(No Model.)

M. W. HENIUS.

BUTTON.

No. 270,665. Patented Jan. 16, 1883.

Fig. 1.

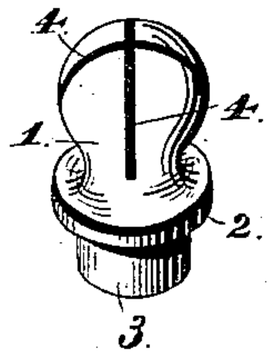


Fig. 2.

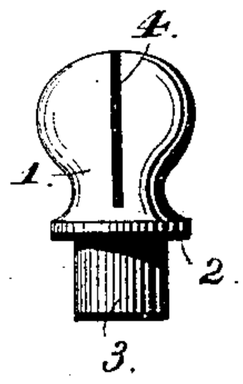


Fig. 3.

Fig. 4.

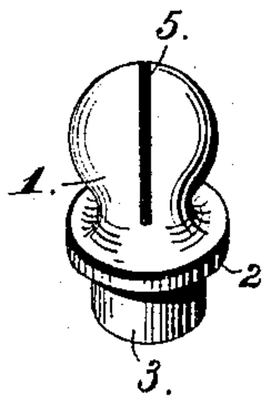


Fig. 5.

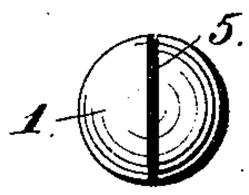


Fig. 6.

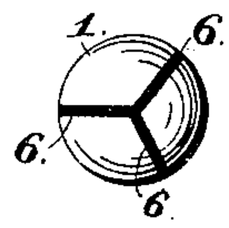


Fig. 7.

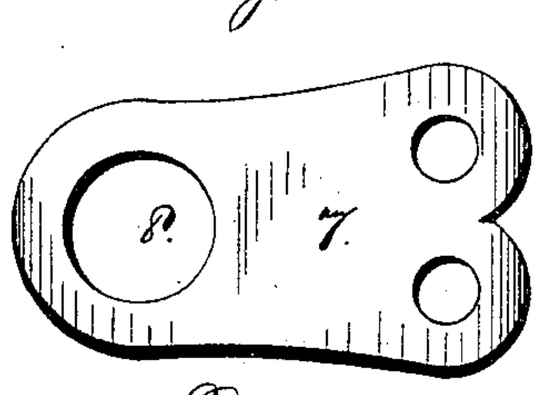


Fig. 8.

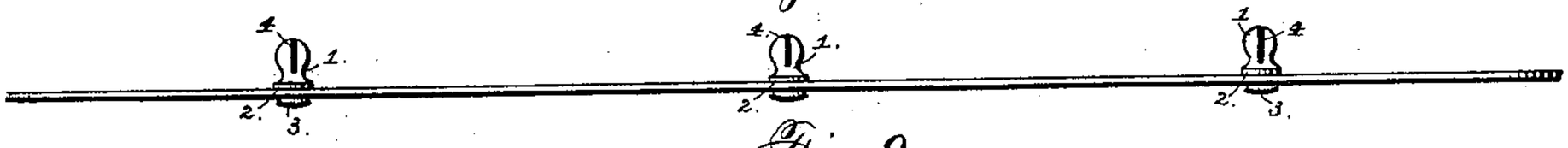


Fig. 9.

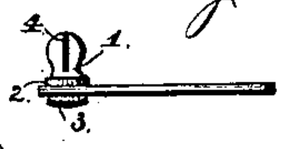


Fig. 10.

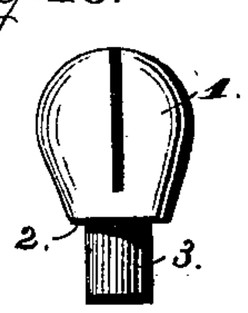
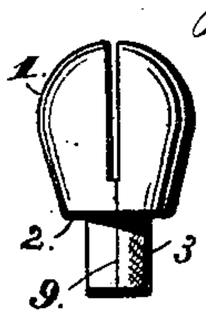


Fig. 11.



