Aug. 20, 1940. H. C. SMIDA 2,212,307

ELECTRIC TESTER

Filed Jan. 24, 1939

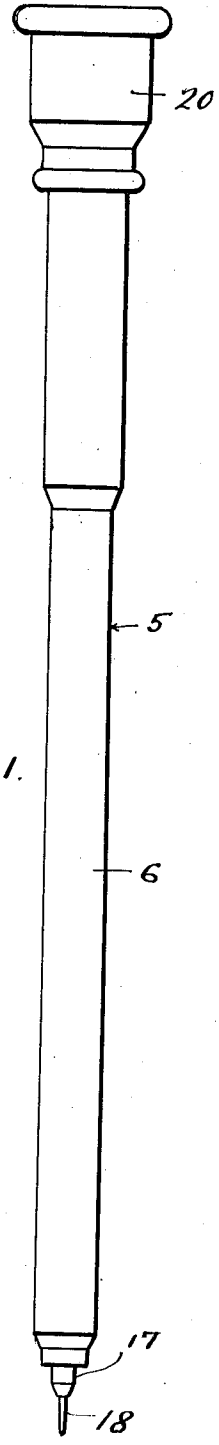


Fig. 1.

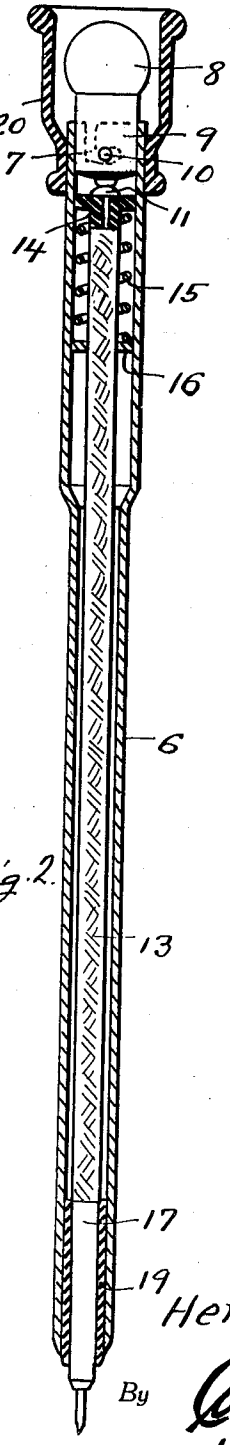


Fig. 2.

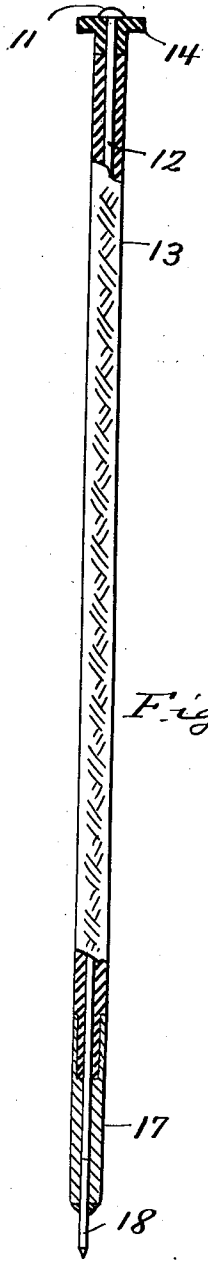


Fig. 3.

Inventor

Henry C. Smida

By Clarence O'Brien and Hyman Berman

Attorneys

Patented Aug. 20, 1940 2,212,307

UNITED STATES PATENT OFFICE

2,212,307

ELECTRIC TESTER

Henry C. Smida, Hooper, Nebr.

