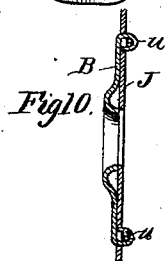
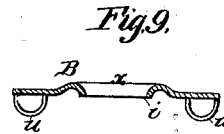
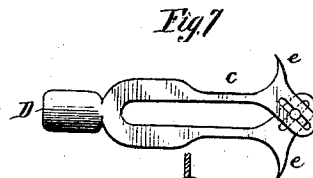
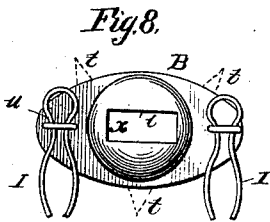
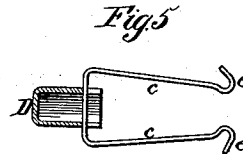
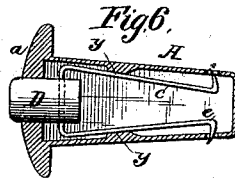
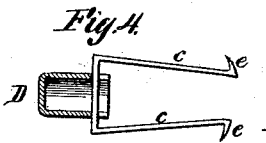
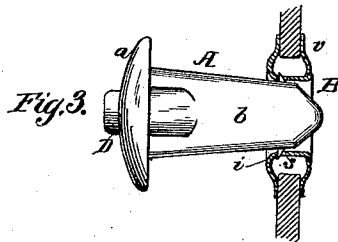
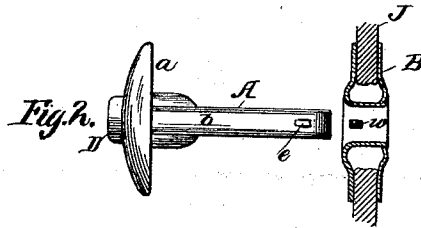
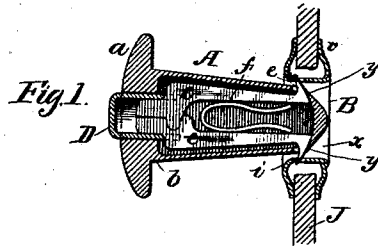


(No Model.)

H. A. CABLES.
SEPARABLE BUTTON.

No. 314,795.

Patented Mar. 31, 1885.



Witnesses:
John H. Hinkel
A. C. Farnsman.

H. A. Cables
Inventor:
M. Foster & Freeman
Atty

UNITED STATES PATENT OFFICE.

HARTLEY A. CABLES, OF PHILADELPHIA, PENNSYLVANIA.

SEPARABLE BUTTON.

SPECIFICATION forming part of Letters Patent No. 314,795, dated March 31, 1885.

Application filed June 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, HARTLEY A. CABLES, a citizen of the United States, residing in the city of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Separable Buttons, of which the following is a specification.

My invention relates to that class of fastening devices used for separable buttons in studs and neckties, &c., in which there are two pieces, one socketed and adapted to receive the other; and my invention consists in combining with one of the parts of said device one or more sliding spring-prongs, and in forming the other part with bearings adapted to engage with said prongs, as fully described hereinafter, so that the parts may be securely connected by bringing them together and readily separated by pushing inward the prongs.

In the drawings, Figure 1 is a longitudinal section showing my improved device as applied to securing the shield of a necktie. Fig. 2 is an edge view, in part section, of the device shown in Fig. 1. Fig. 3 is a plan of part of the device shown in Fig. 1. Figs. 4 and 5 are views illustrating different modes of constructing the prongs. Figs. 6 and 7 are views illustrating different modes of retracting the prongs. Figs. 8, 9, and 10 are views illustrating the form of one of the socket-pieces and the mode of attaching the same to the shield.

The fastener consists of two parts, A, B, the former having a head, *a*, and stem *b*, and the latter constituting the socket adapted to receive the end of the stem. The stem *b* is flat in cross-section, so as to be retained in a horizontal position by the button-hole through which it passes, and an opening, *x*, in the socket-piece B is adapted to receive the flat end of the stem, so that the tie or other device fastened to the socket-piece is held in its substantial horizontal position without turning.

The connection between the two pieces A and B is secured by means of hooked prongs *c*, which are contained within the stem *b*, and the hooks *e* of which catch over the inturned edge *i* of the socket-piece. The hooks *e* are inclined backward, and as they catch upon the inclined bearings *y* any force tending to separate the parts A and B will also tend to carry

the hooks farther outward or separate the prongs, and thereby connect the two parts more securely.

The prongs are thrown outward either by a spring, *f*, placed between them, or by their own spring-action, resulting from bending them inward or together, and they may be either made of two pieces of metal with coinciding recesses and projections, as shown in Fig. 1, or of a single piece, as shown in Figs. 4 and 6, or of wire, as shown in Fig. 5. The outer edges of the hooks *e* are beveled or inclined, so that the hooks will be forced within the casing to the position shown in Fig. 6 by the act of pushing the stem into the socket, and they will spring out and catch upon the bearing *i* as soon as the points pass the edge of the latter.

