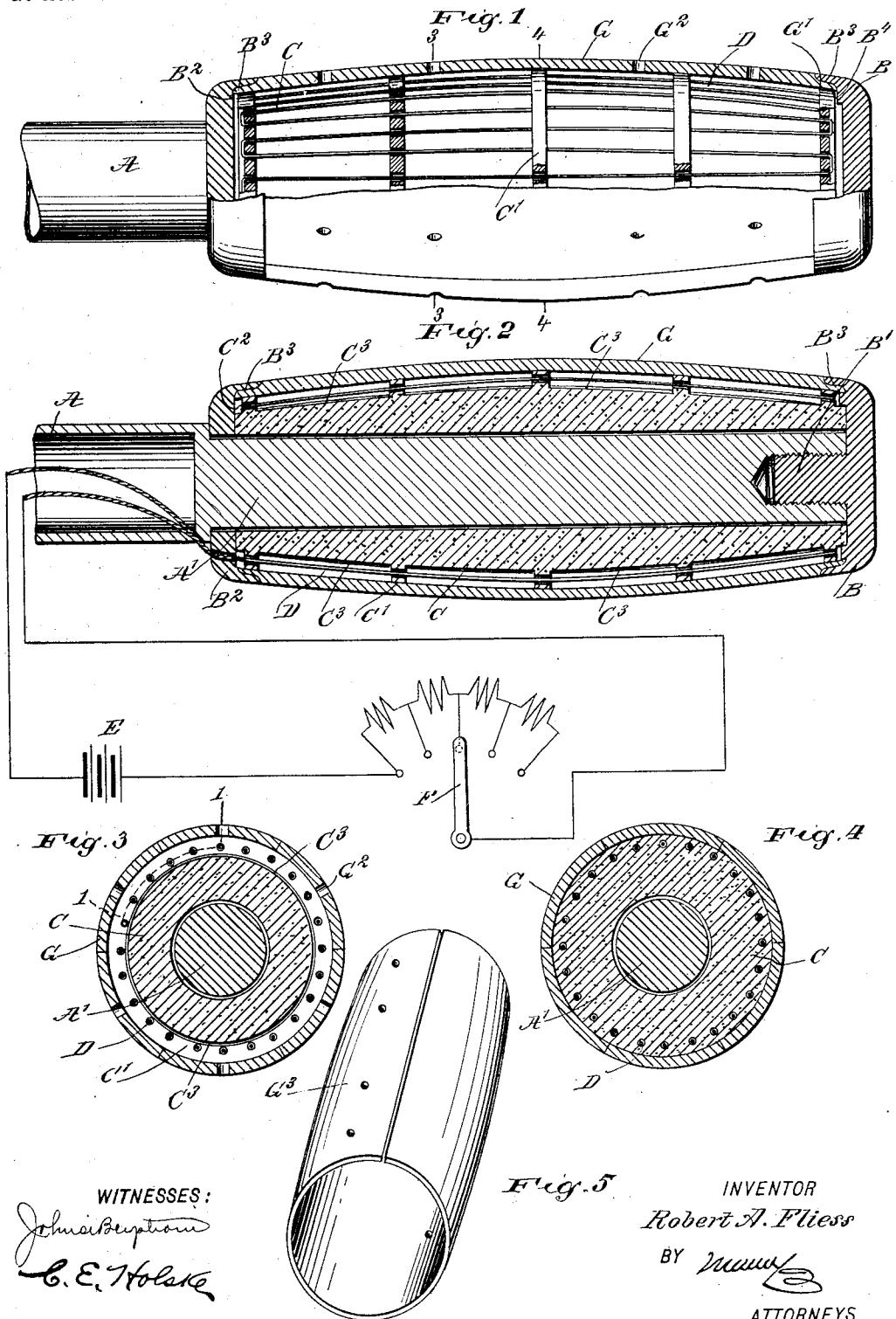


No. 744,739.

PATENTED NOV. 24, 1903.

R. A. FLIESS.
ELECTRICALLY HEATED HANDLE.
APPLICATION FILED JAN. 29, 1902.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT A. FLEISS, OF EAST ORANGE, NEW JERSEY.

ELECTRICALLY-HEATED HANDLE.

SPECIFICATION forming part of Letters Patent No. 744,789, dated November 24, 1903.

Application filed January 29, 1902. Serial No. 91,754. (No model.)

To all whom it may concern:

Be it known that I, ROBERT A. FLEISS, a citizen of the United States, and a resident of the city of East Orange, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Electrically-Heated Handles, of which the following is a full, clear, and exact description.

My invention relates to handles that are adapted to be used in the open air in cold weather, and has for its object to provide a simple and efficient device for heating such handles. The invention is applicable, for instance, to the handles of the steering or speed-controlling levers of horseless carriages.

The accompanying drawings illustrate in detail one form of my invention, while its scope is defined in the appended claims.

Figure 1 is an elevation of my electrically-heated handle, with parts in section on line 1 1 of Fig. 3. Fig. 2 is a longitudinal central section. Figs. 3 and 4 are cross-sections on lines 3 3 and 4 4, respectively, of Fig. 1; and Fig. 5 is a perspective view of another form 25 of outside cover for the handle.

