

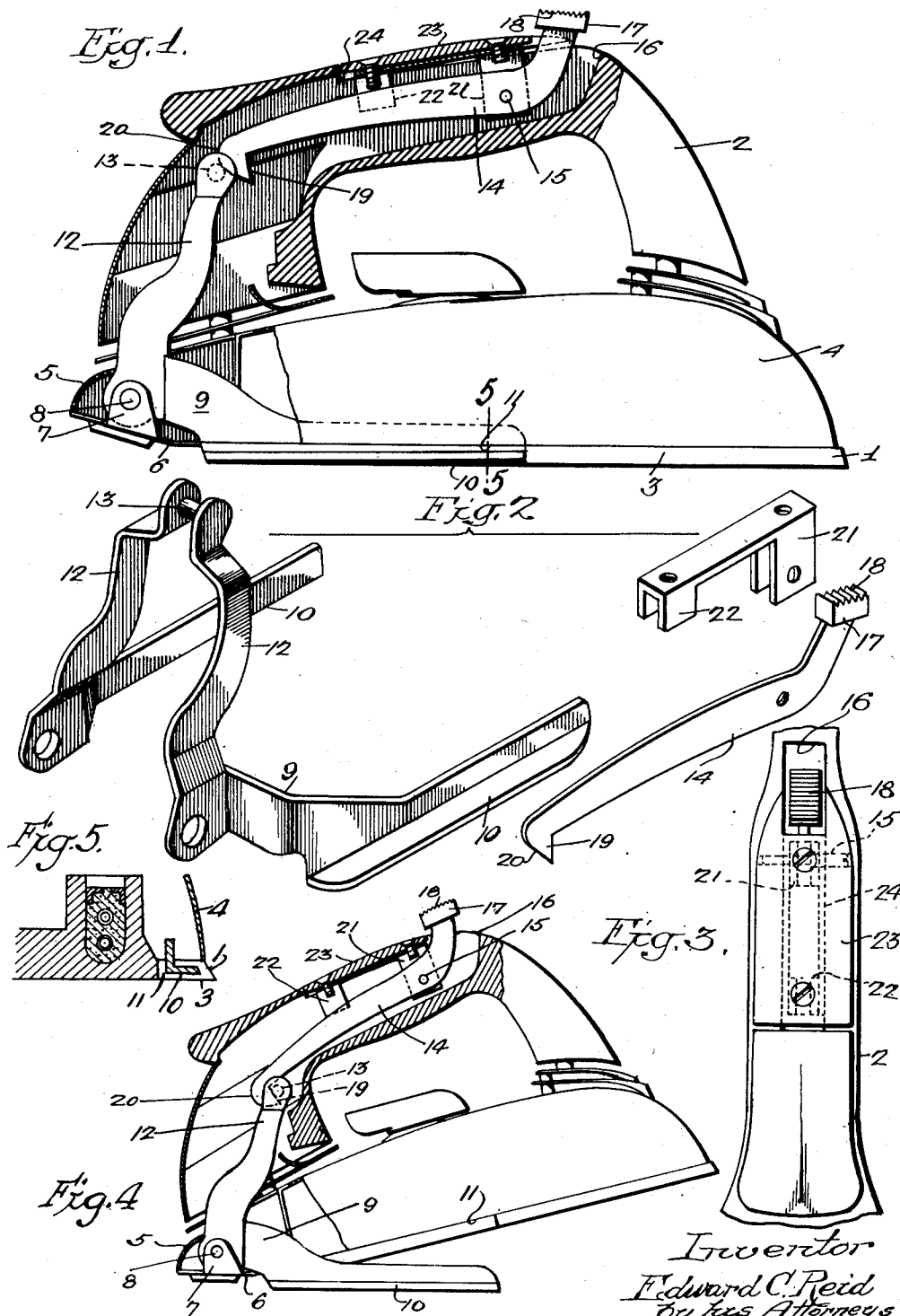
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FLATIRON SUPPORTING MECHANISM

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FLATIRON SUPPORTING MECHANISM

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This invention relates to devices for supporting a flat-iron away from an operating surface whenever the iron is not being used.

The principal object of the invention is to provide an improved device of this character embodying certain novel features which render the device an improvement over prior devices of the same class.

A more specific object of the invention is to provide a device of the character set forth which is relatively easy for the user to operate and which is of relative simple construction and comparatively less expensive to manufacture.

