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1,754,672

FASTENER

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Fig. 1.

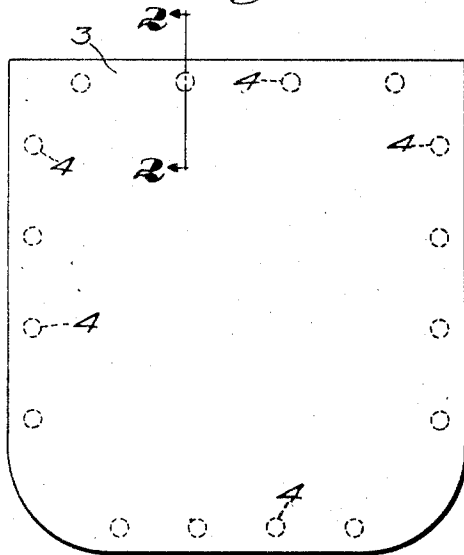


Fig. 2.

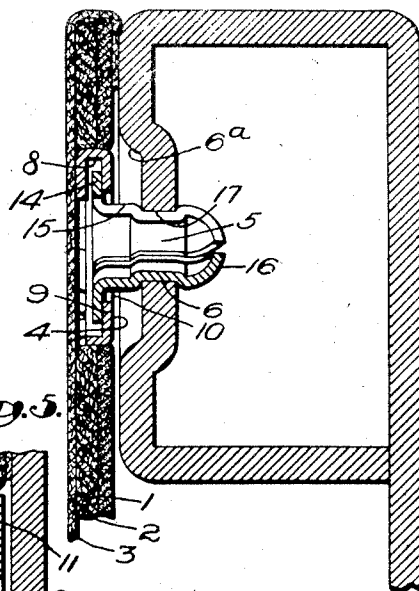


Fig. 3.

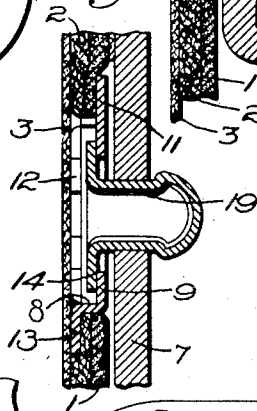


Fig. 4.

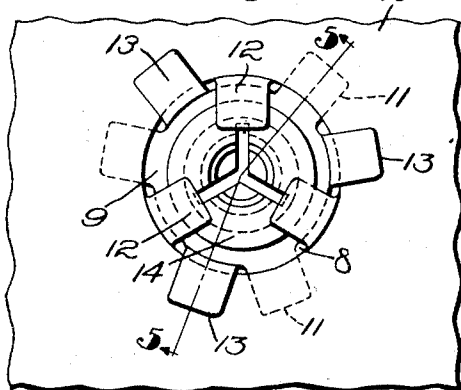
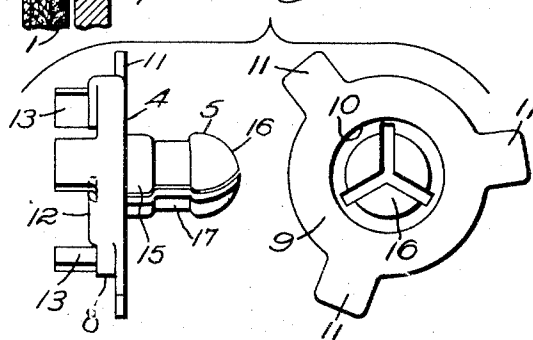


Fig. 5.



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FASTENER

Original application filed July 21, 1927, Serial No. 207,413. Divided and this application filed April 14, 1928. Serial No. 269,992.

My invention aims to provide improvements in fastening means particularly, though not exclusively adapted for use in connection with upholstery installations.

This application is a division of my prior application, Serial No. 207,413, filed July 21, 1927.

In the drawings, which illustrate preferred embodiments of my invention:—

Figure 1 is an elevation of a conventional form of door and door panel;

Fig. 2 is an enlarged section taken on the line 2—2 of Fig. 1, showing the frame of the door, the upholstered panel and the means for fastening the upholstered panel to the door frame;

Fig. 3 is an elevation of a portion of the panel, the upholstered covering being removed to expose a fastener unit and show the means which attach the unit to the panel;

Fig. 4 includes a side and a plan view of my stud unit for securing an upholstered panel to a frame; and

Fig. 5 is a section showing portions of a frame and upholstered panel with a slightly modified form of fastener unit securing the upholstered panel to the frame.