A designates the shank of the lever or other part, to which the handle is applied. This shank has a stem A', of reduced diameter, forming a shoulder. The stem may be made 30 of any suitable material. At its outer end the stem has a screw-threaded axial recess, into which fits the screw B' of a cap B, preferably made of a material which is a bad conductor of heat. Against the shoulder at the 35 other end of the stem abuts a similar cap B', having, like the cap B, a peripheral flange B', extending toward the other cap. Between the two caps B B' a sleeve or core C is fitted on the stem A'. This core is made of a ma-

40 terial which is a bad conductor of heat, such as porcelain, and is preferably bulged out at the center, conforming to the generally-approved style of handles. The core has annular ribs C', provided with spaced apertures, 45 and the outermost ribs are preferably provided with ring-shaped grooves C'. Through the apertures of the ribs C' are strung back and forth, as shown best in Fig. 1, the runs of a conductor D, such as a wire of German 50 silver, the bends of which are received in the grooves C', so as to be countersunk. The ends of the conductor D are connected with

a source of electricity, such as a battery E, and preferably a device is provided for governing the strength of the current, such as 55 a switch-rheostat F, or I may employ the well-known expedient of a controller, by means of which the cells of a battery may be connected with the circuit in different ways so as to vary the voltage.

Under the flanges B' of the caps B B' fit the reduced ends G' of bars or strips G, forming the outside cover. These bars are made of a material which is a good conductor of heat and may be perforated, as shown at G'. 65 The outer cap B preferably has an annular interior rib B', arranged to project between the core C and the strips G.

Instead of a series of bars or strips G, I may employ an outside cover G', made of one piece 70 and slitted lengthwise to permit of fitting it over the core C. This cover may also be perforated to allow the heat to radiate more readily and may be bulged at the middle, if desired.

It will be understood that the current passing through the conductor D will heat the latter, and as the core C is a bad conductor of heat the heat will be thrown mostly outward and absorbed by the conducting-cover G or 80 G', so as to convey a comfortable warmth to the hand of the person. To improve the outward radiation, the outer surface of the core C may be glazed or polished, as shown at C', so that it will practically become a heat-reflector. The handle is readily taken apart and put together.

Various modifications may be made without departing from the nature of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An electrically-heated handle, comprising an electrical conductor forming a heating 95 device, and a core made of a bad conductor of heat and located within said heating device, the outer surface of the core being glazed or polished to reflect the heat outward.

2. An electrically-heated handle, comprising an electrical conductor forming a heating device, an opaque conducting-cover surrounding said device, and a core made of a bad conductor of heat and located within said heat-

ing device, the outer surface of the core being glazed or polished to reflect the heat outward.

3. An electrically-heated handle, comprising a central shank or stem, a core mounted on said stem and made of a bad conductor of heat having a glazed or polished outer surface to reflect heat outwardly, the core having surrounding annular flanges with longitudinal passages, caps mounted on the stem, one at each end of the core, and one provided with an axial projection screwing into the free end of the stem, a conductor strung back and forth through the flanges of the core, and a conducting outside cover held by the caps and surrounding the core and conductor.

4. An electrically-heated handle, comprising an electrical heating device provided with caps at its ends, means for holding the caps in position and longitudinal strips of conducting material surrounding said heating device and resting thereon, the said strips having their ends fitted under and within the edges of said caps.

5. An electrically-heated handle, comprising a conductor adapted to be heated by the passage of an electric current and located around a central space, and a heat-reflector located within said central space and surrounded by the conductor, to throw the heat outward.

6. An electrically-heated handle, comprising a conductor adapted to be heated by the passage of an electric current and located around a central space, a heat-reflector located within said central space and surrounded by the conductor to throw the heat outward, and a cover surrounding the conductor.

7. An electrically-heated handle for the controlling or steering levers of horseless carriages and the like, comprising a central shank or stem having a shoulder at its inner end and a screw-threaded axial recess at its outer end, a sleeve or core mounted on said stem and made of a bad conductor of heat, the said core being bulged out at the center and having a glazed or polished outer surface to reflect the heat outwardly, the said core having surrounding annular ribs or flanges provided with spaced longitudinal passages the outermost ribs having ring-shaped grooves, caps mounted on the stem one at each end of the core and made of a bad conductor of heat, the

cap at the outer end being provided with a screw-threaded axial projection screwing into the opening in the outer end of the stem, the 55 said caps each having a peripheral flange extending toward the other cap, a conductor strung back and forth through the apertures of the flanges or ribs of the core, the bends of the conducting-wire being received in the 60 grooves of the outermost ribs so as to be countersunk, and a conducting outside cover surrounding the core and conductor and having its ends fitting under the flanges of the caps, and held in place by said caps. 65

8. An electrically-heated handle for the controlling or steering levers of horseless carriages and the like, comprising an electrical heating device having a core and conductor, and provided with caps at its ends each having a peripheral flange extending toward the other cap, and longitudinal strips of conducting material surrounding said heating device and having their reduced ends fitted under the flanges of said caps, the outer cap being 70 provided with an annular interior rib arranged to project between the core and the covering-strips.

9. An electrically-heated handle for the controlling or steering levers of horseless carriages and the like, comprising a central stem connected with the shank of the lever, a core mounted on said stem and made of a bad conductor of heat having a glazed or polished outer surface to reflect heat outwardly, the 85 core having surrounding annular flanges with longitudinal passages, caps mounted on the stem one at each end of the core, a longitudinally-extending conductor strung back and forth through apertures in the annular flanges 90 of the core, a conducting outside cover held by the caps and surrounding the core and conductor, a source of electricity with which the ends of the conductor are connected, and means for governing the strength of the current, as set forth.

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

ROBERT A. FLEISS.

Witnesses:

JNO. M. RITTER,
C. E. HOLSKE.