

W. L. BATE.
SEPARABLE BUTTON.
APPLICATION FILED MAR. 25, 1909.

960,780.

Patented June 7, 1910.

Fig. 1.

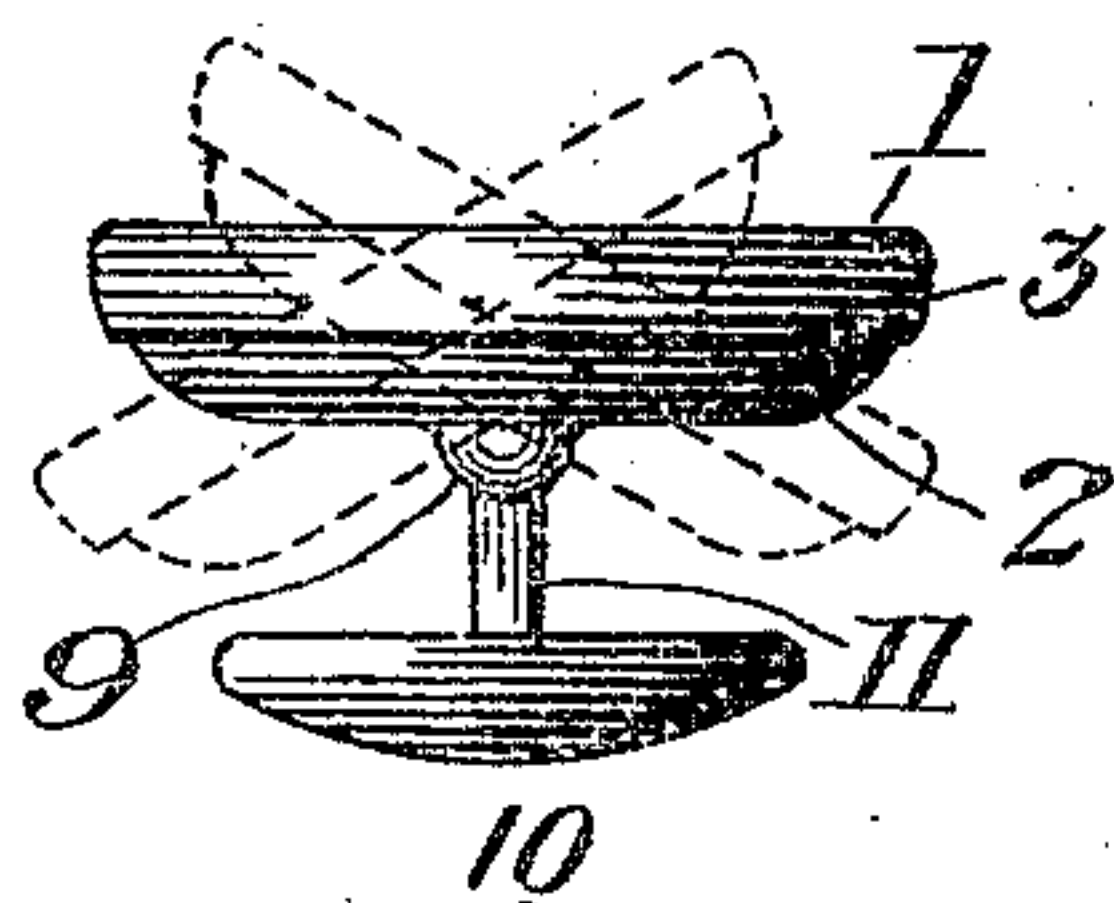


Fig. 2.

