F. KUHN & J. A. HAND.

SOLDERING IRON STAND.

APPLICATION FILED FEB. 21, 1918.

1,270,304.

Patented June 25, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

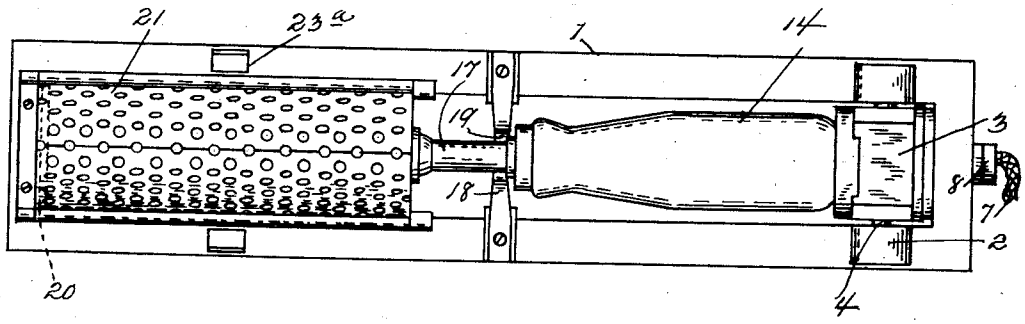


Fig. 2.

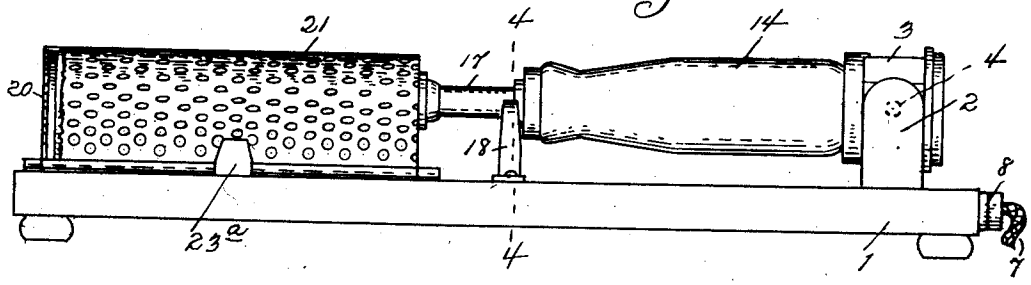
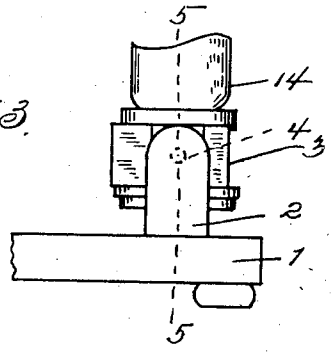


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 5.

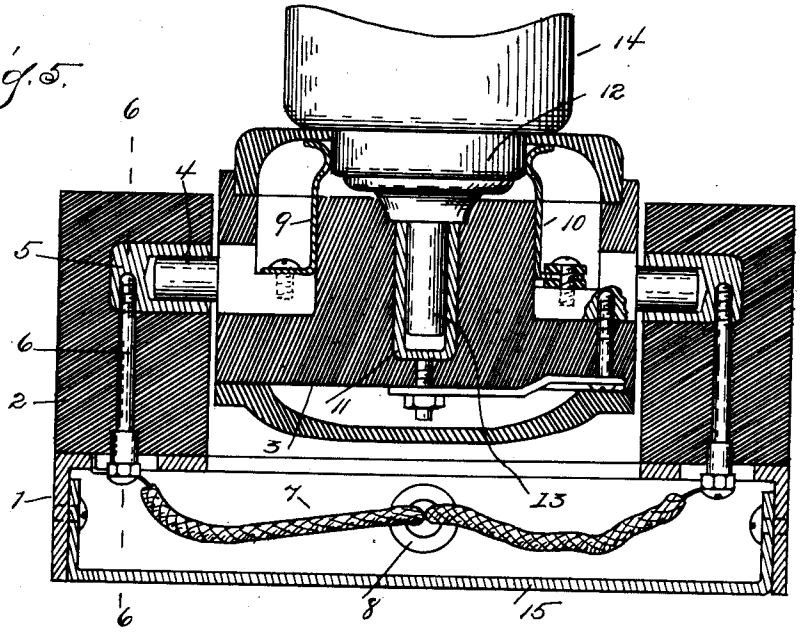


Fig. 6.

