C. L. TAYLOR.

PRESSING AND STEAMING IRON.

APPLICATION FILED APR. 4, 1917.

1,237,726.

Patented Aug. 21, 1917.

2 SHEETS—SHEET 1.

Fig. 1

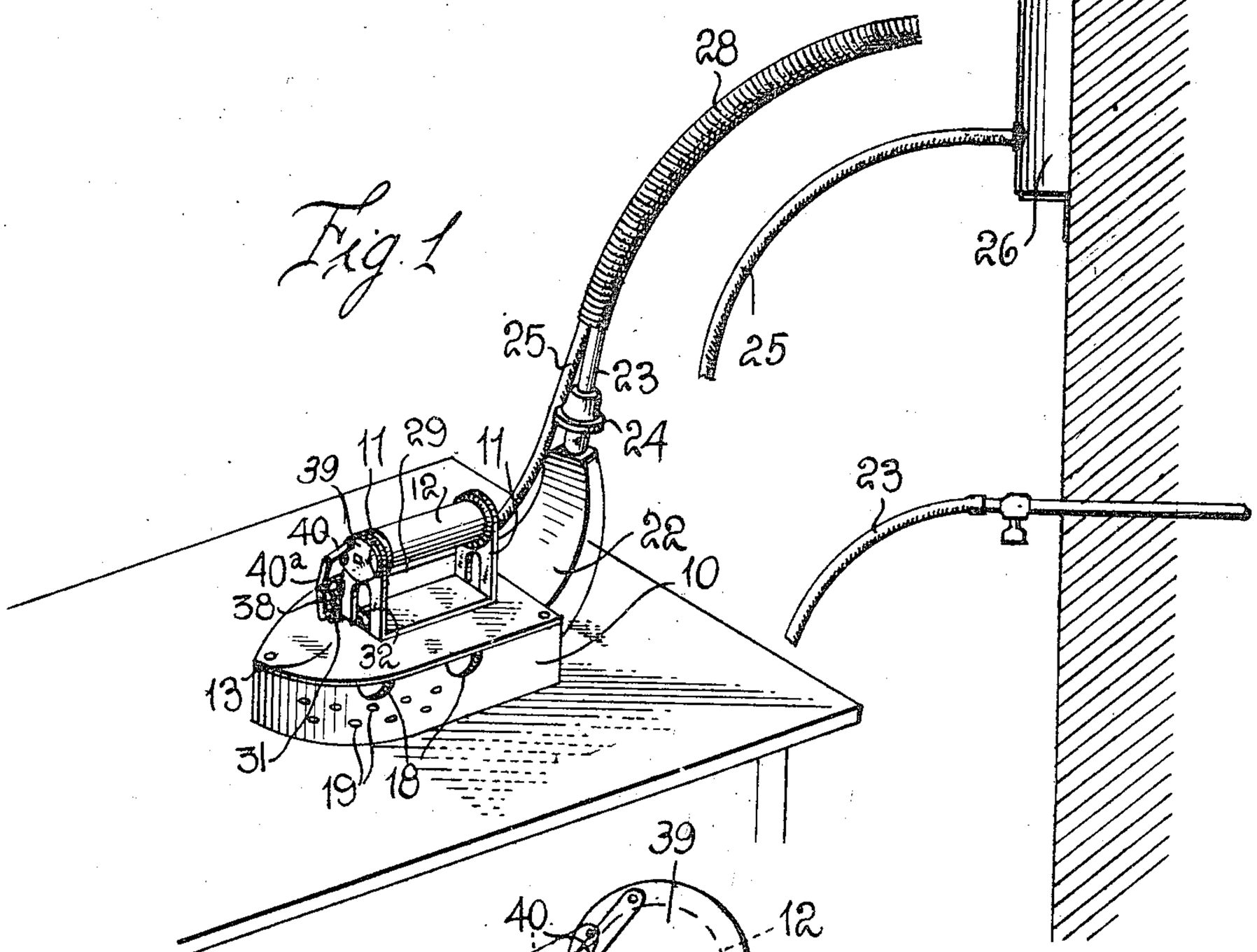


Fig. 4

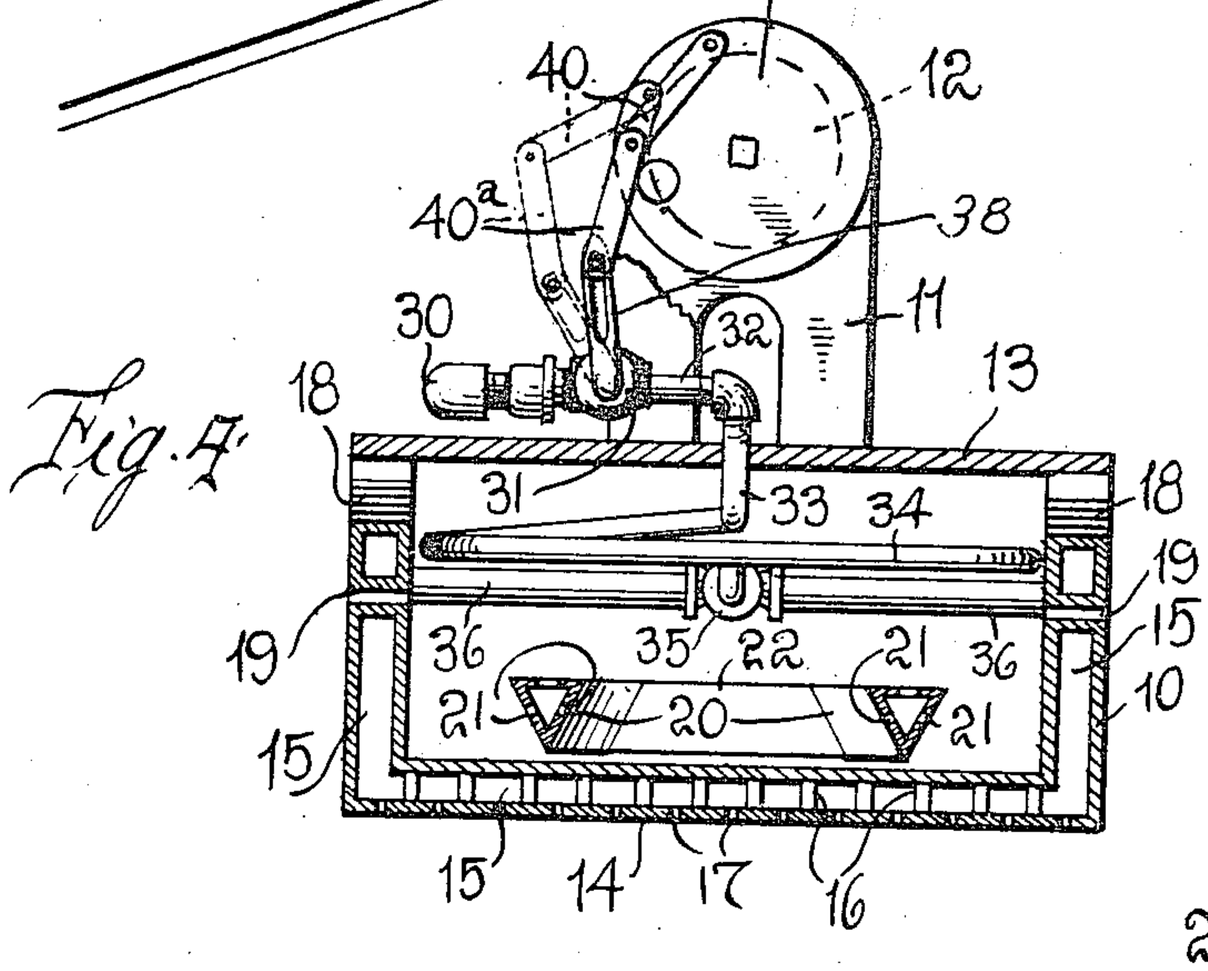
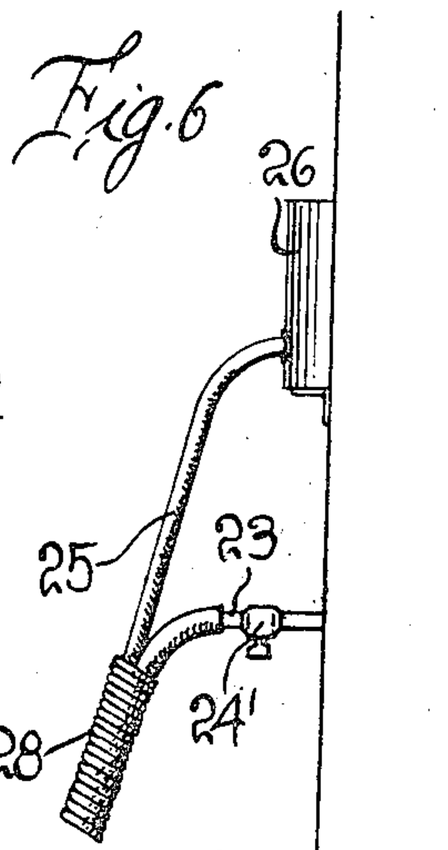


