

(No Model.)

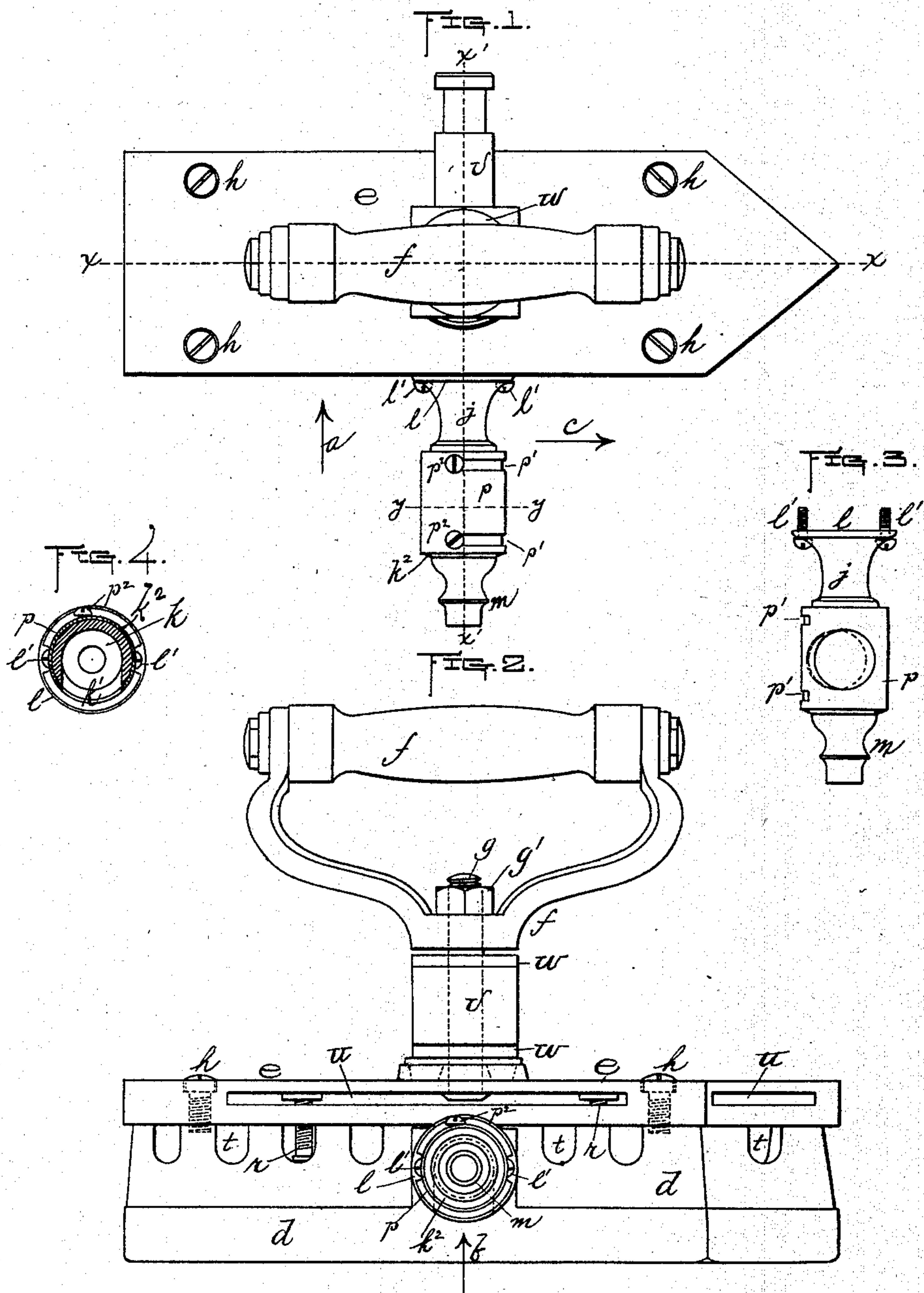
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D. A. UPHAM & T. J. FAY.

