

Sept. 17, 1935.

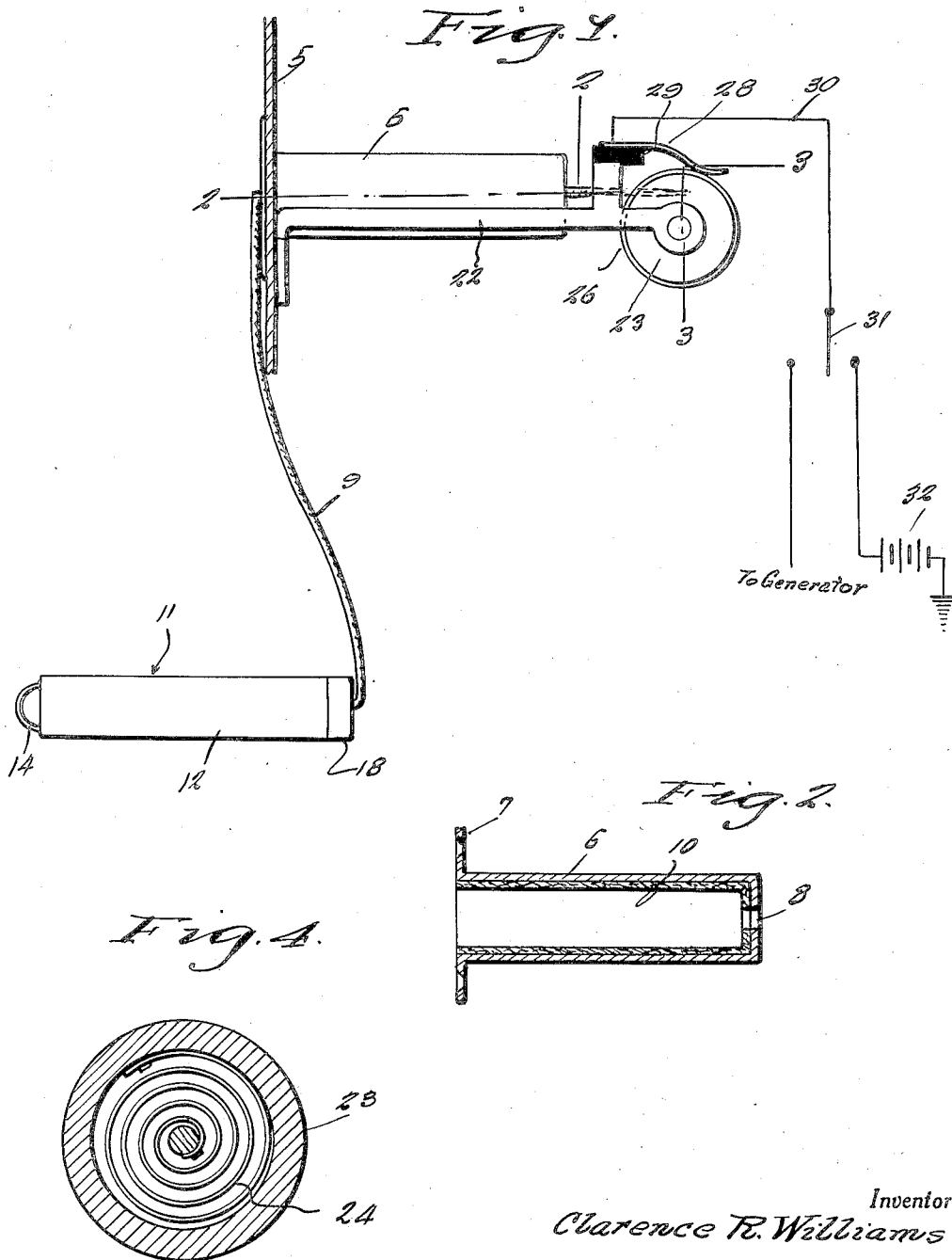
C. R. WILLIAMS

2,014,677

HAND WARMER

Filed Feb. 10, 1934

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3.

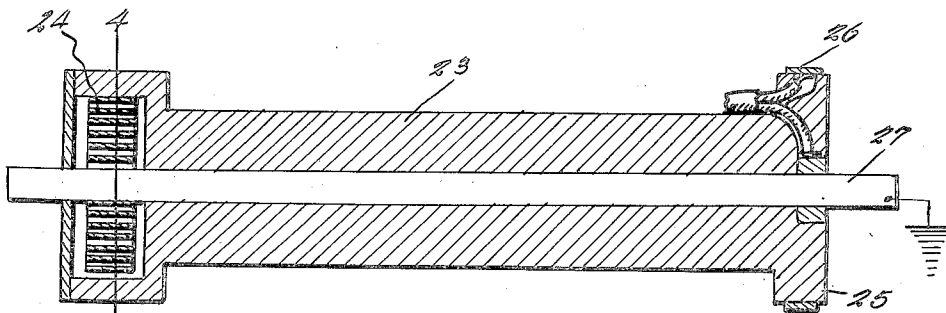


Fig. 5. Fig. 6.

