Dec. 14, 1926. 1,610,932

W. COOPER

ELECTRIC HEATING DEVICE FOR BURNING AND DRYING PURPOSES

Filed April 24, 1926

FIG. 1.

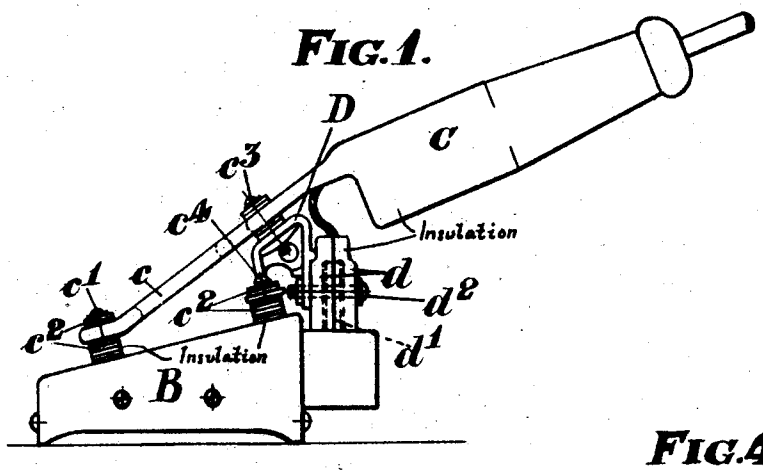


FIG. 4.

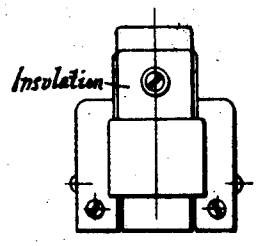


FIG. 3.

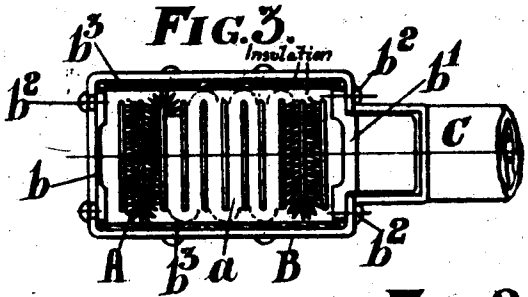


FIG. 2.

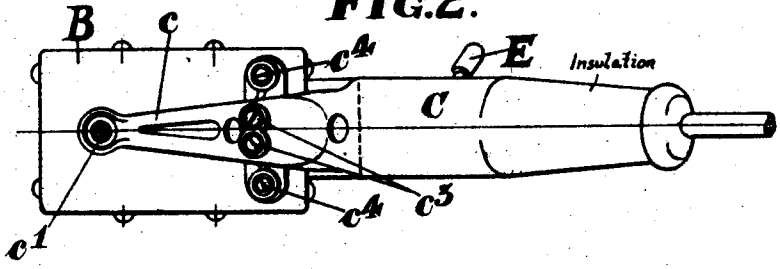


FIG. 5.

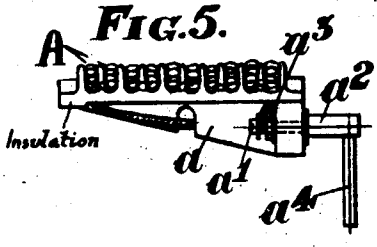
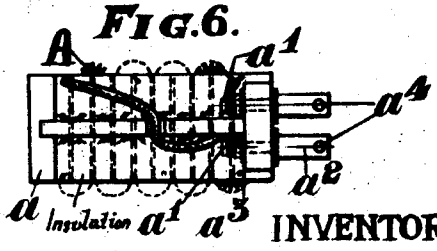


FIG. 6.



INVENTOR.

William Cooper

by Monroe C. Miller Atty.

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UNITED STATES PATENT OFFICE.

WILLIAM COOPER, OF HUDDERSFIELD, ENGLAND.

ELECTRIC HEATING DEVICE FOR BURNING AND DRYING PURPOSES.

Application filed April 24, 1926. Serial No. 104,370, and in Great Britain April 28, 1925.

This invention relates to an electrically heated hand tool that is primarily intended for removing paint from doors, window frames and the like but can also be used for drying the surface of sand moulds in foundries, or for any other purpose to which it may be found to be applicable, and has for its chief object to introduce a light, compact and handy article which will be exceedingly well insulated from heat generated by a heating element so that the operator will be able to use it without experiencing any discomfort either from heat or fatigue.

The invention will be fully described with reference to the accompanying drawings in which:—

Fig. 1 is a side elevation, and Fig. 2 a plan of an electrically heated hand tool constructed in accordance with this invention.

Fig. 3 is an inverted plan, and Fig. 4 an end view of the holder and heating element.

Fig. 5 is a side elevation, and Fig. 6 a plan of the heating element.

A indicates the heating element, B the holder, and C the handle.

The heating element A comprises a number of wire coils supported upon a backing a constructed from fire clay, porcelain, or other suitable refractory insulating material. The ends of the coils are attached to binding screws a^1 carried by two metal rods a^2 which are secured to the backing a by nuts a^3 and are provided with contact plugs a^4. This constitutes one complete unit which is detachably mounted in the holder B and is secured in position therein by plates b b^1 which are attached to the holder by screws b^2, strips of asbestos b^3, or other heat insulating material being interposed between the sides of the backing a and the holder. The handle C is constructed from heat and electrical insulating material and is formed with a prong c which is connected to the back of the holder by a screw c^1 and is insulated from the holder and the screw by heat insulating washers c^2 which are preferably constructed from bone and asbestos arranged alternately. Interposed between the prong and the holder C is a bracket D which is connected to the prong by screws c^3 and to the holder by screws c^4, insulating washers c^2 being provided for insulating the prong from the bracket and the bracket from the holder. This bracket in addition to spacing the handle away from the holder acts as a holding device for two clips d which are constructed from electrical insulating material and hold two sockets d^1 into which the contact plugs a^4 fit; the said clips d being clamped together and secured to the bracket D by a bolt d^2. The handle C is made hollow for the passage of an electric cable which is connected to a switch E and to the sockets d^1, the free end of the electric cable being attached to a plug or other electrical connecting device.

What I claim as my invention, and desire to secure by Letters Patent in the United States is:—

1. An electrically heated hand tool comprising in combination an electrical heating element, a backing of refractory insulating material for supporting said element, metal contacts attached to said backing arranged in electrical connection with said element and terminating in contact plugs, the said parts comprising a single interchangeable unit, a metal casing having an open front for detachably carrying said unit, a handle constructed from heat insulating and electrical insulating material formed with a prong, means for attaching the prong to the back of the casing, heat insulating means for insulating the prong from the casing and the means of attachment, a bracket interposed between the prong and the casing, means for attaching the prong to the bracket, heat insulating means for insulating the prong from the bracket and the means of attachment, means for attaching the bracket to the casing, heat insulating means for insulating the bracket from the casing and the means of attachment, socket holders constructed from electrical insulating material, socket terminals mounted in said socket holders, and means for clamping the socket holders and securing them to the bracket.

2. An electrically heated hand tool comprising in combination an electrical heating element, a backing of refractory insulating material supporting said element, terminal

members for said element carried by said backing, a metal casing having an open front, the backing being detachably mounted in said casing with said element exposed through said open front, a handle formed with a prong attached to said casing, a bracket located between and attached to said prong and casing, and electrical terminal members attached to said bracket and having a slip connection with the first-named terminal members.

In testimony whereof I affix my signature.

WILLIAM COOPER.