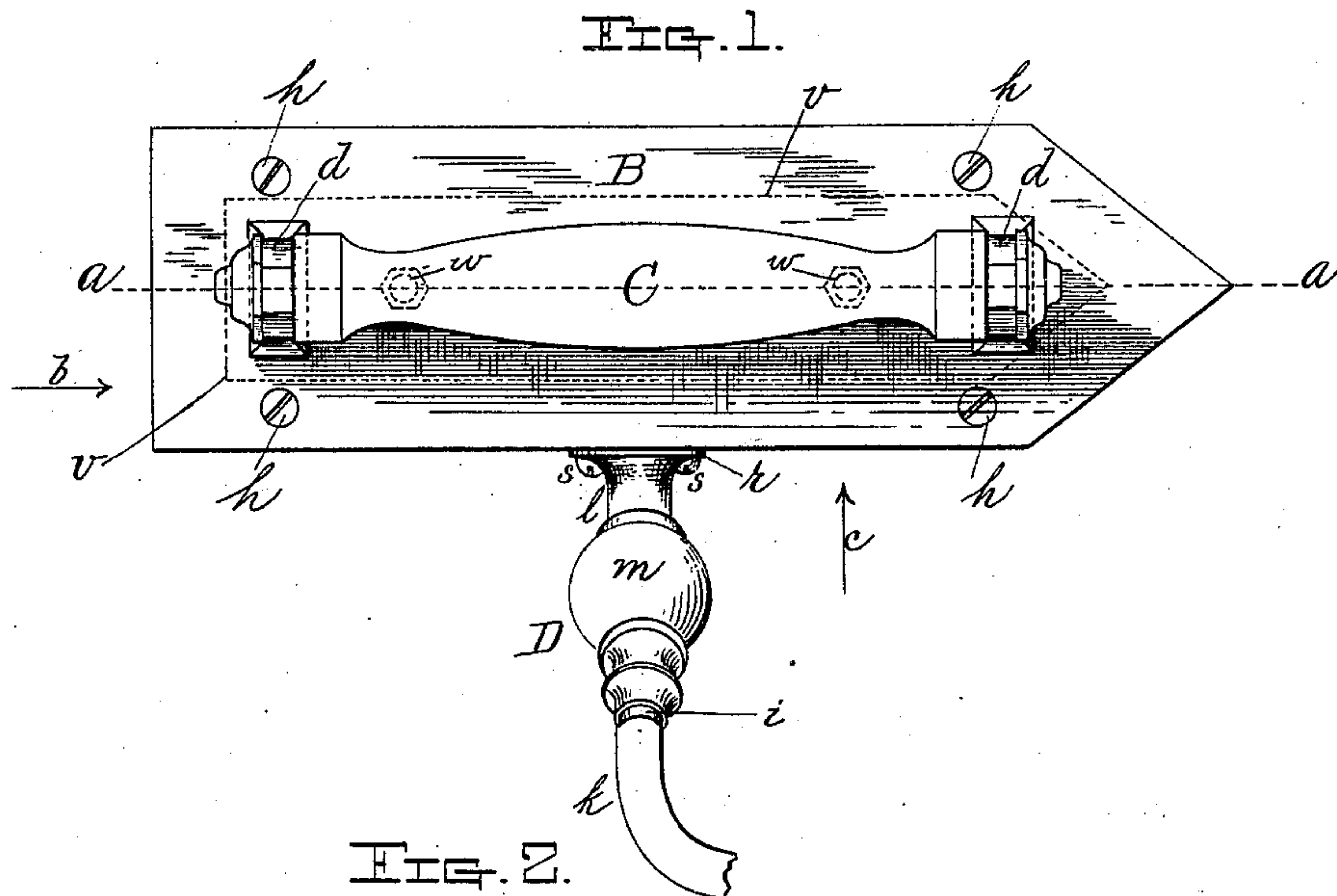


D. A. UPHAM & T. J. FAY.

TAILOR'S GAS IRON.

No. 343,409.

Patented June 8, 1886.



Witnesses;
Walter B. Nourse.
Lucius W. Briggs.

