Sept. 6, 1938. R. ROLLER 2,129,286

ENERGIZED BASE FOR A CORDLESS ELECTRIC IRON

Filed Sept. 13, 1935

Fig. 6.

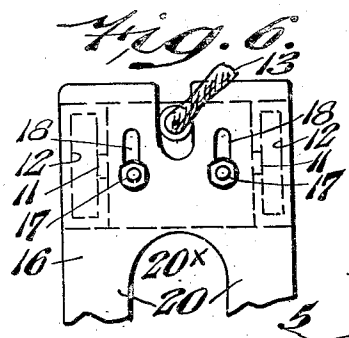


Fig. 1.

Fig. 2.

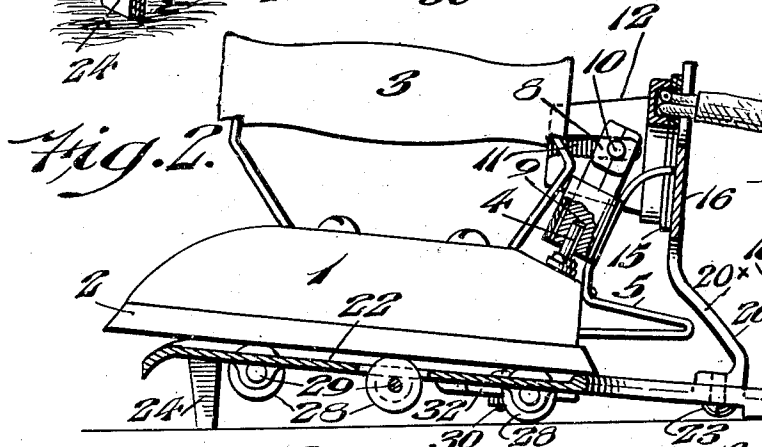


Fig. 7.

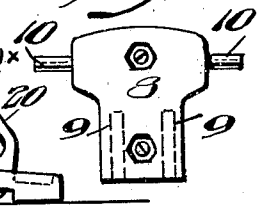


Fig. 3.

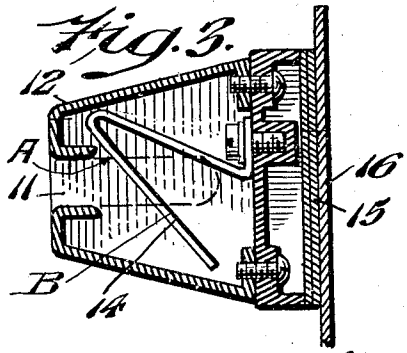


Fig. 4.

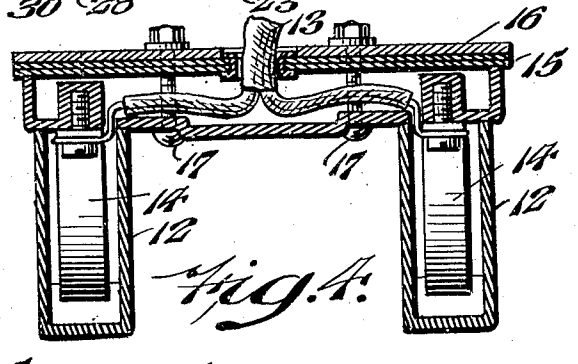
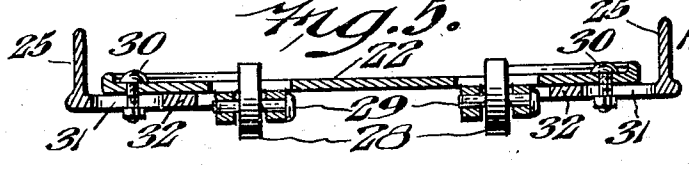


Fig. 5.



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ENERGIZED BASE FOR A CORDLESS ELECTRIC IRON

Robert Roller, Haddonfield, N. J.