Referring to the drawings, I have illustrated an upholstery installation and means for securing the same, particularly though not exclusively, useful in connection with vehicle body construction. For the purpose of illustration only, I have shown my improved installation and means for securing the same in connection with securing an upholstered panel to the frame of a sheet metal door of a vehicle body.

The upholstered panel may be of any suitable construction, but I have shown one which includes a relatively thin backing of cardboard 1, or the like, overlain by a padding 2, and an upholstery fabric 3 covering the padding and wrapped over the edges of the backing where it is secured in any suitable manner to the opposite face thereof. To the

upholstered panel, I have secured fastening units each of which comprises a casing part 4 and a stud part 5, as best shown in Fig. 2. The stud part projects outwardly beyond that face of the upholstered backing which is not covered by the upholstery 3 and is adapted to engage a stud-receiving aperture 6 provided in the bottom of a recessed portion 6* of the frame part 7 (Fig. 2). The fastener unit, which I have illustrated in Figs. 1 through 4, includes the casing part 4 pressed from sheet metal and provided with a tubular portion 8 from one end of which extends inwardly a flange 9 terminating about an aperture 10.

Attaching means are provided at both ends of the tubular portion 8 of the casing part 4 for securing the fastener unit to a support. These attaching means are in the form of fingers 11 and 13 illustrated in Figs. 3 and 4. The attaching fingers 11 normally extend laterally outwardly from that end of the tubular portion 8 at which the flange 9 is connected and are adapted to engage one face of the backing when the tubular portion is inserted into a pre-formed aperture in the backing. The attaching fingers 13 are located at the opposite end of the tubular portion 8 and normally extend therefrom in parallel relation with the wall of the tubular portion 8, as shown in Fig. 4. Other fingers 12 are provided at the same end of the tubular portion 8 as the fingers 13 to provide means for assisting in holding the stud part 5 in assembled relation with the casing part 4, as will be hereinafter more fully described. The tubular portion 8 is located between the attaching portions or fingers 11 and 12 for a purpose more fully hereinafter described. The stud part 5 is provided with a relatively thin flat base portion 14 (Fig. 2) from which extends a shank portion 15 having a head 16 at its outer end and provided with a neck 17. This stud member 5 is assembled with the attaching part in the manner indicated

in Figs. 2 and 3, the base being located within the tubular portion 8 and held in assembly therewith by the flange 9 and fingers 12, the latter being bent inwardly after the base portion 14 has been entered into the casing. The shank 15 extends through the aperture 10 as indicated. The base 14 of the stud is somewhat smaller in diameter than the diameter of the tubular portion, and the shank 15 is smaller in diameter than the aperture 10 (Fig. 2), thereby permitting lateral shifting of the stud in any transverse direction relative to the attaching part.

In securing the fastener unit to the upholstered backing, I first provide an aperture in the backing and padding of substantially the same diameter as the outside diameter of the tubular portion 8 of the casing part and then insert the tubular portion into the aperture so that the fingers 11 may rest against the backing at its inner face, as shown in dotted lines in Fig. 3, to prevent passage of the casing part entirely through the backing. The fingers 13 which normally extend parallel with the tubular portion 8, as indicated in Fig. 4, are then bent outwardly and downwardly against the padding, as indicated in Fig. 3, thereby positively securing the attaching unit in position relative to the backing. After all of the fastener units are secured to the backing in the manner above described, the upholstered fabric 3 may be stretched over the face thereof and secured in any suitable manner to conceal the fastener units at one side.

In practice, the stud-receiving apertures 17 are usually made prior to forming the door frame, therefore, when the frame has been completely formed, manufacturing tolerances must be considered. To compensate for slight variations, I have found that, by permitting lateral shifting of the stud member in any direction, they may be aligned with the stud-receiving apertures very readily and the upholstered part may be easily secured in place.

Heretofore fastener units have been attached to the upholstered backing in such a manner that the attaching part, or casing, was located at either one side or the other of the backing, thereby adding to the thickness of the entire installation. I have found that this extra thickness is in many instances undesirable, therefore, I have reduced to a minimum the thickness of the upholstered backing by securing the casing part, of the stud unit above described, between the faces of the backing (the backing including the padding as indicated in Fig. 2). When the units are secured to the backing, as illustrated by the drawings, the attaching fingers 11 and 13 lie substantially flush with the faces of the backing (Fig. 5), and, therefore, there are no projecting portions at either face except the stud part itself.