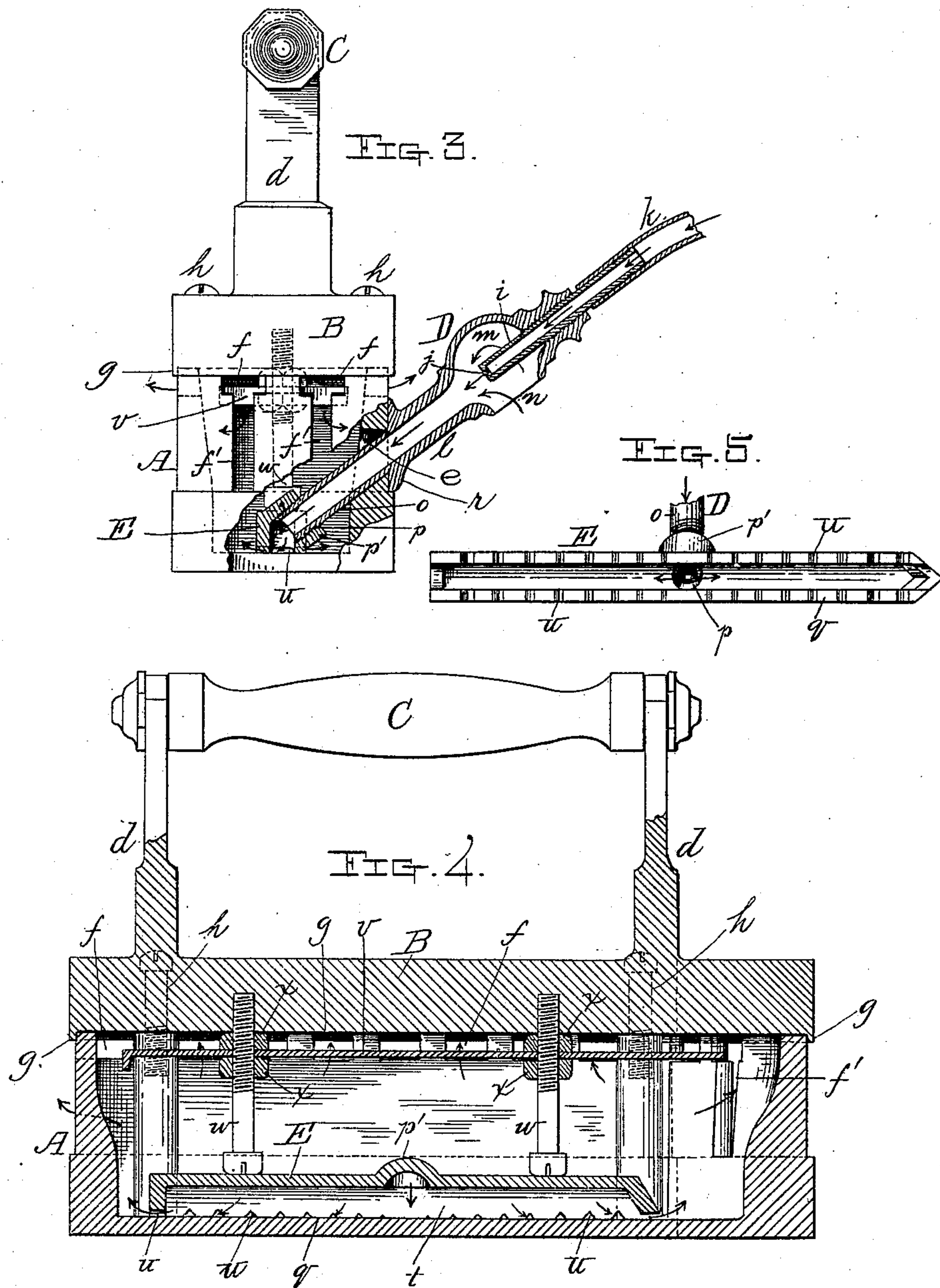
Inventors;
David A. Upham.
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By A. A. Barker Atty.

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UNITED STATES PATENT OFFICE.

DAVID A. UPHAM AND THOMAS J. FAY, OF WORCESTER, ASSIGNORS, BY
DIRECT AND MESNE ASSIGNMENTS, OF ONE-FOURTH TO ANNIE F. LUS-
COMB AND JOSEPH M. PARSONS, BOTH OF SALEM, MASSACHUSETTS.

TAILOR'S GAS-IRON.

SPECIFICATION forming part of Letters Patent No. 343,409, dated June 8, 1886.

Application filed September 12, 1885. Serial No. 176,962. (No model.)

