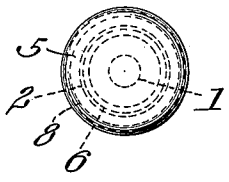
Jan. 5, 1932. R. G. MEADER 1,839,798

FASTENING DEVICE

Filed July 22, 1931

Fig. 1.



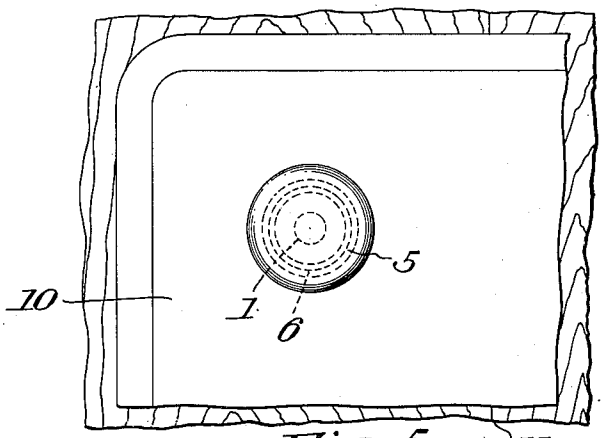


Fig. 5.

Fig. 2.

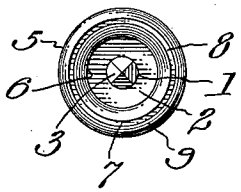


Fig. 6.

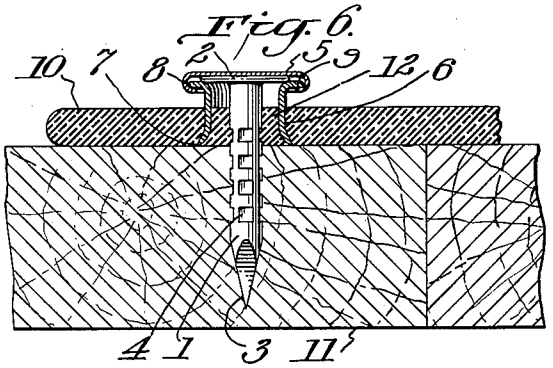
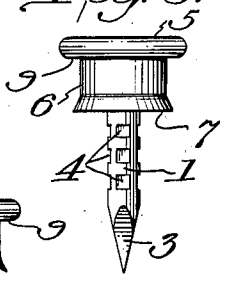


Fig. 3.



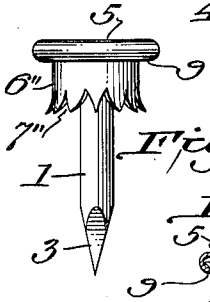
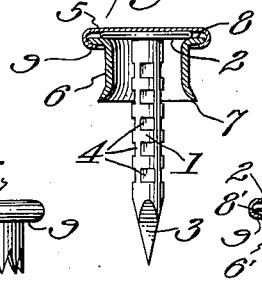


Fig. 9.

Fig. 4.



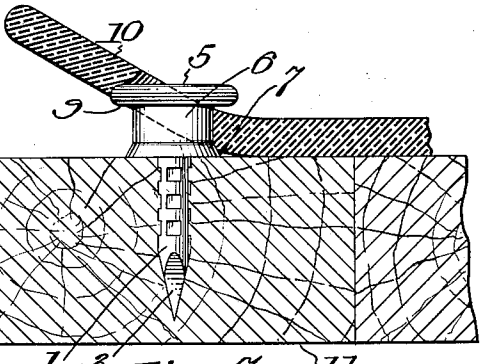


Fig. 7.

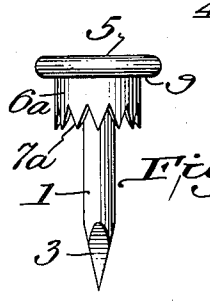


Fig. 10.

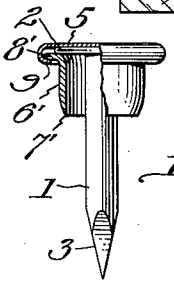


Fig. 8.

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by

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Attorney

Patented Jan. 5, 1932 1,839,798

UNITED STATES PATENT OFFICE

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FASTENING DEVICE

Application filed July 22, 1931. Serial No. 552,522.

This invention relates to fastening devices adapted particularly for securing floor and the like coverings in the bodies of automobiles.

The principal object of the invention is to provide a fastening device for detachably securing rubber mats to the floors of automobile bodies, and although the invention will be hereinafter described in reference to this particular application, it is to be understood that its use is not intended to be thus limited.

The invention consists in a fastening device, comprising a nail, tack, spike or other driven member, provided with a punch element and having a head flange. This device is adapted to be driven through the rubber mat so that the driven member enters the floor and the punch element cuts an opening in the mat of less diameter than that of the head flange; thus the head flange overlies the mat in the manner of a button head from which the mat may be released by stretching the opening sufficiently to clear the head flange. After application of the fastening devices in this manner the mat may be unbuttoned therefrom and rebuttoned thereon at will, as will be explained more fully hereinafter and finally claimed.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a top plan view of the fastening device of the invention, Fig. 2 is a bottom plan view thereof, Fig. 3 is a side elevation thereof, and Fig. 4 is an axial sectional elevation thereof. Fig. 5 is a plan view of the fastening device applied to a rubber mat or the like covering. Fig. 6 is a sectional elevation of the device, similar to Fig. 4, and showing the same in use. Fig. 7 shows the device as illustrated in Fig. 3 but in use, as shown in Fig. 6, the mat being depicted as being partially released or unbuttoned. Figs. 8, 9 and 10 illustrate modified forms of the punch element.

