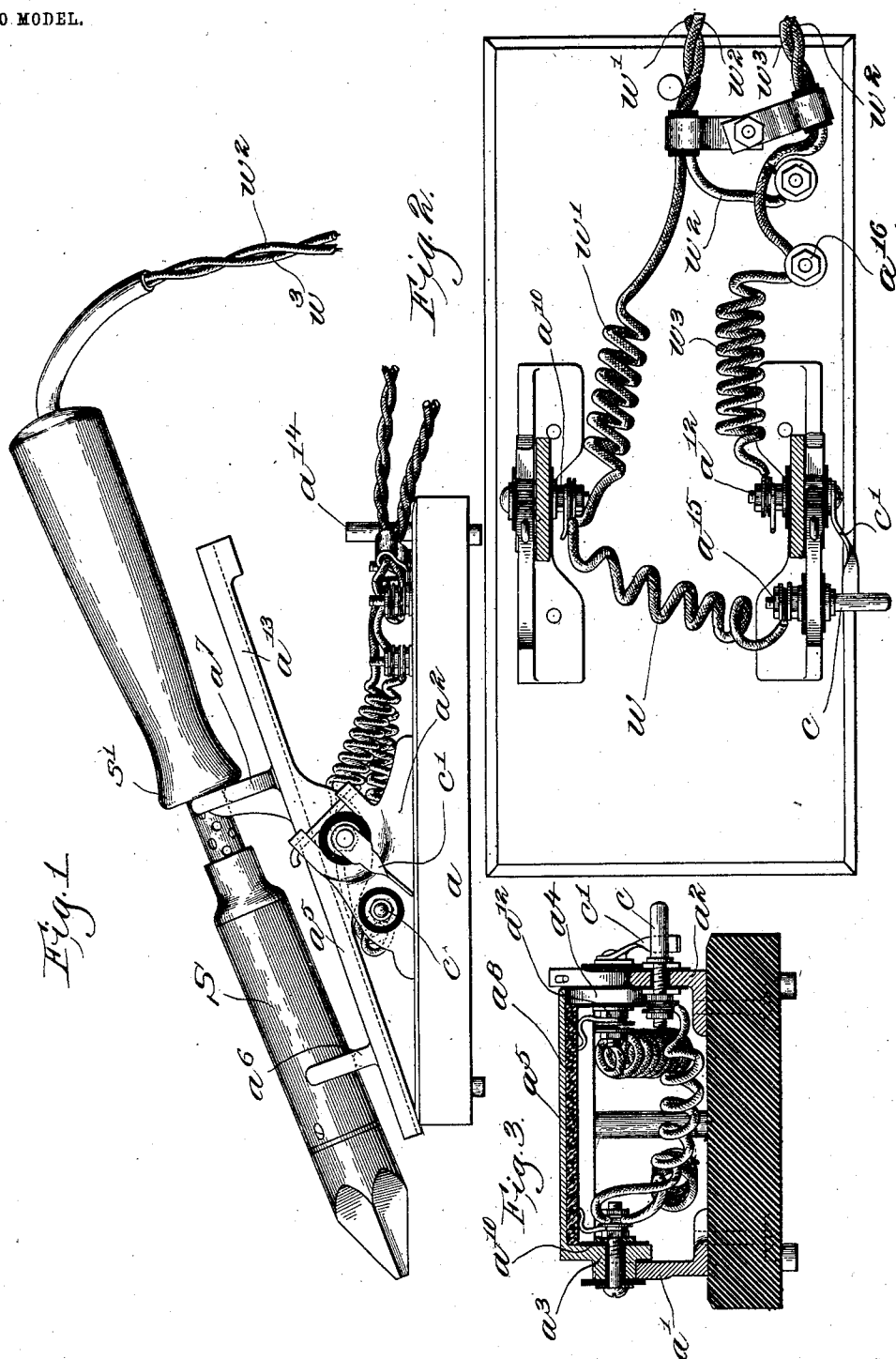


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J. I. AYER.
ELECTRIC SOLDERING IRON STAND.
APPLICATION FILED NOV. 13, 1902.

NO MODEL.



Witnesses:
W. C. Linsford.
E. F. Allen.

Inventor:
James I. Ayer.
by Messrs. Gregory & Co.

UNITED STATES PATENT OFFICE.

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

ELECTRIC-SOLDERING-IRON STAND.

SPECIFICATION forming part of Letters Patent No. 723,634, dated March 24, 1903.

Application filed November 13, 1902. Serial No. 131,107. (No model.)

To all whom it may concern:

Be it known that I, JAMES I. AYER, a citizen of the United States, residing at Cambridgeport, county of Middlesex, State of Massachusetts, have invented an Improvement in Electric-Soldering-Iron Stands, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Electric soldering-irons are rapidly coming into extensive use as electricity becomes more universally available and familiar, and accordingly I have devised the herein-described stand or support for a soldering-iron, the objects thereof being to provide automatic means for maintaining the iron sufficiently heated, but not overheated, when not in use and at the same time economizing current when in use, besides various advantages of mechanism, which will be more fully pointed out in the course of the following description, reference being had to the accompanying drawings, illustrative of a preferred embodiment of my invention, and the latter will be more particularly defined in the appended claims.

In the drawings, Figure 1 shows one embodiment of my invention in side elevation. Fig. 2 is a top plan view of the base of the stand, the tilting part thereof being broken off; and Fig. 3 is a central transverse sectional view of the stand.

