

(No Model.)

C. E. WILLIAMS.

WHIP BUTTON.

No. 361,034.

Patented Apr. 12, 1887.

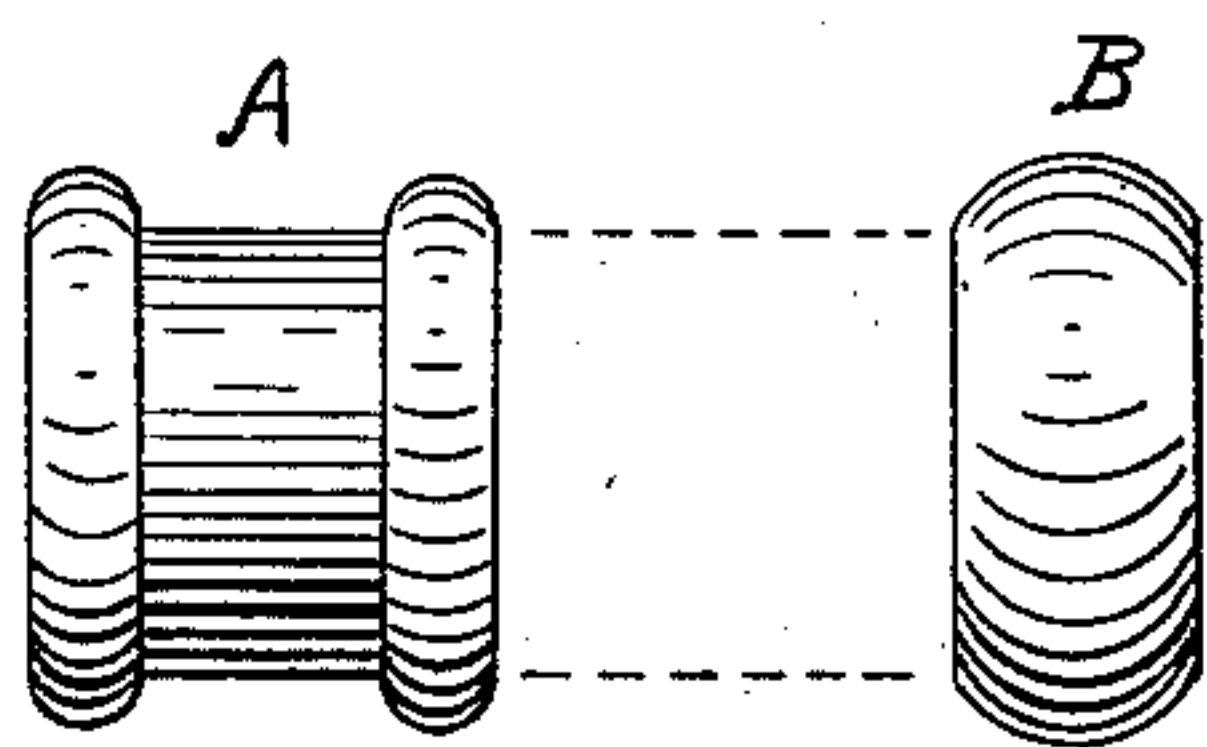


Fig. 1.