To all whom it may concern:

Be it known that we, DAVID A. UPHAM and THOMAS J. FAY, both of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Tailors' Gas-Irons; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a top or plan view of our aforesaid improved gas-iron. Fig. 2 represents a side view of the same, looking in the direction indicated by arrow *c*, Fig. 1. Fig. 3 represents an end view, looking in the direction of arrow *b*, Fig. 1, a part of the iron being shown in section to illustrate some of the interior parts of the same, hereinafter described. Fig. 4 represents a central vertical longitudinal section of the iron, with the exception of its handle, which is shown in elevation, taken on line *a a*, Fig. 1, looking in the direction of arrow *c*, same figure; and Fig. 5 represents a bottom or under side view of the burner and a part of the gas-pipe of our improved gas-iron, hereinafter more fully explained.

Our invention relates to gas-irons for tailors' use; and it consists in the improved construction and arrangement of parts, hereinafter described, and pointed out in the claims.

To enable those skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe it more in detail.

In the drawings, A represents the bottom or base part of the iron, and B its top part or cover, which is provided with vertical standards *d d*, for holding the handle C at the upper ends thereof. The base A is made hollow, and with an open top, over which the cover B is fitted, as shown in the drawings. It is also provided with a side opening, *e*, to receive the gas-supply pipe D, and with a sufficient number of side and end ventilating-openings, *f f'*, for the products of combustion to pass off when the iron is in use. The outer edge

of the bottom of the cover B is provided with a flange, *g*, which fits over the top edge of the base A when said cover is placed in position. Said parts are fastened together by means of screws *h*, one at each corner in this instance.

The supply-pipe D is fastened at its inner end to a long burner, E, and its outer end is provided with a short section of pipe, *i*, having a small central opening, *j*, at its inner end, which may be made larger or smaller, as desired, in making the iron, so as to obtain a greater or less gas-supply to the iron.

Over the outer end of the section of pipe *i* is fitted one end of a flexible conducting-pipe, *k*, whose opposite end is connected with the main gas-supply in the usual way.

The main part or base *l* of the supply-pipe D is made with an enlargement or chamber, *m*, having an opening, *n*, in its lower side to admit of an inflow of fresh air, and thus maintain the combustion in the iron after the gas is lighted. As the pipe *i* is extended down into the chamber *m* nearly to the mouth of the long opening in the pipe *l*, a strong inward draft is produced by the pressure of the gas, thus causing a current of air to be carried along with the gas into the burner E, as indicated by the arrows in Fig. 3.

The purpose of the chamber *m* is to admit of a free circulation of air around the lower or inner end of the pipe *i*, thus causing a more thorough mixture of the gas and air than by the use of a straight pipe with a side opening in the ordinary way. Said chamber *m*, in connection with the section of pipe *i*, also serves to regulate in a measure the gas-flame in the burner E by increasing or decreasing the distance between the inner end of said pipe and the mouth of the opening in the part *l* aforesaid, more or less fresh air to increase or decrease the heat of the flame in the burner being mixed with the gas by means of the adjustment above described, and by the use of a pipe, *i*, having an opening, *j*, of the proper size to correspond therewith.

In fitting and fastening the supply-pipe D and burner E to an iron the inner end, *o*, of

the part *l* is first passed through the opening *e*, before alluded to, in the back side of said iron. The threaded opening *p* in the hub *p'* of the burner is then placed against the inner threaded end of the supply-pipe, when said pipe while in a horizontal position is turned against the burner, which is held stationary, thus fastening them together. Said pipe is now turned up into an inclined position, as shown in Fig. 3, so as to bring the bottom flat side, *q*, of the burner against the bottom of the inside of the iron, and a flange, *r*, formed on the pipe at an angle to the same against the vertical side of the iron. Said parts are then fastened in position by means of screws *s*, as shown in Figs. 1 and 2.

The burner *E* is made in the form of a long and narrow inverted trough, being made hollow with the bottom open and square in cross-section.