Fig. 6



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2 SHEETS—SHEET 2.

Fig. 2

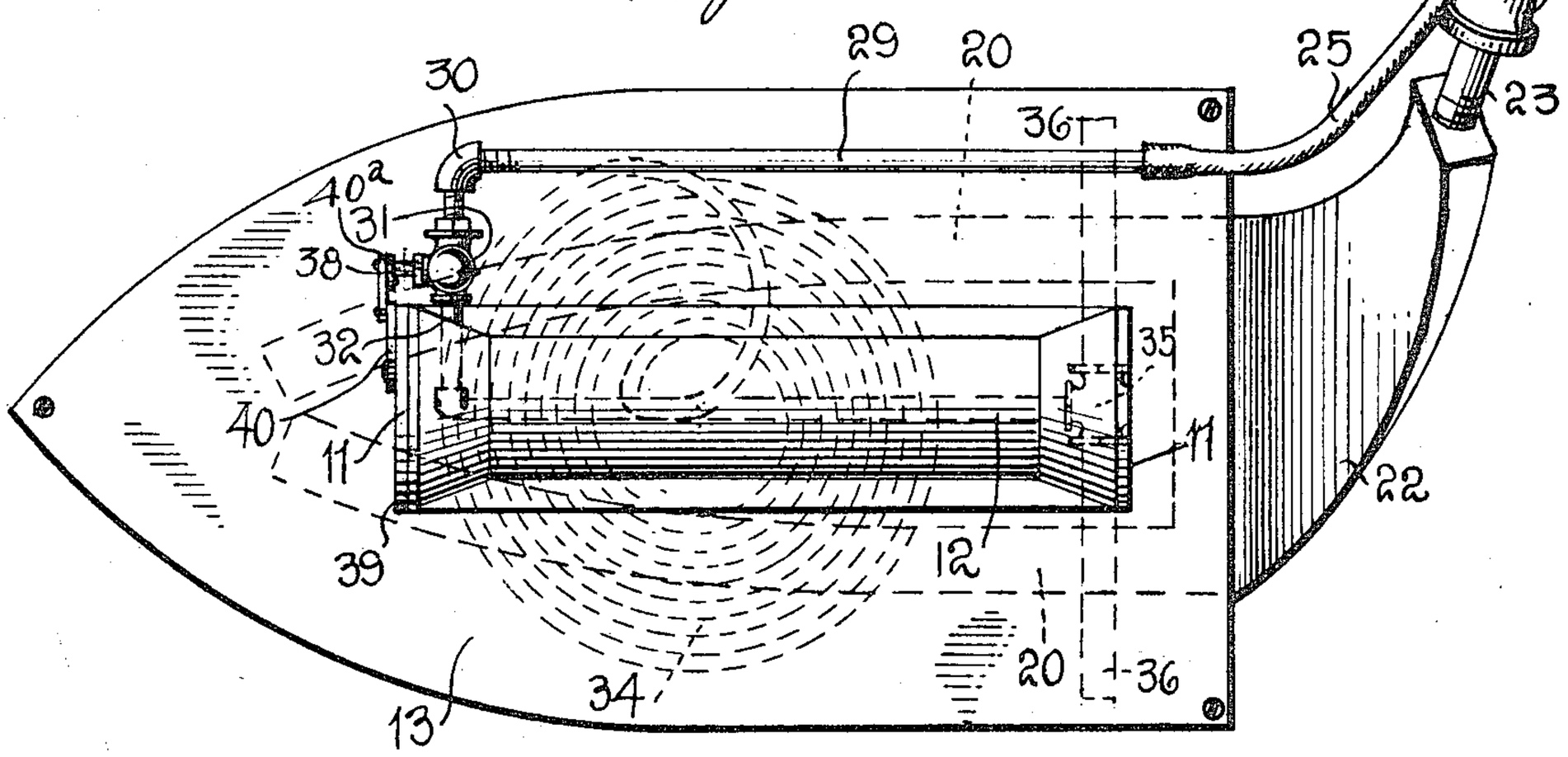


Fig. 3

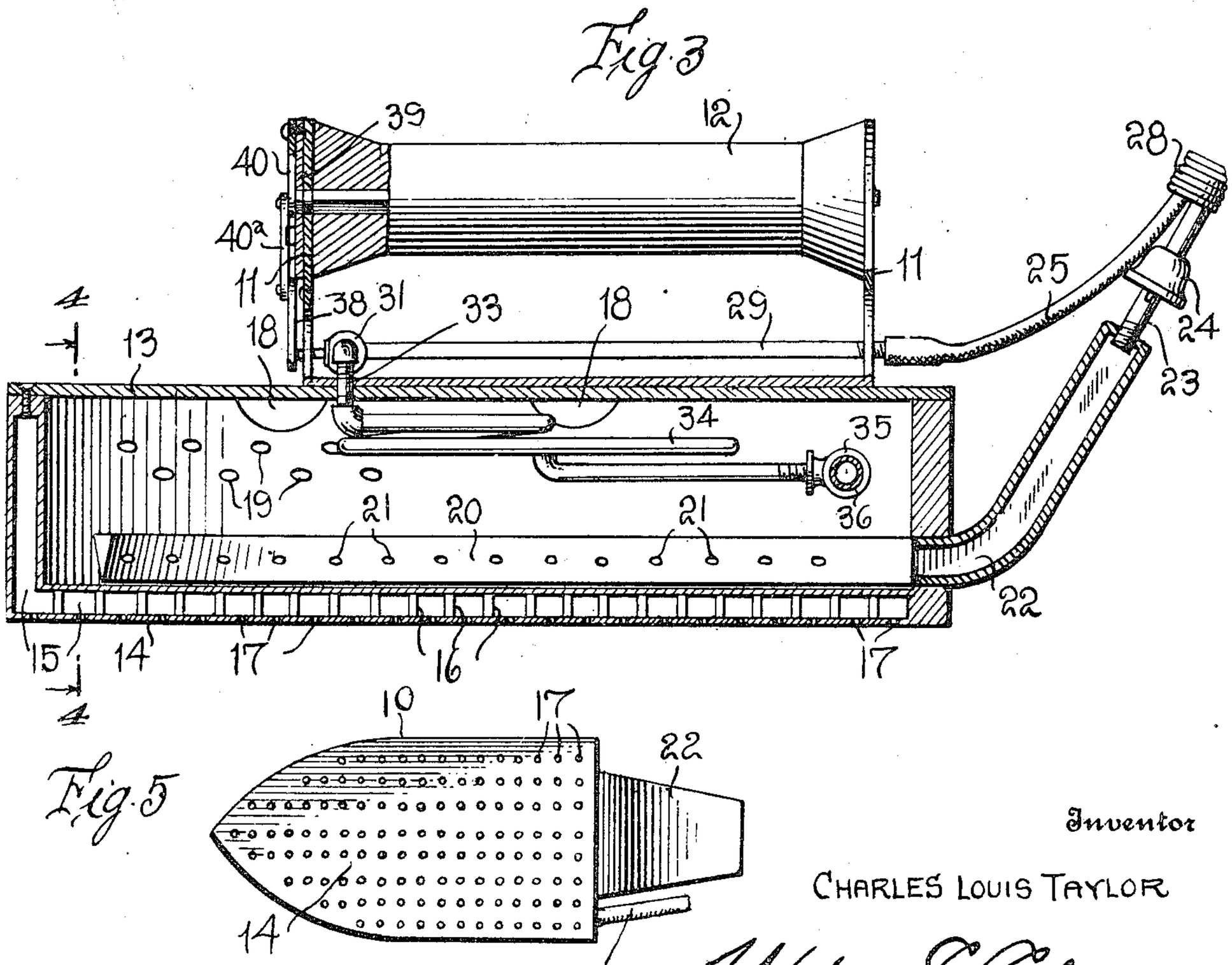


Fig. 5

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PRESSING AND STEAMING IRON.

1,237,726. Specification of Letters Patent. Patented Aug. 21, 1917.

Application filed April 4, 1917. Serial No. 159,839.

To all whom it may concern:

Be it known that CHARLES LOUIS TAYLOR, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, has invented certain new and useful Improvements in Pressing and Steaming Irons, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to pressing irons, such as are used by tailors and particularly to self heating irons.

The object of this invention is to provide a pressing iron particularly designed for use in tailor shops where clothes are pressed and sponged, the iron being so constructed that it will not only be heated, but will generate steam, which steam will be forced through perforations into the material being pressed, thus doing away with the necessity of sponging or otherwise dampening the material being ironed.

A further object of the invention is to provide means on the handle of the iron for controlling the flow of water to the steam generator.

A further object is to improve the details of construction of irons of this character by providing means whereby air for combustion may enter the iron, providing an improved form of burner therein and providing for an improved form of steam generator.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of an iron constructed in accordance with my invention;