The fastening device, as shown particularly in Figs. 1 to 7 inclusive, includes a nail, tack, spike, or other driven member having a shank 1, a head 2, and a point 3, the shank preferably being roughened in any appropriate manner, as indicated at 4. Applied to the head 2 by means of a cap 5 is a tubular punch element 6, having its leading edge flared and sharpened as indicated at 7, and provided with an offstanding lip 8 around which the cap is closed as indicated at 9 to hold the punch element and driven member in fixed assembly. This cap, closed around the lip 8, provides an offstanding head flange which forms a button-like head.

The fastening device, as hereinbefore stated, is adapted particularly for applying rubber mats to the wood floors of automobile bodies, and in use is installed as follows:— The rubber mat 10 is laid upon the floor 11 in desired position and then, at suitably disposed points throughout its surface area, a plurality of the fastening devices is applied. These fastening devices are simply driven, with a hammer or other appropriate tool, through the mat 10 and into the floor 11, as shown in Fig. 6, the flared, sharpened edges 7 of the punch elements thereof cutting openings in the mat of such size that, due to the resilience of the mat, the walls of these openings will lightly contact with the outer surfaces of the punch elements, and the head flanges will overlie the portion of the mat surrounding these openings. Obviously, the portions of the mat, indicated at 12, which are cut from the mat by the punch elements are retained within the punch elements.

With the mat thus secured to the floor by means of the fastening devices, it will be apparent that it may be readily released or unbuttoned from them, in the manner illustrated in Fig. 7, by simply stretching the openings to such an extent that they may be passed over the button-like heads of the fastening devices.

In Figs. 6 and 7 I have shown the fastening device as driven through the mat and into contact with the floor so that the head flange of the device is located slightly above the exposed or upper surface of the mat, thus facilitating the buttoning and unbuttoning of the mat. The fastening devices are preferably driven in to this extent, but it does no harm if the edges of the punch elements slightly enter the floor. However, the de-

vices should not be driven in so far that their head flanges will pinch the mat, as it would then be difficult to release or unbutton the mat from the fastening devices and to again apply it to them.

In Fig. 8 the punch element 6′ has a lip 8′ similar to and for the same purpose as the lip 8 of the punch element 6 previously described, but the cutting edge instead of being flared and sharpened is merely sharpened as at 7′ and thus the opening cut in the mat will be smaller than that cut by the flared and sharpened edge 7 of the punch element 6 and the wall of such opening will more intimately and frictionally engage the wall of the punch element. In this figure, also, the driven element or nail 1 is shown as having a smooth shank, but this is not essential, the roughened shank being preferred.

In Fig. 9 the punch element 6″ is shown as having its flaring leading edge serrated or toothed, as indicated at 7″, to facilitate its penetration of the mat, the leading edge thus serrated being sharpened or not, as desired.

In Fig. 10 the leading edge of the punch element 6*a* is serrated, as indicated at 7*a*, but is not flared, and may be sharpened or not as desired.

It will thus be seen that the device of the invention provides a means whereby floor coverings, particularly rubber mats, may be very easily secured to floors in such manner that they may be subsequently removed and replaced, and that to so secure them with the fastening devices of the invention it is not necessary previously to provide openings in the mats for the reception of these devices. This latter makes unnecessary any fitting or coordination of fastening elements carried by the floors and by the mats respectively, thus greatly facilitating the securing of the mats to the floors in individual installations, it being necessary only to initially correctly position the mats and then drive the fastening devices through the mats and into the floors in appropriate positions relatively thereto, as described.

Various changes in the construction and arrangement of the parts of the fastening device are contemplated as within the spirit of the invention and the scope of the following claims.

What I claim is:—

1. A fastening device, comprising a driven member provided with a punch element and having an offstanding head flange.

2. A fastening device, comprising a driven member provided with a tubular punch element and having an offstanding head flange.

3. A fastening device, comprising a driven member provided with a tubular punch element having a flared leading edge, and said device having an offstanding head flange.

4. A fastening device, comprising a driven member provided with a head, a tubular punch element, and means for uniting said driven member and punch element, said means providing an offstanding head flange.

5. A fastening device, comprising a driven member provided with a head, a tubular punch element having a lip, and a cap applied to said head and closed upon said lip to unite the driven member and punch element, said cap providing a head flange.

6. A fastening device, comprising a driven member provided with a head, a tubular punch element having a lip and a flared and sharpened leading edge, and a cap applied to said head and closed upon said lip to unite the driven member and punch element, said cap providing a head flange.

7. A fastening device, comprising a nail, and a punch element carried thereby, said device having an offstanding flange providing a button-like head.

8. A fastening device, comprising a driven member provided with a tubular punch element having a serrated leading edge, and said device having an offstanding head flange.

9. A fastening device, comprising a driven member provided with a tubular punch element having a serrated and flared leading edge, and said device having an offstanding head flange.

In testimony whereof I have hereunto set my hand this 17th day of July, A. D. 1931.

RUSSELL G. MEADER.