March 29, 1932. M. A. SCHWARTZ 1,851,777

ELECTRIC STEAM PRESSING IRON

Filed April 11, 1930

Fig. 1.

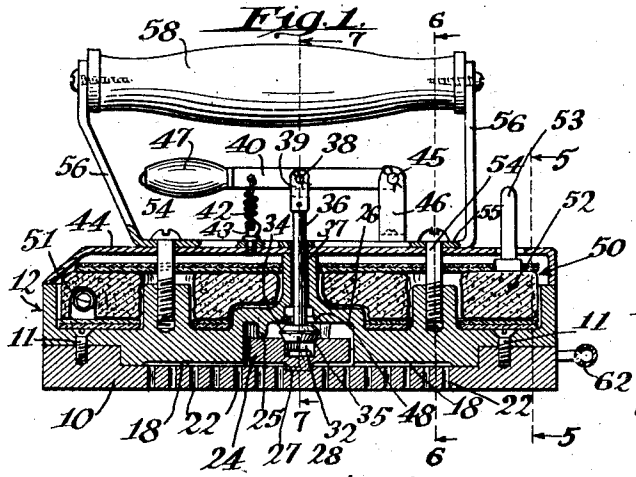


Fig. 5.

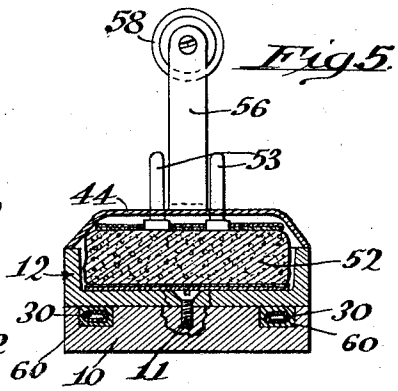


Fig. 2.

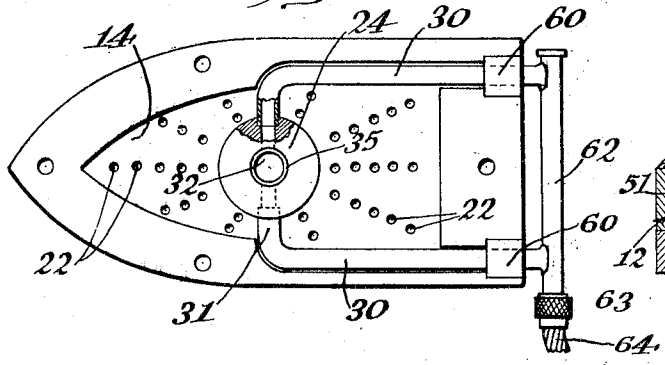


Fig. 6.

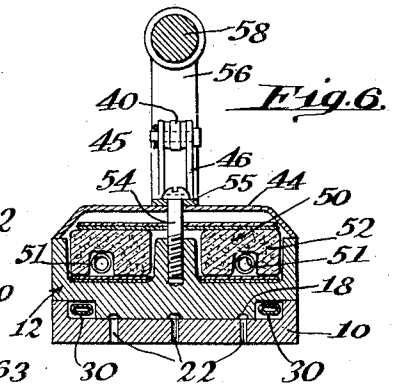


Fig. 3.

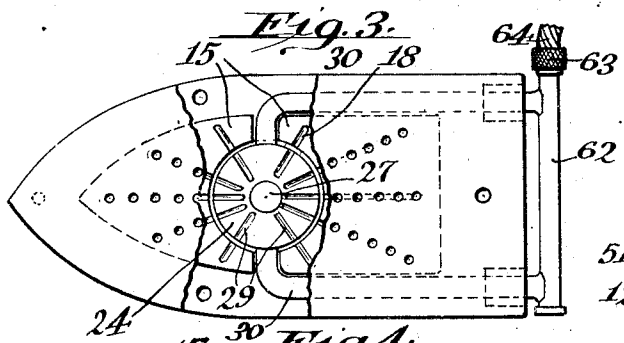


Fig. 7.