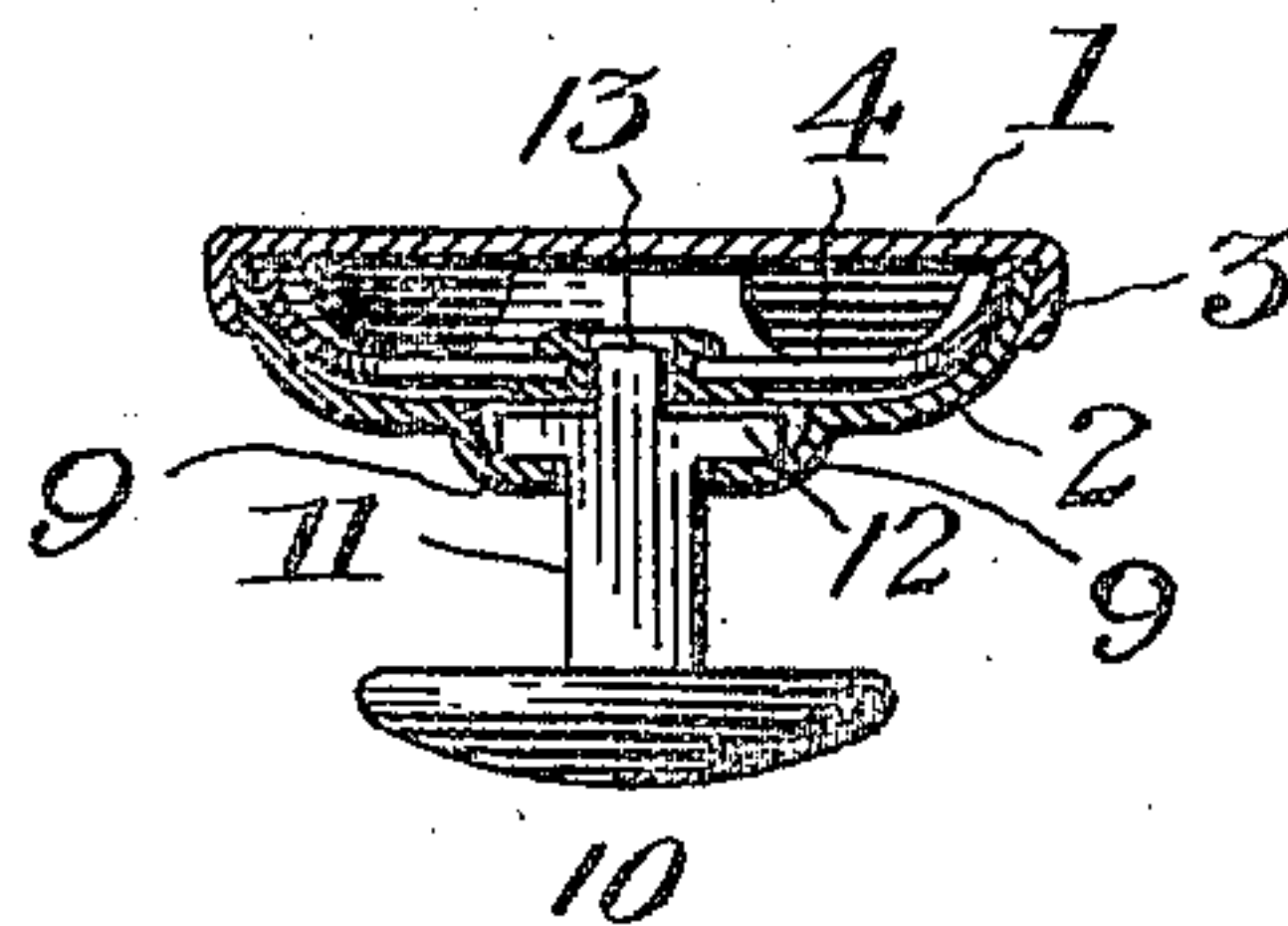


Fig. 3.

