June 13, 1950 O. J. HUELSTER 2,511,110

TACK FASTENED BUTTON

Filed May 22, 1946

Fig. 1.

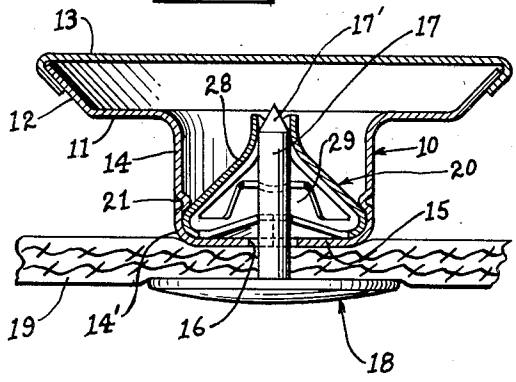


Fig. 2.

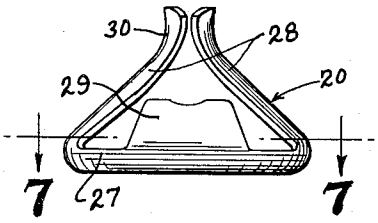


Fig. 4.

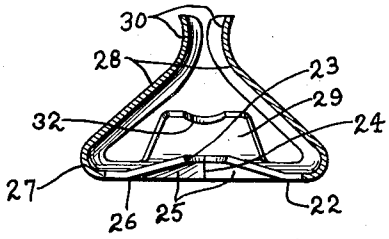


Fig. 3.

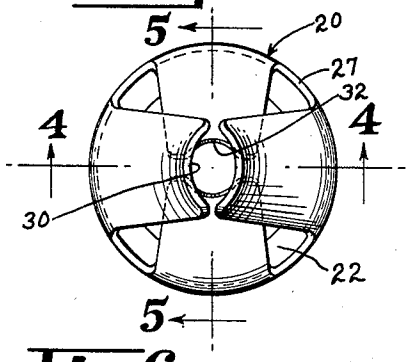


Fig 5.

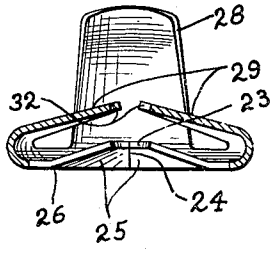


Fig. 6.

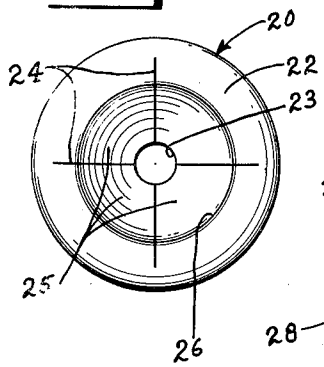
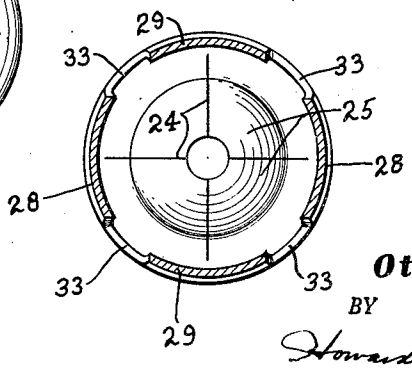


Fig. 7.



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TACK FASTENED BUTTON

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1 Claim. (Cl. 24—90)

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This invention relates to buttons and similar devices wherein tacks are employed for assembling the button to a suitable support. More particularly, the invention deals with an anvil construction for buttons of this type and kind having two pairs of yieldable locking elements adapted to engage the shank of the tack in combination with a slitted base on the anvil, forming four jaw members also engaging the shank of the tack in retaining and supporting the tack in firm position in the button and upon the support to which the button is attached. The novel features of the invention will be best understood from the following description when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed, and in which the separate parts are designated by suitable reference characters in each of the views; and in which:

Fig. 1 is a sectional view through a button showing one of my improved anvils therein, indicating the button attached to a support by a tack fastener.

Fig. 2 is a side elevation of the anvil, detached, and on an enlarged scale.

Fig. 3 is a plan view of the anvil, as seen in Fig. 2.

Fig. 4 is a section on the line 4—4 of Fig. 3.

Fig. 5 is a section on the line 5—5 of Fig. 3.

Fig. 6 is a bottom plan view of the anvil; and

Fig. 7 is a section on the line 7—7 of Fig. 2.

In Fig. 1 of the drawing I have shown, for the purpose of illustrating one adaptation of my invention, a button 10 comprising a head portion 11 having an outwardly flared rim 12 to which a suitable cap 13 is secured. The head 11 has a reduced tubular portion 14 terminating at its lower end in a wall 15 having a central aperture 16 adapted to receive the shank or prong 17 of a tack 18. The tack 18 is used in attaching the button 10 to a suitable support 19.

At 20 is shown one of my improved anvils or tack engaging elements, the anvil being held within the reduced tubular portion 14 of the button and upon the bottom wall 15 by an indenture 21 which in the construction shown is in the form of opposed nibs. The anvil 20 comprises a base plate 22 having a central aperture 23, slightly smaller than the diameter of the shank 17 of the tack employed; the base 22 has two cross splits as at 24, which divides the base into a plurality of jaw members 25 adapted to firmly engage the shank 17 when forced into the anvil, as later described. The members 25 are also set inwardly to a slight extent to give

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a conical formation thereto, as clearly seen in Figs. 1, 4 and 5 of the drawing, this inwardly setting starting as at 26, thus leaving part of the base plate 20 flat to seat upon the wall 15.

