Feb. 20, 1951 I. H. BORING 2,542,858

PRESSING IRON

Filed Nov. 15, 1946

Fig. 1

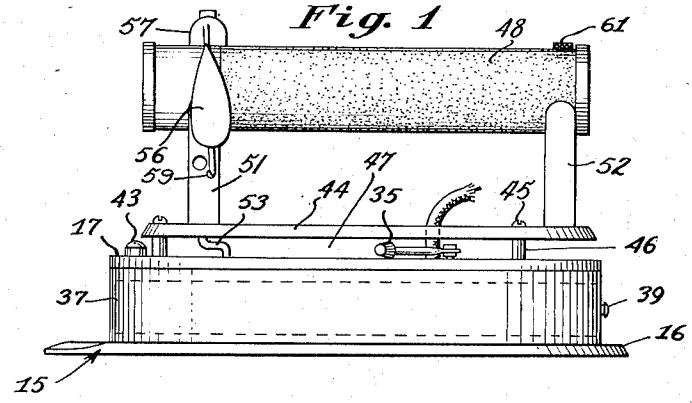


Fig. 2

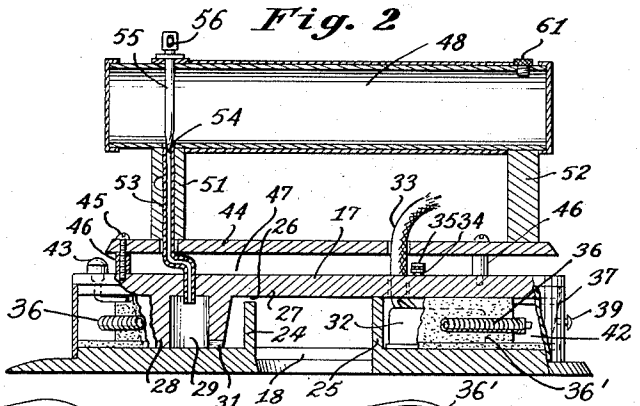
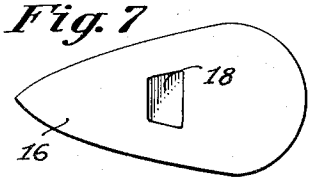


Fig. 7



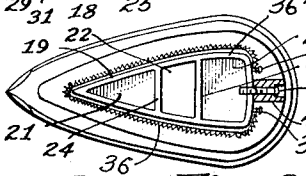


Fig. 4

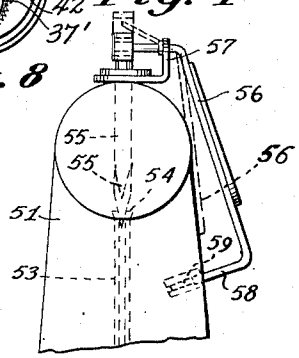


Fig. 3

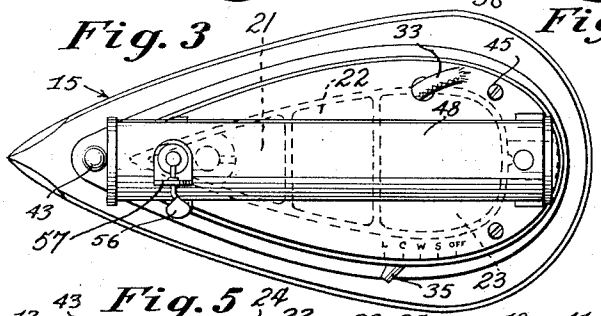


Fig. 8

Fig. 5

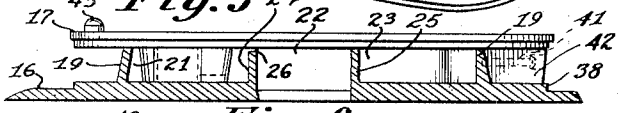
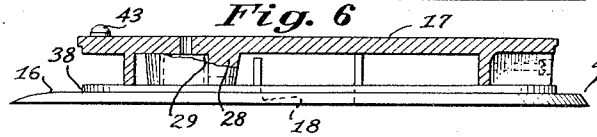


Fig. 6



Inventor

ISAAC H. BORING

By McMorrow, Berman and Davidson

Attorneys

Patented Feb. 20, 1951

2,542,858

UNITED STATES PATENT OFFICE

2,542,858

PRESSING IRON

Isaac Hartsell Boring, Maryville, Tenn.

Application November 15, 1946, Serial No. 709,931

2 Claims. (Cl. 38—77)

1

This invention relates to a pressing iron more particularly to a small electric pressing iron which can be used with or without steam depending upon the desire of the operator.

It is an object of the present invention to provide a pressing iron which is of simple construction, which can be used with steam or at the will of the operator can be operated without steam, and wherein the tank for containing the water which is used to supply the steam generating compartment is located in the handle of the iron removed from the base thereof so that the base of the iron need not be of large dimension to contain a water supply chamber.