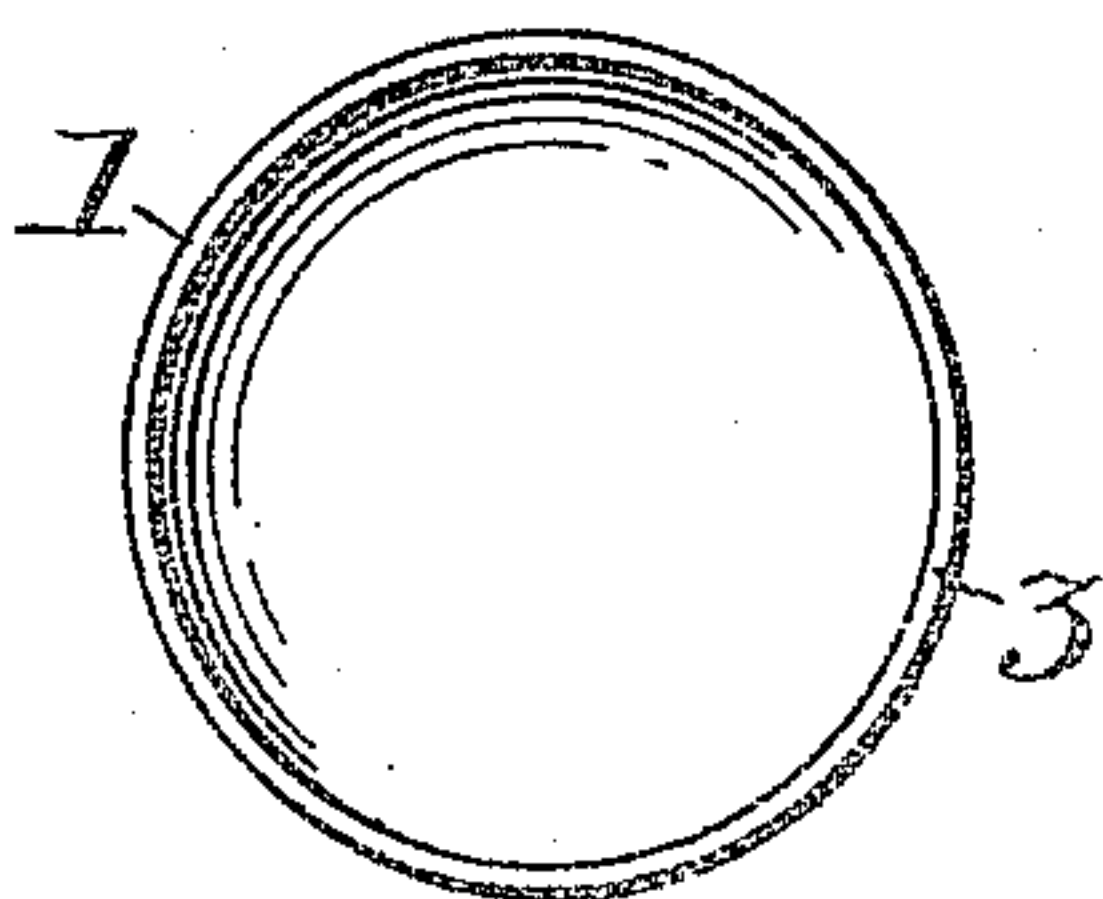


Fig. 4.

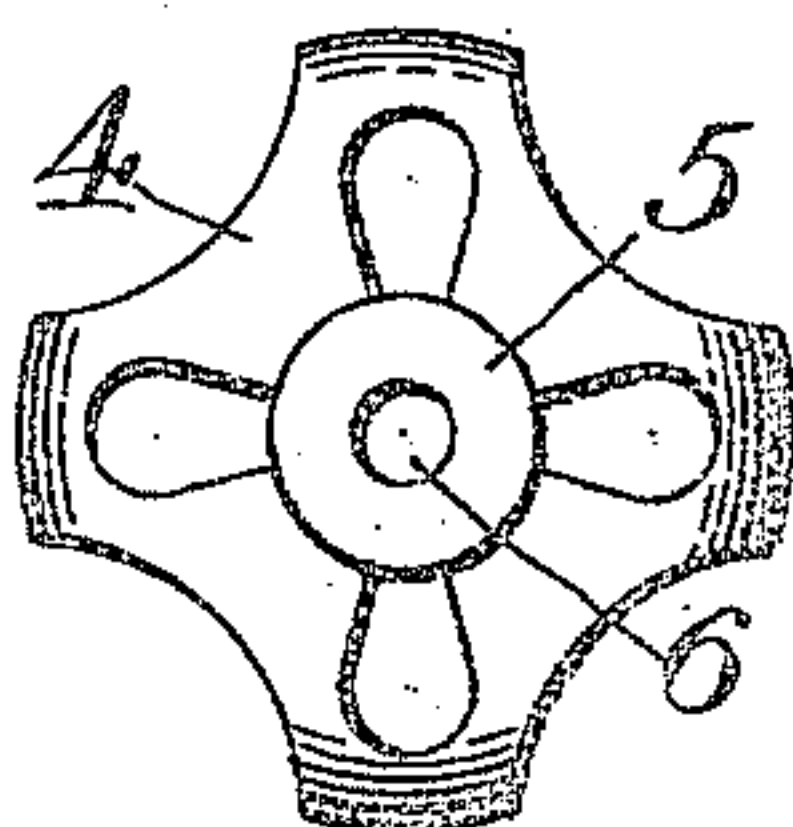


Fig. 5.

