

No. 646,468.

Patented Apr. 3, 1900.

D. J. SINCLAIR.
SEPARABLE BUTTON.
(Application filed July 10, 1899.)

(No Model.)

Fig. 1.

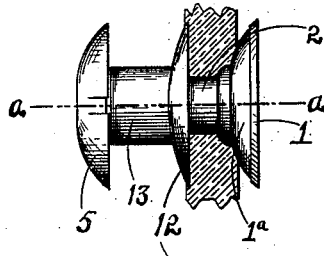


Fig. 2.

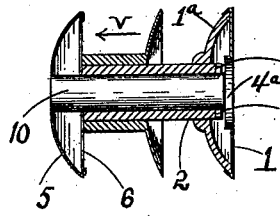


Fig. 3.

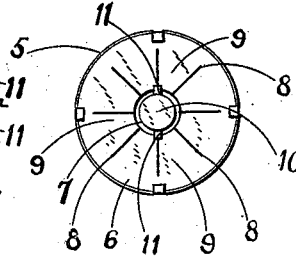


Fig. 4.

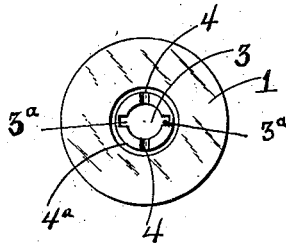


Fig. 5.

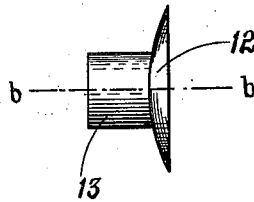


Fig. 6.

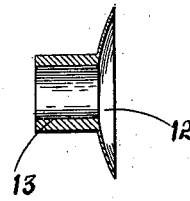
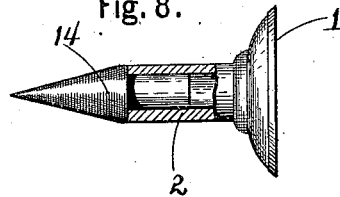


Fig. 7.



Fig. 8.



Witnesses.

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UNITED STATES PATENT OFFICE.

DUNCAN J. SINCLAIR, OF CALEDONIA, NEW YORK.

SEPARABLE BUTTON.

SPECIFICATION forming part of Letters Patent No. 646,468, dated April 3, 1900.

Application filed July 10, 1899. Serial No. 723,297. (No model.)

To all whom it may concern:

Be it known that I, DUNCAN J. SINCLAIR, a citizen of the United States, residing at Caledonia, in the county of Livingston and State of New York, have invented certain new and useful Improvements in Separable Buttons, of which the following is a specification.

My invention relates to an improved separable button; and the object of the invention is to provide a separable button of simple and cheap construction and of but few parts, which when assembled are so fastened together as to be incapable of involuntary or accidental separation.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The invention is susceptible to various changes in the form, proportion, and minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 represents a side elevation of my improved button. Fig. 2 is a longitudinal section on line *aa*, Fig. 1. Fig. 3 represents a bottom plan view of the locking member looking in the direction of the arrow *V*, Fig. 2, the tubular and supplemental portion being removed. Fig. 4 is a bottom plan view of the base member looking in the direction of the arrow *V*, illustrating the locking depressions. Fig. 5 is a side elevation of the supplementary attachment. Fig. 6 is a section on line *bb*, Fig. 5. Fig. 7 is a side elevation of the needle implement. Fig. 8 represents a side elevation of the base member with its stem partly in section and the needle implement inserted in position.

My invention primarily consists of two members—an inner base member and an outer locking member. The base member is composed of a bottom plate 1 and an upper plate 1^a, preferably concavo-convex in form, the outer edge of the lower plate being bent around the outer edge of the upper plate to secure the two plates together. (See Fig. 2.) The lower end of the shank or stem 2 passes through and is rigidly mounted in a center opening or socket in the plate 1^a and has a

central opening 3 extending longitudinally through it and rectangular grooves 3^a arranged on each side of said opening. Depressions or notches 4 are cut in the lower edge of said stem 2 and preferably between and at right angles to the rectangular grooves 3^a, the purpose of which will be explained farther on.

The plate 1 may be provided with a central opening 4^a; but for some purposes, particularly in collar-buttons, it will probably be found desirable to dispense with the same to avoid the danger of the end of the stem 10 being pressed through the opening against the skin of the person.

The locking member is composed of an outer plate 5, preferably concavo-convex in form, and an inner spring-plate 6, which is preferably circular in form and is preferably constructed with a central opening 7 and a series of slots 8, radiating from said opening, thereby forming a series of inwardly-extending spring portions 9. The inner plate 6 is preferably fitted snugly in the surrounding edge of the outer plate 5 and fastened at its peripheral edge to said outer plate 5 by bending portions of the edge of the outer plate over the edge of the inner plate, thus forming both an inclosing bottom for the locking member and a spring locking device. The stem 10 is mounted upon the inner surface of the outer plate and extends through the opening 7 in the inner plate and has laterally-extending projections 11, forming enlargements, arranged upon opposite sides of the outer extreme.

In securing the two members of the button together the stem 10 of one member is inserted in the longitudinal opening in the tubular shank or stem 2 of the other member, the enlargements 11 fitting in the rectangular grooves 3^a. The outer end of the tubular shank or stem 2 is pressed against the spring portions 9, forcing them toward the outer plate 5 of the locking member and bringing the lateral extensions 11 of the stem 10 exterior to or above the surface of the lower end of the stem 2 and freeing them from the grooves 3^a. One of the members is then given a turn or partial rotation of sufficient length to bring the extensions 11 opposite the depressions 4 and the pressure is released, permitting the spring

portions to force the two members apart and seat the lateral extensions 11 in the depressions 4, thereby securely fastening the two members together.