When the burner is placed upon the bottom of the inside of the iron, as shown in Figs. 3 and 4, a chamber, *t*, is formed, in which the gas is deposited from the supply-pipe, hereinbefore described. Exit-openings for the burning gas-fumes are formed at the bottom edges of said chamber by cutting notches *u* crosswise of the bottom edges of the burner and at each end thereof, as is fully shown in Figs. 3, 4, and 5. As the greatest pressure of gas is applied at the center of the burner, the notches *u* aforesaid are made smaller at that point and gradually increased in size toward its outer ends, as shown in Figs. 4 and 5, thus regulating the outflow of burning gas from the bottom edges of said burner, and consequently causing a nearly equal distribution of heat over the bottom of the iron. By thus controlling the supply of gas, so as to apply it directly to the surface required to be heated, it is obvious that a very economical use of gas is effected.

In practice we have ascertained that by the use of even a less quantity of gas than is commonly consumed by an ordinary burner for lighting purposes, the iron may be heated in a very few minutes, ready for use, and while in use we find that the maximum amount of gas consumed does not exceed five feet per hour. It is therefore evident that a large saving in fuel is effected over the usual way of heating ordinary tailors' irons upon stoves. The heating may be more expeditiously performed and saves a large amount of dust and dirt ordinarily resulting from the use of stoves.

In the drawings, we have shown the notches *u* in the burner *E* A-shaped; but we do not wish to limit ourselves to this shape, as they may be made square or any other shape suitable for the purpose.

In order that the cover *B* and handle *C* may be heated as little as possible while the iron is in use, we interpose a division-plate, *v*, between said cover and the burner *E*. In this instance we have arranged said plate with its bottom about upon a level with the bottoms of

the ventilating-openings *f*, and said openings are made entirely around the iron, a free circulation of air passes over it, which greatly assists in keeping the upper parts of the iron cool. In addition to this the handle *C* is made of wood or similar material. It is therefore never heated so as to be uncomfortable to the hand in taking hold of the same.

The division-plate *v* is held in position by means of screws *w w*, extended up into the cover, as shown in Fig. 4, and set-nuts *x* at each side of the plate. The screws *w w* not only serve the above purpose, but also, by being extended down to the top of burner *E*, serve to assist in holding said burner in position upon the bottom of the iron.

Although we prefer in practice to use both the division-plate *v* and holding-nuts *w w* for the purposes hereinbefore stated, either one or both may be dispensed with without materially affecting the utility of our gas-iron. It is desirable to use them, however, as a more complete iron is thereby produced.

By leaving off the standards *d d* and handle *C* our improved gas-iron may be used in combination with a pressing-machine, in which case the division or guard plate *v* may be dispensed with and only the screws *w w* for holding the burner in position used. The same modification may also be adopted, if desired, for a hand-pressing iron such as hereinbefore described.

Having described our improvements in tailors' gas-irons, what we claim therein as new and of our invention, and desire to secure by Letters Patent, is—

1. The combination of the base part *A*, provided with the ventilating-openings *f f'* and side opening, *e*, cover *B*, having the supporting-standards *d d* and handle *C*, and fastening-screws *h*, with the burner *E*, provided with the graduated notches *u* and the gas-supply pipe *D*, constructed and arranged substantially as described, and adapted to be fastened to the side of the base *A*, to the burner *E*, and to the flexible gas-conducting pipe *k*, substantially as and for the purposes set forth.

2. The combination of the base part *A*, provided with the ventilating-openings *f f'* and side opening, *e*, and cover *B*, having the supporting-standards *d d* and handle *C*, with the gas-supply pipe *D*, constructed and arranged substantially as described, and adapted to be fastened to the side of the base *A*, to the burner *E*, and to the flexible gas-conducting pipe *k*, burner *E*, provided with the graduated notches *u*, holding-screws *h w w*, division-plate *v*, and set-nuts *x*, substantially as and for the purposes set forth.

3. The combination of the burner *E*, provided with the graduated notches *u*, with the base *A*, having the side opening, *e*, and gas-supply pipe *D*, constructed and arranged substantially as shown and described, for the purpose stated.

4. The combination of the flexible gas-con-

ducting tube *k* and short section of pipe *i*,
having the end opening, *j*, for regulating the
inflow of gas, with the part *l* of gas-conduct-
ing pipe *D*, having an enlarged portion to form
5 the circular chamber *m*, and an air-inlet, *n*, at
one side of said chamber, said part *l* also be-
ing adapted to be fastened to the burner *E*,
about midway between the ends thereof and

to the base part *A* at an angle thereto, sub-
stantially as shown and described, for the pur- 10
pose specified.

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THOMAS J. FAY.

Witnesses:

ALBERT A. BARKER,
WALTER B. NOURSE.