Stated in general terms, the apparatus comprises a base a , provided on its opposite sides with supports a' a^2 , in which are journaled the opposite ears or trunnions a^3 a^4 of a platform-support or cradle a^5 , provided with forks a^6 a^7 , conforming in size and shape to the tool to be carried, herein shown as a usual soldering-iron S , the upper fork engaging the shouldered handle at s' , so that the heavy lower portion of the soldering-iron rests on the bridge or fork a^6 . On the under side of the platform a^5 is a rheostat a^8 , the wires thereof being shown in Fig. 3 as embedded in porcelain or other suitable insulator and the opposite terminals retained in binding-posts a^{10} a^{12} , secured to and properly insulated from the metal part of the platform or car-

rier a^5 . The lug or support a^2 is provided with a contact c , and the trunnion a^4 carries at its outer end a spring contact-maker in such position that it will make forcible contact at c when the iron S is off, at which time the heavier upper end a^{13} of the carrier a^5 causes the latter to tip down horizontally against a post a^{14} , thereby bringing the contact and contact-maker together. The binding-post a^{10} is connected by a wire w to a binding-post a^{15} on the inner end of the contact c and is connected by a wire w' to the source of energy, the circuit being completed by a wire w^2 to the soldering-iron, and a wire w^3 therefrom connects to a binding-post a^{16} and thence to the binding-post a^{12} , already mentioned.

From the foregoing description it will be apparent that when the soldering-iron is removed from the stand the latter automatically recovers its normal position by gravity, so that the contact-maker c' automatically completes the shunt-circuit through the wire w and cuts out the stand-rheostat, thereby throwing substantially all the energy of the feed-circuit through the soldering-iron while the latter is at work. As soon as the latter is out of work it is replaced on the stand, which thereupon automatically assumes the position shown in Fig. 1, breaking the circuit at c c' and cutting in the rheostat, which serves to reduce the current through the soldering-iron, thereby preventing the latter from being overheated, and at the same time produces sufficient heating effects in the stand to prevent the undue cooling of the soldering-iron by conduction through a cold stand. This utilizes all the heating effects of the current, both when the tool is in use and also out of use, and reduces to a minimum the amount of current required.

Various further advantages of my invention will occur to those skilled in the art, and I wish it also understood that my invention is capable of various other embodiments without departing from the spirit and scope of the invention, and accordingly I do not limit myself otherwise than as expressed herein-after in the claims, taken in connection with this description.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A device of the kind described, comprising an electric circuit, and a tool and a stand therefor, both in said circuit, said stand having a movable tool-carrier, provided with resistance, a shunt for cutting out said resistance, and make-and-break contacts for said shunt, said tool-carrier being movable by the placing of the tool thereon to break said shunt-contacts.

2. A device of the kind described, comprising an electric circuit, and a tool and a stand therefor, both in said circuit, said stand having a movable tool-carrier, provided with resistance, a shunt for cutting out said resistance, and make-and-break contacts for said shunt, said tool-carrier being movable by the placing of the tool thereon to break said shunt-contacts, and automatic means restoring said tool-carrier and thereby completing said shunt-circuit upon removal of the tool.

3. A stand having a stationary part, and a tool-carrier, in the form of a cradle, provided with resistance, an electric circuit including said resistance, said tool-carrier being mounted on horizontal pivots, make-and-break mechanism controlled by the position of said carrier, said tool-carrier being moved into position to introduce said resistance by the turning of said tool-carrier on its pivots when a tool is placed in said cradle.

4. A stand having a stationary part, and a tool-carrier, in the form of a cradle, provided with resistance, an electric circuit including said resistance, said tool-carrier being mounted on horizontal pivots, and make-and-break mechanism for said circuit controlled by the position of said carrier.

5. A stand for supporting a soldering-iron or the like, comprising an electric circuit, a movable tool-carrier, having a resistance adapted to be included in said circuit, a make-and-break device for said circuit automatically operated by said tool-carrier, said tool-carrier being mounted on horizontal pivots to tilt into one position for cutting out said resistance and into another position for cutting in said resistance, the placing of the tool

on said stand tilting said tool-carrier into the latter position.

6. A stand for supporting a soldering-iron or the like, comprising an electric circuit, a tool in said circuit, a make-and-break device for controlling the current delivered to said tool, and an operating member for said make-and-break device mounted on horizontal pivots to tilt into one position for closing said make-and-break device and to tilt into an opposite position for opening said make-and-break device.

7. A device of the kind described, comprising a stand having a stationary part, a tilting tool-carrier horizontally pivoted thereon, and an electric contact on one and a contact-maker on the other, caused to make and break contact by the tilting of said carrier, the latter normally assuming one position and being rocked out of balance and tilted to an opposite position by the placing of the tool thereon.

8. A device of the kind described, comprising a base, a tool-carrier pivoted thereon, and a make-and-break device operated by the tilting of said carrier, said carrier having a tool-receiving portion in position to cause the carrier to tilt by gravity upon receiving the tool.

9. A device of the kind described, comprising a base provided with bearings, a tool-carrier having trunnions journaled therein, one of said trunnions having a contact-maker, and the base having a contact to be engaged thereby when the carrier swings into suitable position.

10. A device of the kind described, comprising a base, a tilting tool-carrier mounted thereon, and an electrically-operated tool, said carrier having a receiving portion to engage said tool out of balance and automatically tilt the carrier, and an electric cut-out in the circuit of said tool, said cut-out being automatically operable by the tilting of the tool-carrier.

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

JAS. I. AYER.

Witnesses:

ELIZABETH M. CONLIN,
DORA A. PROCTOR.