A further object of the invention is to provide a device of the stated character wherein the supporting structure is novelly maintained in retracted position at the will of the user and is automatically movable to supporting position when the iron is tilted upwardly or lifted from the operating surface. The invention also contemplates the provision in such an iron of a finger-releasable mechanism operable automatically to latch the support in said supporting position when permitted to move thereto.

A still further and important object of the invention is to provide a novel combined flat-iron and support structure which does not require that the iron be lifted bodily to effect supporting thereof, but requires only that the iron be slightly tilted upwardly whereupon it is automatically latched in supported position.

These and other objects of the invention and the various features and details of its construction and operation are hereinafter fully set forth and described and shown in the accompanying drawing, in which:

Figure 1 is a view in side elevation of the flat-iron showing a substantial portion thereof in section to illustrate the mechanism provided by the invention, the parts being in position for use of the iron;

Figure 2 is an exploded view showing the parts of the support mechanism in perspective;

Figure 3 is a plan view of the handle structure;

Figure 4 is a view similar to Figure 1 but showing the iron in its supported position with the operating parts positioned accordingly; and

Fig. 5 is a fragmentary sectional view taken along line 5-5 of Fig. 1.

Referring now more particularly to the several views of the drawing, the flat-iron comprises a flat-iron body 1 and a handle 2 fixedly secured thereto. For the most part, the handle is hollow to accommodate the parts hereinafter described.

The body 1 comprises the usual sole plate 3 and cover 4 which, in the present instance, extends beyond the rear of the sole plate to provide a rearwardly extending hood 5. A supporting plate 6 is secured to the rear of the sole plate 3 and has turned up ears 7 for supporting a transverse pin 8 upon which the iron supporting structure or member 9 (see Figure 2) is pivotally carried.

The supporting member 9 has forwardly extending feet 10 which extend longitudinally of the iron and, when said member 9 is in its inoperative position, as shown in Figure 1, these feet 10 are disposed within recesses 11 in the body 1. This supporting member 9 also comprises a pair of arms 12 which extend upwardly into the handle 2 and which carry between their upper ends a connecting cross-pin or like element 13.

It should be pointed out that the supporting member 9, and particularly the forwardly extending feet 10 thereof, have essentially such mass or weight that said supporting member 9, unless restrained, will pivot or move into operating or iron-supporting position under the influence of gravity whenever the iron is lifted or tilted upwardly from the operating surface. It will be apparent that substantially all of the weight of the support 9 is forwardly of the pivot point, and since the support has substantial massive construction of legs 10, a very substantial gravitational force acts on the support. Since a large portion of the legs 10 disappears into the body and within the cover 4, the legs may be made strong and massive without detracting from the appearance of the iron.

The supporting member 9 is normally maintained in a retracted or inoperative position against the action of gravity thereon by the mechanism now to be described, and this same mechanism also operates automatically to latch the said supporting member in its operating or iron-supporting position, shown in Figure 4, when permitted to move thereto.

Within the hollow portion of the handle 2, there is pivotally mounted an arm or lever 14, the pivot pin being shown at 15. The forward end portion of this lever or arm 14 protrudes from an opening 16 at the front of the handle to provide a finger-operable portion 17 having a serrated portion 18 engageable by the thumb of the user of the iron. This arm or lever 14 also extends rearwardly from its pivot 15 and, at its free end, has a depending projection formed to

provide a forwardly facing hook 19 and a rearwardly facing curved cam edge or surface 20.

A bracket 21 is pivotally mounted at its forward end on this same pivot pin 15 and at the rearward end of said bracket 21 there are provided depending spaced portions 22 which straddle the lever or arm 14. Secured above and to this bracket 21 is a member 23 which resides in an opening 24 in the handle 2 and forms a part of the surface engaged by the user's hand when the handle is gripped in the usual manner for using the iron. Thus, it will be seen that, when the iron is in use, the user's hand will engage and depress the member 23 which, acting through the bracket 21, will urge the arm or lever 14 in a counterclockwise direction with respect to Figure 1 of the drawing.

