Dec. 28, 1948. S. H. SORENSEN 2,457,506

SAFETY PROD

Filed Sept. 11, 1945

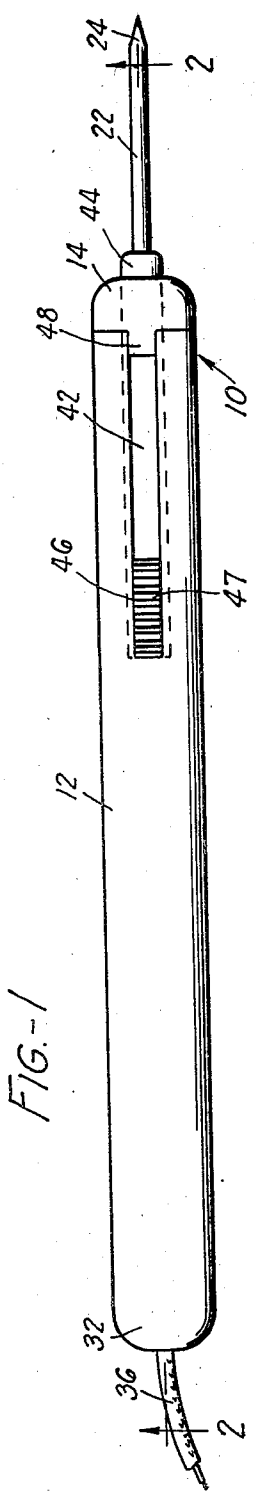


FIG. - 1

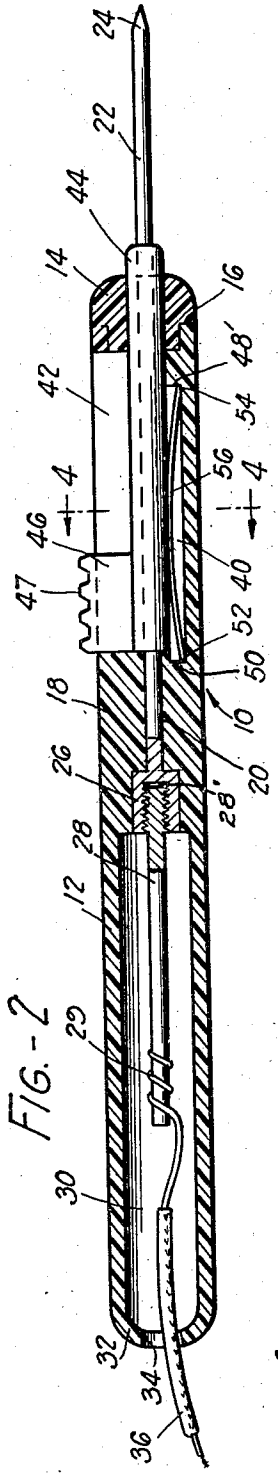


FIG. - 2

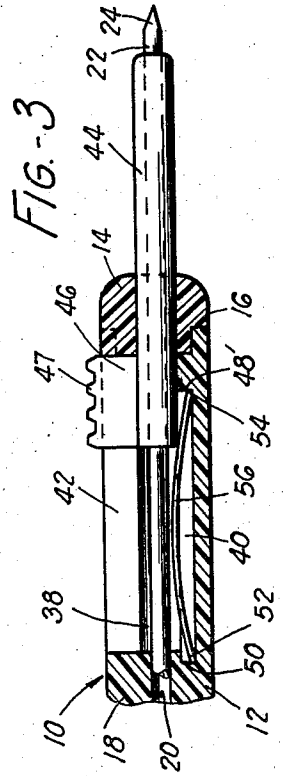


FIG. - 3

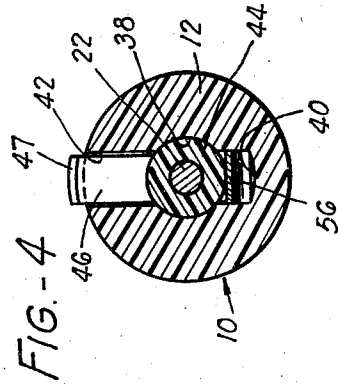


FIG. - 4

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SAFETY PROD

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4 Claims. (Cl. 173—273)

1

This invention relates to a safety-prod which is especially adapted to test electrical circuits.

The conventional type of pencil type test prod in use at the present time has a primary disadvantage, that is, the base tips which are usually about an inch long, very frequently accidentally touch wires or circuits which should be avoided when testing intricate and closely wired circuits, such as radio circuits and the like; this usually causes the test meter to be burned out or the damaging of the circuit being tested.