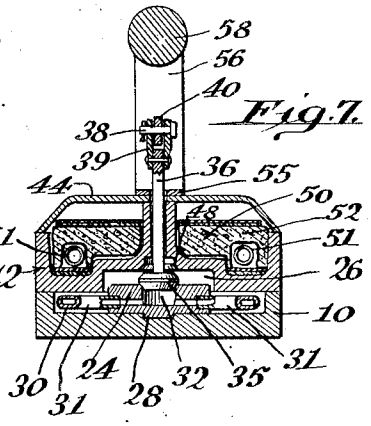
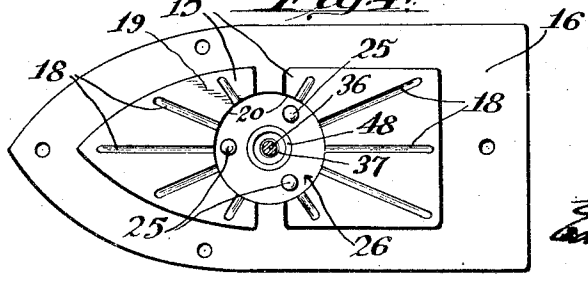


Fig. 4.



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UNITED STATES PATENT OFFICE

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ELECTRIC STEAM PRESSING IRON

Application filed April 11, 1930. Serial No. 443,330.

This invention relates to pressing irons in which steam generated within the iron by electric current is transferred through perforations to the material being pressed.

The iron of this invention is constructed in such a manner that the water inlet is closed by a valve normally seated by spring tension which when unseated will admit water through a distributor adjacent an electric heating element adapted to be constantly energized, said valve preventing escape of steam around the valve stem by engagement with another seat on its upward movement.

The object of the present invention is to provide an iron of the character stated in which distributing means are provided, whereby when water is admitted therethrough it will be instantly converted into steam.

Other objects and advantages will be apparent from the following description, reference being had to the accompanying drawings, in which:

Fig. 1 is a longitudinal section taken through the pressing iron;

Fig. 2 is a top plan view of the pressing face of the iron with the water supply conduits and distributing head in position thereon;

Fig. 3 is a bottom plan view of the pressing iron, parts of the pressing face being broken away to show the relative position of parts therein;

Fig. 4 is a bottom plan view of the body portion of the iron alone;

Fig. 5 is a transverse section taken on line 5—5 of Fig. 1 in the direction indicated by the arrows;

Fig. 6 is a sectional view taken on line 6—6 of Fig. 1;

Fig. 7 is a central transverse section taken on line 7—7 of Fig. 1.

Referring more specifically to the drawings, 10 designates the base or pressing face which is removably secured by screws 11 to the body portion 12.

Formed in the pressing face is a recess 14 which receives a pair of bosses 15 projecting from the face 16 of the body portion. A plurality of grooves 18 are formed in the flat faces 19 of the bosses 15 and overlie rows of perforations 22 formed in the pressing face through which steam is emitted to the material being pressed.

Disposed between the circular oppositely disposed edges 20 of the bosses 15 is a distributor member 24, preferably in the form of a disk, a portion of the bottom face of which engages the surface of the recess 14 and held in place by a plurality of lugs or pins 25 projecting from the face of an annular recess 26 formed in the body portion and bearing on the upper face of said distributor member.

The outside diameter of the distributor is slightly less than the diameter of the annular recess 26 and is centered by a lug 27 formed thereon and projecting into a depression 28 in the pressing face. A plurality of grooves 29 are formed in the bottom face of the member 24 and overlie the perforations in the pressing face, the grooves in the bosses and the distributing member being preferably radially disposed and in alignment.

Water is supplied to the distributor member through a pair of conduits 30, the inner ends 31 of which extend into oppositely disposed openings formed in said member and is conveyed to a chamber 32 in the distributor member 24 through ports 33.

