

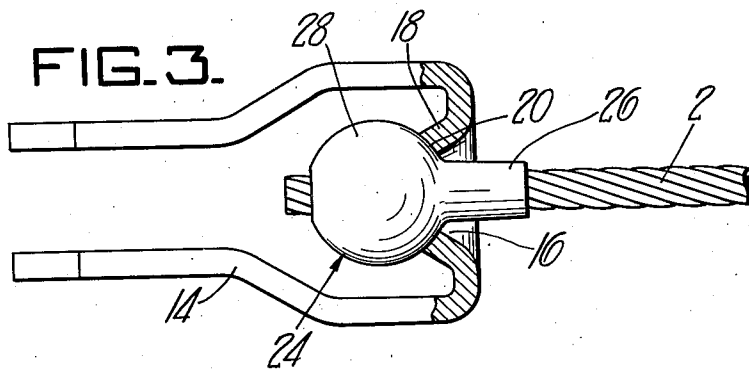
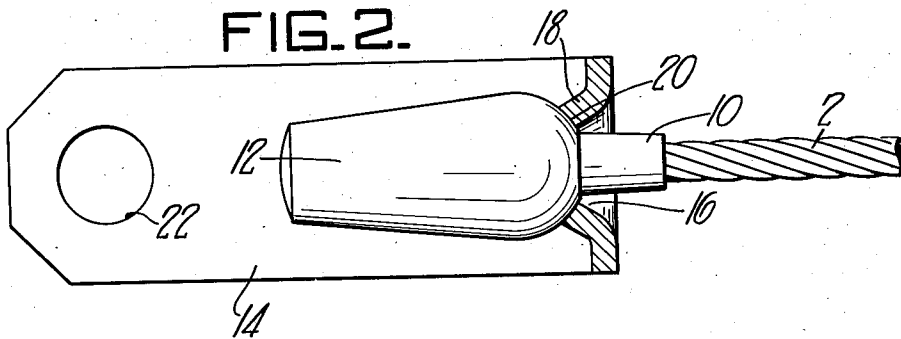
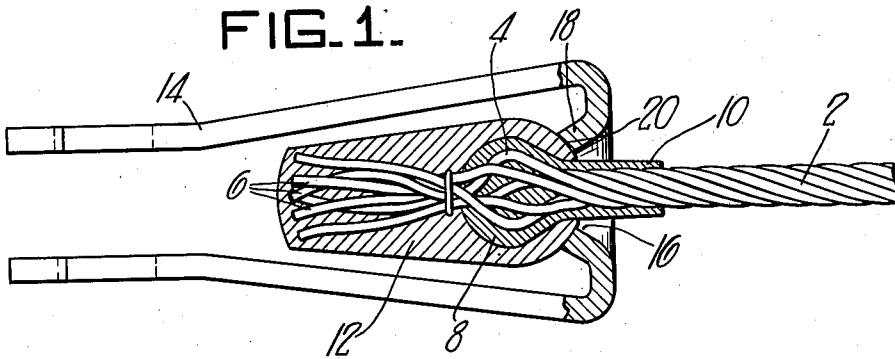
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2,461,031

TERMINAL FITTING

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UNITED STATES PATENT OFFICE

2,461,031

TERMINAL FITTING

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1 Claim. (Cl. 287—82)

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This invention relates to a terminal fitting and more particularly to such a fitting for use with stranded wire structures. In certain installations such as in aircraft, it is desirable to use fittings where the full strength of the stranded wire structure will be developed regardless of any angularity between the end of the fitting and the axes of the stranded wire structure. Various fittings have been developed with this purpose in mind but none have proved entirely satisfactory.

It is an object of this invention to provide a terminal fitting in which the full strength of the stranded wire structure is obtained and in which maximum strength of the fitting is also developed.

This and other objects will be more apparent after referring to the following specification and attached drawings, in which:

Figure 1 is a view partly in section of the fitting attached to a stranded wire structure;

Figure 2 is a top plan view of Figure 1; and

Figure 3 is a view partly in section of a modification.

Referring more particularly to the drawings, the reference numeral 2 indicates a stranded wire structure to which a terminal fitting is to be attached. The fitting is made in two parts, one being attached to the stranded wire structure and the other being free to move with respect thereto. As shown in Figure 1, the end of the wire structure is prepared to receive the attached part of the fitting by brooming it to form a ball portion 4 and a spray portion 6. The method of brooming a stranded wire structure in this manner is disclosed in my copending application, Serial No. 476,588, filed February 20, 1943, now Patent 2,389,951. A ball type fitting 8 of a low melting point metal is then die cast or sprayed directly onto the ball portion 4 with a sleeve portion 10 extending over the stranded wire structure 2. The outer portion 12 of higher strength metal is then cast directly onto the fitting 8 and the spray portion 6 all in the manner described in my copending application, Serial No. 571,918, filed January 8, 1945. While this method of attaching the fitting to the stranded wire structure is preferred since it protects the wire from damage due to heat, parts 8 and 12 may be applied as one unit to the stranded wire structure

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2. The end of the portion 12 adjacent the sleeve 10 is preferably spherical with its center at or near the center of portion 8. The movable portion 14, which is slipped on the stranded wire structure 2 prior to casting the portions 8 and 12 thereto, has an opening 16 therein of a greater diameter than that of sleeve 10. Surrounding the opening 16 is a lip 18 which preferably extends toward the center of the spherical end of fitting 12. The end 20 of the lip 18 is preferably spherical and of the same radius as the spherical portion of fitting 12. The end of the fitting 14 is provided with holes 22 for attachment to any desired element.

Figure 3 shows a second embodiment of my invention in which that part of the fitting which is attached to the end of the stranded wire structure 2 is swaged thereon. In this embodiment the fitting 14 is slipped over the end of the stranded wire structure 2 which is not broomed. The fitting 24 is then swaged on the wire structure 2. Fitting 24 is provided with a sleeve portion 26 and a ball portion 28 having a diameter approximately the same as that of the end 20 of lip 18.

When the fitting 14 is attached to the desired part and tension is applied to the stranded wire structure 2, the lip 18 will apply a compressor force to the fitting 12 (or 24) which augments the grip on the end of the stranded wire structure 2. There is bearing between the face 20 of fitting 14 and the spherical portion of fitting 12 (or 24) entirely around the periphery. There is also free universal joint action between the fittings 14 and 12 (or 24) which permits full strength of the stranded wire structure 2 to be developed regardless of any angularity between fitting 14 and the stranded wire structure 2. The size of opening 16 may be varied to provide for more or less angularity. The sleeves 10 and 26 prevent the lip 18 from damaging the stranded wire structure 2.

While two embodiments of my invention have been shown and described, it will be apparent that other adaptations and modifications may be made without departing from the scope of the following claim.

I claim:

50 A terminal fitting for stranded wire structures comprising a member attached to said wire struc-

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ture, said member having a spherical portion, a one-piece clevis member freely slidable over the wire structure, said clevis member having two spaced apart arms and a connecting portion, said connecting portion having an opening therein for passage of said wire structure, and a frusto-conical flange surrounding said opening and extending radially toward the center of the spherical portion on the wire structure, the rim of said flange bearing against the end of said spherical portion and the base of said flange being spaced from said arms.

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4**REFERENCES CITED**

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