The main object of this invention is to overcome this disadvantage by covering up the tip with a sliding plastic insulating sleeve which is slidably mounted on the top and can be adjusted to permit only a small fraction of the tip to be exposed.

With the above and other objects and advantages in view, the invention consists of the novel details of construction, combination and arrangement of parts more fully hereinafter described, claimed and illustrated in the accompanying drawing in which:

Figure 1 is an elevational view of an embodiment of the invention;

Figure 2 is a sectional view on the line 2—2 of Figure 1 showing the protective sleeve in retracted position;

Figure 3 is a fragmentary view showing the protective sleeve in extended position, and

Figure 4 is a sectional view on the line 4—4 of Figure 2.

Referring more in detail to the drawing, the numeral 10 designates the safety prod which comprises a plastic body 12 having a removable apertured plastic plug 14 in the open end 16 thereof.

The medial portion 18 of the body 12 is provided with a longitudinally extending bore 20 in which is secured the test prod 22.

The forward end of the prod 22 is pointed at 24 and extends forwardly of the body 12 passing through the apertured plastic plug 14.

The rear end of the prod 22 is provided with a screw socket 26 which is adapted to receive the threaded end 28' of the removable conductor 28 which is mounted internally of the body 12 in a circular recess 30 in the rear end thereof.

The rear end 32 of the body 12 is rounded and provided with an aperture 34 through which an electrical current wire 36 passes and is soldered to the conductor 28, at 29. Current is thus supplied to the prod 22 by means of the wire 36.

Adjacent the open end 16 of the body 12, there is provided a circular bore 38 which is provided

2

on its lower circumference with a recess 40 and on its upper circumference with a slot 42; the recess 40 and slot 42 are arranged opposite to each other and at right angles to the bore 38.

The bore 38 is of a sufficient diameter to slidably receive the plastic insulating sleeve 44 which is slidably mounted on the prod 22. Formed integral with the sleeve 44 and extending upwardly at right angles thereto is the finger-operated slide 46 which is knurled at 47 and is received in the slot 42 and extends outwardly of the body 12 in order that it may be easily manipulated by the fingers of the operator.

The plastic plug 14 previously described is provided with a forwardly extending integral lug 48 which enters the slot 42 and acts as a stop for the slide 46.

The recess 40 is provided with a shoulder 48' and extends into the body 12 at 50 to receive the opposite ends 52 and 54 respectively of the flat plastic spring 56. The spring 56 applied sufficient pressure on the sleeve 44 to retain it in any position it has been moved by the fingers of the operator.

When in use, the sleeve 44 is manipulated by the slide 46 to cover the prod 22 and thus eliminates the danger of damaging the circuit or the test meter with which the prod is being used.

In assembly, the flat spring 56 is inserted in position first, the conductor 28 is screwed into the socket 26. The sleeve is then inserted over the prod 22 with the slide 46 in the slot 42. The plug 14 is then permanently pressed into place in the open end 16 of the body 12 and the test prod is ready for use.

It will be apparent therefore to those skilled in the art that a test prod has been provided that will accomplish the objects set forth and it is to be understood that modifications may be made in the details of construction without extending beyond the scope of the invention as defined by the appended claims.

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

1. A device of the character described, comprising a plastic body having a circular recess in the rear end of said body, and an open front end, a circular bore at the front end thereof, a removable apertured plug in the open front end, a longitudinally extending bore in said body at the center thereof communicating with said recess and said circular bore, a test prod mounted in said longitudinally extending bore, said prod having the rear end thereof terminating in the

bore at the rear thereof, and the front end thereof extending forwardly of said plug, and having an electrical conductor connected to the rear end thereof within said longitudinally extending bore, and a plastic sleeve slidably mounted on the forward end of said prod within said circular bore and said plug to insulate said prod.

2. The invention as in claim 1 wherein said circular bore is provided with a longitudinally extending recess in its lower circumference, and a spring mounted in said recess which is adapted to apply sufficient pressure to said sleeve to press said sleeve into contact with the wall of said bore to retain said sleeve on the prod in any position to which it has been slidably moved.

3. The invention as in claim 1 wherein said circular bore has a slot communicating therewith, and opening outwardly of the body, and a finger operated slide fixed to said sleeve extends through

said slot for the manipulation of said sleeve forwardly of the body on said prod in either direction so that the sleeve may be pushed forward to cover part of the prod or pulled backward to expose the prod.

4. The invention as in claim 1, wherein the rear end of the body is apertured to receive said conductor and said conductor is detachably connected to said prod at the rear end thereof.

STEFFEN H. SORENSEN.

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The following references are of record in the file of this patent:

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