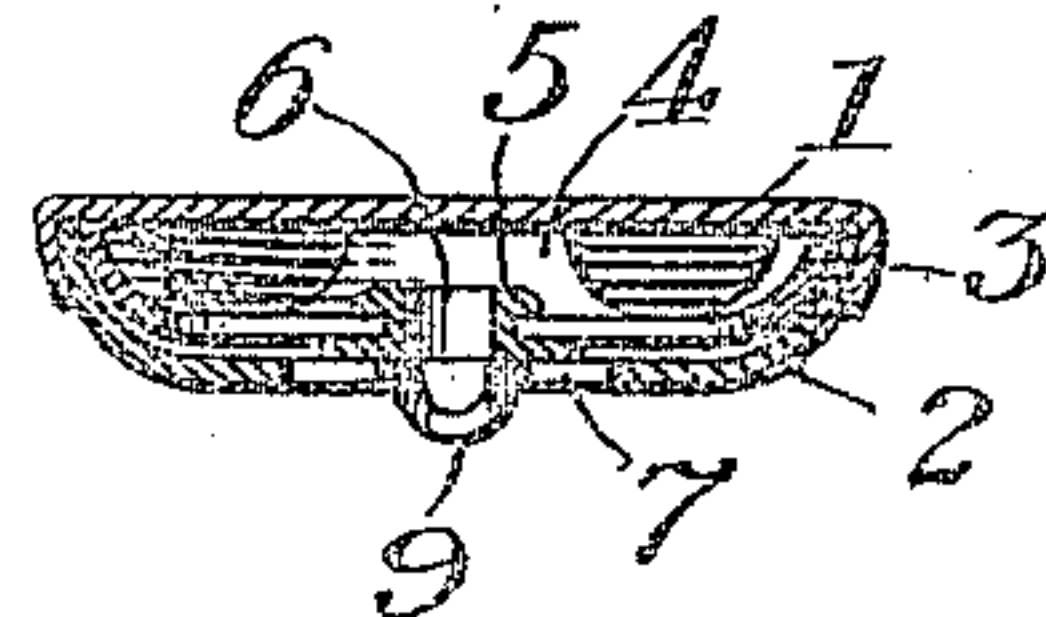


Fig. 6.