Application January 24, 1939, Serial No. 252,641

1 Claim. (Cl. 175—183)

This invention relates to an electric tester to be employed by electricians, automobile mechanics and other persons desiring to locate easily and quickly trouble in electric circuits, electrical equipment, such as lamp sockets, switches, etc., and has for the primary object the provision of a device of this character which may be conveniently carried in a person's pocket or a tool kit and is convenient to operate, simple to construct and is compact, durable and may be manufactured and sold at a low cost.

With these and other objects in view, the invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a side elevation illustrating an electric tester constructed in accordance with my invention.

Figure 2 is a vertical sectional view illustrating the device.

Figure 3 is a side elevation, partly in section, illustrating an insulated electric conductor and penetrating element.

Referring in detail to the drawing, the numeral 5 indicates the holder of the device consisting of a metallic tube 6 having one end portion of an increased diameter and provided in its end with bayonet slots 7 forming said end into an electric lamp socket especially adaptable to receive an electric lamp 8 in which the base 9 thereof is equipped with pins 10 to enter the bayonet slots 7 for retaining the electric lamp in frictional contact with the tube and with a contact 11 forming an integral part of an electric conductor rod 12. The conductor rod is covered with insulating material 13 and is provided at one end with an integral disc 14 having frictional contact with the tube 6 and providing a seat for one end of a coil spring 15, the other end of said spring engaging a seat 16 fixed in the tube 6. The action of the spring 15 is to urge the contact 11 into engagement with the contact of the base 9 of the lamp 8.

The conductor rod 12 extends into a bore of a metallic member 17 which extends outwardly of one end of the tube 6 and has a portion of the bore thereof increased to receive therein the end of the insulating material 13. The metallic member 17 also receives therein a penetrating conductor element 18 having direct contact with the conductor rod 12. An insulating sleeve 19 surrounds the metallic member 17 and insulates the latter from the tube.

Mounted on the ends of the enlarged portion of the tube is an electric lamp guard or protector 20 constructed of rubber or any other material suitable for the purpose and of substantially cup shape with its open end positioned a selected distance beyond the electric lamp 8 so as to thoroughly guard the electric lamp against breakage but which will expose the electric lamp to view.

In operation, when it is desired to locate electric trouble in an electric circuit, an electric lamp socket or some other electrical equipment, the penetrating element 18 is placed in engagement with the hot wire of the circuit and if insulated the penetrating element may readily pass through such insulation and the tube 6 is brought into engagement with the electric ground of the circuit so that if the wire is hot the electric lamp 8 will be illuminated and, of course, if the lamp 8 fails to illuminate the trouble will then be known to be from that point in the hot wire to the electric source. To test an electric socket, for instance, the pointed element 18 is placed in the socket against one of the contacts and the tube 6 brought into engagement with the other contact. If the electric lamp illuminates it indicates that the socket is operative. The cited uses are only a few of many uses in which the present tester may be employed. It will be seen that the tester is extremely convenient to use and may be readily carried in a person's pocket or within a tool kit and will be durable and economical to manufacture.

It is believed that the foregoing description, when taken in connection with the drawing will fully set forth the construction and advantages of this invention to those skilled in the art to which such device relates, so that further detailed description will not be required.

Having thus described the invention, what is claimed is:

An electric tester comprising an elongated metallic tube having one end slightly increased in diameter to provide an electric lamp socket, an electric lamp mounted in said end of the tube, a conductor rod in said tube and engaging a contact of the electric lamp, an insulating cover for said rod to insulate the latter from the tube and having one end enlarged and frictionally engaging with the tube to center the rod in said tube and to form a seat, a second seat fixed in said tube, a coil spring interposed between said seats for urging the rod into engagement

with the electric lamp, a metallic sleeve extending into the other end of the tube and insulated therefrom and receiving therein with a frictional fit a portion of the insulating cover and a portion of the conductor rod, a penetrating conductor element extending into the metallic sleeve with a frictional fit and abutting the conductor rod, and a cup-shaped cushion guard for said electric lamp and having a frictional fit with said tube.

HENRY C. SMIDA.