In some instances, the attaching part or casing of the fastener unit is attached to a backing which comprises only a relatively stiff material, such as cardboard, and is confined between the faces thereof. Such would be the case if the padding 2 and cardboard 1 (Fig. 2) are considered as being of a single thickness or several thicknesses of cardboard. In either instance, the padding 2 may be placed in position to cover one entire face of the backing and fastener units. As there are no protuberances caused by the stud units when attached to a backing in any of the ways above described, the padding will lie perfectly flat and a smooth thin finish will be provided when the upholstery fabric 3 has been applied.

It is my intention to have it clearly understood that in my invention, as set forth by the appended claims, the use of the term "backing" is broad as to its meaning and includes the structures above described. The invention is not to be construed in any way as being limited to the material or materials used in the construction of the backing.

In Fig. 5, I have shown an installation in which the stud member is provided with a relatively wide neck 19 so that the upholstered backing may be attached to frames formed of various thicknesses of material without making the depressed portion shown in Fig. 2. In this instance, the head of the stud is shown as projecting beyond the inner face of the frame part 7, thereby clearly showing that accommodation is made for greater thicknesses of material and the neck 19 of the stud is shown as gripping the wall surrounding the stud-receiving aperture to hold the upholstered installation tightly against the frame part 7.

While I have shown and described preferred embodiments of my invention, it should be understood that I do not wish to be limited thereto, my invention being best described in the following claims.

Claims:

1. A stud unit including a socket-engaging part and a casing part assembled with each other, said casing part including a tubular portion, a base provided by said socket-engaging part and located within said tubular portion of the casing part and attaching means provided at each end of the tubular portion for securing the stud unit to a suitable support, the attaching means at one end of the tubular portion being adapted to engage one side of the support and the attaching means at the other end being adapted to engage the opposite side of the support.
2. A stud unit including a casing part having a tubular portion, attaching means provided at each end of the tubular portion for securing the casing part to a support, a stud part having a head, a neck and a base, the base being located within the said tubular

portion of the casing part and between the attaching means at the ends of the tubular portion, and means forming part of the stud unit for holding the parts assembled.

5 3. A stud unit including a casing part and a stud part having a base, the casing part being formed from a single piece of metal and having a tubular portion for housing the base of the stud, said casing part having means for engagement with opposite sides of the base to hold the stud in assembly with the tubular portion and said casing part also having attaching means at opposite ends of the tubular portion for securing the unit to a suitable support.

15 4. A stud unit including a casing part having a tubular portion, attaching means provided at each end of the tubular portion for securing the attaching part to a support, a stud part having a head, a neck and a base, the base being located within the tubular portion of the casing part and being smaller in diameter than the tubular portion to permit lateral shifting of the stud part in all directions relative to the casing part, and means forming part of the stud unit for holding the parts assembled.

20 5. A stud unit comprising, in combination, a casing part and a stud part, the stud part being shiftable transversely relative to the casing part, said casing part having spaced attaching means for engagement with opposite sides of a support to which the unit is to be attached and a tubular portion between the attaching portions to provide a housing for the base of the stud part.

30 6. A stud unit comprising, in combination, a casing part and a stud part, the stud part being shiftable transversely relative to the casing part, said casing part having an annular wall, a number of fingers extending laterally from one edge of said wall, and a plurality of fingers extending parallel to said wall from the other edge thereof, said fingers providing means for securing said casing part to a support, the stud part having a base located within said annular wall and means extending laterally inwardly at each edge of said wall and at opposite sides of the base of the stud part to hold the parts in assembly.

40 7. A stud unit for use in securing upholstery panels to framework, said unit comprising a casing part 4 and a fastener part 5, the fastener part 5 having a base portion 14 secured against axial movement by a flange portion 9 and fingers 12 of the casing part 4 and attaching means 11 and 13 forming part of the casing part 4 and located at opposite faces thereof for securing the unit to a suitable support.

50 8. A fastener unit including a casing part having a tubular portion, fastener element holding means provided as a part of said casing part and extending inwardly with relation

to said tubular portion to provide a space surrounded by said tubular portion, a fastener element having a base located in the space between said fastener element holding means, and attaching means extending outwardly from one end of the tubular portion and adapted to cooperate with other attaching means extending from adjacent to the other end of the tubular portion for securing the said fastener unit to a support.

In testimony whereof, I have signed my name to this specification.

DIDRICK DYRESEN.

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