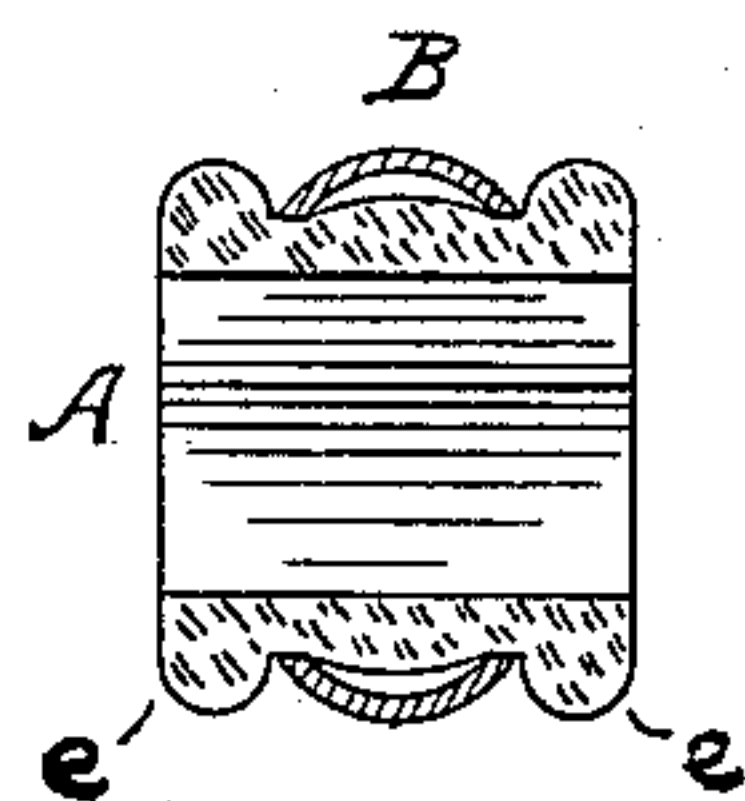
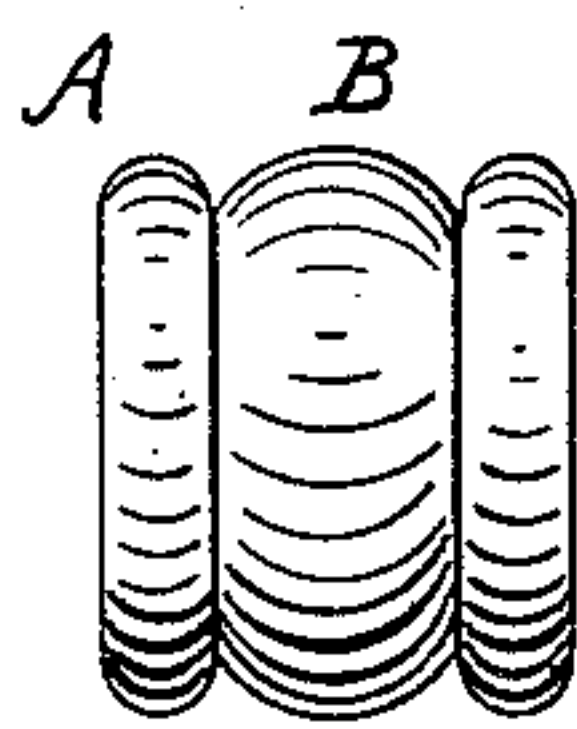


Fig. 2.

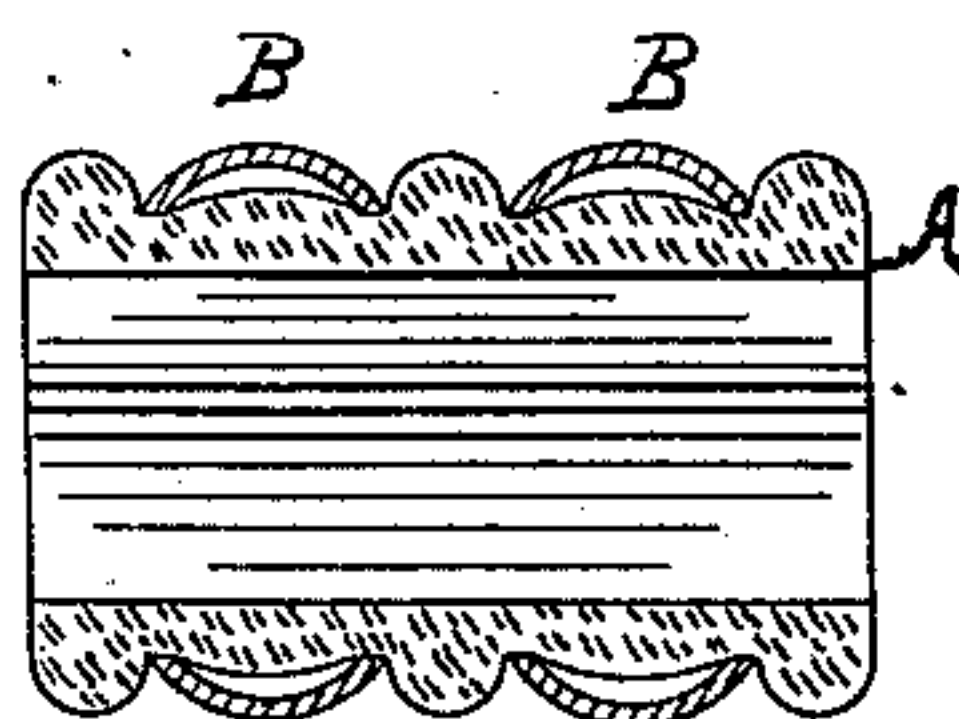


Fig. 3.