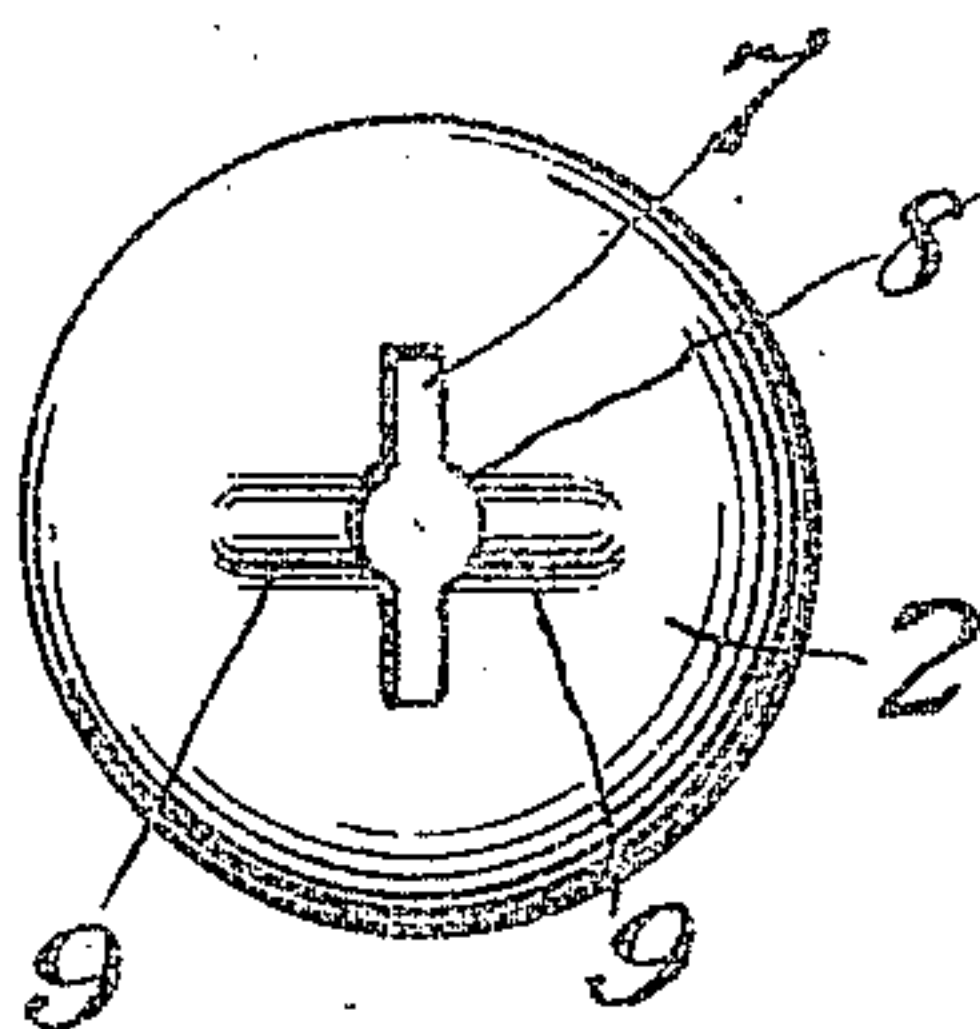


Fig. 7.

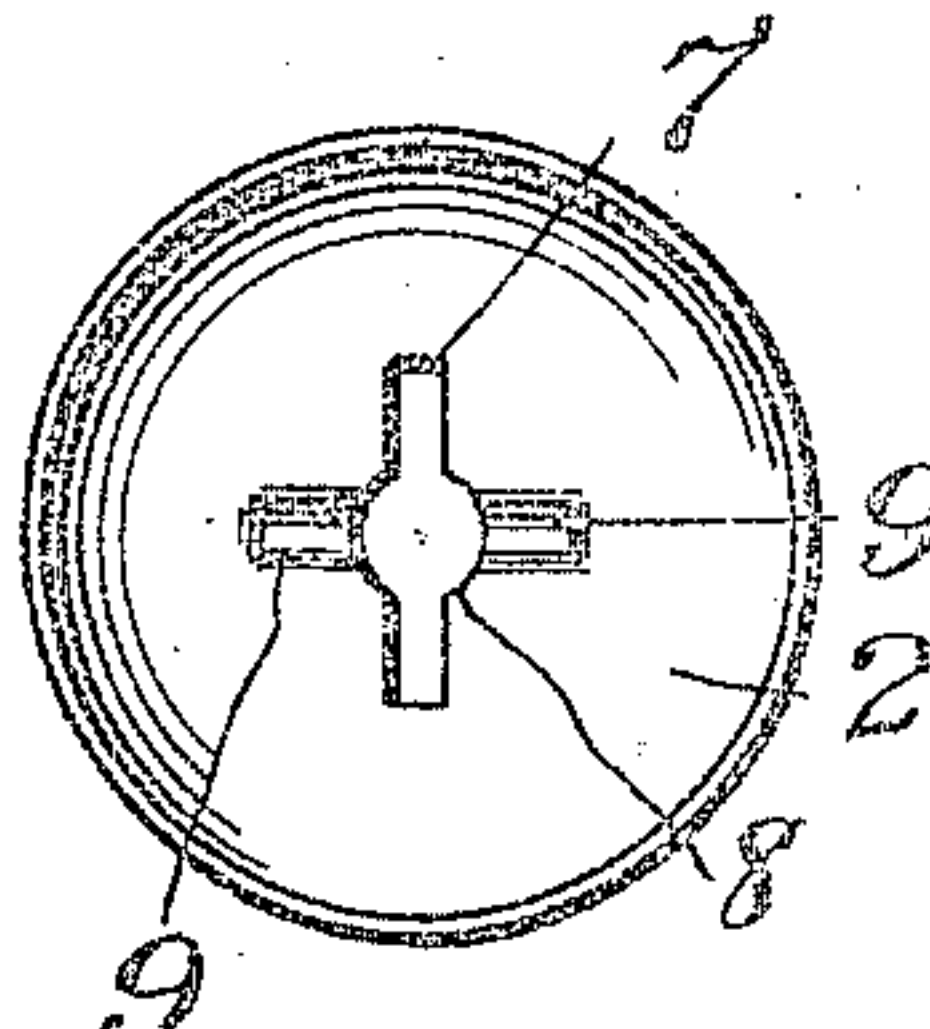


Fig. 8.