Application September 13, 1935, Serial No. 40,374

2 Claims. (Cl. 219—25)

My invention relates to a new and useful energized base for a cordless iron whereby the electrical energy needed for heating the iron is transmitted by direct contact from the base to the iron, thus eliminating the electric cord heretofore used in supplying electrical energy to the iron. My present invention is an improvement upon the construction shown in my prior Patent No. 1,966,263 as well as other prior art constructions heretofore devised for this general purpose. The structural features and advantages of my novel construction will be more clearly understood from the following description taken with the accompanying drawing, in which:

Fig. 1 represents a perspective view of the energized base embodying my invention.

Fig. 2 represents a side elevation of the base shown in Fig. 1 with a cordless iron positioned thereon in heating position.

Fig. 3 represents, on an enlarged scale, a vertical section on line 3—3 of Fig. 1.

Fig. 4 represents, on an enlarged scale, a transverse section on line 4—4 of Fig. 1.

Fig. 5 represents, on an enlarged scale, a section on line 5—5 of Fig. 1.

Fig. 6 represents a fragmentary and diagrammatic back view of the upper portion of the base shown in Fig. 1.

Fig. 7 represents a plan view of an adapter plug used for effecting electrical contact between the iron and the base.

Referring to the drawing, in which like reference characters represent like parts, 1 designates a conventional iron having the base 2, the handle 3 and the prongs 4, and which may, or may not, have the rear yoke 5 on which the iron may be stood on end, when desired, it being understood that the yoke 5, or other support that may be provided at the rear end of any make iron, performs no particular function as far as my invention is concerned, and may be omitted if desired. In lieu of applying a wired plug to the prongs 4 of the iron in order to supply the necessary electrical energy I utilize the plug 5 shown in Fig. 7 which is provided with the contact sockets 9 into which the prongs 4 of the iron are inserted and with the contact pins 10 which are adapted to enter the openings 11 in the wings 12 to engage the spring contacts 14 which in turn are energized by the cord 13, the other end of which (not shown) is plugged into an electric outlet in any suitable manner. Thus with the plug 8 shown in Fig. 7 applied to the prongs 4 of the iron and with the pins 10 of the plug 8 engaging the contacts 14, electrical energy is supplied to the iron.

In order to render the contact wings 12 readily adjustable to electric irons of varying heights, the contact wings 12 are carried by a bracket 15 which is secured to the vertical portion 16 of the base by means of the fastening devices 17 passing through the slots 18 in the back 16. In this way the contact wings 12 may be raised and lowered and the width (horizontally speaking) of the openings 11 afford the necessary adjustment to any variation in the spacing of the contact pins 10 of the plug 8 engaging the prongs 4 at the rear end of the iron. The back support 16 is suitably curved backwardly as at 20 in order to accommodate the supporting yoke 5, or other support that may be provided on irons of this character, it being understood that instead of curving the back 16 as at 20, the opening 20X may be enlarged sufficiently to accommodate the yoke 5 or its equivalent. The entire back support 16 may be made integral with, or may be secured to, the base member 22 as at 23. The base member 22 is provided with the front leg 24 so that it slants backwards towards the vertical back support 16 and is also provided with the outwardly flaring guide rails 25 which eliminate the necessity of precision in placing the iron in contacting position, as shown in Fig. 2, since they guide the iron and centralize it with respect to the base 22 and the back support 16. In order to minimize the amount of effort necessary in putting the iron in contacting position, I provide the base 2, in addition to the backward slanting thereof, with rollers, or other anti-friction devices 28, which are secured to the base by cotter pins, or the like, 29. With the rollers 28 and the slanting character of the base 22, an iron placed on the base will very easily and with hardly any effort roll back into the position shown in Fig. 2 where the prongs 10 on the plug 8 will engage the spring contacts 14 in the wings 12. The rollers 28 in addition to serving as anti-friction means, also space the iron from the base thus preventing overheating of the latter, by reducing the contact area of the iron and the base, and by providing an air space therebetween. In order to render the base 22 adjustable for various sized irons, the guide rails 25 are adjustably secured to the base 22 by the bolts 30 passing through the base and through an aperture 31 in the bottom portions 32 of the guide rails 25. The repeated sliding of the prongs 10 against the spring contacts 14 serves as a wiping action and maintains the prongs 10 and the spring contacts 14 in clean, polished condition for effecting maximum ef-