Extending upwardly from the base 22 is a rounded circumferential flange portion 27 adapted to fit in the rounded portion 14', as clearly seen in Fig. 1 of the drawing. Extending upwardly from the flange 27, are two pairs of yieldable wings or fingers 28 and 29, the fingers 28 being longer than the fingers 29 and disposed at right angles thereto. The upper ends of the fingers 28 are curved and flared outwardly to a slight extent, as seen at 30.

The fingers 28 extend upwardly from the rim at angles of approximately forty-five degrees to the base plate 22, or what might be termed the flat bottom portion thereof. On the other hand, the fingers 29 are relatively flat, or in other words, are substantially parallel to the conical portions of the jaws 25, the fingers 29 terminating at their inner ends in curved recesses 32 adapted to fit upon the shank 17 of the tack.

Considering Fig. 3 of the drawing, it will appear that the recesses 32, in combination with the curved ends 30 form a rounded opening which will be of less diameter than the diameter of the shank 17, so that as the tack is forced into the anvil, the members or fingers 28 and 29 will both be flexed radially in firmly engaging the shank at two positions along the shank, in the manner indicated in Fig. 1 of the drawing, with the jaws 25 also firmly engaging the shank below the fingers 29, as seen in Fig. 1.

Considering Fig. 7 of the drawing, it will appear that the splits 24 are disposed centrally of each pair of fingers 28 and 29, whereas the spacings between the pairs of fingers 28 and 29, as at 33, note Fig. 7, are disposed centrally with respect to the prongs 25. By this construction, the prongs 25 establish a four-way engagement with the shank 17 between which are the other gripping engagements accomplished by the fingers 28 and 29 disposed at right angles to each other and in alinement with the splits formed between the prongs 25. Furthermore, the prongs in combination with the spring fingers or elements provide engagement with the shank at spaced intervals longitudinally thereof. This construction firmly embraces the shank of the tack and provides a firm support which will also retain the button against tilting or rocking movement upon the shank.

It will be apparent that a tack once pushed into the anvil of the button will be retained

against displacement therefrom, first by the jaws **25**, and further assisted by the fingers or elements **29**, the fingers or elements **28** providing a supporting brace on the shank adjacent its pronged or pointed end **17'** and holding the tack in a straight position.

The curved or flared ends **30** of the fingers **28**, give a curvature to the ends **30** substantially as seen in Fig. 3 of the drawing to fit about and embrace the shank **17** to support and maintain the pronged end in straight position, as illustrated in Fig. 1 of the drawing.

By forming the fingers or elements **28** and **29** as extensions to the upturned rim, or flange **27** on the anvil, a well reinforced mounting of the elements on the base **22** is provided. In other words, what might be termed the mounting or swinging ends of the fingers or elements, which might also be termed arms, is reinforced and strengthened by the flange or rim portion **27**, which is circumferentially continuous. Considering Fig. 6 of the drawing, it will be apparent that part of the base **22** is also circumferentially continuous beyond the limits of the splits **24**.

The anvil structure may be also defined as comprising an annular ring of curved cross sectional form. From one edge of the ring extends the four jaws **25**, formed by the splits **24**, and from the other edge of the ring extends the two pairs of fingers, elements or arms **28** and **29**, producing on the resulting anvil three tack shank engaging stations spaced longitudinally of said shank.

It will also appear that the device herein termed the anvil comprises a means for retaining a rod like element, such as the tack shank against movement in one direction with respect to the device. This is accomplished by providing the three axially alined jaws spaced longitudinally of what may be termed the axis of a ring like member of the device with the elements defining the jaws disposed in an angular relationship so that one pair of elements is substantially at forty-five degrees to said axis, whereas the elements defining the other two stations are disposed at a different angle to the first pair of elements and are substantially parallel to each other, at least before the tack is mounted therein. It will be understood that in inserting the tack into the anvil or device, all of the elements, that is to say, the jaws **25** and the fingers or arms **28** and **29** are flexed outwardly, and this flexure will change the angularity to a slight extent.

By arranging the splits **24** centrally with respect to the fingers **28** and **29**, there is no danger of the splits breaking through the edge of the rim **27**, as would be the case if the splits were alined with the adjacent edge portions of said fingers, or positioned at forty-five degrees to the position shown in Fig. 7. At this forty-five degree position, the full strength of the rim is maintained and where the splits are located, there is ample stock to give strength and rigidity to the anvil.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

A tack engaging member for tack attached buttons comprising a base having a central opening and slits converging at said opening to form a plurality of jaw members set inwardly from the periphery of the base in conical arrangement, the outer periphery of said base having a plurality of extensions one of which is in line with each of said slits and forming fingers which are turned upwardly and radially inwardly so that their ends will engage a tack inserted through the base, one pair of said fingers which are opposed to each other acting as a guide for the end of the tack and another pair of said fingers which are opposed to each other acting as gripping jaws to grip the tack at a point between the guide fingers and the first mentioned gripping jaws, whereby the second mentioned gripping jaws bear against said tack directly over the slits in the base, and each one of said fingers reinforces said base in the radial line of each of said slits.

OTTO J. HUELSTER.

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