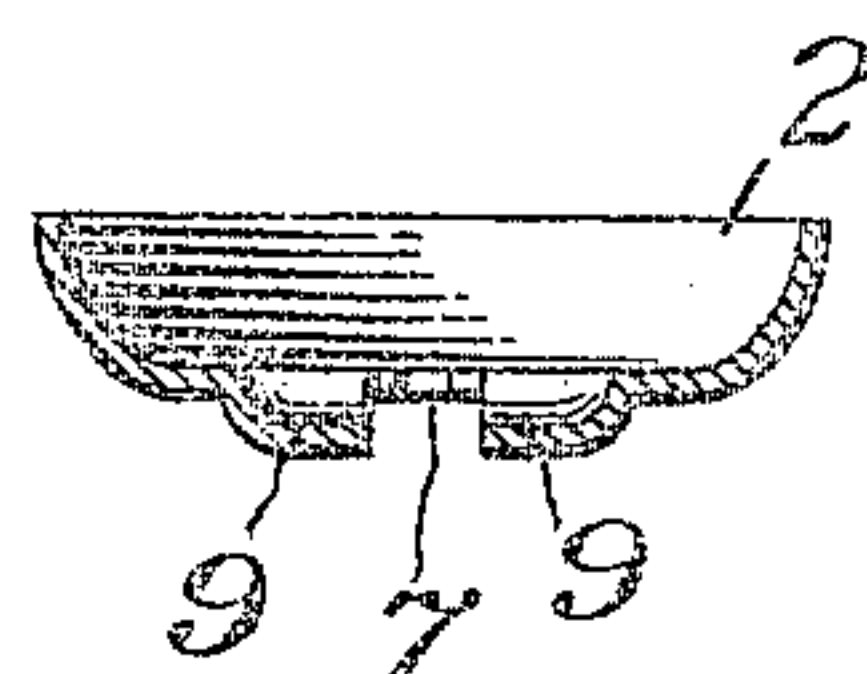


Fig. 9.

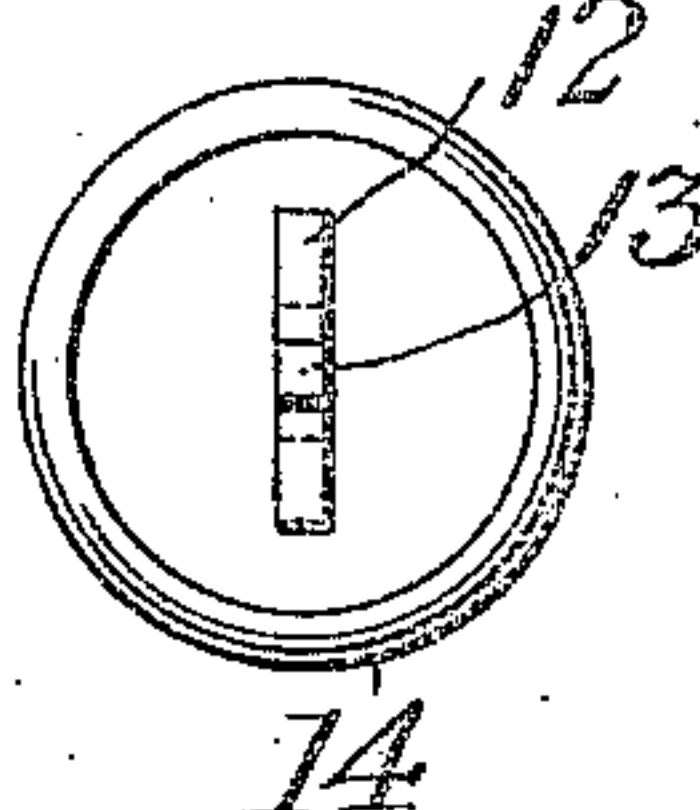
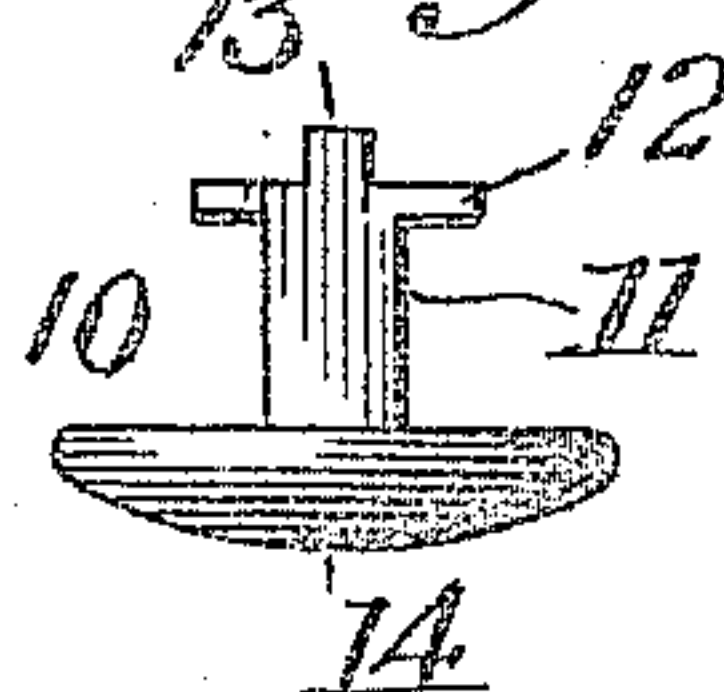