## TAILOR'S GAS IRON.

No. 413,354.

Patented Oct. 22, 1889.



Witnesses;

Walter B. Nourse;  
Lucius W. Briggs.

Inventors;

David A. Mpham  
Thomas J. Fay.  
By A. A. Barker, Att'y.







(No Model.)

3 Sheets—Sheet 3.

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Fig. 9.

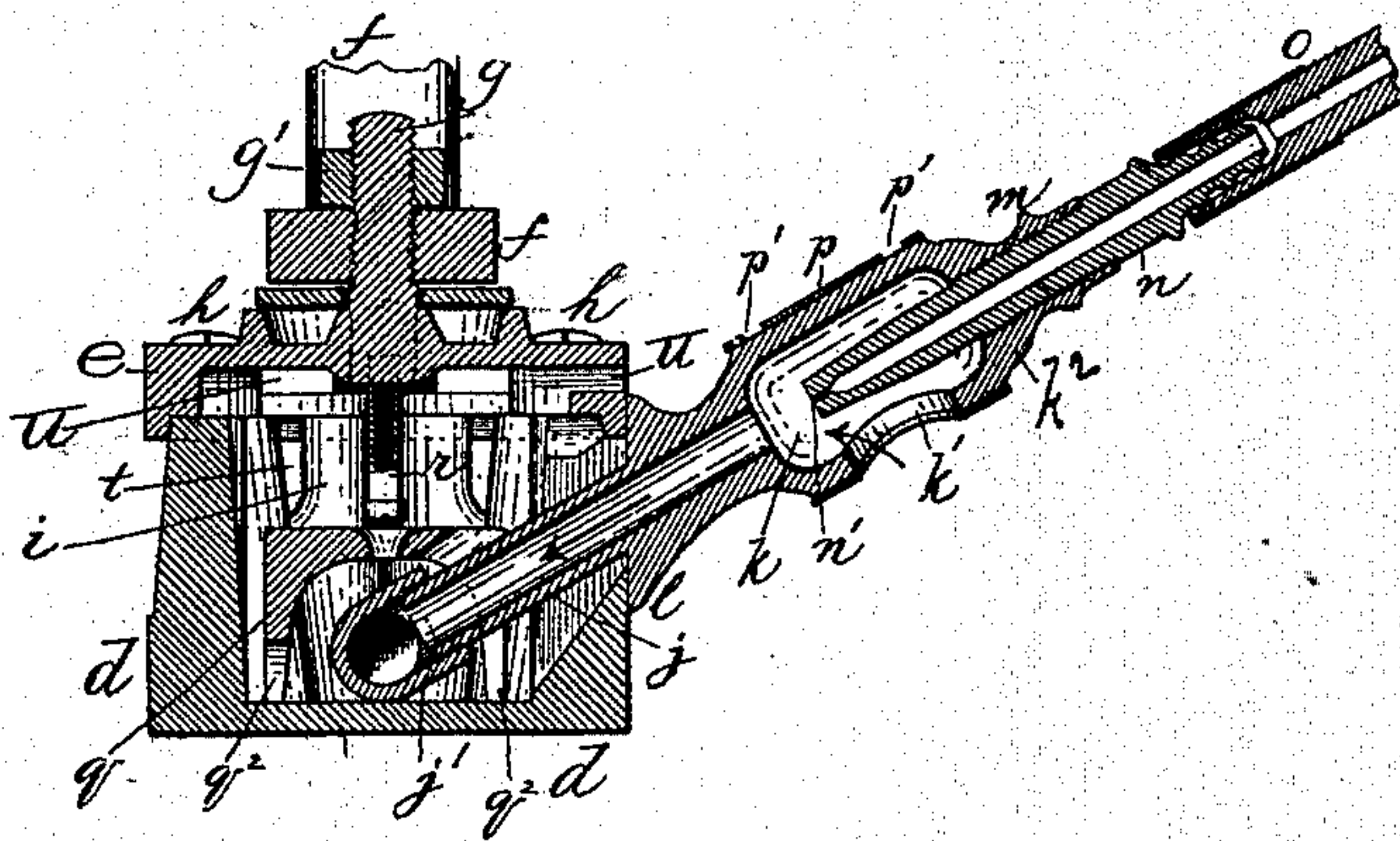
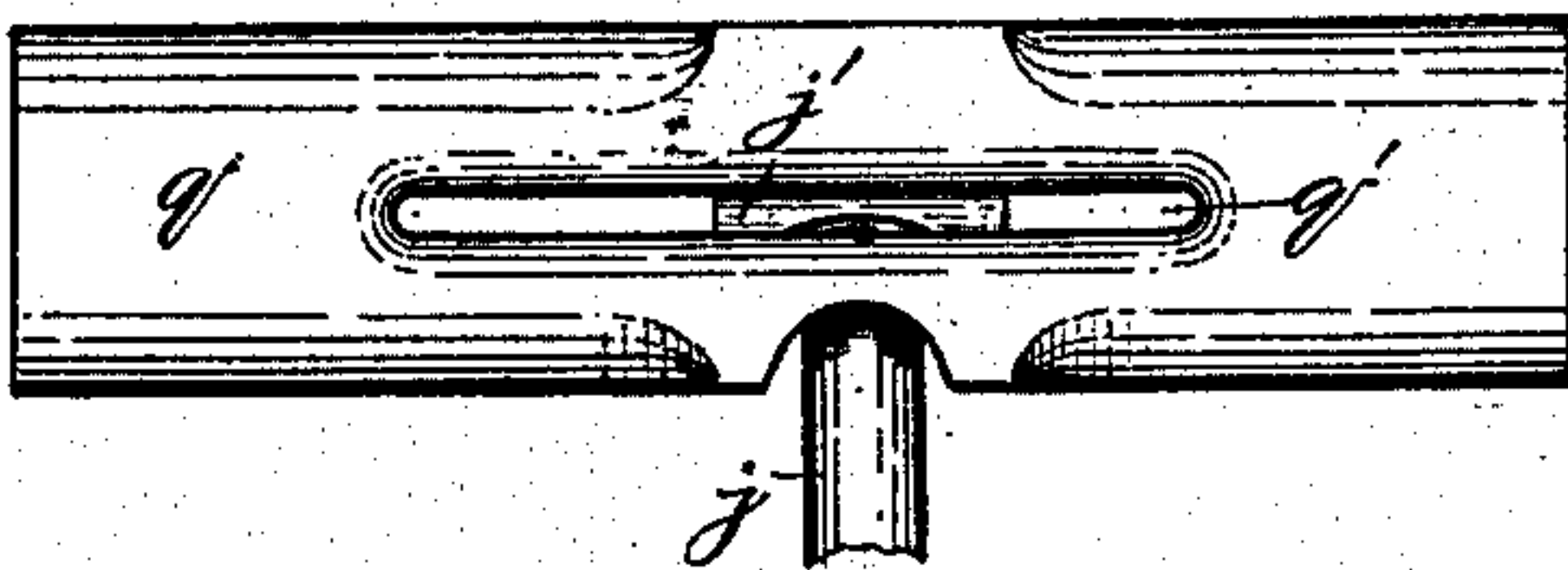


