

J. S. HANSEN.
ELECTRICALLY HEATED TOOL.
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Patented Mar. 26, 1912.

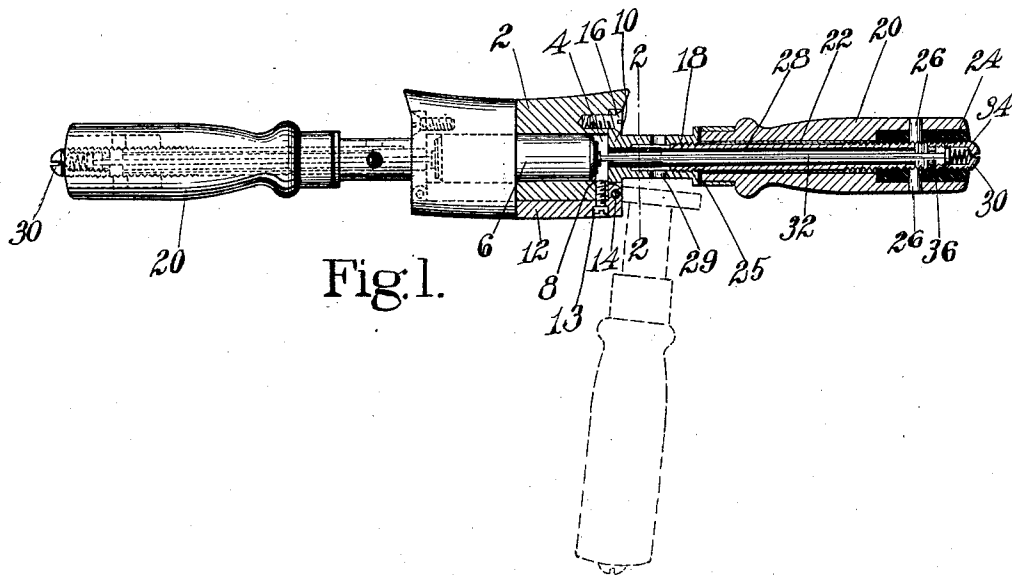


Fig. 1.

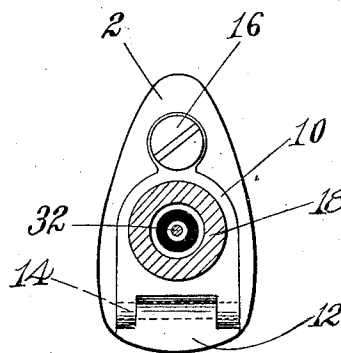


Fig. 2.

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UNITED STATES PATENT OFFICE.

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ELECTRICALLY-HEATED TOOL.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN S. HANSEN, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain Improvements in Electrically-Heated Tools, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to electrically heated tools and is herein shown as embodied in a treeing iron used for smoothing out the wrinkles in the uppers of boots, shoes and similar articles. It has been proposed heretofore to heat tools of this character electrically by inserting a suitable resistance in the body of the tool and providing electrical connections thereto. These resistances frequently become short circuited or otherwise defective and it is then necessary to replace them.

It is a particular object of this invention to provide a construction by which the insertion or removal of the heating resistance shall be facilitated.

The nature of the invention will be readily understood from the following description of one embodiment thereof and the novel features will be pointed out in the appended claims.

Referring to the drawings, Figure 1 is a view partly in the side elevation and partly in central longitudinal section of a preferred form of treeing iron; and Fig. 2 is a sectional view on the line 2—2, Fig. 1.

The body 2 of the iron is given a shape suited to the particular work for which it is intended, the iron shown being somewhat oval in cross section. An aperture 4 preferably circular in cross section is formed through the body of the iron from one side to the other for the reception of a resistance unit 6. This unit is of a common type having contact terminals on its opposite ends, one of said terminals being shown at 8, Fig. 1. The unit preferably is of cylindrical form with a sheet metal covering on its lateral surfaces and is of a size to fit the aperture snugly. Since its internal construction forms no part of the present invention, a description thereof is unnecessary.

A cover 10 is provided at each end of the aperture 4. Since both covers and the

parts associated therewith are precisely the same, a description of one will be sufficient. As indicated in the drawings the cover is irregular in shape and fits into a recess formed in the end of the body 2 so that its surface is flush with the end of the body. At one side the cover has two projecting ears which straddle the end of a plate 12 that extends the entire length of and is set into the body 2, the face of this plate forming a part of a polishing face of the iron. Two screws one of which is shown at 13 hold the plate in position and a pin 14 extending through the ears and the end of the plate secures the cover pivotally thereto. The cover is normally held in closed position by a screw 16 extending through it into the body 2. Projecting from the cover at right angles thereto is a tubular post 18 on which a handle 20 is supported by means of a tube 22 secured fast in the post and threaded at its outer end into a fiber plug 24 that is inserted in the end of the handle. The plug 24 is held in place by two pins 26. An insulating disk 25 is inserted between the end of the post 18 and the end of the handle. Preferably the bore of the handle is lined with a layer of asbestos 28 to prevent the transmission of heat to the handle from the tube 22 and for this purpose also several holes 29 are drilled through the post 18.