WITNESSES

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By James L. Norris

Attorney

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MAX W. HENIUS, OF WATERBURY, CONNECTICUT.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 270,665, dated January 16, 1883.

Application filed May 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, MAX W. HENIUS, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Buttons, of which the following is a specification.

This invention relates to improvements in buttons for use in connection with an eye, and is especially designed for fastening corsets, though the device is applicable to gloves, shoes, garments, and other articles.

Heretofore a fastening has been composed of a post provided at one end with a solid head to engage an eye in a metallic plate, and adapted to be attached at the other end to a corset-steel; but in such, the head being solid and unyielding, it is not adapted to expand after the eye has been placed over the head, and thereby close the orifice forming the eye and at the same time act to retain the eyed plate in position on the post. This has to some extent been remedied by a fastening composed of a rectilinear metallic plate of sufficient elasticity to form a spring, said plate being formed at two opposite edges with projecting nibs, and at the other edges with teeth-like points for attaching the device, each projecting nib being stamped into a spoon shape to form approximately an hemispherical hollow protuberance. The nibs so formed are then bent upward and folded together to form two spring-arms emanating from a rectilinear base-plate, and constitute means for engaging an eye, the spring-arms expanding after the eye is forced over them, and their spoon-shaped nibs serving to close the orifice of the eye and to retain the latter in position. In another instance a fastening device has been composed of a rectilinear spring-metal plate which is placed in a die and the ends formed into cup shapes, or hemispherical hollow protuberances, after which the plate is bent around to form two upright spring-arms, which are brought together at a point below the cups or pertuberances, whereby when the eye is pressed over the spring-arms they will spring apart at their upper ends and the cups or portuberances project beyond or outside of the edges of the eye. These constructions of spring-buttons are objectionable for the reason that they are difficult to manufacture, owing to the necessity of cutting, stamping, and bending them into the required form, and to the difficulty of bringing the edges of the hollow hemispheres or similar shapes directly opposite each other. They are not strong and substantial, and hence cannot resist the excessive strains to which such articles are subjected, thereby rendering them liable to become easily disarranged. A space is required between the spring-arms, which permits their ends to be caught by articles of wearing-apparel, and thereby bent out of shape, if not actually torn off. The spring-arms soon lose their expanding nature or elasticity, owing to the strength of the light metal plates. The spring-arms are liable to be bent to one side, and thus render it impossible to bring the buttons and eyes into proper juxtaposition. Their provision for attachment to an article is weak and insufficient, and not adapted to the variety of uses for which they are desirable without the employment of extra rivets; and, finally, the protuberances on the spring-arms being hollow, the edge of one is liable to be forced into the cavity of the other, all of which tend to render the device imperfect and unsatisfactory in use.

The objections above stated are overcome by my invention, and I provide a button with an expansible head mounted on a practically-rigid post, having a shank adapted to be rivited to an article, the expansible head being solid in contradistinction to hollow, all of which produces a button of a strong and substantial structure, capable of resisting excessive or undue strains, and one in which the head will expand after the eye has been pressed over it upon the post, and thereby close the orifice forming the eye, at the same time serving to retain the latter in position on the post.

My invention is clearly illustrated in the accompanying drawings, in which Figure 1 represents a perspective view of a button constructed in accordance with my invention; Fig. 2, a side elevation of the same; Fig. 3, a plan view of the same; Fig. 4, a perspective view, showing a button with the head provided with a single slit to form two solid hemispherical yielding parts; Fig. 5, a plan view of

Fig. 4; Fig. 6, a plan view of a button in which the head is provided with three slits to divide the same into three solid but yielding parts; Fig. 7, a plan view of a metallic eye-plate adapted for use with any of the buttons illustrated. Fig. 8 shows a series of the buttons attached to a corset-steel. Fig. 9 shows it attached to a plate adapted to be secured to a glove, shoe, or article of wearing-apparel; Fig. 10, a side elevation of a modified form of button, and Fig. 11 a sectional view of another modification.