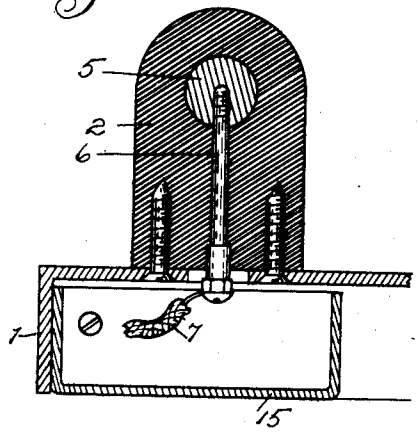
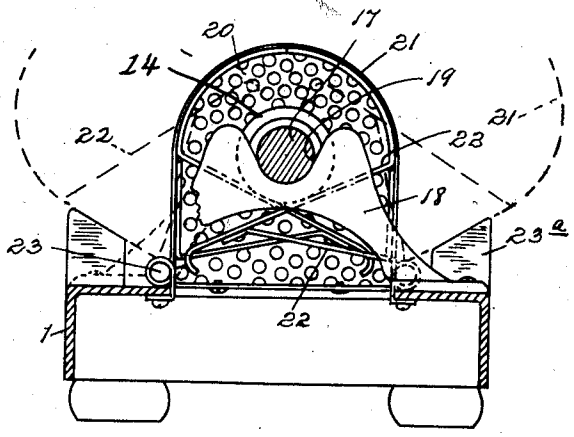


Fig. 4.



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FRANK KUHN AND JAY A. HAND, OF DETROIT, MICHIGAN, ASSIGNORS TO AMERICAN ELECTRICAL HEATER COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

SOLDERING-IRON STAND.

1,270,304. Specification of Letters Patent. Patented June 25, 1918.

Application filed February 21, 1918. Serial No. 218,399.

To all whom it may concern:

Be it known that we, FRANK KUHN and JAY A. HAND, both citizens of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Soldering-Iron Stands, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to soldering-iron stands and more particularly to stands for electric soldering-irons.

It is an object of the invention to provide a soldering-iron stand equipped with a pivotal socket member with which an electric soldering-iron may be very quickly engaged or disengaged, thus permitting a workman to use the iron without being impeded by any electrical connections thereto.

A further object of the invention is to provide a guard housing for the heated end of the iron while the same is upon its stand and to provide such a housing with pivotally adjustable walls which will be thrown apart by the iron as the same is removed from the stand and automatically brought together over the iron when the same is being replaced.

In the drawings:

Figure 1 is a top view of a soldering-iron stand embodying the novel features of the present invention, a soldering-iron being shown positioned in the stand and the walls of the guard housing being closed;

Fig. 2 is a view of the same in side elevation;

Fig. 3 is a side view of the socket portion of the stand showing a position of adjustment of the socket wherein its axis is substantially vertical;

Fig. 4 is a cross-section taken on line 4—4 of Fig. 2;

Fig. 5 is a sectional view of the socket taken on line 5—5 of Fig. 3;

Fig. 6 is a view in cross-section of one of the pivotal bearings supporting the socket, the section being taken on line 6—6 of Fig. 5.

In these views the reference character 1 designates an elongated base carrying at one end a pair of spaced upstanding insulator standards 2, between which is disposed an insulator socket member 3 having trunnions 4 at each side thereof whereby said socket is pivotally supported by said standards. The standards 2 are provided with bushings 5 receiving the trunnions 4, an electrical as well as a pivotal connection between the socket and standards being thus established. In each standard there is vertically embedded a screw 6 engaging a corresponding bushing 5 at its upper end and having its lower extremity engaged by a current supply connection 7 within the base 1, the connection 7 being introduced into the base through a bushing 8 mounted in the base end wall. The trunnions 4 have portions embedded in the socket 3, upon which are respectively mounted spring contact members 9 and 10, the latter of which is insulated from its support. The last named support is electrically connected with a tubular contact member 11 mounted centrally of the socket 3. Contact members 12 and 13 are carried at the handle extremity of a soldering-iron 14 and adapted to engage the contacts 9 and 11 respectively when inserted in said socket. The spring member 10, while coacting with the contact 9 to frictionally engage the contact 12 of the soldering-iron, performs no electrical function.

To protect the portions of the conductors 7 extending from the bushing 8 to the members 6, a sheet-metal guard plate 15 is extended across the end portion of the base 1 beneath the conductors.

In Fig. 6 there are shown the screws 16 whereby the standards 2 are secured rigidly to the base 1.

In front of its handle the soldering-iron has a reduced portion or shank 17 which is adapted to engage a rest 18 carried by the base when the soldering-iron has been engaged with its socket and swung to a substantially horizontal position, as shown in Figs. 1 and 2, said rest being formed with a groove 19 into which said shank fits. The member 18 besides furnishing a support for the middle portion of the soldering-iron also serves to prevent the iron being adjusted to its normal horizontal position unless fully engaged with its socket, since if the engagement of the soldering-iron and socket is not complete, the relatively thick handle portion of the iron will come into engagement with the member 18 instead of its shank portion 17.

The base 1 further carries a guard hous-

ing for the heated ends of the soldering-iron so as to eliminate danger of the same being engaged through accident by the workman or by any inflammable object, this guard housing comprising an end wall 20 of perforated metal mounted at the opposite end of the base from said socket and a pair of curved perforated side walls 21 pivoted as indicated at 23 at each side of the base and adapted in one position of adjustment to arch together resting upon the end wall 20 and forming an inclosure for the end portion of the soldering-iron. This arrangement is such that no manipulation of the parts of said guard housing is required either in engaging the soldering-iron with its stand or removing it therefrom. When the soldering-iron is swung up about its pivoted end for removal from its socket, the side walls 21 of the housing are thrown to each side by the heated end portion of the iron. When the iron is being replaced in the stand said end portion thereof engages during downward swinging movement of the iron with a pair of bracket arms 22, inwardly projecting from the walls 21 so that said walls are swung inward to inclose the heated end of the iron. To prevent the walls 21 of the guard housing from swinging outward unnecessarily far, there is provided upon the base 1 at each side thereof a beveled stop 23^a, said walls resting upon said stops when outwardly swung.