Fig. 2 is a top plan view of the iron illustrated in Fig. 1;

Fig. 3 is a longitudinal sectional view of the iron illustrated in Fig. 2;

Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 3;

Fig. 5 is an underside view of the iron; and

Fig. 6 is a fragmentary elevation of the gas and water connections to the iron.

Referring to this drawing, 10 designates the body of the iron which has approximately the usual form and is provided with the upwardly extending handle supports 11, upon its upper surface, these handle supports supporting a rotatable handle 12 which may be made of any suitable material, but is preferably made of non-heat conducting material. The supports 11 are mounted upon a cover plate 13, which is attached to the body of the iron in any suitable manner and the side walls of the iron and the bottom 14 are hollow, so as to provide a steam space or chamber 15, extending through the walls of the iron and through the bottom thereof. The inner wall of this steam space may be supported from the outer wall of the steam space by integral webs or pins 16. The bottom of the iron is formed with a plurality of openings 17 leading from the steam space, these perforations or openings being relatively small and being disposed uniformly over the face of the bottom. The upper edges of the side walls are cut away at a plurality of points, as at 18 to permit hot air to pass and products of combustion to escape from the interior of the iron and preferably the side walls are provided with a plurality of outwardly extending tubes 19 through which air may pass into the interior of the iron for the