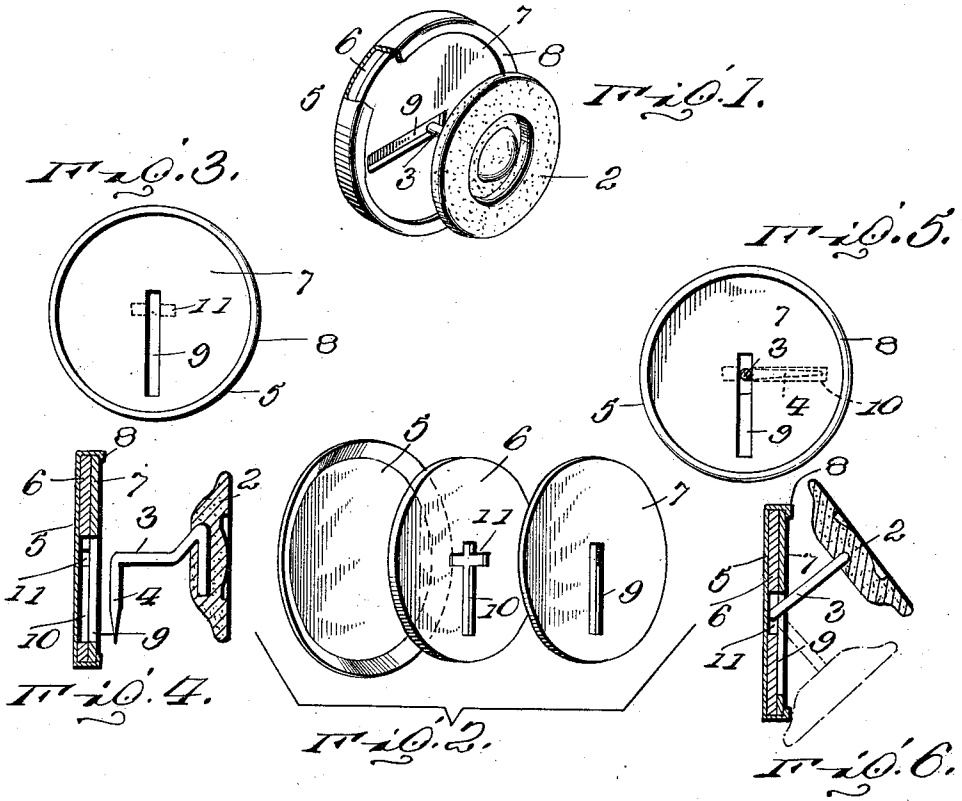
S. E. NORMAN.

SEPARABLE BUTTON.

APPLICATION FILED SEPT. 2, 1910.

1,000,752. **Patented Aug. 15, 1911.**



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SEPARABLE BUTTON.

1,000,752. Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed September 2, 1910. Serial No. 580,154.

To all whom it may concern:

Be it known that I, STERLING E. NORMAN, citizen of the United States, residing at Manchester, in the county of Hillsboro and State of New Hampshire, have invented certain new and useful Improvements in Separable Buttons, of which the following is a specification.

This invention relates to separable buttons of that character wherein a head is provided which is separable from a base, the base of the button being intended to be placed on one side of the fabric and the head of the button being, of course, on the other side thereof, a shank being provided which connects the head with the base, the head being normally held in engagement with the base, but detachable therefrom.

The object of my invention is to provide a separable button of this character in which the devices for engaging the head with the base, or rather locking the head to the base, are placed within the base of the button, permitting the shank or the shank and head to have any desired character or configuration, thereby allowing the button to be made of a very ornamental character, or a plain character as may be desired, and fitting it for a great variety of uses.

Another object of the invention is to provide a separable button of this character in which the shank connecting the head with the base has a pointed extremity adapted to be readily inserted through the cloth or fabric and into engagement with the base, thus doing away with the necessity of punching a hole in the fabric for the insertion of the shank and thus injuring the garment to which the device is to be applied.

A further object is to provide a separable button in which the head and base are relatively loosely connected to each other so as to avoid the rigidity which is ordinarily incident to this class of buttons, thus permitting the head to be more easily buttoned under ordinary circumstances.

Still another object is to so form the button and arrange its parts that while the shank may be easily inserted into its locking position in the base, yet the shank will be so held in engagement with the base as to prevent any ordinary accidental movement from detaching the shank from the base, while permitting a relatively easy manipulation of the button so as to secure the separation between the head and base.

