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GB 1219096  
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H2E
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(54) **Holder for an electrical conductor brush**

(57) A holder for an electrical conductor brush, comprising a sheath (10) formed of sheet brass and in which the brush (not shown) is slidably mounted, and a mounting member (11) having a bore (25) in which the sheath (10) is received, said sheath (10) comprising two channel-section limb portions (20) interconnected at one end by a transversely extending bridge portion (21), each limb portion (20) being provided on its outside with a tab portion (15) and a tab portion (16), said tab portions (15, 16) engaging end surfaces of the mounting member (11) to locate and hold the sheath (10) in the mounting member (11).

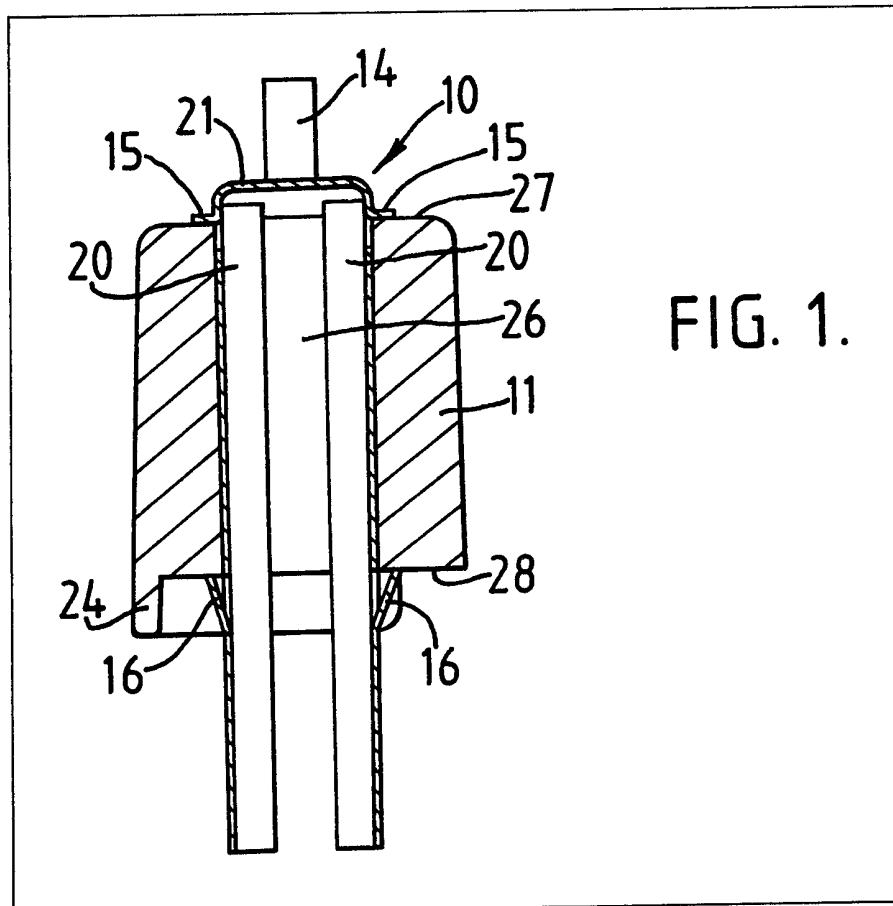


FIG. 1.

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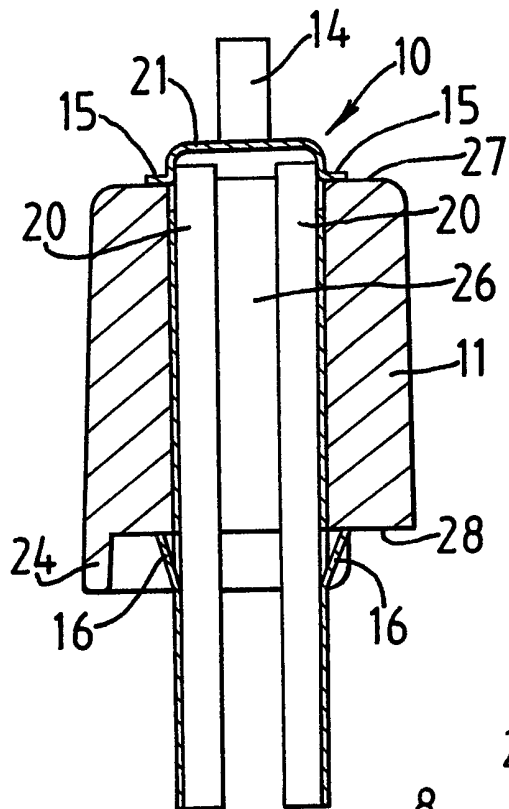


FIG. 1.

