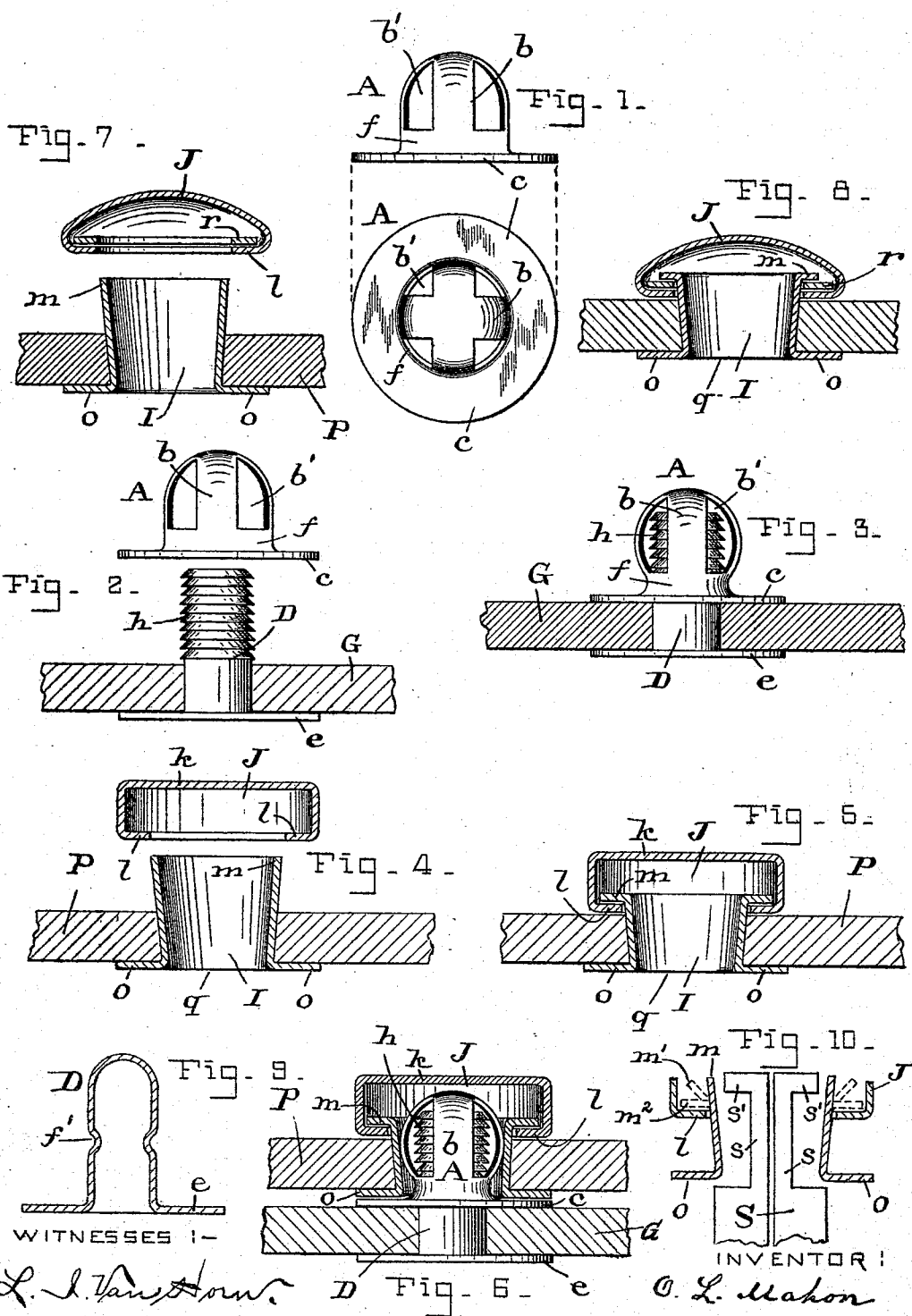


(No Model.)

O. L. MAHON.
BUTTON.

No. 543,312.

Patented July 23, 1895.



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ORMSBY L. MAHON, OF BALTIMORE, MARYLAND.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 543,312, dated July 23, 1895.

Application filed September 20, 1894. Serial No. 523,560. (No model.)

To all whom it may concern:

Be it known that I, ORMSBY L. MAHON, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Buttons, of which the following is a specification.

My invention relates to a certain improved construction of a separable or two-part button—that is, a spring-head stud and an embracing button or socket.

The subject-matter of this invention relates to that class of buttons which are used as glove-fasteners and for other purposes.

The object of the invention is to provide a button of simple and cheap construction, as will be hereinafter described and claimed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows two views (a side and top view) of the spring-cap of the stud. Fig. 2 shows a side view of the spring-cap and the stud-shank, indicating their condition just previous to being united on the fabric. Fig. 3 shows the complete spring-stud, being the same parts seen in Fig. 2, but illustrates them united together on the fabric. Fig. 4 shows a sectional view of the two parts composing the socket, and indicates their position just previous to their union on the fabric. Fig. 5 shows the complete socket attached to the fabric. Fig. 6 is a view of the two parts of the button complete, both parts being attached to the fabric and the socket part being shown in section. Figs. 7 and 8 are sectional views showing a modification of the construction of the socket, Fig. 7 illustrating the several parts previous to their union and Fig. 8 the same parts after they are attached to the fabric. Fig. 9 is a view of a hollow stud-shank and shows the indentation that is made by contracting the dome-shell on it. Fig. 10 indicates the kind of tool that is used to expand and flatten the end of the eyelet.

