No. 811,901. PATENTED FEB. 6, 1906.

H. CASE.

HINGED LEAF BUTTON.

APPLICATION FILED MAR. 9, 1905.

Fig. 1.

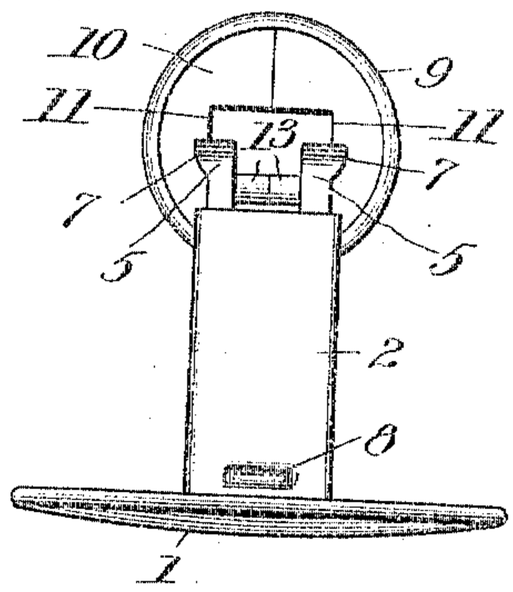


Fig. 2.

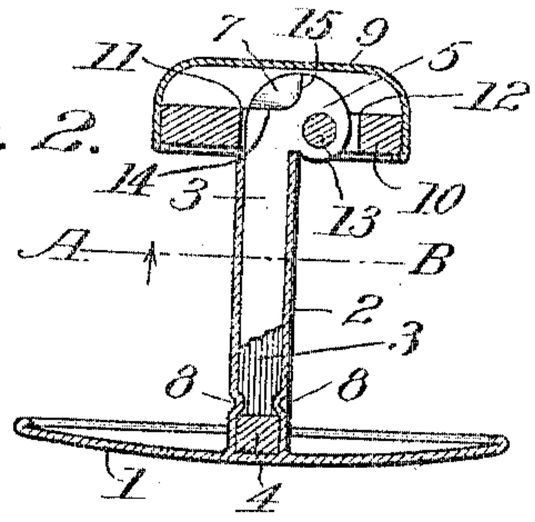


Fig. 3.

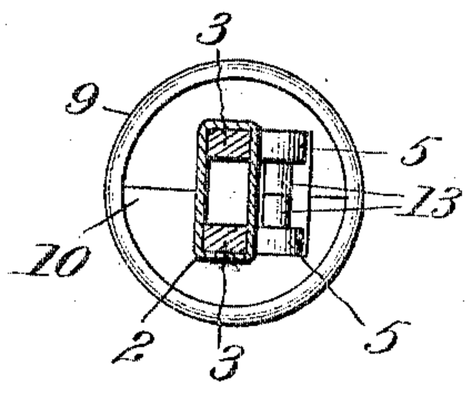
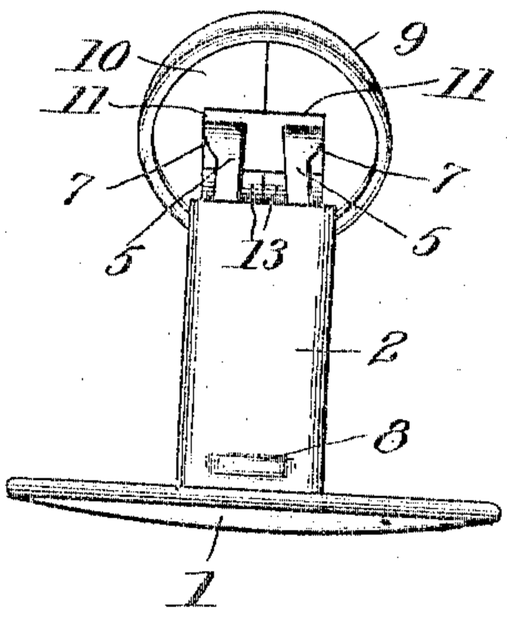


Fig. 4.



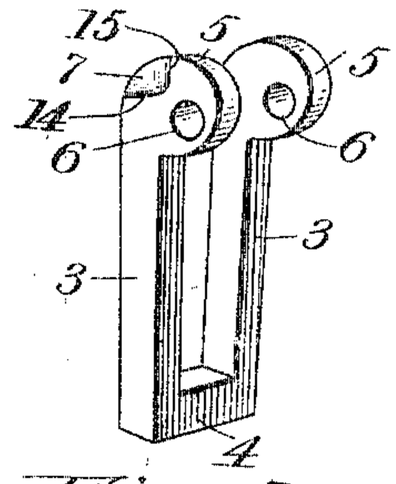
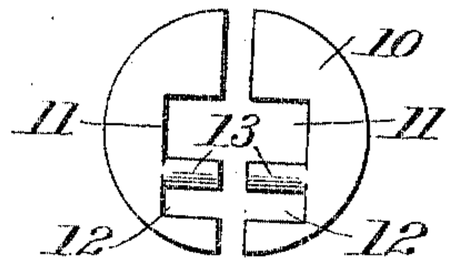


Fig. 5.

Fig. 6.



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HENRY CASE, OF GLOVERSVILLE, NEW YORK.

HINGED-LEAF BUTTON.