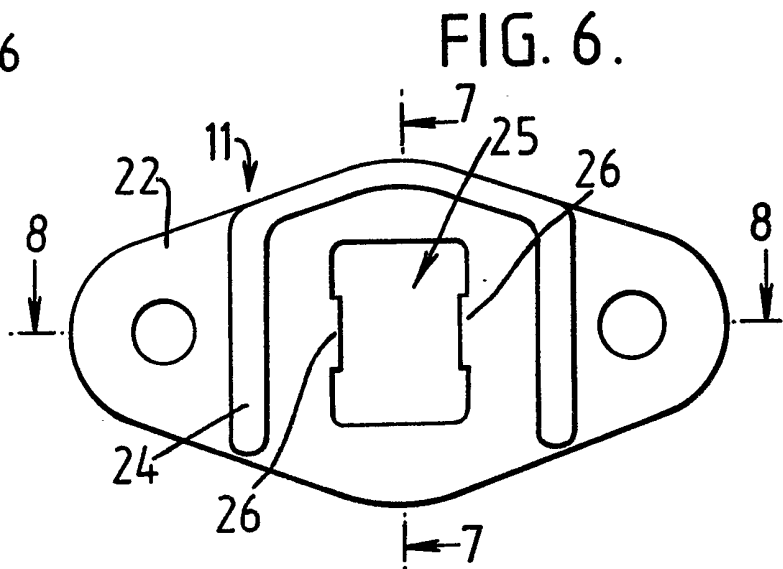


FIG. 6.

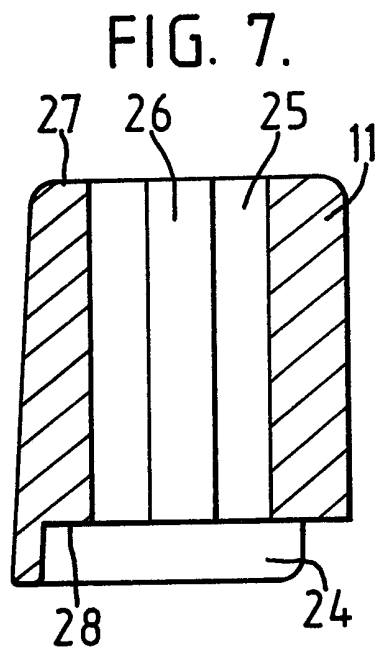


FIG. 7.

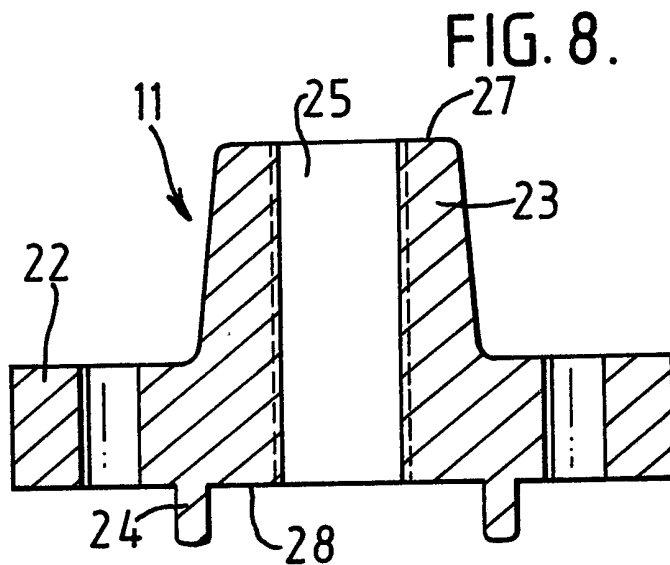


FIG. 8.

FIG. 2.