The spring-cap A consists of a dome-shaped metal shell which has radial spring blades or bows *b* in number as many as may be desired, which at their base are integral with a collar *f*, and a ring-shaped flange *c* is attached to said collar. The dome-shell, collar, and flange

are made integral, being stamped up from a single piece of metal. Slots *b'* are then cut out of the shell and the metal between adjoining slots forms spring-bows *b*. The shank D has a flange *e*. These two parts comprise the spring-stud, and when they are united on the fabric G, as shown in Fig. 3, said shank D is first entered into the hollow dome-shell A, and the base-collar *f* of the said dome, adjoining the flange *c*, is then contracted, as in Fig. 3, so as to tightly grip said shank, the fabric G being compressed between the flange *c* of the cap and the flange *e* of the shank.

The shank D may be either hollow or solid. If solid, it is preferably provided with annular beads or grooves *h*, with which the contracted part *f* of the dome-shell engages. If the shank is hollow, as in Fig. 9, the contracted part *f* of the dome-shell will compress the hollow shank and make an annular indentation around it, as indicated at *f'*, and thus these two parts will be engaged together. It will be seen that the spring-stud complete when finally attached to the fabric has but two parts or pieces. The socket consists also of two parts—the eyelet I and the cap-head J. The cap-head is a circular shell. (Shown in diametrical section in Figs. 4, 5, and 6.) It has a cap or head *k* and an inturned or inward-contracted flange *l* with a central opening (see Fig. 4) for the insertion of the end *m* of the eyelet. This eyelet I has a flange *o*, and from said flange it flares or expands toward the end *m*. These two parts—the cap-head and the eyelet—are united on the fabric P, as shown in Fig. 5. The flared end *m* of the eyelet is first inserted into the cap-head and then said end is expanded and flattened down tightly onto the inturned flange *l*, so as to engage therewith, as in Fig. 5. The fabric P is thereby compressed between the inturned flange *l* of the cap-head and the flange *o* of the eyelet. When the socket is thus constructed and attached to the fabric, it will be seen the entrance *q* to it is at the small end of the eyelet. Now, as the exterior of the dome-shell A with its spring-bows *b* is a little larger normally than the entrance *q* to the socket, said spring-bows must yield or collapse slightly before they can enter, and then after the dome-shell

is in, as shown in Fig. 6, they expand and recover their normal size, and thus the two parts are retained or held together.

Figs. 7 and 8 illustrate a modification, in which a clamping-ring *r* is provided, one of the objects of which is to hold the edges of a sheathing or cover that may be over the cap-head. The said sheathing (not shown) in practice will be over the cap-head and under the exterior of the inturned flange *l* and its edges will be upon the interior of said flange and between the latter and the clamping-ring *r*. Thus the clamping-ring will confine the edges of the sheathing. In these figures the cap-head is shown as rounded instead of flattened, as in the other figures.

Fig. 10 shows one form of tool which may be employed to expand and flatten down the flared end *m* of the eyelet *I* onto the inturned flange *l* of the cap-head *J*. The tool comprises, in the present instance, shanks *S*, each having a neck *s* and a lateral head *s'* on the neck. In the practical operation I preferably use four of these shanks; but the two shown in the drawings are sufficient to illustrate the operation. As shown in the said figure, the shanks are inserted within the eyelet with their lateral heads *s'* facing opposite sides of the flaring end *m*. Now, when the shanks are forced apart, as by a suitable wedge or other means, the lateral heads *s'* will take against the said flaring end of the eyelet and bend it until the necks *s* come into contact with the entrance of the eyelet adjoining the flange *o*, whereupon the said flaring end will have the inclined dotted-line position, (designated *m'*.) With the parts in this position a downward pull given to the shanks will cause the lateral heads *s'* to flatten the inclined end *m'* down to the flat dotted-line position (designated *m*²) onto the in-

turned flange *l* of the cap-head. It will be understood that an expansive downward motion of the tool will effect the same result.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a separable button, a spring stud having a shank, *D*, provided at one end with a flange, *e*; a dome-shell having spring bows, *b*, a ring-shaped flange, *c*, and a collar, *f*, uniting said spring-bows and flange,—the shell, bows and collar all being integral, and said collar being contracted to pinch or grip the shank and thus secure the shell and shank together; in combination with a socket into which the spring stud enters.

2. As a new article of manufacture, a separable button comprising a spring stud member having a dome-shell provided with spring-bows, *b*, which at their base are integral with a collar, *f*, having a ring-shaped flange, *c*, and a shank, *D*, provided with annular beads or grooves and at one end a flange, *e*, and said shank secured to the dome-shell by contracting the said collar to pinch or grip said beads or grooves on the shank; and an anvilless socket member having a cap-head, *J*, provided with an inturned base-flange, *l*, and a flaring eyelet, *I*, whose flared end is in the cap-head and expanded and flattened down so as to engage said inturned base-flange, and said socket having no anvil but only an unfilled space between the said flattened end of the eyelet and the top of the cap-head.

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

ORMSBY L. MAHON.

Witnesses:

C. CALVERT HINES,
CHAS. B. MANN, Jr.