July 7, 1942. E. H. SORENSEN 2,289,221

DEVICE FOR UNITING ARTICLES

Filed June 30, 1939

FIG. 1

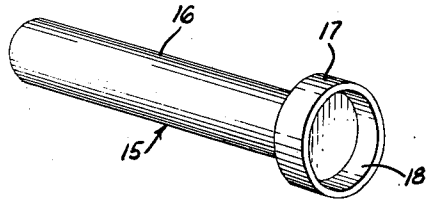


FIG. 2

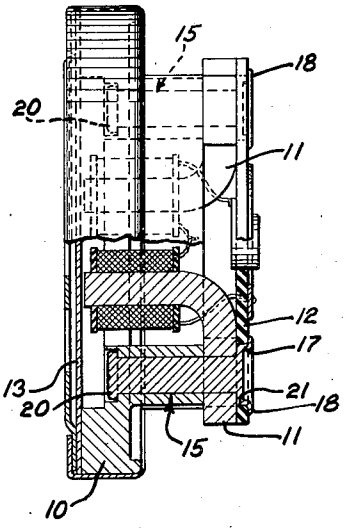


FIG. 3

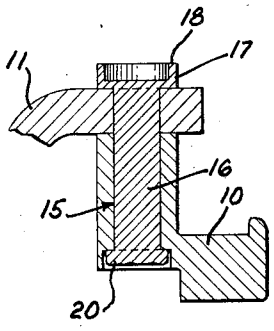


FIG. 4

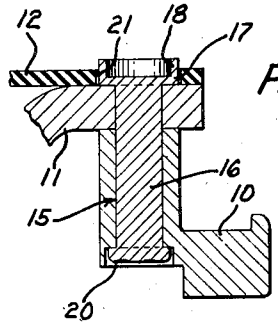
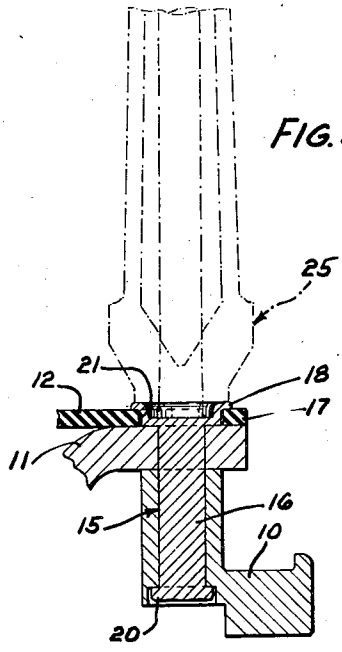


FIG. 5



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DEVICE FOR UNITING ARTICLES

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3 Claims. (Cl. 85—37)

This invention relates to devices for uniting articles, and more particularly to improvements in the construction of rivets and the like.

Objects of the invention are to provide a simple and inexpensive unitary device for securely uniting several parts and for thereafter attaching an additional element thereto.

One embodiment of the invention contemplates the provision of a rivet-like device for uniting or riveting together two or more parts, and having a cup-shaped head adapted to be flared out to fasten an additional element to one of the riveted parts.

A more complete understanding of the novel features and advantages of devices embodying the invention may be had from the following detailed description when read in conjunction with the accompanying drawing, in which

Fig. 1 is a perspective view of a device embodying the features of the invention;

Fig. 2 is a side elevational view, partly in section, of a telephone receiver unit with several of its parts united or secured together by means of devices embodying the invention, and

Figs. 3, 4 and 5 are fragmentary sectional views of the receiver unit, illustrating the manner in which the devices are employed to unite several parts thereof.

Although not limited thereto, devices embodying the features of the invention may be employed to advantage for uniting or securing together several parts of a telephone receiver unit. As shown in Fig. 2 of the drawing, the receiver unit may comprise a frame 10, a magnet and core assembly 11, a fibre terminal plate 12, and a diaphragm 13. By means of two rivet-like devices 15 embodying the invention, the magnet and core assembly is securely riveted to the frame and the fibre terminal plate is then attached to the riveted assembly in the manner hereinafter described.

Each of the rivet-like devices 15, as shown more clearly in Figs. 1 and 3, comprises a shank portion 16 formed at one end with an enlarged cup-shaped head 17 having a cylindrical wall portion 18. When employing the device in the assembly of receiver units such as referred to above, the shank portion 16 is inserted through aligned holes in the magnet and core assembly 11 and frame 10, and the end thereof is headed or upset, as indicated at 20 (Fig. 3), to securely rivet the magnet and core assembly to the frame. The fibre terminal plate 12 is then placed in position over the magnet and core assembly, as shown in Fig. 4. It will be noted that the enlarged head of each rivet extends through an aperture 21 in the terminal plate and the cylindrical wall portion 18 of the rivet head protrudes from the outer surface of the terminal plate. This protruding cylindrical wall portion is bent over or flared out, preferably by means of a rotary expanding tool 25, as shown in Fig. 5. The fibre plate is thus securely attached to the riveted assembly by the cup-shaped head portions of the same rivets which secure the magnet and core assembly to the frame. It will be seen, therefore, that a unitary fastening device or rivet of inexpensive and practical construction is provided, whereby the magnet and core assembly is firmly riveted to the frame and the fibre terminal plate is securely attached to the riveted assembly without being subjected to the crushing or compressing effect of the riveting operations.

It should be understood, of course, that the invention is not limited to the specific embodiment thereof herein illustrated and described, except insofar as is defined by the appended claims.

What is claimed is:

1. A device for uniting a plurality of parts comprising a shank portion extending through one of said parts, an enlarged head for clamping said part and extending through a second part, and a flange on said head for clamping said second part.

2. A device for uniting a plurality of parts comprising a shank of a given diameter extending through one of said parts, a head of larger diameter for clamping said part and extending through a second part, and a flange of still larger diameter on said head for clamping said second part.

3. A device for uniting a plurality of parts comprising a shank portion having an enlarged head at one end thereof and clamping means at its opposite end to clamp some of said parts together, said head extending through another part, and having a flange for clamping said last part against the other parts.

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