The button is composed of a single post, 1, formed at one end with a spherical or ovoidal head, and at its other end with a lateral extension, forming a shoulder, 2, which is flat on its under side, and from the center of which depends a short shank, 3. The spherical head shown in Figs. 1, 2, and 3 is provided with two transverse slits, 4 4, which cross each other at right angles, and are preferably extended a considerable distance into the post 1, thereby dividing the head into four elastic parts. Instead, however, of providing two crossing slots, as stated, the head may be provided with a single slit, 5, to form two solid hemispherical parts, as in Figs. 4 and 5; or it can be subdivided into three equal sections by three slits, 6, as in Fig. 6; but in all instances the parts or sections are solid and joined to the solid post, and constitute a yielding head, which will be compressed on slipping the eye of the plate 7 over it, and will then expand and serve not only to close the orifice forming the eye, but also to retain the same on the post. The slits, as shown, extend downward into the post a short distance, thereby securing the necessary inherent elasticity for the parts composing the head, and the remaining part of the post is rigid and substantial, whereby it is rendered capable of resisting excessive or undue strains, to which such fastening devices are subjected, as in corsets, gloves, belts, garments, and other articles.

In attaching the button the shank 3 is inserted through an opening in the corset-steel or other plate until the shoulder 2 rests square on one surface thereof, and the projecting end of the shank is then upset or riveted to securely fasten it in position. The shoulder 2 forms an extended bearing for the post 1, and also limits the insertion of the rivet-shank 3 through the orifice in the plate or article to which the button is attached. By this means an efficient, substantial, and strong attachment is obtained, and the button forms, as it were, a rigid structure, and yet permits the head to yield and expand, for the purposes hereinbefore stated, without liability of its losing its elastic qualities by constant use.

The parts composing the elastic head are each solid in contradistinction to hollow, and no accurate fitting is essential, as the slits can be accurately and uniformily formed by means of any suitable cutting-instrument or saw. The solid nature of the head and its uniform spherical or ovoidal shape enable the eye to be readily engaged and disengaged.

The eye 8 in the plate 7 or other device is made of a diameter slightly less than the diameter of the head in its expanded position, and in engaging the eye with the post the plate is slightly tipped, and then pressed down over the head, which causes the sections or parts of the head to advance toward each other, and when the eye has passed over the same they will expand or spring away from each other, and thereby close and conceal the orifice forming the eye, and at the same time retain the eyed plate in position.

It will be observed that the button forms, as it were, a solid structure with a yielding and expansible head, and consequently is stronger, more durable, and efficient than those buttons composed of two upright spring-arms emanating from the edges of a rectilinear spring-plate, and provided at their free ends with hemispherical hollow protuberances.

The button is capable of use on various articles other than those specified where an eye is used to engage and disengage a button. The solid nature of the parts composing the head opposes the collection of dirt. The button is easily manufactured, and it is of a character which will readily recommend itself to the trade.

The head may be spherical, spheroidal, ovoidal, or any shape approximating thereto, so as to provide rounding edges for the ready engagement and disengagement of the eye.

In Fig. 10 I have shown a modification of my invention wherein the slitted head of the button is flat on its under side to form the shoulder 2, and in this instance the attaching-shank 3 also subserves the function of a supporting-post for the slitted head.

In Fig. 11 I have shown a button similar to that shown in Fig. 10, except that the combined shank and post 3 is divided, as at the line 9, and in this construction the button is made in two parts, which are placed together, and the shank and post 3 inserted through the plate or other device to which the button is to be secured. In attaching this form of button the shank or post 3 becomes solid, as it were, by reason of riveting down its end.

I am aware that a separable button has been composed of a post split at one end, and provided at its center with an elliptical flange and at its other end with a button-back, said construction of post forming one section of a button for engaging and disengaging a detachable button-head having a tube provided with a flange to rest upon the elliptical flange of the post when the button is in position. Such, however, does not constitute my invention, and is hereby disclaimed.

What I claim is—

As an improved article of manufacture, the button herein described and shown, consisting of a shank having one end adapted to be inserted through an aperture in the article to

which it is to be attached, and to have such end upset or riveted to secure the same in position, the other end of the shank being formed with a slitted spherical head formed at its lower end into a horizontal shoulder to constitute a stop and steadying-bearing, as and for the purposes set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

MAX W. HENIUS.

Witnesses:

LUCIEN F. BURPEE,

ALBERT H. NORRIS.