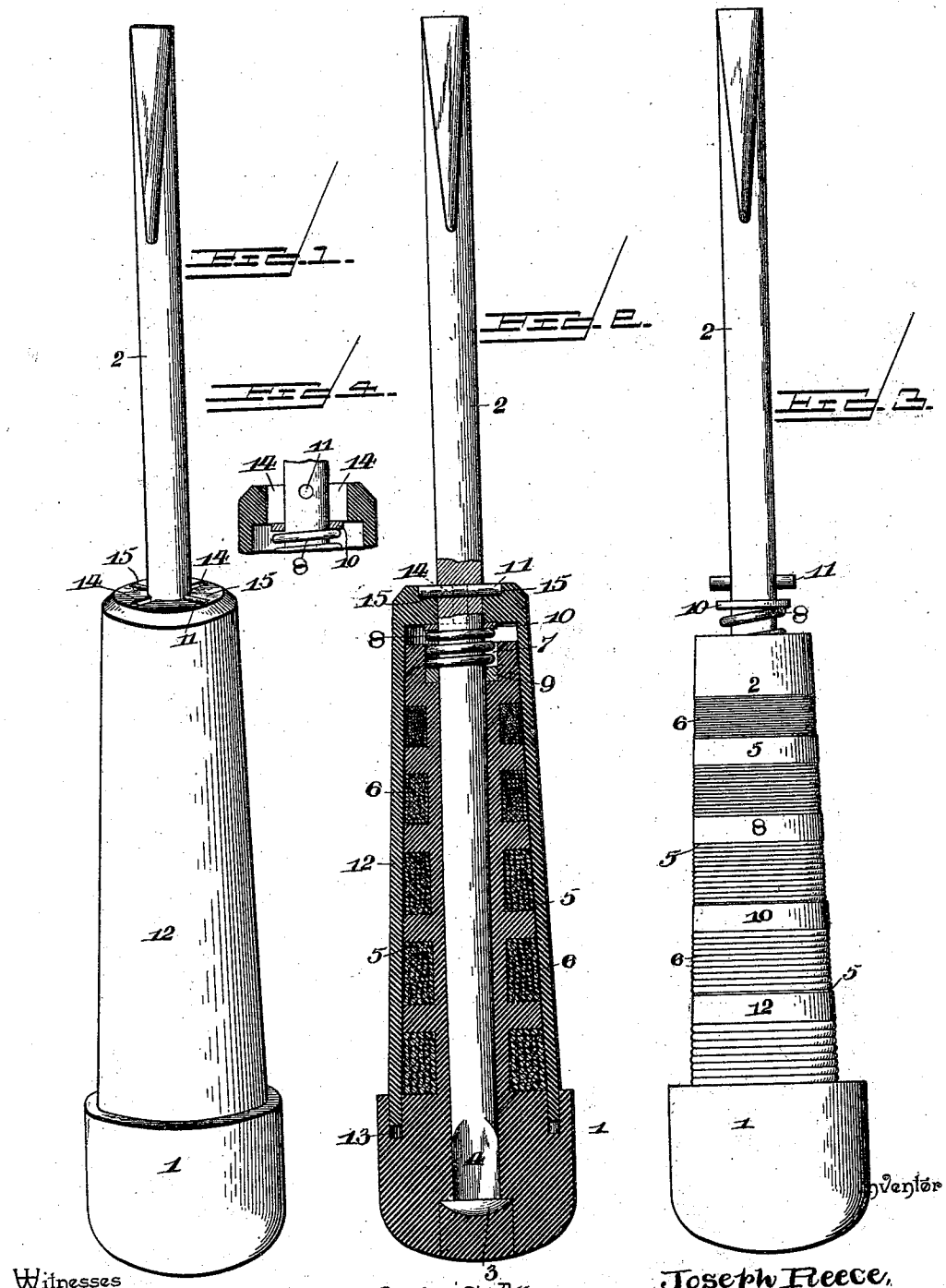
(No Model.)

J. REECE.

ELECTRICIAN'S SCREW DRIVER.

No. 553,965. Patented Feb. 4, 1896.



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UNITED STATES PATENT OFFICE.

JOSEPH REECE, OF PULASKI, NEW YORK.

ELECTRICIAN'S SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 553,965, dated February 4, 1896.

Application filed May 31, 1895. Serial No. 551,198. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH REECE, a citizen of the United States, residing at Pulaski, in the county of Oswego and State of New York, have invented a new and useful Electrician's Screw-Driver, of which the following is a specification.

This invention relates to an improvement in screw-drivers and is designed especially for use by electricians.

The object of the present invention is to provide a simple, convenient and efficient article of the character referred to, which shall be thoroughly insulated for adapting the same to be used with safety in electric plants while the current is on.

A further object of the invention is to provide such screw-driver with a series of grooves or annular pockets for the reception of fuse-wire of different gages and to combine therewith a removable shell or casing of non-conducting material adapted to cover and inclose the fuse-wires and to be locked to the shank of the screw-driver.

Other objects and advantages of the invention will appear in the course of the subjoined description.