In order to retract the hooks, that the parts B and A may be disconnected after being attached, as before described, the prongs are movable longitudinally within the stem *b*, and may be brought against suitable bearings, so that when pushed inward they will be drawn together and the hooks carried within the casing.

In Fig. 1 the hooks are shown as secured to a stem or button, D, sliding in an opening in the head *a*, and the outer inclined ends of the hooks are opposite inclined bearing-faces *y* of the stem *b*, and an inward movement imparted to the hooks by pushing in the button D brings the inclined edges of the hooks against the inclined bearings *y* and retracts the hooks within the stem, carrying them away from the bearing *i*.

In Fig. 6 the prongs are set at an angle to the button or pusher D, and are brought against bearings *y* at the sides of the stem when the button is pushed inward, and in Fig. 7 the ends of the prongs are shown as overlapping, with inclined slots crossing each other and receiving a pin, which constitutes the bearing against which the inclined edges are brought to retract the hooks.

The portion A may be constructed in any suitable manner either from sheet metal and with a closed stem, *b*, or of cast metal with an open stem and lips to hold the prongs in place. The button D may form part of the prongs, as shown in Fig. 7; but I prefer to use a capsule of thin metal notched and receiving

the ends of the cross portion of the prongs, as shown in Figs. 1, 4, 5, and 6.

The socketed portion B will vary in construction, according to the purpose for which the device is intended. When the device is a stud, the portion B will constitute one of the heads; but when it is intended as a connection for neckties and similar purposes the portion B is an eyelet or thin metal plate adapted for ready attachment to the shield J of the tie, or to take its place.

One form in which the plate B may be made is shown in Figs. 8, 9, and 10, in which the center of the plate is stamped to form the intumed bearings *i* and cut away to form the transverse slot or socket *x*.

The plate may be secured to the shield by forming it with sharp projections or prongs *t*, which are bent at right angles to the plate and pass through the shield or back of the tie, and are bent down upon the opposite side of the latter or clinched. I prefer, however, to provide the plate at its inner side with eyes *u*, which may be passed through the shield and secured to the latter by means of spring or other pins, *l*, as shown in Fig. 8. By this means the socket-piece is held firmly in place, but may be readily removed when necessary. The eyes and spring-pins also constitute a simple and inexpensive connection, even when the latter is intended to be permanent.

Although I have shown the device and have described the same as being provided with two spring-prongs, it will be apparent that in some instances a greater or less number may be employed.

When the portion B of the fastening is in the form of an eyelet, the tubular part thereof has lateral perforations *w* to receive the hooks *e*, and is spread at the end to overlap the outer plate, *v*, as shown, so that the shield is firmly clasped between the two parts.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A fastening device consisting of two portions, one of which is provided with a stem closed at its end and carrying one or more sliding spring-prongs having hooks projecting laterally through openings in the sides of said stem, and bearings formed within the stem, whereby said hooks are retracted when the

prongs are moved inward, and the other portion having a socket to receive the closed end of the stem and provided with apertures for said hooks, substantially as set forth. 55

2. The combination, with the socketed portion B of a fastening device, of the portion *a*, having a hollow flat stem secured thereto, spring-prongs sliding within and independent of said stem and secured to a pusher extending through the portion *a*, and inclined bearings formed within the stem and adapted to engage with the inclined edges of hooks formed on the ends of said prongs and projecting through openings in the stem, so that by the inward movement of the pusher the hooks are retracted within said openings and the portion B released, as and for the purpose set forth. 60 65 70

3. The combination, in a fastening device, of the portion *a*, provided with a hollow stem, and carrying prongs sliding therein, and provided with hooks inclined inward, and a socketed portion, B, having intumed edges and apertures for said hooks, substantially as set forth. 75

4. The combination, in a fastening device, of the head *a*, stem *b*, secured thereto, spring-fingers sliding in the stem and provided with hooked ends adapted to openings in said stem, and pusher D, consisting of a capsule of thin metal secured to the spring-fingers and extending through the head, substantially as set forth. 80 85

5. The combination, in a fastening device, of the portion B thereof, adapted for attachment to the shield of a tie, and consisting of an eyelet having a tubular part, *s*, extending through the shield and provided with openings *w*, and a plate, *v*, through which the tube *s* extends, and outside of which it is spread, and the portion *a*, provided with a stem having suitable fastening devices and adapted to said tubular opening in the portion B, substantially as described. 90 95

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARTLEY A. CABLES.

Witnesses:

M. A. EISEN,
WILLIAM S. TOLAND.