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J. I. AYER.

HEAT CONTROLLER STAND FOR ELECTRIC SMOOTHING IRONS.

APPLICATION FILED JAN. 6, 1902.

NO MODEL.

Fig. 1.

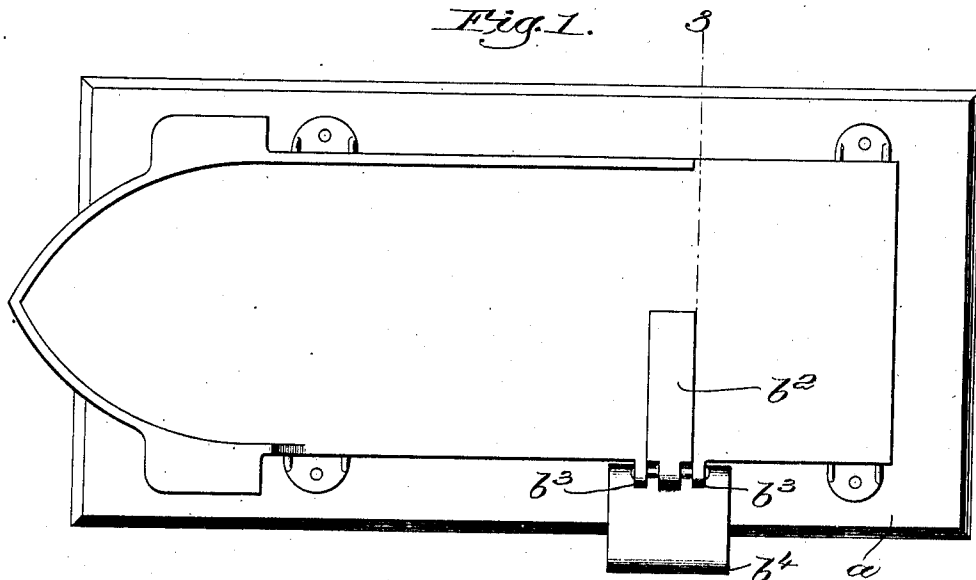


Fig. 2.

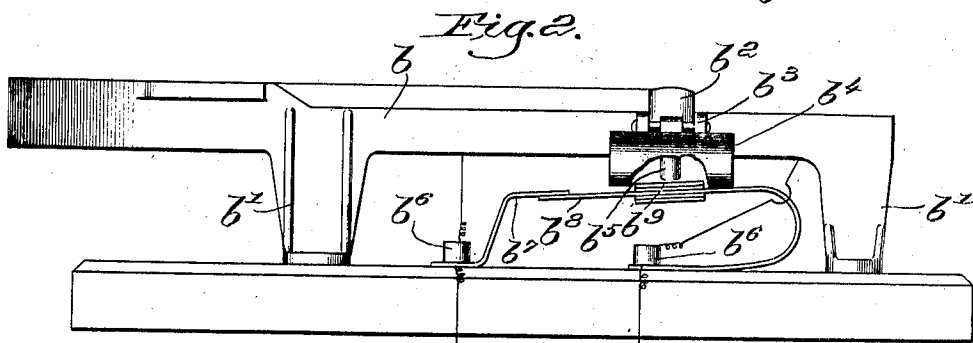
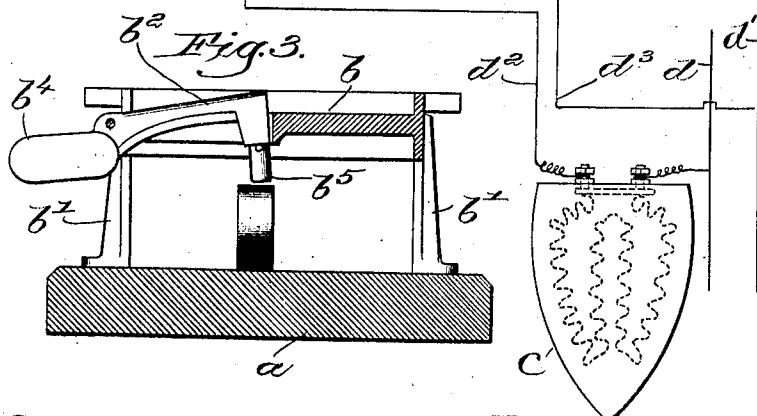


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES I. AYER, OF MALDEN, MASSACHUSETTS, ASSIGNOR TO SIMPLEX ELECTRIC HEATING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

HEAT-CONTROLLER STAND FOR ELECTRIC SMOOTHING-IRONS.

SPECIFICATION forming part of Letters Patent No. 723,633, dated March 24, 1903.

Application filed January 6, 1902. Serial No. 88,570. (No model.)

To all whom it may concern:

Be it known that I, JAMES I. AYER, a citizen of the United States, and a resident of Malden, county of Middlesex, State of Massachusetts, have invented an Improvement in Heat-Controller Stands for Electric Smoothing-Irons, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Electricity has been long coming into prominent use as a heating medium wherever a steady local heat is required for various kinds of tools, including such articles as smoothing-irons used in laundries, tailoring establishments, &c., the usual method of applying electricity to heating the iron being, however, simply to lead the current directly to the iron or to a heating-coil carried by the iron, the result being that, provided the strength of current was proper for the purpose, the iron would maintain a proper heat while being actively used on the heat-consuming damp clothes, but when permitted to remain out of contact with the damp clothes being ironed it would become abnormally heated, with resultant danger of damage to the iron and to the clothes when the iron was subsequently applied to them. Accordingly I have devised a stand to be used in connection with an electrical-heated iron which operates automatically to cut out part of the current during periods of idleness and preferably, also, allows incidental heat of the stand to assist in keeping the iron at normal heat during such periods of idleness.

