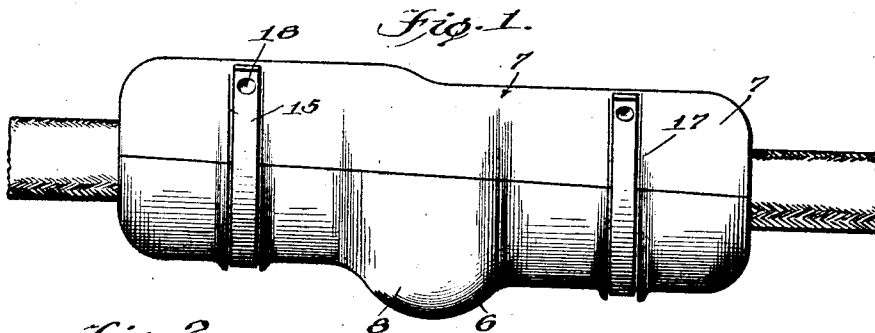
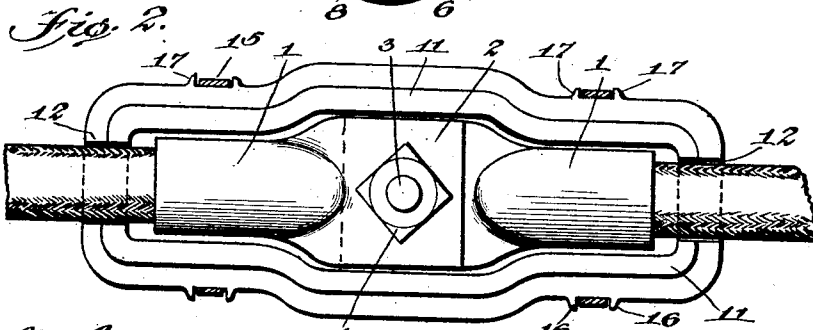
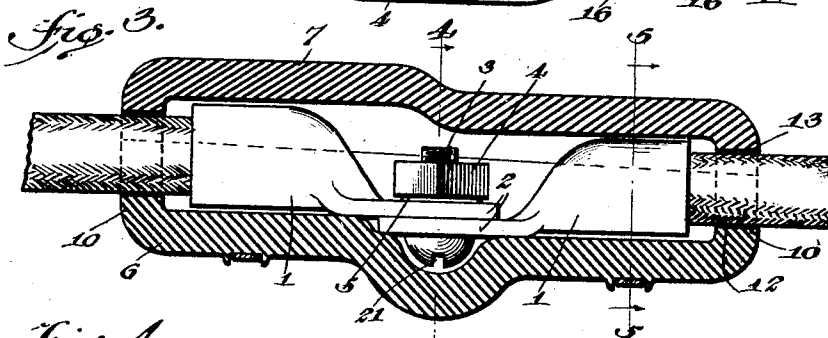
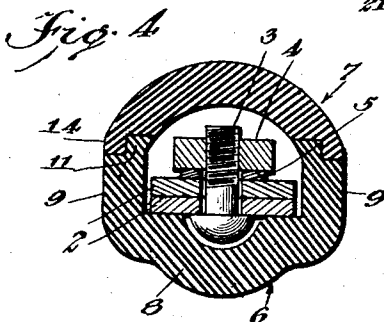
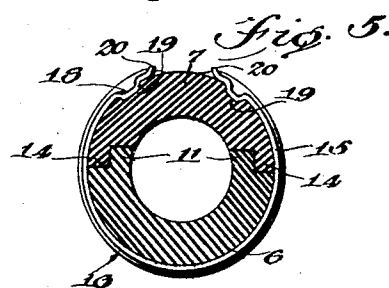


March 15, 1927.

1,620,693

H. W. I. ROYAL  
TERMINAL INSULATOR  
Filed May 28, 1926



WITNESSES  
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## UNITED STATES PATENT OFFICE.

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## TERMINAL INSULATOR.

Application filed May 28, 1926. Serial No. 112,341.

This invention relates to an insulator for electric motor terminals and is especially designed and adapted for use in insulating the coupled terminals which serve to connect the motor leads with line wires.

Ordinarily the terminals connecting the motor leads with the line wires are insulated with layers of tape. When a break-down occurs it is necessary to remove this tape. Removing the tape is also necessary when testing through or changing motors. Valuable time is lost in cutting away or otherwise removing this tape and the problem of removing the tape is aggravated when it becomes saturated with oil or grease as it frequently does. Then, again, at times, the vibration of the motor causes the tape to wear through and this results in a ground involving the burning of the terminals, thereby causing expense and delay as a splice must be made, or new terminals soldered on.