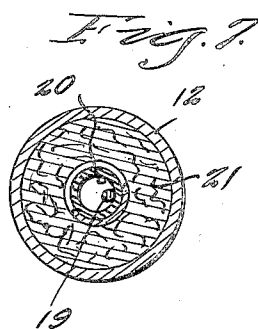
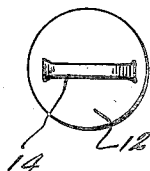
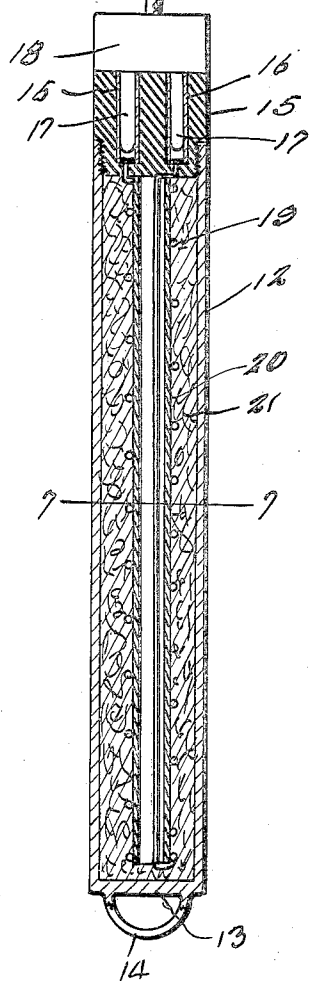
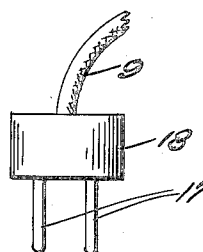


Fig. 8.



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UNITED STATES PATENT OFFICE

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HAND WARMER

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2 Claims. (Cl. 219—19)

This invention appertains to new and useful improvements in electrical devices, and more particularly to a novel device in the form of a hand warmer which can be installed on automobiles in winter time.

The principal object of the present invention is to provide a simple and inexpensive device which can be readily installed and operated at low cost.

Another important object of the present invention is to provide a device for warming the hands in cold weather and which, because of its compact construction and arrangement of parts, will not detract from the appearance of the usual instrument board when it is used on an automobile.

These and various other important objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings:—

Figure 1 represents a side elevational view of the invention shown installed on an instrument board and electrically connected with a source of energy.

Figure 2 represents a longitudinal sectional view through the instrument housing.

Figure 3 represents a longitudinal sectional view taken substantially on line 3—3 of Figure 1.

Figure 4 represents a sectional view taken substantially on line 4—4 of Figure 3.

Figure 5 represents a longitudinal sectional view through the warming element.

Figure 6 represents an end elevational view of the warming element.

Figure 7 represents a cross sectional view taken substantially on line 7—7 of Figure 5.

Figure 8 represents a side elevational view of the plug connector.

Referring to the drawings wherein like numerals designate like parts, it can be seen in Figure 1 that numeral 5 represents the usual instrument board of an automobile which in the present case is provided with an opening to receive the cylindrical-shaped housing 6. One end of this housing 6 is open and provided with a circumferentially extending flange 7 provided with openings through which securing elements may be disposed for securing the flange to the board 5 and thus supporting the housing 6. The opposite end of the housing 6 is provided with a small opening 8 through which the conductor wire 9 can pass and as is clearly shown in Figure 2, the housing is provided with a di-electric lining 10. This housing serves as a container for the warming element generally referred to by numeral 11, which consists of the outer cylindrical shell 12 closed at its end 13, but provided at this end with a ring or semi-ring 14 whereby the instru-

ment can be hung up when not used in conjunction with the housing 6.

The opposite end of the shell 12 is internally threaded to receive the threaded socket body 15 which is provided with a socket 16 therein for receiving the prongs 17 of a plug connector 18 attached to the conductor wire 9. Wires extend from the socket 16 and connect to the heating element 19 which is convoluted on the elongated di-electric tube 20 which extends longitudinally in the shell 12 and which is practically embedded in a suitable heat absorbing filler 21.

A suitable bracket 22 attached to the rear side of the instrument board 5, supports the spring roll 23 on which the conductor 9 is wound. A spring 24 of this roll is located within one end of the roll, while the opposite end is provided with a circumferentially extending shoulder 25 covered by a conductor band 26. The conductor has one wire attached to the grounded shaft 27, while its other end attaches to the conductor band 26 and a spring contact 28, supported by the bracket 25, but insulated therefrom, as at 29, is connected by the conductor 30 to a switch 31, which switch is installed between a source of current 32 and the conductor 30 so that the current can be supplied to the instrument 11 whenever desired.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:—

1. A hand warmer comprising a shell closed at one end, a core disposed longitudinally in the shell and provided with a heating element thereon, a di-electric body in the opposite end of the shell, di-electric material in the shell extending between the body and the closed end of the shell and being interposed between the core and the inner side of the shell, said body being provided with an electric socket therein connected with the heating element, and an extensible conductor connected with a source of current having a pronged plug for quick detachable engagement with the socket of said body.

2. In combination, a hand warmer consisting of a shell, a heating element in the shell, a housing for the shell, an electrical conductor mounted for extension through the housing and provided with a plug, said shell being provided with a socket with which the plug is quickly detachable, said shell being of substantially the same length as the housing and provided with a handle at its end opposite from the end at which the socket is located.

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