March 8, 1955 R. L. REDMOND ET AL 2,703,428

CUSHION HEAD PIN

Filed June 21, 1949

FIG. 1

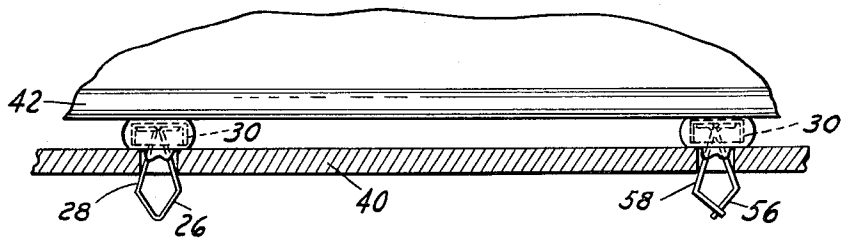


FIG. 2

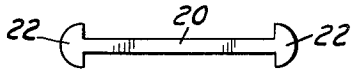


FIG. 4

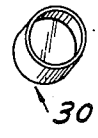


FIG. 5

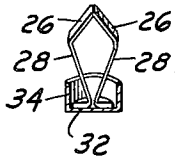


FIG. 3

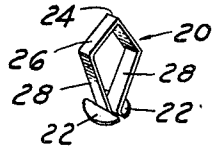


FIG. 6

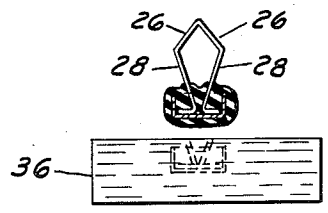


FIG. 7

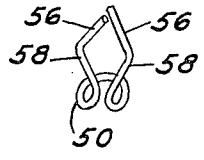


FIG. 8

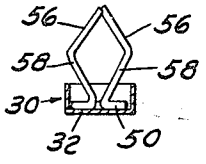
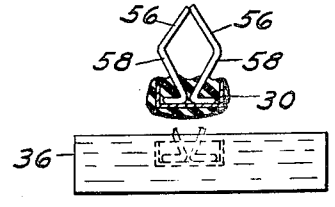


FIG. 9



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2,703,428

CUSHION HEAD PIN

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Application June 21, 1949, Serial No. 100,416

8 Claims. (Cl. 16—86)

This invention relates to a cushion head pin and has particularly to do with a button type of cushion which is fastened at various places to provide a resilient pad. It is an object of the invention to provide a cushion head pin which has a resilient clipping construction inherent therein and which is easily formed to a definite shape by the method to be described herein.

Preferably the invention consists of a spring clip means having a portion to be embodied in a cushion head, a paper button telescoped over said head portion, the assembly then being dipped to fill and surround the button. It is an object of the invention to provide a button which can be made with a single dipping as compared with some constructions which require several dips to obtain the necessary body and thickness for the cushioning function.

It is a further object to provide unusual clip constructions which adapt themselves to fastening the button in apertured plates.

Other objects and features of the invention relating to details of construction and operation will be apparent in the following description and claims.

A drawing accompanies the specification, and the various views thereof may be briefly described as:

Figure 1, a sectional view showing the application of the buttons in a cushioning position between two parts.

Figure 2, a plan view of a blank used in forming a holding clip.

Figure 3, a view of the formed clip prior to assembly.

Figure 4, a view of the skeleton button.

Figure 5, a view of the assembled button and clip prior to dipping.

Figure 6, a view showing the button after a dipping operation.

Figure 7, a view of a modified type of clip.

Figure 8, a view of the clip assembled with the paper button prior to dipping.

Figure 9, a sectional view showing the dipping operation completed.

Referring to Figure 2, the fastening clip blank consists of a straight piece of flat resilient material **20** having semi-circular heads **22** integral therewith and extending transversely of the ends. In the process of forming the unit to be described, the blank **20** is bent in the middle to form a bight portion **24**, the legs extending outwardly therefrom in portions **26** and back toward each other in portions **28** to enclose a diamond shaped aperture. The heads **22** are bent to lie in a common plane which is normal to the axis of the formed legs as shown in Figure 3. In Figure 4 a cup **30** is shown preferably formed of a drawn piece of cardboard, paper, or other fibrous material to have a base **32** and side walls **34**. For use in a cushion head pin the side walls would have such flexibility as not to interfere with the cushion function. The cup diameter is so dimensioned relative to the heads **22** that when the heads are inserted in the cup there will be a slight outward pressure of the heads **22** against the walls **34**. The resilience of the legs **28** will maintain the parts together for the dipping operation shown in Figure 6 where a tank **36** of a liquid dispersion of rubber or similar material is provided. The dipping could, of course, be accomplished by hand but in production would probably be performed by a conveyor system wherein the cupped end of the clip is dipped for pre-determined time in the bath, depending upon the coating desired and the consistency of the material. As shown in Figure 6 the cup is inserted right side up so that when immersed it will