Now the lever or arm 14 is constructed and arranged so that when the supporting member 9 is in its inoperative position the cross-pin 13 carried by the upper ends of the arm portions 12 thereof is disposed rearwardly of and in engagement with the curved cam edge or surface 20 of said arm or lever 14, and as will be seen by reference to the drawing, the contour of this cam edge or surface 20 is such that a counter-clockwise urging of the arm or lever 14 causes said cam edge 20 to urge the supporting member 9 also in a counterclockwise direction thereby retracting the extending feet 10 of the supporting member 9 within the recess 11 of the body 1 so that their forward ends at least are elevated slightly above the plane of the sole plate. Thus it will be seen that when the iron is in use, or so long as the hand of the user grips the handle in the usual manner, the supporting member 9 and its forwardly extending feet 10 will be maintained in retracted or inoperative position.

When it is desired to discontinue the use of the flatiron, the user relaxes his grip on the handle 2 thereby releasing pressure upon the member 23 and at the same time tilts the iron so that its forward end is tilted upwardly from the operating surface whereupon the mass or weight of the supporting structure 9 will cause the latter to pivot slightly in a clockwise direction into the operating or iron-supporting position shown in Figure 4 of the drawing. During this relative movement of the iron and the supporting member 9, the cross-pin 13 acting on the cam edge or surface 20 of the arm or lever 14 forces the latter upwardly in a clockwise direction with the result that as the supporting member 9 reaches its iron-supporting position the hook portion 19 will ride over and engage said cross-pin 13 rearwardly thereof as shown in Figure 4 of the drawing, thus latching the supporting member 9 in said operative or iron-supporting position.

Now when it is desired to again use the iron the user engages the serrated portion 18 of the finger-operable portion 17 of the arm or lever 14 with the thumb, moving said portion 17 forwardly whereby the said arm or lever 14 is actuated in a clockwise direction thus disengaging the hook portion thereof from the cross-pin 13, and permitting the supporting member 9 to be disposed in its inoperative or retracted position merely by lowering the iron onto the operating surface. When this has been done, and the thumb released from the finger-operable portion 17, the arm or lever 14 will pivot in a counter-clockwise direction and assume the position shown in Figure 1 with its cam edge or surface 20 engaging the cross-pin 13 forwardly thereof. At the same

time, the handle of the iron is more firmly gripped by the user preparatory for use with the result that the user's hand exerts pressure upon the member 23 which, acting through the bracket 21, urges the arm or lever 14 in such counterclockwise direction causing the cam edge or surface 20 thereof to urge the supporting member 9 in a like direction so that the forwardly extending feet 10 thereof are maintained in retracted position within the recesses 11 of the body 1 so long as the iron may continue to be used.

Thus it will be seen that the present invention provides a support mechanism for flat-irons wherein the user has only to tilt the iron so that its forward end is tilted upwardly from the operating surface to cause the supporting member to dispose itself in iron-supporting position in which it is automatically latched. Moreover, when the user desires to again use the iron, it is only necessary to trip the latching mechanism and lower the iron onto the operating surface in order to retract the supporting member which is then retained in said retracted position by the grasp of the user's hand upon the handle in the usual manner.

While a particular embodiment of the present invention has been illustrated and described, it is not intended to limit the invention to such disclosure but that changes and modifications may be made and incorporated therein within the scope of the annexed claims.

I claim:

1. In a flat-iron, a body, a handle affixed to said body, at least a part of said handle being hollow, a support pivotally mounted at the rear of said body, said support having supporting legs extending forwardly of the body and an arm extending in fixed angular relation to said legs into the hollow part of the handle, said support being disposable in its supporting and retracted positions by tiltably raising and lowering the iron, means within said handle adapted to latchably engage said arm when the iron is tilted upward to its supported position, whereby the support is automatically latched relative to the iron to maintain the iron in supported position, and means on said handle for releasing said latching means at will to permit downward movement of the iron to its position of use.

2. In a flat-iron, a body, a handle affixed to said body, at least a part of said handle being hollow, a support pivotally mounted at the rear of said body, said support having supporting legs extending forwardly of the body and an arm extending in fixed angular relation to said legs into the hollow part of the handle, said support being disposable in its supporting and retracted positions by tiltably raising and lowering the iron, a lever including a cam portion and a hook portion constructed and arranged with respect to said arm so that the arm is engaged by said cam portion when the support is in retracted position, and said arm is engaged by said hook portion when the iron is tilted upwardly to its supported position, whereby the support is automatically latched relative to the iron to maintain the iron in supported position, means for disengaging the hook portion from said arm at will to permit downward movement of the iron to its position of use and movement of the support to retracted position, and means for urging the cam portion of the lever against said arm to maintain the support in said retracted position at the will of the operator.