purpose of supporting combustion. Supported in the large end of the iron and extending toward the small end thereof are a pair of burner pipes 20, which are preferably angular in cross section and formed upon their inner faces with downwardly opening perforations 21, whereby the flames from the burners may be discharged against the bottom of the iron and on their upper faces with apertures discharging jets of flame upward against the coil 34. These burner tubes or pipes 20 extend into a common header 22 and this header is operatively connected to a gas pipe 23 by means of a detachable coupling 24, this gas pipe 23 leading to a source of gas shown as a gas bracket 24 provided with a stop cock.

For the purpose of supplying water to the iron, I provide the water pipe 25 which is connected to any suitable source of water as, for instance, the reservoir 26, this pipe 25 being made of flexible material and extending down beside the pipe 23 and preferably being connected thereto by a wrapping 28. A flexible pipe 25 extends downward to the iron and connects to a pipe 29 which extends over the cover 13 and at its

end is connected by an elbow 30 to a valve casing 31, from which extends a pipe 32 leading downward through the cover plate into the interior of the iron where it is connected to one end of a coil of brass pipe 33, this preferably being a ¼ inch pipe. This pipe 33 is bent to form a coil 34 which is disposed above the burner tubes 20 and the other end of the coil is extended to a T coupling 35 which in its turn is connected to two branch pipes 36 extending into the space 15 formed in the side walls of the iron.