Fig. 10.



Witnesses:
Lillie M. Perry
Ed. Ginnell

Inventor:
William Laurin Bate
by W. M. Finkel
Atty

UNITED STATES PATENT OFFICE.

WILLIAM LAURIN BATE, OF NEWBURGH, NEW YORK, ASSIGNOR TO SWEET, ORR & COMPANY, OF NEWBURGH, NEW YORK, A FIRM.

SEPARABLE BUTTON.

960,780.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed March 25, 1909. Serial No. 485,844.

To all whom it may concern:

Be it known that I, WILLIAM LAURIN BATE, a citizen of the United States, residing at Newburgh, in the county of Orange and State of New York, have invented a certain new and useful Improvement in Separable Buttons, of which the following is a full, clear, and exact description.

In the use of that class of garments, such as jumpers, coats and the like from which it is customary and often necessary to detach the buttons, there is always more or less loss of buttons owing to imperfect or inadequate fastenings for such buttons. In those buttons where a fastening device has to be passed through a buttonhole or eyelet hole into the button-head, there is very commonly no such flexibility in the connection as would allow the button-head to tilt or adjust itself in buttoning and unbuttoning the garment, and then resume its normal position.

The present invention has for its object the provision of a separable button which is not likely to become detached or separated accidentally and by use, and in which the head is capable of tilting on its post, and then resuming its normal position.

The invention consists of a separable button, comprising a head, having a slotted and socketed back-plate, a spring having a post-centering hole arranged in said head, and a cruciform-post adapted to be passed through the slot in said back-plate and loosely held in the sockets therein, to form a flexible connection between said head and post, all as I will proceed now more particularly to 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 a side elevation, showing by dotted lines the tilting capacity. Fig. 2 is a cross-section taken at right angles to the view shown in Fig. 1. Fig. 3 is an inside plan view of the cap detached. Fig. 4 is a plan view of the spring detached. Fig. 5 is a cross-section of the button-head, the section being taken at right angles to the section Fig. 2. Fig. 6 is an outside plan view of the back-plate of the button-head. Fig. 7 is an inside plan view of the back-plate. Fig. 8 is a cross-section of the back-plate, same as in Fig. 2. Fig. 9 is a top plan view

of the post. Fig. 10 is a side elevation of the post, same position as in Fig. 2.

The button-head may be of any approved construction, but preferably comprises a face-plate 1 and a back-plate 2, which are connected by closing in the flange 3 of the face-plate over the back-plate. Within the cavity formed between the face-plate and back-plate is arranged any suitable spring 4, the construction shown in the drawings comprising a plate spring, having a reinforced center 5, within which is a post-centering hole 6. The back-plate has a transverse slot 7 in it, with a central hole 8, of a little greater diameter than the shank of the post, and on opposite sides of this slot are arranged the outwardly projecting portions 9, forming sockets which open into the slot as well as into the button-head beneath the spring. The post 10 is of cruciform construction, having a shank 11 preferably made flat with the laterally projecting arms 12 and the upwardly projecting point 13, the dimensions of the arms 12 being such as to completely enter and permit them to pass through the slot 7 and into the button-head and to rest in the sockets 9, with their upper or inner edges below the inner surface of the back-plate and away from the spring 4, leaving a space between the arms and spring, and the point 13 being of such dimensions as to enter the hole 6 without binding in it, and so as to have some freedom of motion therein. Any usual shoe or cap 14 may be used to provide a finish for or to complete the post.