It is another object of the invention to provide a combined steam iron and supply tank therefor within the handle, whereby the handle will be kept cool at all times, and wherein there is space provided above the heated base to which air can pass to keep the air which is heated by the top of the base of the iron from coming into contact with the hand rested over the handle and whereby the operator will not be subjected to the high heat of the iron.

It is another object of the invention to provide on the handle a control valve for controlling the flow of water from the handle to the steam chamber in the iron base so that while the operator is using the iron he may at any time cause the iron to generate steam while the same is in use and without the necessity of stopping the motion of the iron over the cloth and wherein there is provided a control means so that the heat generated in the iron by the electric heating unit can be easily regulated to the different degrees of heat depending on the types of cloth being ironed.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawings, in which:

Figure 1 is a side elevational view of the flatiron embodying the features of the present invention.

Figure 2 is a longitudinal cross sectional view of the flatiron shown in Figure 1.

Figure 3 is a top plan view of the flatiron shown in Figure 1.

Figure 4 is an enlarged fragmentary end elevational view of the handle and showing in elevation the control valve accessible to the thumb of the operator while the press is being used to at his will deposit steam upon the cloth being ironed as in cases where this may seem beneficial.

2

Figure 5 is a longitudinal cross sectional view of the iron base, and of one of the parts thereof but also showing another part in full.

Figure 6 is a cross sectional view of the upper part while showing the bottom part of the iron base in full.

Figure 7 is a bottom plan view of the iron base with the opening therein through which the steam is dispensed.

Figure 8 is a detail view of the bottom part of the base and looking upon the top thereof.

Referring now to the figures, 15 represents an iron base comprising a bottom part 16 and a top part 17. The bottom part 16 has an opening 18 therein through which steam is dispensed upon the piece of cloth being ironed at times when the operator so desires that steam is needed. The bottom part 16 is of the usual press shape and has an upstanding flange 19 for providing a chamber divided into three compartments 21, 22 and 23. These three compartments are obtained by providing walls or partitions 24 and 25. The compartment 22 is in alignment with the opening 18 of the base bottom part 16 and through which the steam is dispensed. The partition 24 does not extend upwardly to the same height as the partition 25 thereby to provide an opening 26 between the upper edge of the partition and the bottom face 27 of the top part 17 of the iron base.

The part 17 has extending downwardly from its bottom face 27 a hollow projection 28 having a chamber 29 therein and from which steam generated can be dispensed into the compartment 21 through an opening 31.

In the compartment 23 there is disposed an electric switching device 32 supplied with electric current by a cable 33. Extending upwardly through the top part 17 is a shaft 34 adapted to be operated by a lever arm 35 whereby to regulate the current supply delivered to heating coil units 36 which are contained on the bottom part 16 around the upstanding flange 19. As best shown in Figure 8, the heating coil 36 extends substantially entirely about the flange 19, and the opposite ends of the heating coil are connected with terminal screws 37', mounted upon the rear side of the flange 19 and spaced transversely apart, as shown. A continuous elongated pad 36' of asbestos or the like may be arranged between the heating coil 36 and flange 19. In order to enclose the heating coil units 36 a sheet metal strap 37 may be extended around the peripheries of the top part 17 and a shoulder 38 on the bottom part 16. This strap 37 is retained in place by a screw 39. The parts 16 and 17 may be detachably

secured together by an elongated horizontally disposed screw 41, extending through a depending projection of boss 42, formed upon the bottom of the part 17, and into the rear end of the upstanding flange 19 of the bottom part 16. The boss 42 will be positioned between the terminal screws 37', so that it will not interfere with the coil 36.

A telltale lamp 43 may be located on the forward end of the top part and wired to the cable 33 through the switch device 32, whereby to indicate when the current is on.

Vertically spaced from the top part 17 is a horizontally-disposed flat plate 44. The connection of the plate 44 is effected by long screws 45 extending through spacing sleeves 46. This arrangement will provide an open horizontally-disposed breezeway 47 so as to permit the top of the iron to be cooled as when air is passed laterally through the space 47. Thus, as the iron is moved back and forth over the article being pressed, a free passage of air is achieved through the breezeway 47 to cool the upper portion of the base and likewise prevent the plate 44 from becoming overheated. The plate 44 will accordingly insulate the iron base from a handle 48.

The handle 48 is in the form of a cylindrical tank adapted to contain the water used for effecting the generation of steam. The operator will grasp the handle 48 and inasmuch as there is water within the same the handle will be kept cool, and since there is provided a plate 44 by which a ventilating space 47 is obtained the space around the handle through which the hand is extended should be kept to a minimum temperature and such that the operator need not be made uncomfortable by the heat upon his hands.