The object of this invention is to provide for initially heating the water as it enters the iron and then discharging this heated water or steam into the space within the wall of the iron where the steam will be more highly expanded or where the water will be completely vaporized, if the water in the coil is not turned to steam.

For the purpose of controlling the passage of water into the heating coil 34, I provide in the valve casing 31, a valve having a handle 38 shown as radially disposed. Mounted upon one end of the handle 12 is an eccentric disk 39 pivotally connected to an arm 40 which in turn is pivotally connected to a second arm 40ª which is operatively connected to the handle 38. By rotation of the handle in one direction or the other, the valve may be shifted to increase, diminish, or entirely cut off the flow of water from the pipe 29 to the pipe 32.

My improved pressing iron does away with the necessity of using sponges or damp cloths and, therefore, saves considerable time and labor. Furthermore, its use is much more sanitary than the use of sponges or like dampening means, as the water used is always fresh and not used over and over again, thus accumulating dirt, and the superheated steam that is forced into the interstices of the material being pressed tends to kill germs and thoroughly disinfect the material. As soon as the valve 37 is opened, it allows a flow of water in any quantity desired to pass into the coil 34 which is disposed directly over the burners and is always hot. This coil immediately begins to generate steam and this steam flows into the hollow chambers of the iron and passes out through the perforations in the body of the iron to the garment which is being sponged and pressed.

It will be seen that with my construction there is ample space for the steam to generate and pass out into the clothes and be uniformly distributed throughout the iron, thus increasing the heat of the iron and the heat of the iron in turn increasing the heat of the steam. When it is not desired to use steam but the pressing is to be done with a dry iron, the water need not be allowed to pass into the iron. The iron may be readily connected to or disconnected from the source of gas and water. The device is very simple, can be cheaply made and has the advantages previously stated.

The webs or pins 16 do not merely act to support the inner wall upon the outer wall of the iron but have a very important additional function. These pins or webs 16 act to conduct the heat from the inside of the iron to the pressing surface of the iron. If it were not for the fact that these webs or pins conducted the heat to the pressing surface of the iron it would be impossible to heat the bottom of the iron sufficiently for the iron to have any practical value. These pins or webs conduct the heat from the inner wall of the bottom to the outer wall thereof.

One very important feature of the construction lies in the fact that all condensation is taken care of, in other words, there is no condensation in this iron. This is where other types of self-heating irons have entirely failed. This iron constructed in accordance with this invention has been fully tested and no condensation occurs. It is obvious that the irons may be made of various weights, from fifteen pounds up to any desired weight.

Having described my invention, what I claim is:

1. A pressing iron of the character described, having a body formed with a bottom and side walls, the bottom and side walls being chambered and communicating with each other and the bottom being formed with downwardly opening perforations, a gas burner mounted within the iron and having jet orifices discharging downward, the burner being adapted to be connected to a source of gas, a water pipe entering the interior of the iron and extending over said burner and having oppositely extending branches opening into the chambered wall of the iron, said wall being provided with air inlet openings.

2. A pressing iron of the character described having a chambered bottom and chambered side walls, the bottom being formed with downwardly opening perforations and the side walls having air openings extending entirely through the side walls and having heat outlet openings, a cover detachably mounted upon the side walls, a handle mounted on the cover, a burner disposed within the hollow interior of the iron and having orifices discharging upward and downward, a header to which the burner is connected, a gas pipe connected to the header, a water pipe disposed upon the exterior of the cover and extending from the rear end of the iron to the forward end thereof and connectible to a water supply, said water pipe extending downward into the interior of the iron and discharging into a heating coil disposed within the iron and

above the burner, the heating coil at its exit end being provided with branches leading into the chambered side walls of the iron, a valve controlling the passage of water through the water tube and having a radially extending arm, and valve actuated arms operatively connected to each other, to the valve arm and to the handle whereby the valve may be actuated to control the water supply.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

CHARLES LOUIS TAYLOR.

Witnesses:

WARREN C. TUCKER.

A. MARGARET SCHMID.