A valve 34 engages a seat 35 formed around the upper circular edge of the distributing member and is provided with a stem 36 passing through a bore 37 in a boss formed on the body portion. The upper end of the stem is connected by a pin 38 and clevis 39 to a lever 40, said valve being normally held seated by a retractile coil spring 42, the upper end of which is connected to the lever and the lower end to an eye or the like 43 secured to the cover plate 44.

Lever 40 is pivotally connected by a pin 45 to a suitable bracket 46 secured to the cover plate and is provided with a handle 47 preferably formed of wood or other heat insulating material.

An electric heating element generally designated at 50 is positioned in the body portion and consists of a resistance coil 51 disposed in channels formed in a body of fire clay

or the like 52, each end of the coil being connected to terminals 53 which in turn may be connected to the usual plug of a flexible wire cord extending from a suitable source of electric energy.

Cover plate 44 encloses the heating element and is held in place on the body member by a pair of screws 54 which also extend through a strap 55, the free ends of which provide bales 56 for the handle 58.

Conduits 30 are disposed in parallel relation and extend through blocks 60 resting in recesses formed in the sides of the pressing face. The projecting ends of the conduits are connected to a tube 62 detachably connected by a union 63 to a flexible conduit 64. The conduit 64 is adapted to be connected to a gravity feed tank or to a water faucet.

In operation the coil 51 is adapted to be constantly energized, the heat generated thereby being transmitted to the body portion and pressing face. When steam is required the operator lifts the handle (this may be easily done with the forefinger), the action of which through the lever and stem moves the valve 34 from the seat 35 into engagement with a seat 48 thereabove formed in the face of the recess 26.

When the valve is in this position water from the chamber 32 will fill the recess 26, then flow downwardly around the distributor into the grooves 18 and 29 wherein it will be instantly converted into steam which will then be emitted through the perforations 22 onto the material being pressed.

From the foregoing it will be seen that no steam can escape around the valve stem when it engages the seat 48 as above described, and that little or no condensation will take place due to the arrangement of the grooves and perforations therebelow.

I claim:

1. An iron of the class described comprising a pressing face having perforations therein, a body member secured to said face and an operating handle secured thereto, an electric heating element mounted in said body member, water distributing means disposed between said body member and pressing face, valve means within the body member for controlling the admission of water through said water distributing means, and a valve operating handle disposed below the first named handle, whereby the water admission valve may be operated during an ironing operation.

2. An iron of the character described comprising a pressing face having perforations therein, a body member having grooves formed in its bottom faces overlying the perforations in said pressing face and an operating handle secured thereto, a water distributor disposed between said body member and pressing face, a valve within said body member for admitting water through said distributor into the grooves formed in said body member, and a valve operating handle disposed below the first named handle, whereby the water admission valve may be operated during an ironing operation.

3. An iron of the class described comprising a pressing face having a plurality of rows of perforations therein, a body member having a plurality of grooves formed in its face overlying the rows of perforations in said pressing face, a water distributor disposed between said pressing face and body member, conduits leading to said distributor from the exterior of the body portion adapted to be connected by flexible conduits to a water supply, a valve engaging a seat formed in said distributor and closing a chamber formed therein, said valve having a stem extending through a bore formed in said body portion, a lever pivotally mounted on said body portion, means for connecting the valve stem to said lever, and spring means engaging said lever normally holding said valve seated.

4. An iron of the class described comprising a pressing face having a plurality of rows of perforations therein, a body member having a plurality of grooves formed in its face overlying the rows of perforations in said pressing face, a water distributor disposed between said pressing face and body member, conduits leading to said distributor from the exterior of the body portion adapted to be connected by flexible conduits to a water supply, a valve engaging a seat formed in said distributor and closing a chamber formed therein, spring means normally seating said valve, and means for unseating said valve, said valve being adapted to engage a second seat formed in said body member when raised from the seat in said distributor.

In testimony whereof I affix my signature.

MORRIS A. SCHWARTZ.