Electrical connections to the heating resistance 6 are made through the handles 20. For this purpose a thimble 30 is threaded into the fiber plug 24 and receives the headed end of a conducting rod 32 that extends through the tube 22, post 18 and cover 10 into the cavity 4. This rod is pressed toward the cavity by a spring 34 within the thimble, but its movement in this direction is limited by a nut 36 threaded into the end of the thimble. The tube 22 and the bore of the post 18 are lined with insulation to prevent contact of the rod therewith.

Ordinarily the parts occupy the positions in which they are shown in full lines in the drawings and in this condition the conducting rods 32 are pressed firmly into contact with the terminals 8 of the resistance unit 6. If the terminals of an electric supply circuit are connected to the respective thimbles 30 the flow of current through the resistance 6 will heat up the iron. In case the resistance

becomes defective or for any other reason it is desired to remove it, it is merely necessary to take out one of the screws 16 and swing the handle and cover down into the positions in which they are shown in dotted lines in Fig. 1. The resistance usually will drop out, but in case it sticks, it can be pushed out after opening the other cover. A new resistance may then be inserted and the handles swung back and secured in their normal positions. The movement of either handle into the position indicated in dotted lines in Fig. 1, of course, breaks the electrical connection through the iron but this connection is restored again when the handle is returned to its normal position.

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

1. A treeing iron comprising a body having a cavity therein extending longitudinally thereof to receive a heating resistance, a cover for said cavity, said cover and body having coöperating means enabling the cover to be turned about an axis to close or open the cavity and a handle for said iron supported by the cover.

2. A treeing iron comprising a body, said body having a cavity formed therein to receive a heating resistance provided with terminals, a cover for said cavity movable about an axis to close or open the cavity, and an electrical conductor supported by the cover to make electrical connection with a terminal of the resistance when the cover is in closed position.

3. A treeing iron comprising a body, said body having a cavity formed therein to receive a resistance unit provided with terminals, a cover for said cavity movable about an axis to close or open the cavity, a handle for said iron supported by the cover and a conductor extending through the handle and cover and making contact with a terminal of said resistance unit when the cover is in closed position.

4. A treeing iron comprising a body having a cavity formed therein to receive a resistance unit provided with terminals, a cover for said cavity mounted to swing into closed or open position, means for holding the cover in closed position, a handle for said iron rigidly supported on said cover, an electrical contact mounted in exposed position on the handle, a conductor extending from said contact through said handle and cover into the cavity in position to make contact with a terminal of said resistance when the cover is in closed position, said conductor being mounted to yield relative to the handle and cover.

5. A treeing iron comprising a body having a cavity formed therethrough to receive a resistance unit provided with terminals at its opposite ends, covers for the ends of the cavity movable independently of each other to close or open the cavity and a conductor supported by each cover to make electrical connection with the terminals of said resistance.

6. A treeing iron comprising a body having a cavity extending therethrough to receive a heating resistance provided with terminals, a cover at each end of the cavity, each cover being movable about an axis to close or open the cavity and a conductor yieldingly connected to each cover to make electrical connection with the terminals of said resistance.

7. A treeing iron comprising a body having a cavity extending therethrough to receive a heating resistance provided with terminals at its opposite ends, a cover at each end of said cavity movable to close or open the cavity, means for holding each cover closed, a handle for said iron carried by each cover and conductors extending into said cavity to make electrical connection with the terminals of said resistance.

8. A treeing iron comprising a body having a cavity extending therethrough to receive an electrical resistance provided with terminals at its opposite ends, a cover at each end of said cavity mounted to swing into closed or open position, a handle for said iron rigid with each cover, an electrical contact mounted in exposed position on each handle and a conductor leading from each contact into said cavity in position to make electrical connection with the terminals of said resistance when the covers are closed.

9. A treeing iron comprising a body having a cylindrical cavity formed therethrough to receive a resistance unit having terminals at its opposite ends, a plate set into said body, covers pivoted to said plate, one at each end of said cavity, handles rigidly fastened to said respective covers, contacts supported in said handles and electrical conductors extending through said handles and covers into said cavity to make electrical connection with the terminals of said unit, said conductors having yielding connection with the respective contacts.

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

JOHN S. HANSEN.

Witnesses:

OSCAR CALKINS,
JOHN H. MCCREADY.