ficiency in the electrical contact established. In this connection I wish to call particular attention to the slanting of the resilient contacts 14 with respect to the openings 11, whereby said contacts are protected against corrosion due to arcing resulting from constant make and break of the circuit. Thus the pin 10, when it first enters the opening 11, touches the spring contact 14 at the point marked A. But, as the pin 10 progresses towards the inner (closed) end of the opening 11, the resilient contact 14 "gives" and the pin 10 finally comes to rest on the part of the contact 14 marked B. Thus any corrosion due to arcing, upon breaking or completion of the circuit, will take place only at A, where the contact is "temporary" and not at B where the contact pin 10 comes to rest while the iron is being heated. In this way the life of the contact 14 and pin 10 is greatly prolonged since the arcing at the point A will early produce corrosion which would result in more and more arcing and less and less proper contact, were the heating of the iron as well as the making and breaking of the circuit to take place at one and the same point which is the part marked A, as the then continuous arcing resulting from the corrosion already produced will burn the pin 10 and the contact 14 in a very short time. Thus it will be seen that the resiliency and slanting of the contacts 14 with respect to the openings 11 is a very important feature since it is material to the success of my construction in actual practice. In actual operation the iron is placed on the stand or base in the position shown in Fig. 2 until it has attained the necessary degree of heat, whereupon it is used for ironing and while the piece being ironed is shifted or folded, the iron is put back on the insulated base 22 and the heat lost in the previous operation is replenished in the time elapsing while the piece being ironed is prepared for further action.

While I have shown the wings 12 provided with horizontally disposed contact slots 11 and the plug 8 to be provided with laterally projecting prongs 10, it is to be understood, that if desired, the prongs 10 can be made to project longitudinally of the plug 8, and that the contact slots 11 can be made to extend vertically instead of horizontally in corresponding fashion.

It will thus be seen that I have devised a novel base construction which receives and energizes the iron practically automatically and with minimum effort and one which is readily adjustable for irons of different makes and different sizes without in any way interfering with the existing construction of the iron. It is also to be noted that the adapter plug forms an important cooperating part since it materially assists in adapting my novel base for successful operation with all types of irons. While I have shown the novel contact establishing construction, best shown in Fig. 2 as applied to a cordless electric iron, it is to be understood that the same is capable of wide application to any number of other devices and that I claim this form of contact construction in all of its possible applications.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In combination, a base, a back support secured thereto, contact wings carried by said support and containing contact elements therein, there being slots in said wings affording access to said contact elements, and an adapter plug having a body portion constituting a socket for engaging the contact prongs of an electrical iron and having pins disposed within the vertical planes of said body portion but extending at an angle to the longitudinal axis thereof adapted to pass through the slots in said contact wings for wiping engagement with said contact elements.

2. In an energized base for a cordless electric iron, the combination of an adapter plug having sockets for engaging the contact prongs of an electric iron and contact prongs disposed at a substantially right angle to but in the same plane as said sockets, with an inclined base, a plurality of wheels mounted therein and projecting above the surface of said base, outwardly flaring guide wings adjustably secured to the sides of said base, a back support secured to the rear end of said base and comprising legs projecting upwardly from said base and having their lower portions recessed away from said base, contact wings adjustably secured to said support and overhanging the rear portion of said base, contact elements within said wings accessible only to the prongs of said adapter plug, and means for energizing said contact elements.

ROBERT ROLLER.