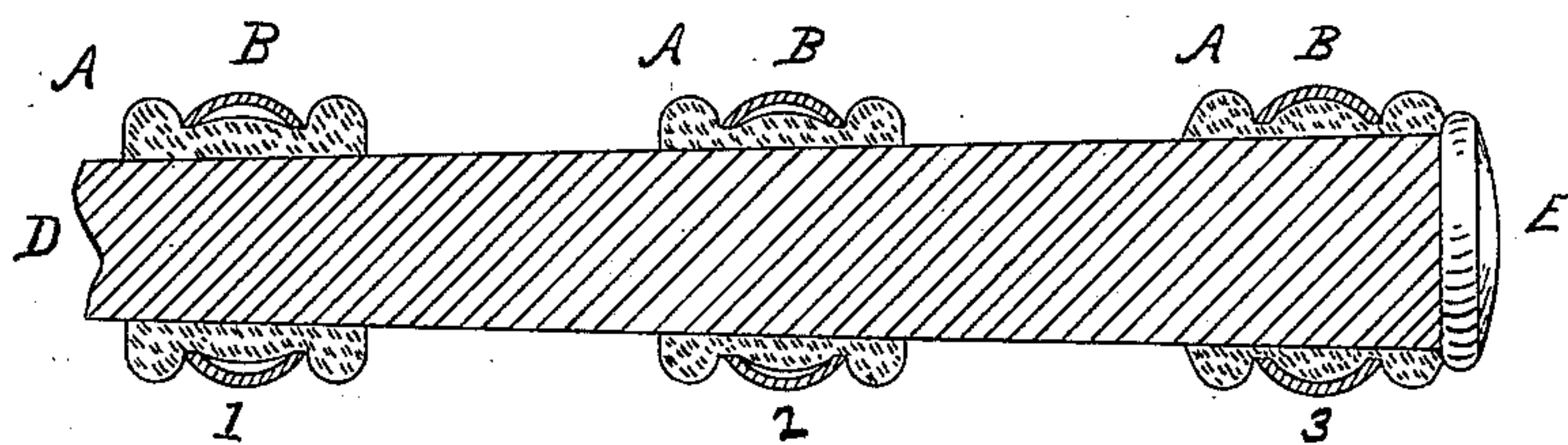


Fig. 4.

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WHIP-BUTTON.

SPECIFICATION forming part of Letters Patent No. 361,034, dated April 12, 1887.

Application filed October 30, 1886. Serial No. 217,550. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. WILLIAMS, a citizen of the United States, residing at Westfield, in the county of Hampden and Commonwealth of Massachusetts, have invented a new and useful Improvement in Whip-Buttons, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to the ornamental rings or "buttons" placed upon the stock of a whip, outside of the woven or other covering thereof. At least two, usually three, and sometimes four and five of these buttons are placed upon driving-whips, the number being varied to suit the several styles and grades of whips. One is placed at the end of the butt, usually covering the tubular portion of the cap, another at the forward end of the handle, usually another at about one-fourth of the distance from the handle to the tip, and sometimes others located at suitable distances apart between the last-mentioned and the tip.

So far as I am aware, these buttons have heretofore been made according to one or the other of the following methods, to wit: by cementing the ends of three or more strands of thread to the stock and then winding said strands around the stock until a mold of the desired shape and size is formed, after which the button is formed by braiding a strand of threads upon said mold, by turning from wood a tubular mold adapted to be placed upon the stock, and then braiding a textile or other covering around the mold, which latter is now usually done by machinery, by stamping or rolling the button from metal, or by stamping it from leather, and afterward, by means of a lathe or otherwise, turning its periphery to the desired configuration. The thread button, that made by the first-mentioned method, has been practically superseded by the wooden, metallic, and leather buttons, because of the great expense involved in hand-braiding each whip. The use of either of these three kinds of buttons, however, makes it necessary for the manufacturer to keep in stock an immense variety of different sizes of each style of button, for the reason that they must be located at exactly defined points upon the whip, which

has a constantly varying diameter, and must fit closely when so located, and because it is found that however much care be exercised in their manufacture no two whips are exactly equal in diameter at any given point, so that a button of the proper size to fit one whip at a certain point will not fit another at the same point. The workman therefore is obliged to try one button after another until he finds one which exactly fits the whip at the desired point, often consuming much time in such search. This fact adds materially to the cost of making the whip, besides, as above stated, compelling the manufacturer to keep constantly on hand a great variety of sizes of each style of button, and the result has been that old and oftentimes unsightly styles of buttons have been adhered to by the manufacturers in spite of a demand by their customers for something new and pleasing, because of the great expense involved in providing a requisite supply of various sizes of a new button. A button has also been devised consisting of a metallic ferrule encircled by a ring of any suitable rigid and solid material—such as bone, ivory, celluloid, &c., the periphery of the ferrule being spun into a fillet or annulet upon each side of the ring; but this button is open to the same objection as those above noted, for the metallic ferrule, having a fixed diameter, cannot adjust itself to unequal diameters of the whips any more than the wooden or wholly metallic buttons above described.

The object of my invention is to provide a whip-button which will accurately fit every whip at any point thereon, thus doing away with the necessity of keeping on hand many different sizes of buttons, which, at the same time, permits the change from one style of ornamentation to another, by means of interchangeable parts, at little or no increased expense, and which can be manufactured at a trifling cost as compared with the buttons now in use.

To these ends my invention consists of a whip-button having an interior bushing or lining of soft rubber, whereby, in consequence of the elasticity of the rubber, the button closely embraces a whip-stock wherever placed thereon.