Fig. 10.



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# UNITED STATES PATENT OFFICE.

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ASSIGNORS TO THE WORCESTER GAS IRON COMPANY, OF PORTLAND,  
MAINE.

## TAILOR'S GAS-IRON.

SPECIFICATION forming part of Letters Patent No. 413,354, dated October 22, 1889.

Application filed December 17, 1886. Serial No. 221,900. (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, and in which—

Figure 1 represents a top or plan view of a tailor's gas-iron embodying our improvements. Fig. 2 is a front side view thereof looking in the direction of arrow *a*, Fig. 1. Fig. 3 is an under side view of the outer end or nozzle of the supply-pipe of the iron, hereinafter more fully described, looking in the direction of arrow *b*, Fig. 2. Fig. 4 is a cross-section thereof, taken on line *y y*, Fig. 1. Fig. 5 is a central, vertical, longitudinal section through the iron, taken on line *x x*, Fig. 1, looking in the direction indicated by arrow *a*, same figure. Fig. 6 is a transverse vertical section through said iron, taken on line *x' x'*, Fig. 1, looking in the direction of arrow *c*, same figure. Figs. 7 and 8 represent a top and bottom view, respectively, of the burner of our improved iron. Fig. 9 is a transverse section similar to that shown in Fig. 6, showing modifications in the construction of the iron, hereinafter more fully explained; and Fig. 10 is a top view or plan similar to that shown in Fig. 7, representing a modification in the burner, also hereinafter more fully explained.

Our invention relates to tailors' gas-irons adapted to be combined with a cloth-pressing machine or used for hand pressing.

It relates more particularly to improvements upon the tailor's gas-iron set forth in a former application filed by us September 12, 1885, and for which we were subsequently granted Letters Patent No. 343,409, under date of June 8, 1886.

Said invention consists of the improved construction and arrangement of parts hereinafter described, and pointed out in the claim.

To enable others 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 the part marked *d* represents the bottom or base of the iron, *e* its top or cover, and *f* its handle, which is fastened to said cover by means of the bolt *g* and nut *g'*. The base *d* is made hollow and the cover *e* fitted over the top edges thereof. They are fastened, when thus fitted together, by means of screws *h*, one at each corner in this instance.

The gas is introduced into the chamber *i* or interior of the iron to heat the bottom thereof by means of a short pipe *j*, having a T *j'* upon its inner end arranged to discharge the gas toward the ends of the iron, and provided at its outer end with an air-chamber *k*, having an opening *k'* in its under side to admit fresh air when the iron is in use. Said outer end is also provided with a flange *l*, by means of which and the screws *l'* said pipe and the parts connected thereto may be fastened to the base *d* of the iron, said base being also provided with an opening in its side to receive the pipe and admit of the aforesaid parts being fitted and fastened in position, as shown in the drawings.

The chamber *i*, it will be understood, comprises the whole interior hollow portion of the iron under cover *e*.

The outer extremity of the air-chamber terminates in a threaded opening formed in the neck *m*, in which is fitted the gas-supply tip *n*. The inner end thereof is extended through the air-chamber *k* just beyond the inner side of the inlet-opening *k'*, as shown in Figs. 6 and 9, and its outer end is made to fit into the end of a flexible conducting-pipe *o*, connected at its outer end with the main gas-supply, as is usual in such cases. For the purpose of convenience only a short section of said conducting-pipe is shown in the drawings.

The supply of gas to the iron may be regulated by using a tip having a larger or



smaller opening  $n'$  at its inner extremity, as desired. The supply of air to the chamber  $k$  may also be controlled by increasing or decreasing the size of the inlet  $k'$ . This we accomplish by means of a collar  $p$ , having an opening equal in size to opening  $k'$  and fitted to turn on the part  $k^2$ , in which said chamber is formed. Therefore, by turning said collar to bring the two openings in line with each other, as shown by full lines in Figs. 3 and 4, the full capacity of opening  $k'$  may be used, or the same reduced by bringing more or less of said collar over the opening, as shown by dotted lines in Fig. 3. In the above manner it is obvious that the combustion may be controlled to produce any degree of heat desired from the minimum to the maximum capacity of the iron.

The aforesaid collar  $p$  may be kept in position longitudinally by means of lateral slots  $p'$  made therein and screws  $p^2$ , fastened in the part  $k^2$ , which extend out through said slots, or in any other suitable and convenient manner.

