Aug. 21, 1945. M. COHEN 2,383,238

BUTTON

Filed July 23, 1943

Fig. 1.

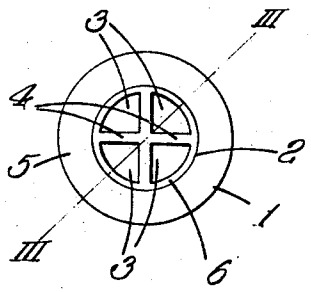


Fig. 2.

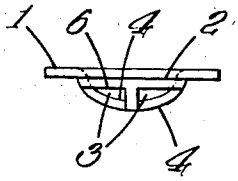
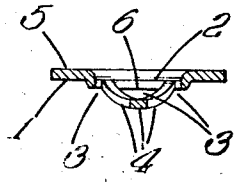


Fig. 3.



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BUTTON

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5 Claims. (Cl. 24—90)

This invention relates to buttons and whilst applicable to buttons generally, applies more especially to metal buttons.

Buttons are usually provided with four uniformly spaced holes arranged at the corners of a square in a recessed portion of the button.

Machines used for sewing on ordinary buttons have a very rapid throw of the needle up and down in a crosswise direction, the operation for completely sewing on a button taking approximately one to one and a half seconds.

In different moving parts of the machine there is a play of about 1/1000 of an inch, which by the time it reaches a clamp, by which the button is held, may have accumulated to 1/64", 1/32", 1/16" or in some cases to as much as 1/8". As a result there is a liability of the needle striking the body of the button instead of passing into a hole whereby many hundreds of needles are broken every week. Further, shocks or jars are transmitted to the machine when a needle strikes the body, which are liable to put the machine wholly or partly out of its proper timing.

As the buttons are placed into the machine manually, it is necessary to place the buttons correctly into the clamp, as otherwise the needle is liable to strike the body of the button, which leads to further breakages of needles and consequent transmission of jars and shocks to the machine.

It is the object of the present invention to provide a button with openings so constructed and arranged that the needle is more readily capable of passing into an opening even when the button has not been placed into the clamp absolutely correctly.

According to the present invention a button is provided in the central portion thereof with four segmental openings which are separated from one another by a number of strips of the material of which the button is constructed.

In the case of a button having a central recess, the openings fill this recess substantially completely with the exception of a narrow peripheral portion of substantially the same width as the strips between the openings.

The invention will now be described by way of example, as applied to an ordinary metal trouser button, with reference to the accompanying drawing, wherein:

Figure 1 is a plan view of the button;

Figure 2 is a side view of Figure 1;

Figure 3 is a section on the line III—III of Figure 1.

As shown in the drawing, the centre recessed portion 2 of the button 1 is provided with four openings or holes 3 of segmental shape.

The four openings 3 are spaced apart by strips 4 of metal integral with the body of the button 1, which extend radially at 90° apart from the centre of the button 1 where they are also integral with one another. These strips 4 are of a width about equal to the thickness of the metal of the button 1.

The openings 3 are spaced from the flat upper surface 5 of the button 1 by a width of metal 6 which is about equal to the thickness of metal of the button 1 or slightly wider.

With a button constructed as above described, it will be appreciated that by reason of the large openings 3, which are spaced apart by narrow strips 4, extreme accuracy in placing the buttons in the clamp of a machine for sewing on buttons is not absolutely essential, as in view of the large holes 3 no damage is liable to be caused to needles or to the machine, whilst the large holes 3 also make provision for a predetermined amount of play in the various moving parts of the machine so that damage to needles, as a result of striking the body of the button 1 instead of entering an opening, and the resultant jars and shocks to the machine, are reduced to a minimum.

Whilst the invention has been described as applied to a metal button, it will be understood that it is also applicable to buttons made of other materials. The buttons need not be provided with a recess 2 but may have a flat central portion.

It will also be understood that the dimensions set out above are only given by way of example and not in a limiting sense.

What I claim is:

1. A button for the purpose described, comprising a central portion, said central portion consisting of four strips arranged at 90° apart and integral with one another at the centre of the button, and a flat circular rim with which the outer ends of the strips are formed integral, each of said strips being of a width about equal to the thickness thereof and of the rim, said strips and rim inclosing four segmental openings.

2. A button for the purpose described, comprising a flat body having a central concave recess therein, said central recess having four segmental openings therein, said segmental openings being separated from one another by strips radiating at 90° from the centre of said recess, said strips being each of a width about equal to the thick-

ness thereof and being integral at the center of the recess and with the bottom.

3. A metal button for the purpose described, comprising a central concave portion and a flat rim portion located at the periphery of said concave portion, said concave portion consisting of four strips extruding radially at 90° apart from the centre of said concave portion at which the said strips are integral with one another, and a narrow peripheral portion integral with said rim and said strips, said strips and said peripheral portion being of a width equal to about the thickness of the metal of the button.

4. A button to be applied by machine stitching, including a face having a central opening, and a recessed portion including two normally related strips curving downwardly from the margin of the opening in the face and joined integrally centrally of such opening in a limited solid area, said strips being integral with said face, the space between the strips defining relatively large machine needle receiving openings and said strips providing the sole button part below the face.

5. A button to be applied by machine stitching, including a face formed with a central opening having a depending wall portion defining an annular rim below the face, and a recessed portion including four narrow strips in relatively normal relation extending from said rim and curving from the face to a common center, said strips and said center defining needle-receiving openings below the face and constituting the sole projection of the button below said rim, said strips being integral with said rim and being integral with one another at the common center.

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