In the accompanying drawings, Figure 1 is a perspective enlarged view of one form of my separable button; Fig. 2 is a perspective view of the several members of the base disassembled; Fig. 3 is a face view, showing the parts in the position for the insertion of the shank; Fig. 4 is a diametrical section of the base in the position shown in Fig. 3, the head of the button being shown is section and the shank in position for insertion; Fig. 5 is a face view of the base with the parts turned into locking position; Fig. 6 is a diametrical section of the base with the parts in the position illustrated in Fig. 5, the head of the button being shown in section, the dotted lines showing the rocking movement of the head of the button with relation to the base.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the figures, 2 designates the head of a separable button having any desired character, but shown as being molded or otherwise formed rigid with the shank 3. This shank 3 extends at right angles to the inner face of the head and is then bent at right angles to itself, as at 4, this angularly bent terminal end being pointed so as to permit the shank to be easily inserted through a fabric without marring the fabric and without the necessity of using any tools for punching a hole in the fabric. The shank is made of relatively small gage wire and hence will not tend to punch an unduly large opening in the fabric. The base of the button is formed in the construction illustrated in these figures in three parts, namely, an outer casing plate 5, rotatable plate or disk 6 and an inner face plate 7.

The outer plate 5 has the preferable form of a disk which may be provided with a marginal flange 8, the edges of which may be turned over upon the disk 7 in any suitable manner so as to connect the disk 7 and plate 8 sufficiently strongly to prevent the two plates from being pulled apart. I, of course, do not wish to be limited to any particular manner of fastening the plate 5 to the disk 7. Disposed between the plate 5 and the disk 7 and rotatable in the space

between these two parts is the disk 6 previously referred to. The disk 7 is formed with a radially extending slot 9, one end of which is disposed sightly beyond the center of the disk 7 and which extends nearly to the margin of the disk, as shown in Fig. 2. The disk 6 is also provided with the radially disposed slot 10 adapted when the disk 6 is rotated to aline with and register with the slot 9. The slot 10 has the same length and width as the slot 9 so that it will entirely register with the slot 9 when the disk is suitably rotated. Preferably, the slot 10 is intersected by a transversely extending slot 11, this slot being relatively short. A cross shaped slot is thus formed in the disk 6 and extends entirely through the same.

The purpose of the transverse slot 11, as will be more apparent later on, is to permit the shank to have a sidewise pivotal movement in the base, when the rotatable disk 6 is so turned that the slot 10 is at right angles to the slot 9 and the slot 11 is in alinement with the slot 9. It will be seen that the disks 6 and 7 are held in relative rotatable engagement with each other by means of the outer plate 5.

With the plates 5, 6 and 7 assembled as shown in Fig. 4, the operation of my device is as follows: The point of the shank is inserted through the cloth and the angular terminal end 4 is placed within the slot 9. Assuming that the plates 6 and 7 are so turned relative to each other that the slots 9 and 10 are not in alinement, then the plate 7 is rotated by means of the angular shank until the slot 9 comes in alinement with the slot 10. As soon as the slots are in alinement, the angular terminal end 4 of the shank drops down into the slot 10 and rests against the inner face of the casing plate 5. Now, upon rotating the shank 3, the disk 6 will be rotated until it is out of alinement with the disk 7, the terminal end of the shank 4 extending at angles with the slot 9 and being locked in place so that it is impossible to pull the shank out. If the disk 6 is also provided with the intersecting slot 11 and the disk 6 be rotated so that the slot is at right angles with the slot 9, it will thus be obvious that the shank may have a lateral rocking movement in the slot 9, the rocking movement of the shank being accommodated or permitted by the intersecting slot 11, which at this time is in alinement with the slot 9. When it is desired to separate the button, it is only necessary to return the parts to their original position, reversing the operation above described, whereupon the shank may be withdrawn.

Having thus described the invention, what is claimed as new is:

1. A separable button including a member having a shank formed with an angularly bent end, and a mating member including parallel disks rotatable relative to each other, one disk having a radial slot and the other having a corresponding radial recess sufficiently deep to receive the angular end of the shank and also having a recess extending at an angle to the first named recess and crossing the same.

2. A separable button, including a member having a shank formed with an angularly bent end, and a member including parallel disks rotatable relatively to each other, one disk having a radial slot of a length greater than the angular end of the shank and the other having a corresponding radial recess, said recess being deep enough to receive the angular end of the shank and also having a recess extending at a right angle to the first named recess and intersecting the same intermediate of the length of the first named recess.

3. A separable button, including a member having a shank formed with an angularly bent end and a member including an outer casing, parallel contacting disks mounted within said casing, each disk being independently rotatable, the inner disk contacting with the inner face of the said casing, the outer disk being formed with a radial slot, the inner disk having a corresponding slot and also having a slot extending transversely to the last named slot and intersecting the same at a point intermediate of its length but adjacent to the inner end of the slot.

4. A separable button, including a head having a shank formed with an angularly bent end and a base including parallel disks rotatable relatively to each other, and a circular casing in contact with one of said disks and extending upward and over the circumference of the other disk, the outermost disk being provided with a slot having a length greater than the length of the angular end of the shank, the inner disk having a like slot likewise adapted to receive said shank, the shank forming the means whereby the inner disk may be rotated relatively to the outer to bring the slots at right angles to each other.

In testimony whereof I affix my signature in presence of two witnesses.

STERLING E. NORMAN. [L. S.]

Witnesses:
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