3. In a flat-iron, a body, a handle affixed to said body, at least a part of said handle being hollow, a support pivotally mounted at the rear

of said body, said support having supporting legs extending forwardly of the body and an arm extending in fixed angular relation to said legs into the hollow part of the handle, said support being disposable in its supporting and retracted positions by tiltably raising and lowering the iron, a lever including a hook portion and a cam portion constructed and arranged with respect to said arm so that the arm is engaged by said cam portion when the support is in retracted position and said arm is engaged by said hook portion when the iron is tilted upwardly to its supported position, whereby the support is automatically latched relative to the iron to maintain the iron in supported position, means for disengaging the hook portion from said arm at will to permit downward movement of the iron to its position of use and movement of the support to retracted position, and depressible means on said handle and engaging said lever for urging the cam portion of the lever against said arm to maintain the support in said retracted position at the will of the operator.

4. In a flat-iron, a body, a recessed stationary handle affixed to said body, a support pivotally mounted at the rear of said body and having supporting legs extending forwardly of the iron, said support having its center of gravity forwardly of its pivot, means for retaining said support in retracted position against the action of gravity, a member recessed in said handle and engageable by the operator's hand when grasping the handle for actuating said last-named means, said support being disposable in supporting position gravitationally by releasing said member and tiltably raising the iron manually, means for automatically latching the support relative to the iron whenever the iron is tilted upward to its supported position, thereby maintaining the iron in supported position, and means on said handle for releasing said latching means at will to permit return of the iron to its position of use.

5. In a flat-iron, a body having recesses therein, a stationary handle affixed to said body, a support pivotally mounted at the rear of said body and having massive supporting legs extending forwardly of the iron and adapted to recede into said recesses, there being a substantial gravitational force acting on said support forwardly of its pivot due to the mass of said legs, means operable by the user to retain said support in retracted position against the action of gravity, said support being disposable in supporting position gravitationally by releasing said last-named means and tiltably raising the iron manually, means for automatically latching the support relative to the iron whenever the iron is tilted upward to its supported position, thereby maintaining the iron in supported position, and means on said handle for releasing said latching means at will to permit return of the iron to its position of use.

6. In a flat-iron, a body, a handle affixed to

said body, at least a part of said handle being hollow, a support pivotally mounted at the rear of said body, said support having supporting legs extending forwardly of the body and an arm extending in fixed angular relation to said legs into the hollow part of the handle, said support being disposable in its supporting and retracted positions by tiltably raising and lowering the iron, a pivoted lever within said handle, means on said lever adapted to latchably engage said arm when the iron is tilted upward to its supported position, whereby the support is automatically latched relative to the iron to maintain the iron in supported position, and means on said lever extending exteriorly of said handle for releasing said latching means at will to permit downward movement of the iron to its position of use.

7. In a flat-iron, a body, a handle affixed to said body, at least a part of said handle being hollow, a support pivotally mounted at the rear of said body, said support having supporting legs extending forwardly of the body and an arm extending in fixed angular relation to said legs into the hollow part of the handle, said support being disposable in its supporting position by tiltably raising the iron, means within said handle adapted to latchably engage said arm when the iron is tilted upward to its supported position, whereby the support is automatically latched relative to the iron to maintain the iron in supported position, means on said handle for releasing said latching means at will, to permit downward movement of the iron to its position of use, means within said handle adapted to engage said arm and hold the support in retracted position, and manually operable means on said handle for actuating said last-named means.

8. In a flat-iron, a handle having a hollow portion, a flat-iron support having an actuating portion extending into the handle, said support being movable to supporting and retracted positions, a member within said handle adapted to retain said support in its retracted position and to latch said support in its supporting position, means for manually maintaining said member in support retaining position, and manually operable means for actuating said member to free it from support latching position.

9. In combination, a flat-iron and a support thereon relatively movable to dispose said support either in retracted or supporting position relative to the iron, whereby the iron may be supporting position relative to the iron, whereby the iron may be supported in a raised position, a first means to latch the support in supporting position, a second means adapted to engage a portion of said support near its inoperative position and to urge it to said inoperative position, both said means being normally biased toward engaging position, and manually controlled means to simultaneously urge both said means away from said engaging position.

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