My invention consists, further, of a whip-

button composed of an elastic bushing or lining having one or more depressions within its exterior surface, and a metallic or other band or bands mounted upon said bushing within the depressions.

My invention consists, also, of a whip-button composed of a soft-rubber bushing or lining and a series of interchangeable ornamental metallic or other bands, each of which is adapted to be mounted upon said bushing.

Referring to the drawings, in which like letters designate like parts in the several figures, Figure 1 is a diagrammatic view, showing in side elevation the soft-rubber bushing or lining and the band separately, and also as combined to form the complete button. Fig. 2 is a central longitudinal section of a button having one band similar to that shown in Fig. 1. Fig. 3 is a similar view of an elongated button having two bands. Fig. 4 is a longitudinal section of a whip-stock having three of my improved buttons applied thereto, showing the manner in which the elastic bushing or lining serves to securely retain the button at any point on the whip regardless of its varying diameter.

The letter A designates a soft-rubber core or tube, which constitutes the bushing or lining of the button. In its preferred form this tube will terminate at its ends in peripheral beads *e*, as shown, thus forming an annular depression between the beads, and can best be made by the well-known process of molding soft rubber.

B designates the ornamental band, which may be made from any suitable metallic substance or from vulcanized rubber, horn, bone, ivory, celluloid, &c., by stamping, rolling, molding, turning, or other usual process. It should be of a proper width and diameter to snugly fit the annular depression in the rubber tube, as shown. I prefer to use a metallic band concavo-convex in cross-section, as shown in the drawings, such form having special advantages, which will be hereinafter set forth. The tube is inserted within the band, as indicated by the dotted lines in Fig. 1, by compressing one end thereof and slipping the band thereover, when the elasticity of the tube causes it to resume its normal shape and to securely retain the band thereon.

The button is now ready to be applied to the whip, and the normal diameter of its bore should be such that after inserting the tip of the whip therein the button may be freely moved toward the butt to the point where the first button is to be located—as, for instance, the point marked 1 in Fig. 4. At this point the button is securely held in place by a very slight compression of the elastic bushing between the whip-stock D and the band B. Owing to the elasticity of the soft rubber, however, the same button can be moved to the point 2 and to the point 3, where it may cover the tubular portion of the cap E, like the ordinary leather button now in

use. It will be observed by reference to Fig. 4 that as the button is advanced toward the whip-butt the increasing diameter of the whip compresses the bushing more and more, and thus more and more firmly secures the button in place. It will be observed, further, that one size of button thus constructed serves a purpose which has heretofore required three or more different sizes, and, moreover, that inequalities in the size of individual whips, which have heretofore necessitated a search for the proper button, have no effect upon a button made according to my invention.

As above stated, I prefer to make the band B concavo-convex in cross-section, and for the reason that space is thereby provided within the band for the expansion of the rubber, thus permitting a thicker bushing to be used and making a more compact and durable structure. The operation of such a band with the bushing is clearly shown in Fig. 4.

Making the band and elastic bushing as separate and interchangeable parts constitutes an important feature of my invention, inasmuch as it enables the manufacturer to vary at will the ornamentation of the buttons on the various grades of whips at the slight expense of producing a new style of band. Again, by making the rubber bushing in different colors he is enabled to arrange new combinations of band and bushing from the stock in hand, and thus introduce new styles of whips at no additional cost, this fact being particularly true of the form of button shown in Fig. 3, where an elongated bushing with two bands, which may be of contrasting materials or ornamentation, is illustrated. Moreover, the bushing can be used very successfully with the metallic, wooden, and leather buttons now in use, the latter serving as the band, and thus obviate the objections incident to such buttons at present, as above pointed out.

The annular beads *e* may be omitted altogether, or the bushing may be provided with additional beads or other exterior ornamentation, and the width and configuration of the band may be varied from that shown without departing from the spirit of my invention.

The buttons, when placed in position upon the whip, may be additionally secured thereto by the use of cement, if desired.

I claim—

1. A whip-button composed of a soft-rubber tube having upon its periphery a non-elastic band, substantially as set forth.

2. A whip-button consisting of a soft-rubber tube having its periphery of less diameter in the center than at the ends, and a band concavo-convex in cross-section, the inner diameter of which is that of the center of the tube, substantially as set forth.

3. A whip-button consisting of a soft-rubber tube having upon its periphery one or more annular beads, whereby the portion of said periphery between said beads is depressed below their level, and a series of interchangeable

non-elastic bands, the inner diameter of each of which is approximately that of the periphery of the tube between the beads, substantially as and for the purpose described.

- 5 4. A whip-button consisting of the soft-rubber bushing A, having the annular beads *e* at its ends, and the concavo-convex band B, in-

closing said bushing between said beads, substantially as shown and described.

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