In the use of this separable button, the post is passed through the buttonhole or eyelet hole in the garment, and there held by the hand, and then the button-head is applied to the post by alining its slot with the cross-arms, and so that the point 13 of the post shall enter the hole in the spring in advance, and then by pressure exerted on the button-head or post, or both, so as to cause them to approach, the cross-arms pass through the slot into the button-head and displace the spring sufficiently to put it under tension, and then by giving the post or the head a quarter turn, the cross-arms drop completely into the sockets 9 with their upper or inner edges below the inner surface of the back-plate and are there retained by the spring under release of its tension,

and so the parts of the separable button are securely connected, and with the least possible chance of becoming disconnected accidentally or in service. When the arms 12 enter the sockets 9, the spring returns to its normal and flexed position, and hence exerts no pressure on the arm.

As indicated in Fig. 1 by the dotted lines, the arms lying in the sockets free of any pressure thereon by the spring afford a sort of loose pivot about which the button-head may be tilted to facilitate its insertion in and removal from the buttonhole, and for other purposes, and then allow it to return to its normal position, thereby gaining the flexibility of a sewed-on button and avoiding the rigidity and stiffness of the ordinary separable button.

By the construction described, I provide a separable button, whose head contains a spring, having a post-centering hole, and whose back-plate is slotted in line with the hole in the spring, and has sockets arranged on opposite sides of the slot and opening into it, and a cruciform post, the point of which above the arms is adapted to pass through the slot and enter the hole in the spring and is enough smaller than this hole to allow considerable freedom of lateral movement, the arms of this post passing through the slot and by pressure putting the spring under tension and then passing into the button-head and when turned a quarter turn within the button-head, drop into the sockets away from the spring, leaving a space between the spring and arms. The spring returns to its normal flexed condition and overlies the sockets and prevents the escape of the arms from the sockets, and thereby effects a union of the button-head and post and at the same time admits of entire flexibility or freedom of lateral movement between the head and post, with the arms in the sockets as a pivot.

Thus a very simple, economical and efficient separable button is provided which is especially adaptable to such hard usage as

these buttons receive on jumpers, coats, and other like garments.

What I claim is:—

1. A separable button, comprising a head having a slotted and socketed back-plate, a spring having a post-centering hole arranged in said head, and a cruciform post adapted to be passed through the slot in said back-plate by forcing said spring away from said back-plate and to enter the sockets in said back-plate and leave a space between the arms of said post and said spring, whereby said post is loosely held in the sockets in said back-plate by said spring returning to its normal position over said sockets, to form a flexible and loose connection between said head and post which permits a relative tilting movement of the head and post.

2. A separable button, comprising a face-plate and a back-plate suitably connected to form a button-head, the back-plate having a slot, and sockets arranged on opposite sides of said slot and opening into it, a spring within the button-head, having a post-centering hole of greater dimensions than the part of the post engaging the same, and a post of cruciform construction having a point adapted to enter the post-centering hole, and cross-arms adapted to pass through the slot into the button-head by forcing the spring away from the back-plate and to be turned and entered into the sockets in the back-plate with their inner surfaces below the inner surface of the back-plate and loosely retained in said sockets by the spring returning to its normal position over said sockets away from said arms, the post projection remaining in the hole in the spring and permitting the button-head and the post to have a relatively loose tilting movement.

In testimony whereof I have hereunto set my hand this 24th day of March A. D. 1909.

WILLIAM LAURIN BATE.

Witnesses:

CHAS. W. BARTRUNE,
FRANK H. KETCHAM.

It is hereby certified that in Letters Patent No. 960,780, granted June 7, 1910, upon the application of William Laurin Bate, of Newburgh, New York, for an improvement in "Separable Buttons" errors appear in the printed specification requiring correction as follows: Page 1, line 79, the words "completely enter and" should be stricken out and be inserted after the word "to" line 81, same page; page 2, line 7, the word "arm" should read *arms*; the name of the first witness to the signature to the specification should read *Chas. W. Bartrum* instead of "Chas. W. Bartrune;" and that the said Letters Patent should be read with these correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 5th day of July, A. D., 1910.

[SEAL.]

F. A. TENNANT,
Acting Commissioner of Patents.