fill with the coating material and also the material will coat the outside of the cup with a definite thickness. The drawing exaggerates the thickness on the outer walls of the cup. The projecting leg portions **26, 28** then extend from the cushion end of the unit and may be snapped into place in an aperture plate **40** as shown in Figure 1. The cushioned end then provides a resilient pad for any contacting member **42**. For example, these cushion head pins may be used underneath the hood of an automobile to provide a cushion stop and an anti-rattle spacer.

In Figure 7 I have shown a modified type of construction formed of spring wire in which a circular loop of wire **50** has legs extending upwardly therefrom centrally of the circle **50**. These legs have crossing portions **56** at the ends and outwardly extending portions **58** which project down toward the center of the circle. As in Figure 3 it will be seen that the legs enclose a diamond shaped area. The head **50** is dimensioned to be received snugly in the cup **30** and the dipping operation shown in Figure 9 is similar to that described in connection with Figure 6.

It will thus be seen that there is provided an excellent cushion head pin with the resilient extending legs serving as fastening portions and also serving during the manufacturing steps to hold the parts in assembly. One dip in the coating material is usually adequate to complete the entire cushion due to the cup which fills and coats simultaneously.

What we claim is:

1. A cushion head pin which comprises a core having a head and a shank, a cup of relatively light, flexible material surrounding the head and having a volume capacity materially greater than the head portion, and a body of soft, compressible material such as rubber filling the cup to embed the head of the core and surrounding the outer walls and bottom of the cup to envelope the cup to provide a unitary resilient cushion head adapted to be distorted upon application of pressure thereto, said shank portion remaining free to function as a fastening element for the head.

2. A cushion head pin which comprises a core having a head and a shank, a cup of relatively light, flexible material surrounding the head and having a volume capacity materially greater than the head portion and engaged with the head portion, and a body of soft, compressible material such as rubber filling the cup to embed the head of the core and surrounding the outer walls and bottom of the cup to envelope the cup to provide a unitary resilient cushion head adapted to be distorted upon application of pressure thereto, said shank portion remaining free to function as a fastening element for the head.

3. A bumper pad and prong holder which comprises a metal core having a head portion and a shank holding portion extending away from the general plane of the head portion, a cup of relatively light, compressible material having a volume capacity materially greater than the head portion and surrounding the head portion and a part of the shank portion, and a soft, resilient material filling the cup and surrounding the outer surfaces thereof and anchoring the head portion, said holding portion remaining free to function as a fastening element for the head.

4. A bumper pad and prong holder which comprises a metal core having a head portion and a holding portion extending away from the general plane of the head portion, a cup formed of inexpensive fibrous material such as paper telescoping over the head portion of the core and a part of the holding portion, and a coating of soft material such as rubber surrounding the bottom and outside cup walls and filling the cup on the inside to embed the head portion of the core and that part of the holding portion within the cup, said holding portion remaining free to function as a fastening element for the head.

5. A bumper pad and prong holder as defined in claim 4 in which the cup has relatively straight cylindrical walls and the head portion and the cup are associated with the head portion engaging the interior of said walls to remain frictionally engaged independently of the rubber coating.

6. A bumper pad and prong holder which comprises a core having a head portion and a holding portion formed

of a single piece of wire curved in one plane to form the head, the ends being bent in a plane normal to the plane of the head to enclose a diamond-shaped area in said normal plane, a paper cup frictionally engaging said head to surround the head and a portion of said ends, and a soft material such as rubber filling the cup and coating the outer walls and bottom thereof to anchor the head portion, said holding portion remaining free to function as a fastening element for the head.

7. A headed pin as defined in claim 2 in which the core is formed of a single piece of strip resilient metal having tab ends extending laterally thereof, said metal being bent to bring those ends together in a plane at the end of a diamond-shaped enclosure formed by the strip itself, said cup being formed of fibrous material and receiving those ends, the resilience of the strip urging those ends against the side walls of the cup to engage the cup.

8. A bumper pad and prong holder which comprises a strip of resilient material bent upon itself to form spaced legs, a cup of paper material over the free ends of said legs held in place by the resilience of the legs acting on the walls, anchoring means on the ends of the legs, and a soft material such as rubber filling the cup and coating the walls and bottom thereof and embedding the anchoring means.

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