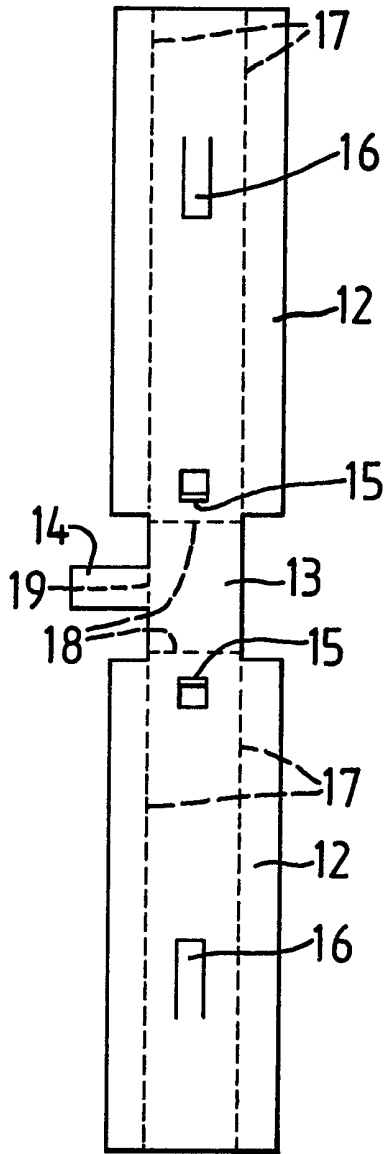


FIG. 3.

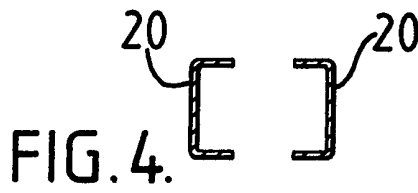
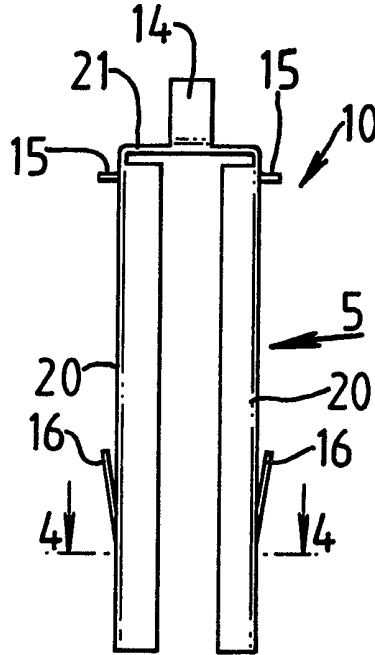
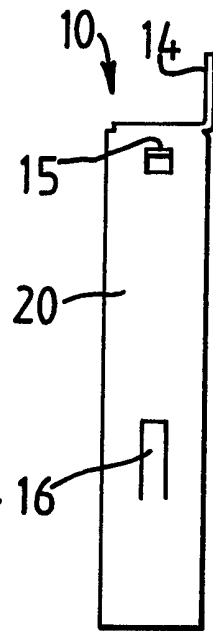


FIG. 5.



## SPECIFICATION

**Holder for an electrical conductor brush**

5 This invention relates to a holder for an electrical conductor brush, i.e. a brush formed of electrically conductive material, such as carbon, for conducting electrical energy between a stator and a rotatable member. Such a brush is usually slidably mounted  
10 in a holder against the force of a spring located within the holder.

According to the present invention there is provided a holder for a electrical conductor brush, comprising a sheath formed of electrically conductive material in which the brush can be slidably  
15 received, said sheath being formed from sheet material and comprising two limb portions interconnected at one end by a transversely extending bridge portion, each limb portion being provided on its  
20 outer side with a first outwardly extending tab portion adjacent said bridge portion and a second outwardly extending tab portion longitudinally spaced from the first tab portion, said limb portions extending through a bore provided in a mounting  
25 member formed of an electrically non-conductive material, said tab portions engaging end surfaces of the mounting member to locate and hold the sheath in the mounting member.

Preferably the limb portions of the sheath are  
30 channel-section in transverse cross-section with the interior of the channel of one limb portion facing the interior of the channel of the other limb portion.

An embodiment of the invention will now be described, by way of an example, with reference to  
35 the accompanying drawings, in which:-

*Figure 1* is a longitudinal section through the brush holder assembly,

*Figure 2* is a plan view of a stamped sheet blank from which the sheath is formed, prior to being bent  
40 into shape,

*Figure 3* is a side elevation of the formed sheath,

*Figure 4* is a section taken along the line 4-4 of *Figure 3*,

*Figure 5* is a view of the sheath taken in the  
45 direction of arrow 5 of *Figure 3*,

*Figure 6* is a plan view on the underside of the mounting member,

*Figure 7* is a section taken along the line 7-7 of *Figure 6*, and

*Figure 8* is a section taken along the line 8-8 of  
50 *Figure 6*.