Since in soldering it is obviously important to apply the iron to the work before the heat thereof is dissipated materially, it will be clear that there is much utility in having the iron quick-detachable from its socket, and it will be further evident that the pivotal mounting of the socket will considerably facilitate both removal of the iron from its stand and its replacement therein. Automatic opening and closing of the guard housing without necessity for direct manipulation thereof will also accomplish a desirable saving of time.

What we claim as our invention is:—

1. A soldering-iron stand comprising a base, means carried by said base for supporting a soldering-iron, and a guard upon said base for the heated portion of the iron, said guard being movable relative to said base to facilitate engagement of the iron therewith and its disengagement therefrom.

2. A soldering-iron stand comprising a base, means upon said base for supporting a soldering-iron, and a guard for the heated portion of the iron mounted upon said base and movable into or out of a position above the iron respectively through engagement of the latter with its supporting means and disengagement of the iron from said means.

3. A soldering-iron stand comprising a base, supporting means upon said base for a soldering-iron, a guard member for the heated portion of the iron pivoted upon said base and extending in one position above the iron, said member being actuable out of said position through disengagement of the iron from its supporting means, and an arm carried by said guard member and engageable by the soldering-iron on engaging the latter with its supporting means to actuate said guard member to its guard position.

4. A soldering-iron stand comprising a base, means carried by said base for supporting a soldering-iron, and a guard housing for the heated end of the iron comprising a pair of walls oppositely pivoted upon the base and simultaneously actuable into or out of a position overhanging the soldering-iron respectively through engagement of the soldering-iron with its supporting means or disengagement of the iron from said means.

5. A soldering-iron stand comprising a base, a guard member for the heated portion of a soldering-iron carried by said base, and a socket member carried by the base, electrically and mechanically engageable by a soldering-iron and adjustable to permit disengagement of the soldering-iron from the guard member.

6. A soldering-iron stand comprising a base, a guard housing for the heated portion of a soldering-iron comprising a pair of members oppositely pivoted upon the base and adjustable into or out of a position above the soldering-iron respectively through engagement of the soldering-iron with the stand or disengagement thereof from the stand, and a socket member electrically and mechanically engageable by the soldering-iron and adjustable to permit engagement of the soldering-iron with the guard housing or disengagement of said iron therefrom.

7. A soldering-iron stand comprising a base, a socket member pivotally mounted thereupon, electrically and mechanically engageable by a soldering-iron, and a support upon said base for an intermediate portion of a soldering-iron.

8. A soldering-iron stand comprising a base, a pair of spaced standards upon said base, a socket member between said standards, an electrical and pivotal connection between said socket and standards, and supporting means for a soldering-iron upon the base supplementary to said socket.

9. A soldering-iron stand comprising a base, a socket member pivoted upon said base and electrically and mechanically engageable by a soldering-iron, means carried by said base supplementing said socket in supporting a soldering-iron in one position of pivotal adjustment of the socket, and a guard member shielding the heated portion of the iron in said position of the socket.

10. A soldering-iron stand comprising a

base, a socket member pivoted upon said base and electrically and mechanically engageable by a soldering-iron, a pair of members pivoted upon the base and coacting to form a guard housing for the heated portion of the soldering-iron, said members being engageable by the iron to actuate them from the path of the iron when the latter is swung upward upon the pivotal axis of the socket and being actuable by the iron into engagement above the iron when the latter is swung downwardly about the pivotal axis of the socket.

11. A soldering-iron stand comprising a base, a socket pivotally mounted upon said base and electrically and mechanically engageable by a soldering-iron, means supplementary to said socket carried by the base for supporting a soldering-iron upon the latter, a pair of opposed pivotal members upon the base constituting a guard housing for the heated portion of the iron, said members being adjustable out of the path of the iron when the same is swung upwardly about the pivotal axis of the socket, stops carried by the base limiting swinging movement of said pivotal members from each other, and arms carried by said pivotal members engageable by the iron when swung downwardly about the pivotal axis of the socket to swing said members into a coacting relation above the iron.

12. A soldering-iron stand comprising a base, a support for a soldering-iron pivotally mounted on said base, means associated with said support for establishing an electrical connection with the iron engaging the same, and means carried by the base supplementing said pivotal member in supporting a soldering-iron in one position of adjustment of said member.

13. A soldering-iron stand comprising a base, a guard member for the heated portion of a soldering-iron carried by said base, a support mounted upon the base adjustable to permit of disengagement of a soldering-iron from the guard member, and means associated with said support for establishing an electrical connection with the iron engaging the same.

In testimony whereof we affix our signatures.

FRANK KUHN.
JAY A. HAND.