No. 811,901. Specification of Letters Patent. Patented Feb. 6, 1906.

Application filed March 9, 1905. Serial No. 249,191.

To all whom it may concern:

Be it known that I, HENRY CASE, a citizen of the United States, residing at Gloversville, in the county of Fulton and State of New York, have invented a certain new and useful Improvement in Hinged-Leaf Buttons, of which the following is a full, clear, and exact description.

This invention relates to that class of buttons, commonly known as "collar-buttons," which have a head hinged to the post in such way that said head may be turned parallel with the post to pass it through the buttonhole and then turned back at right angles to the post, so as to stand crosswise of the buttonhole. This hinged head is also known as a "hinged leaf," and this last-named term is herein used to designate the part. A spring of some sort has been used to act upon the leaf and its post to hold the leaf in its two positions, and in several instances the post itself is both post and spring.

The invention consists of a hinged-leaf button having a leaf hinged to a spring and the spring and a casing therefor fixed to a shoe against relative longitudinal movement, all as I will now proceed to more particularly set forth and finally claim.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is an elevation with the hinged leaf turned up parallel with the post. Fig. 2 is a longitudinal section taken at right angles to the view shown in Fig. 1, but with the hinged leaf at right angles to the post. Fig. 3 is a horizontal section taken in the plane of line A B, Fig. 2, and looking toward the hinged leaf. Fig. 4 is a view similar to Fig. 1, but with the hinged leaf about midway between its horizontal and its vertical positions. Fig. 5 is a perspective view of the spring detached. Fig. 6 is a plan view of the two-part pivot-plate of the hinged leaf.

The shoe 1 may be of any usual construction, and upon it is erected a tubular casing 2 of any suitable shape in cross-section. Within this casing is placed the spring 3. This spring has two arms connected by an integral base 4, and the opposite ends of these arms are provided with the projecting ears 5, which are perforated transversely at 6 and have the laterally-projecting straight-edged cams 7. The spring is placed within the tubular casing so that its base 4 is in the bottom of the casing next to the shoe, and then the metal of the casing is set in or indented over this base, as at 8, so as to hold the spring in place within the tubular casing without impairing its spring action. Obviously the spring is made to act by a movement of the spring-arms toward and from one another.

The head or hinged leaf is composed, preferably, of a cap-piece 9 and a pivot-plate 10, which latter is made in halves, as shown more particularly in Figs. 3 and 6, and these halves are cut away, as at 11 and 12, to receive the ears 5 of the spring, and they are also made with the pintles 13, which enter the holes 6 in the ears of the spring, and thereby serve as pivots for the leaf.

The parts of the plate 10 having their pintles inserted in the holes 6 are brought together and secured within the cap-piece 9, and thus the head or leaf is hinged to the spring. The outward or diverging pressure of the spring-arms, which is the normal set of the spring, is sufficient to hold the hinged leaf in position; but to insure such position the straight edges 14 of the cams 7 when the hinged leaf is in the horizontal position, as shown in Fig. 2, engage the inner edges of the pivot-plate next to the openings 11, and thus lock the leaf in that position. Similarly, when the hinged leaf is turned up into the position shown in Fig. 1 the straight edges 15 of the cams engage the outer edges of the pivot-plate 10 next to the openings and lock the said hinged leaf in that position. To put the hinged leaf in either position, some little force is required to overcome the spring, and it will be observed upon comparing Figs. 1 and 4 that in going from the horizontal to the vertical position or reversely the arms of the spring are caused to approach, the cams meanwhile riding upon the vertical edges of the opening.

By the use of the casing 2 the spring-arms are allowed perfect freedom of movement in the operation of the hinged leaf, and at the same time the spring-post is entirely protected from wear and entanglement or disarrangement.

In this construction the spring is made angular or of angular stock and at considerably less cost than if round and may be secured in place by means of its angular base very much more readily than if stock of circular cross-section were used.

I have thus described the principle of my invention and the best mode in which I have contemplated applying that principle; but it

is obvious that there are numerous equivalents of this principle.

What I claim is—

1. A button, having a hinged leaf, a spring upon which the hinged leaf is pivoted, a casing for the said spring and a shoe upon which the spring and casing are fixed against relative longitudinal movement.

2. A button, having a spring, a leaf provided with a two-part plate containing pivots engaging the spring, a casing for the said spring and a shoe upon which the spring and casing are fixed against relative longitudinal movement.

3. A button, having a spring provided with pivot-ears and locking-cams on said ears, a leaf having a pivot-plate pivoted to said ears and adapted to engage with the cams, a casing for said spring and a shoe upon which the spring and casing are fixed against relative longitudinal movement.

4. A button, having a hinged leaf, a spring upon which the hinged leaf is pivoted, a casing for the said spring and within which the spring is fixed against longitudinal movement and a shoe upon which the spring and casing are fixed against relative longitudinal movement.

5. A button, having a shoe, a casing fixed on said shoe, a two-armed spring fixed in said casing against longitudinal movement, the free ends of said arms having ears and cams and a leaf pivotally connected to said ears and adapted to coöperate with said cams so as to be capable of being held thereby in a position at right angles to the casing and in a position substantially parallel to the casing.

In testimony whereof I have hereunto set my hand this 6th day of March, A. D. 1905.

HENRY CASE.

Witnesses:
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