The handle 48 is supported on vertical supports 51 and 52 carried on the top of the plate 44. Extending downwardly through the vertical support 51 is a tube 53 for conducting water from the tank 48 to the chamber 29. This tube passes downwardly through the plate 44, the space 47 and through the top part 17 into the chamber. The upper end of the tube 53 is supplied with a valve seat 54 with which cooperates a needle valve 55 extending upwardly through the tank and to the top thereof. Pivotally connected with the top of the needle valve 55 is an operating lever 56, accessible to the thumb of the operator at one side of the handle. The lever 56 is pivotally mounted upon an upturned L-shaped bracket 57, rigidly secured to the top of the tank or handle 48. The lower end of the lever 56 is inwardly bent, as indicated at 58, to enter a small opening 59 in the vertical support 51. The lever 56 is free to swing in a vertical plane toward and away from the handle or tank 48, as shown in Figure 4, for causing the needle valve 55 to reciprocate vertically. In this manner the needle valve is raised and lowered from the valve seat 54, to permit water to be introduced into the tube 53. When the lever 56 is pressed inwardly toward the handle 48 the needle valve 55 will be raised from the seat 54, and when the lever 56 is released, the needle valve will return by gravity to the seat 54. The tank may be filled with water through a filler plug opening in the top of the tank and at the rear thereof, as shown at 61.

Having now described my invention, I claim:

1. A steam pressing iron comprising a bottom pressing plate having a steam discharge opening formed therein, an upstanding substantially continuous flange formed on the top of the pressing plate and arranged inwardly of the marginal edge of the pressing plate, the flange including a pair of spaced transverse ribs connecting opposite sides of the flange and forming with the flange forward intermediate and rear compartments, said intermediate compartment being arranged adjacent to and above the steam discharge opening of the bottom pressing plate, an upper plate mounted upon the top of the flange and covering the forward intermediate and rear compartments and including a tubular depending extension which projects into the forward compartment to form a flash chamber for the formation of steam, an electrical heating element arranged between the bottom pressing plate and said top plate and extending substantially entirely about said flange, a switch device mounted within the rear compartment and below the top plate and electrically connected with said heating element for controlling the flow of current through the heating element, a heat baffle plate mounted upon the upper plate and spaced vertically above the same for creating a ventilating passage between said upper plate and said heat baffle plate, a tubular handle mounted upon the heat baffle plate and spaced upwardly therefrom and constituting a water reservoir, said tubular handle having a discharge opening formed therein, tube means connected with the discharge opening of the tubular handle and leading into the flash chamber of the depending tubular extension, a needle valve secured to the tubular handle for covering and uncovering the discharge opening of the tubular handle, and manually operated means arranged adjacent to the tubular handle and connected with the needle valve for raising the needle valve to open the discharge opening of the tubular handle.

2. A steam pressing iron, comprising a substantially flat bottom pressing plate having a centrally arranged steam discharge opening formed therein, an upstanding substantially continuous flange formed upon the top of the pressing plate and spaced inwardly from the marginal edge of the pressing plate, the upstanding flange including a pair of transversely spaced ribs connecting opposite sides of the flange and forming with the flange forward intermediate and rear compartments, the intermediate compartment being adjacent to and leading directly into the central steam discharge opening of the pressing plate, an upper generally flat plate secured to the top of the continuous flange and covering the forward intermediate and rear compartments, said upper plate including a forward depending tubular extension projecting into the forward compartment and forming a flash chamber for the creation of steam, the tubular depending extension having a side opening placing the flash chamber and forward compartment in communication, the forward compartment being in communication with the intermediate compartment, an elongated substantially continuous heating coil arranged between the bottom pressing plate and upper plate and close to and extending substantially entirely about said flange, a switch device mounted within said rear compartment and electrically connected with the heating coil for controlling the supply of current thereto, a separate marginal cover for said heating coil and arranged laterally outwardly of the heating coil and extending between the bottom pressing plate and upper plate, said separate cover extending about substantially the entire marginal edge of said upper plate, a heat baffle plate mounted upon the

upper plate and spaced above the same for forming a ventilating opening, a tubular handle mounted upon the heat baffle plate and spaced upwardly therefrom and constituting a water reservoir, the tubular handle having a discharge opening formed therein, tube means connecting said discharge opening and said flash chamber, valve means mounted upon the tubular handle for covering and uncovering the discharge opening, and manually operated means arranged adjacent to the tubular handle and operatively connected with said valve means for opening the same.

ISAAC HARTSELL BORING.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,521,058	Walker	Dec. 30, 1924
1,548,957	Slobotkin	Aug. 11, 1925
1,593,896	Brewer	July 27, 1926
1,672,040	Rubenstein	June 5, 1928
2,188,011	Miller	Jan. 23, 1940
2,384,839	Kistner	Sept. 18, 1945
2,418,511	Hume	Apr. 8, 1947