The brush holder assembly comprises a sheath 10 formed of an electrically conductive material, such as sheet brass, and a mounting member 11 formed  
55 of a non-electrically conductive material, such as a plastics material.

The sheath 10 is formed from a flat sheet blank as shown in *Figure 2* which has two identical rectangular shaped portions 12 interconnected by a connecting portion 13 provided with a portion 14 extending  
60 normal thereto. The portion may be at a right angle as shown or at any other angle or can be dispensed with. Each portion 12 is provided with a tab portion 15 which is punched from the sheet and extends at a  
65 right angle to the plane of one face of the sheet, and

each portion 12 is provided with a tab portion 16 which is punched from the sheet and is inclined to the plane of said one face of the sheet and extends in a direction towards the tab portion 15. The portions  
70 12 of the punched or stamped blank are then bent along lines 17 so that the portions 12 have a channel-section configuration and are then bent along lines 18. The portion 14 is preferably bent upwardly along a line 19, but it may remain in the  
75 plane of the portion 13.

The formed sheath 10 is shown in *Figures 3* to *5* and comprises limb portions 20 formed by the bent portions 12 of the blank which are interconnected at one end by a bridge portion 21 formed by the portion  
80 13 of the blank. The portion 14 forms a terminal on the bridge portion 21.

The mounting member 11 comprises a moulding having a flange portion 22 provided on one side with a raised base portion 23 and on its underside with a  
85 flange 24. Extending through the mounting member 11 is a rectangular section bore 25 which is provided on two opposed sides with a longitudinally extending rib 26. The bore 25 may have a square cross-section if desired. The mounting member 11 has an  
90 end face 27 at its upper end and an end face 28 at its lower end.

The sheath 10 is inserted into the upper end of the bore 25 with the free longitudinal edges of the side walls of the channel section limb portions 20 engaged with the side edges of the ribs 26.  
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As the sheath 10 is pushed along the bore 25 the tabs 16, due to their resilience, will be forced inwardly as they move along the bore 25.

The sheath 10 is moved along the bore 25 until the  
100 tabs 16 contact the upper end surface 27 of the member 11. When the sheath 10 is in this position the tabs 16 clear the bore 25 and due to their resilience move outwardly to their inclined position and the free end of each tab 16 contacts the end face  
105 28 of the member 11. In this position the sheath 10 is correctly and positively located in position in the mounting member 11 to required tolerances without the need for fasteners.

The bridge portion 21 acts as a stop plate for a brush spring (not shown) which is provided in the sheath 10 when a carbon brush (not shown) is slidably mounted in the free end of the sheath 10.

## CLAIMS

115 1. A holder for an electrical conductor brush, comprising a sheath formed of electrically conductive material in which the brush can be slidably received, said sheath being formed from sheet  
120 material and comprising two limb portions interconnected at one end by a transversely extending bridge portion, each limb portion being provided on its outer side with a first outwardly extending tab portion adjacent said bridge portion and a second  
125 outwardly extending tab portion longitudinally spaced from the first tab portion, said limb portions extending through a bore provided in a mounting member formed of an electrically non-conductive material, said tab portions engaging end surfaces of  
130 the mounting member to locate and hold the sheath

in the mounting member.

2. A holder as claimed in claim 1, in which the limb portions of the sheath are channel-section in transverse cross-section with the interior of the channel of one limb portion facing the interior of the channel of the other limb portion.

3. A holder as claimed in claim 2, in which the bore is rectangular or square in cross-section and two opposed sides of the bore are provided with a longitudinally extending rib which is received between the inner side edges of the limb portions.

4. A holder as claimed in any preceding claim, in which the first tab portions each extend at a right angle to the face of the associated limb portion and the second tab portions are inclined to the face of the associated limb portion and directed towards the first tab portions.

5. A holder as claimed in claim 4, in which the second tab portions are resilient.

6. A holder as claimed in any preceding claim, in which the sheath is formed from sheet metal and bent into shape.

7. A holder as claimed in claim 6, in which the sheet metal is brass.

8. A holder as claimed in any preceding claim, in which the mounting member is moulded in plastics material.

9. A holder for an electrical conductor brush, substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

10. An electrical device provided with an electrical conductor brush mounted in a holder as claimed in any preceding claim.