The constructional details of my invention and its operation and further advantages thereof will appear more fully in the course of the following description, reference being had to the accompanying drawings, in which I have illustrated a preferred embodiment of my invention, and the latter will be particularly defined in the appended claims.

In the drawings, Figure 1 represents in top plan one form of stand embodying my invention. Fig. 2 is a view thereof in side elevation, parts being broken away for clearness of illustration. Fig. 3 is a vertical cross-sectional view taken on the line 3, Fig. 1.

While I have chosen to illustrate my invention as applied to a smoothing-iron stand, it will be understood that I am not limited thereto, but that the invention is applicable to various other situations where a tool or similar article is required to be temporarily placed at rest on the suitable stand.

In the drawings I have indicated a form of smoothing-iron or flat-iron stand capable of receiving a large iron, such as is frequently employed in tailoring establishments, said stand being shown as comprising a base *a*, of insulating material, on which is mounted the stand proper, *b*, supported thereon in any suitable manner by legs *b'* and having its upper surface formed in usual manner to correspond to the shape of the bottom of the smoothing-iron, the latter being diagrammatically indicated at *c*, Fig. 2. At any convenient place in the stand, preferably at one side thereof, I mount a contact-breaker normally in inoperative position. This contact-breaker may be constructed in many different ways; but I prefer to make it in the form of a pivoted member *b²*, hung between ears *b³* at the side of the stand and provided with a weight *b⁴* at one end for normally holding the opposite end of the contact-breaker in raised position, said end being herein shown as carrying on its under side a projection *b⁵*.

The iron *c* derives current in any suitable manner, as from service-wires *d d'*, being in a branch circuit composed of wires *d² d³*, which are connected to the stand at binding-posts *b⁶*. From these binding-posts contacts, herein shown as and preferably consisting of springs *b⁷ b⁸*, extend in such position that the breaker *b²* may engage one or the other in such manner as to break the circuit upon being depressed, the contact-spring *b⁸* for this purpose being herein shown as provided with an insulated pressure-receiving piece *b⁹* immediately beneath the projection *b⁵* of the pivoted device *b²*. When the contacts *b⁷ b⁸* are broken, the branch circuit is completed through the stand *b*, said stand being composed or partially composed of conducting material, preferably iron.

From the above description it will be seen that when the iron is in use it is included in

a branch circuit $d^2 b^7 b^8 d^3$, and therefore receives a maximum current, such as is required for keeping the iron normally heated under usual conditions of use, the circuit at that time being completed through the contacts $b^7 b^8$, and hence the circuit is uninterrupted by any special resistance, such as that which is subsequently introduced by placing the stand in series circuit with the iron. When the iron is taken away from the cooling conditions of contact with the damp clothes being ironed, and would therefore quickly rise in temperature to a dangerous or undesirable point, the iron is placed on the stand, and hence automatically by depression of the circuit-breaker b^2 throws into series with its heating-circuit the resistance of the stand or that portion thereof which is in the circuit, and hence to that degree the current supplied to the iron is reduced, it being understood that the parts are proportioned according to the requirements of the given smoothing-iron or other tool and other conditions in which the apparatus may be employed. In this preferred form of my invention, however, in which the resistance which is introduced into the circuit is carried by the stand itself, another desirable advantage results, as follows: If the iron were left out of active use for a considerable time, the withdrawal of the heating-current therefrom, as explained, might permit the iron gradually to cool off more than would be desirable, and hence by having a portion of the current sent through the stand the latter is slightly heated, so as to assist in keeping normal heat in the iron.

Broadly my invention resides in providing means acting automatically when the iron is placed out of use to introduce resistance into the heating-circuit and cut out said resistance when the iron is again put into use, and therefore, as previously intimated, I do not limit myself in the broader claims to the mechanism herein set forth, although I intend to cover this mechanism specifically in certain of the narrow claims.

This application covers, broadly, the automatic feature of the general invention, which is claimed generically in connection with another species thereof in my companion application filed concurrently herewith.

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

1. A device of the kind described comprising a stand, a tool normally occupying said

stand when not in use, an electric circuit for heating said tool, said stand being included in series with said tool in said circuit, a short-circuit device across said circuit between the stand and tool, and a circuit-breaker for co-operating with said short-circuit device to break the short circuit.

2. A device of the kind described comprising a stand, a tool normally occupying said stand when not in use, an electric circuit for heating said tool, said stand being included in series with said tool in said circuit, a short-circuit device across said circuit between the stand and tool, said short-circuit device including separable contacts, and automatic means for separating them.

3. A device of the kind described comprising a stand, a tool normally occupying said stand when not in use, an electric circuit for heating said tool, said stand being included in series with said tool in said circuit, a short-circuit device across said circuit between the stand and tool, and a yieldingly-supported circuit-breaker in position to be operated by the placing of the tool on said stand.

4. A device of the kind described comprising a stand, a tool normally occupying said stand when not in use, an electric circuit for heating said tool, said stand being included in series with said tool in said circuit, a short-circuit device across said circuit between the stand and tool, and a circuit-breaker pivotally supported and normally projecting in position adjacent said short-circuit device to be moved for breaking the circuit, by the placing of the iron thereon.

5. A device of the kind described comprising a stand, a tool normally occupying said stand when not in use, an electric circuit for heating said tool, said stand being included in series with said tool in said circuit, a short-circuit device across said circuit between the stand and tool, said short-circuit device consisting of two contacts held yieldingly together, and a circuit-breaker for separating them, said short-circuit device having a portion normally projecting above the iron-receiving surface of the stand to be depressed automatically by the placing of the iron on the stand.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAS. I. AYER.

Witnesses:

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WILHELMINA C. HEUSER.