The object of the present invention is to provide an insulator which avoids these difficulties and disadvantages, which will not be worn to any appreciable extent by the vibration of the motor, which may be easily applied or taken from the terminals, which effectively insulates the same, and which is of simple and durable construction, reliable and efficient in operation and easy and comparatively inexpensive to manufacture.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claim, reference being had to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a view in side elevation showing an embodiment of the invention.

Figure 2 is a view thereof in plan, the top section of the insulator being removed and the clamping bands being shown in section.

Figure 3 is a view of the insulator in central longitudinal section, the terminals being shown in elevation.

Figures 4 and 5 are views in transverse sections on lines 4-4 and 5-5 respectively, of Figure 3.

Referring more particularly to the drawings, the terminals to be insulated are designated at 1 and have their ends 2 flattened and engaged in overlapping relation, as

shown in the drawings. The ends 2 are held together by means of a screw 3 and nut 4, a washer 5 being interposed between the nut 4 and the adjacent terminal 2.

The insulator which constitutes the present invention comprises a hollow or tubular body made up of sections designated generally at 6 and 7 which are widened at their central portions to provide a chamber 6<sup>a</sup> to receive the flattened connected ends of the terminals, and reduced at their ends to snugly receive the smaller cable engaging ends of the terminals, whereby the terminals are snugly housed and held against wobbling and abrasive movements. The section 6 is the main section of the body and has a curved bottom 8, sides 9 and ends 10, the sides and ends having upwardly extending marginal flanges 11, the marginal flanges extending around the inner marginal edge of the lower section. The ends 10 have recesses 12 to accommodate the conductors and flanges 11 terminate at these recesses.

The section 7 is in the nature of a cover section and is of arcuate formation in cross section having a downward offset opposite the depression 8 in the body section to provide for the close location of the top section to the terminals preventing undue play between the housing and the terminals. At its ends the section 7 has recessed end walls 13 which are complementary to the recesses 12 in providing the openings for the conductors. Around the outer marginal edge of the cover section 7 a downwardly extending flange 14 is provided. The flanges 11 and 14 overlap and snugly engage each other in the assembly as illustrated in Figures 4 and 5 and in this way these flanges 14 and 11 coact to prevent lateral displacement or endwise displacement of the cover section 7 from the main section 6. These flanges 11 and 14 do not, however, prevent movement of the sections 6 and 7 toward or away from each other in the direction at right angles to the longitudinal axis of the tubular body and also at right angles to the general plane of the meeting faces or surfaces of the sections. In other words, the flanges coact to hold the sections against displacement relative to each other in all directions but one. Readily releasable means is provided for securing the sections against displacement relative to each other in this direction and this means consists of a pair of resilient clamping bands 15,

the bands 15 being in the form of a split annulus and being received between ribs 16 on the section 6 and ribs 17 on the section 7, there being four sets of ribs 16 and 17 which  
5 define grooves to accommodate the bands 15. The bands 15 have inwardly projecting bosses 18 which are designed to fit sockets 19 in section 7 to prevent angular displacement of the bands.

10 As illustrated in Figure 5 the bands completely encircle the section 6 and almost entirely encircle the section 7. They may be readily removed by flexing the same to effect their disengagement from the section 7. To  
15 facilitate flexing of the bands their ends are offset outwardly as indicated at 20. The sections 6 and 7 are made of some rugged insulating and fire-resisting material or composition and as shown they associate to provide  
20 a central cavity or socket 21 to accommodate the coupling means between the terminals. The terminals are entirely housed and insulated since the sections provide a  
25 complete enclosure for the same. It is obvious that the sections of the insulator may be readily and easily applied to or removed from the terminals which they insulate.

What I claim is:

An insulator for coupled terminals having flat widened overlapping connected ends and 30 smaller round cable engaging ends; said insulator comprising an elongated tubular housing composed of a bottom and a top section widened at their central portions to form a chamber to receive said flattened ter- 35 minal portions, and having reduced ends to snugly fit the cable engaging ends of the terminals, the bottom section having a bolt head receiving depression and the top having a downward offset opposite said depression, 40 said sections having interfitting flanges at their meeting edges and provided on their outer faces with registering peripheral grooves, the grooves in the top section terminating at points spaced peripherally from 45 each other and having seats therein, and resilient split metal bands mounted in said grooves with the ends thereof flared to facilitate removal and release of the sections, said ends having inwardly extending projections 50 to engage said seats whereby the sections are releasably held engaged.

HUGH WILLIAM IVOR ROYAL