The invention consists in a screw-driver embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a screw-driver constructed in accordance with this invention. Fig. 2 is a longitudinal section through the handle and removable shell or case, the shank of the screw-driver being partly in section also. Fig. 3 is a view in elevation of the screw-driver with the shell or case removed. Fig. 4 is a detail section through the end of the removable shell or case, taken at right angles to Fig. 2.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates a suitable handle of non-conducting material, such as hard or vulcanized rubber, the body of said handle being of sufficient extent longitudinally to form a firm support for the shank 2 of the screw-driver. The body of the handle is formed with a longitudinal central bore extending entirely through the same, in which is fitted the shank of the screw-driver, said bore being increased in diameter at the butt of the handle to provide for the reception of the head 3 of the shank. This head may be either round or polygonal, or a portion of the shank near the head may be squared or flattened, as indicated at 4, to prevent said shank and handle from turning relatively to each other. After the shank 2 is inserted through the bore of the handle 1 the enlarged end of said bore, at the butt of the handle, is filled with rubber or other non-conducting material in a soft or plastic state and the same allowed to harden, the effect of which is to securely bind and lock the shank of the screw-driver within the handle, as shown in Fig. 2.

The body of the handle is provided at intervals with annular grooves or pockets 5, which may be of different widths and capacities, the same being adapted to receive a supply of fuse-wires of different gages, with which the operator may patch a line-wire, such wires being indicated at 6. For the sake of convenience these grooves or pockets are numbered to indicate the size or gage of the wire, said numbers being applied to the outer surface or periphery of the intervening partitions. The handle is provided also with a cylindrical socket or recess 7 in its end, in which is arranged a spiral spring 8, said spiral spring being disposed around the shank of the screw-driver and interposed between a washer 9 in the base of said socket or recess and an outer washer 10, also surrounding the shank 2, just beneath a pin 11 inserted through a perforation in the screw-driver shank and projecting at its ends from opposite sides of said shank.

12 designates a shell or cylindrical case, which is made slightly tapering and adapted to fit over and snugly surround the grooved portion of the handle, the lower or adjacent end of said shell or case being adapted to fit within an annular groove 13 in the head or butt of the handle, as indicated in Fig. 2. This shell or case at its outer end is formed with a perforation or circular hole of a size corresponding to the diameter of the shank 2, by means of which said shell is adapted to be passed over the end of the shank and moved inward. This end of the shell or case is also

provided with oppositely-disposed grooves 14, extending entirely through the same and radiating from the central circular opening, by means of which the pin 11, carried by the screw-driver shank, is adapted to pass through the end of the shell or case from the inside. After the pin 11 passes through the grooves 14 the shank 2, with the aid of the handle 1, is given a quarter-turn, so as to bring said pin or the projecting ends thereof into alignment with an oppositely-disposed pair of radial sockets or depressions 15, arranged substantially at right angles to the grooves 14. In this position the washer 10 bears against the inner face of the closed end of the shell or case 12, and the tension of the spring 8 is exerted to hold the pin 11 in engagement with said sockets.

To remove the shell or case 12, for the purpose of obtaining access to the fuse-wires, said shell or case is drawn inward against the tension of the spring sufficiently to disengage the pin 11 from the sockets 15 and a quarter-turn given to the handle, which brings the projecting ends of said pin into line with the slots or grooves 14, when the shell or case may be readily removed.

The screw-driver herein described will be found very convenient in use by electricians or those who work in and about an electric plant. By reason of the handle and the inclosing case or shell being made from non-conducting material the device is perfectly safe to be used while the current is on, and on account of the handle being adapted to carry a supply of fuse-wires of different sizes or gages the tool will be found very convenient and useful.

It will be apparent that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a screw-driver, a handle composed of material which is a non-conductor of electricity and formed with an annular pocket adapted to have a supply of wire wound around the same, the screw-driver shank permanently embedded in said handle, and a removable inclosing shell or case composed of material similar to the handle and adapted to be applied and locked thereto, substantially in the manner and for the purpose described.

2. In a screw-driver, the combination with a handle composed of material which is a non-conductor of electricity and having formed therein a series of annular pockets for the reception of fuse-wires, of a screw-driver shank permanently embedded therein and provided with a transverse through-pin and a removable inclosing shell or case closed at one end and open at the other and adapted to fit over said handle and to cover the pockets therein, said shell being provided in its closed end with a slot crossing the aperture for the shank and adapted to permit the passage of said pin, substantially as specified.

3. In a screw-driver, a handle having formed therein a series of annular grooves or pockets for the reception of fuse-wires or other material, in combination with a screw-driver shank carried thereby and having a fixed relation thereto, a pin carried by and projecting laterally from opposite sides of said shank, and a removable shell or case fitting over and covering the pockets in said handle and provided in its outer end with grooves or slots for permitting the passage of the projecting ends of said pin, substantially as set forth.

4. In a screw-driver, a handle having formed therein pockets for the reception of fuse-wires or other material, in combination with a screw-driver shank fitting therein and carried thereby, a removable shell or case fitting over and covering said pockets and provided at one end with radial grooves or slots for permitting the passage of a pin carried by the shank of the screw-driver and with radially-extending sockets or depressions in its outer face for the reception of the ends of the pin, and a spiral spring interposed between the end of the handle and the adjacent inner face of the closed end of the shell or case, all arranged substantially as and for the purpose specified.

5. In a screw-driver, a handle formed with a series of annular grooves or pockets, and with a groove 13 in the head thereof, in combination with a screw-driver shank fitting within and carried by said handle, a pin carried by said shank and having its ends projecting laterally upon opposite sides thereof, a cylindrical shell or case fitting over said handle and covering the pockets therein and adapted to have its open end received within said groove 13 in the handle, and also formed in its opposite end with a circular central opening and with a pair of grooves or slots radiating therefrom and also with a radially-extending pair of sockets or depressions in its outer face, and a spiral spring arranged within said shell or case and interposed between the outer end of the same and said handle and disposed around the shank of the screw-driver, substantially as described and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH REECE.

Witnesses:
WM. H. EDWARDS,
W. C. REECE.