The heat produced by the burning gas at the outlets of the  $T j'$  is confined, principally, to the bottom of the iron by arranging a long hood  $q$  over said  $T$ , as shown in the drawings. Said hood is made with open ends and extends nearly to the ends of the iron, as shown in Fig. 5. It is also provided with a longitudinal slot  $q'$  in its top, as well as one or more side openings, for the purpose hereinafter described.

The heating of the bottom of the iron may be facilitated by directing the flame against the same by inclining the two outlet branches of the  $T j'$  down, as is also shown in Fig. 5; and to further facilitate said heating a slot  $j^2$  may be made longitudinally in the bottom of said  $T j'$ , through which the gas may be discharged to produce a flame under said  $T$  and extending up each side thereof.

The  $T j'$  may be passed through the top of the hood, as shown in Figs. 7 and 8, or through the side thereof, as shown in Fig. 10. When the iron is combined with a pressing-machine; the first of said constructions is adopted, and the supply-pipe is arranged at right angles to said iron, as shown in the first eight figures; but when it is used for hand pressing or ironing, the supply-pipe is arranged at an angle thereto, as shown in Fig. 9, and the  $T$  inserted through the side of the hood, as shown in Fig. 10. Said modifications in the construction are simply for the purpose of convenience in using the iron in the two ways named rather than for effecting any better results.

The hood  $q$  may be more securely held in position upon the bottom of the inside of the iron by means of holding-screws  $r r$ , extending down from the cover and bearing upon said hood.

The aforesaid  $T j'$ , in connection with the

hood  $q$ , constitutes the burner of our gas-iron, as will be obviously seen.

In addition to the air-supply hereinbefore described through the inlet  $k'$ , air is also admitted directly to the flame under the hood, to add force to said flame, through a series of openings  $t$ , formed around the top edges of the base  $d$ , and the longitudinal opening  $q'$ , formed in said hood. Openings  $q^2$  are also formed in the sides of the hood—one upon each side in this instance—for the same purpose.

The products of combustion rising to the top of chamber  $i$  pass off through the horizontal openings  $u$ , formed in the edges or flanges of the cover, as indicated by the arrow in the drawings.

A greater or less number of openings may be formed in the base  $d$ , cover  $e$ , and hood  $q$  than shown and described, if desired. The shapes thereof may also be varied to suit different requirements without departing from the principle thereof.

The part marked  $v$  is a swivel-bolt, whose inner end is made with a vertical slot to receive the vertical bolt  $g$ , and which is fitted to turn in a socket-piece  $w$ , held in position by passing said bolt  $g$  through vertical openings formed therein. The purpose of said swivel-bolt device is to form a means of fastening a pressing-machine to the iron, said connection being made in the usual way. When the gas-iron is made especially for hand use, said swivel device is left off, and the handle-connection made as shown in Fig. 9, the frame of the handle being brought in direct contact with the top of the cover or an interposing washer placed between said parts.

We have previously obtained a United States patent for improvement in tailors' gas-irons, the same being numbered 343,409 and dated June 8, 1886. We are aware also of United States patents for similar devices granted to A. F. Zimmerling, No. 269,368, dated December 19, 1882, A. I. Varney, No. 322,217, dated July 14, 1885, and C. H. Parsons, No. 207,299, dated August 20, 1878; also of the English Patent No. 3,739, granted to C. L. Mensing November 18, 1873. In all of said patents the sad-irons therein shown and described effect similar results to those produced by our invention, but by a construction unlike that shown and described in our application. In view of said patents we disclaim all right to the features, considered broadly, therein set forth, and limit our invention to the special construction and arrangement which we have shown, specified, and pointed out in the claim.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a tailor's gas or sad iron, the combination of the base and supply-pipe thereof



with a burner consisting of the T j' and  
hood q, said T extending forward and down  
from the inner end of said pipe, with its two  
branches projecting laterally therefrom, and  
5 provided with a longitudinal slot at the bot-  
tom and the hood made open at both ends,  
with suitable air-inlets at the top and sides,  
also with an opening to receive the T, and

arranged longitudinally in the bottom of the  
iron over said T, substantially as set forth.

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