5 In some instances, particularly in attaching the button to articles of clothing, it is often advisable to provide means for locating the outer portion at a short distance from the exterior of the clothing to allow for the easy
10 attachment of the suspender-loop or similar article thereto. For this purpose I preferably employ a supplementary portion composed of a plate 12, usually concavo-convex in form, provided with a center circular opening slightly larger in circumference than the
15 stem 2, and a tubular extension or stem 13, projecting from the center of the plate and provided with a longitudinal opening similar in circumference to the opening through the
20 plate 12.

For attaching the button to articles of clothing or the like I use a needle-like instrument 14, having a short point at one end and a reduced portion at the opposite end adapted to
25 fit in the open end of the tubular stem 2 of the base member.

To secure my improved button, with its supplementary portion, to the clothing or like articles, I place the reduced portion of the needle in the end of the stem 2 of the base member and force it through the cloth. Then I
30 remove the needle, place the supplementary portion upon the protruding portion of the stem, with its plate 12 against the exterior surface of the cloth, and then insert the stem
35 10 of the locking member into the tubular stem 2 of the base member and press the members together sufficiently to allow one of the members to be turned sufficiently to bring
40 the lateral extensions into the depressions and lock the two members together. As the outer end of the stem 13 of the supplementary portion bears against the spring-plate 6, it is held in place with a spring tension which
45 allows it to give slightly under strain, thus lessening the liability of tearing or ripping the cloth. The spring-plate serves not only to lock the two members together and to form an inclosing bottom for the locking member,
50 but also as a yielding support for the end of the supplementary portion.

This improved button can be used as a collar or cuff button or is adapted to be easily and quickly attached to articles of clothing
55 to replace buttons detached therefrom.

I claim as my invention—

1. An improved separable button comprising two members, one member provided with a tubular stem and the other consisting of an
60 outer plate, an inner spring-plate forming an inclosing bottom and a spring locking device, and a stem adapted to be inserted in the tubular stem of the other member and to be fastened therein by the partial rotation of
65 one of the said members upon the other and to be held in said position by the pressure of

the spring-plate against the end of the tubular stem.

2. An improved separable button, comprising a base member, a locking member having
70 a spring-plate, and a supplementary device for raising the button proper from the article to which it is attached and having its outer end against the spring-plate.

3. An improved separable button comprising
75 a base member having a base-plate and a tubular stem having rectangular grooves on opposite sides of its central opening, and depressions on opposite sides of its inner edge, and a locking member having an outer plate,
80 an inner plate divided by slots into a plurality of independent spring portions, and a stem adapted to fit in the opening in the stem of the base member and provided with lateral extensions adapted to travel in the grooves, and
85 seat in the depressions in said base member to secure the two members together.

4. An improved separable button, comprising a base member having an opening and depressions on opposite sides of said opening,
90 a locking member having a spring back-plate and a stem adapted to fit in the opening in the base member and provided with lateral extensions adapted to seat in the depressions in said base member to secure the two mem-
95 bers together, and to be held in said position by the spring back-plate, and a supplementary device composed of a tubular stem and an end plate adapted to be mounted upon the stem of the button with the end plate against
100 the exterior of the cloth for raising the button proper from the cloth and the end of the stem against the spring-plate to maintain it in said position with a spring tension.

5. An improved separable button, comprising
105 a base member having a base and a stem mounted upon said base and having a longitudinal opening and depressions on its lower edge on opposite sides of said opening, and a locking member having an outer cap-plate,
110 an inner spring-plate having a central opening and a series of slots forming a series of spring portions, and a stem provided with lateral extensions adapted to seat in the depressions in the base member, as set forth.
115

6. An improved separable button, comprising a base member having a base and a tubular stem mounted upon said base and provided with a longitudinal opening and rectangular grooves on opposite sides of said
120 opening, and depressions upon its lower edge on opposite sides of said opening, and a locking member having a concavo-convex top cap and an inner plate provided with a central opening and a series of radial slots forming
125 a series of inwardly-extending spring portions surrounding the opening, and a stem extending from the top cap through the opening in the plate and having lateral extensions in its end adapted to seat in the depressions
130 to lock the two members together, when the stem of the locking member is inserted in the

opening in the stem and one of the members is partially rotated relatively to the other, as set forth.

7. An improved separable button adapted to be attached to clothing or similar articles and comprising a base member, a locking member having a spring-plate, and a supplementary device composed of a tubular stem and an end plate adapted to be mounted upon the stem of the button with the end plate against the exterior of the cloth for raising the button proper from the cloth and the end of the stem against the spring-plate.

8. An improved button adapted to be attached to clothing or similar articles and having a spring-plate, and a supplementary tubular device adapted to be mounted upon the stem of the button with one end against the exterior of the cloth for raising the button proper from the cloth and the other end against the spring-plate.

9. An improved separable button adapted to be attached to articles of clothing and the like, comprising a base member having a lower plate, an upper plate and a tubular stem passing through and mounted in a socket or opening in the upper plate and provided with a longitudinal opening, rectangular grooves on opposite sides of said opening and at substantially right angles to said grooves, and depressions upon its lower edge, a locking member having a top cap and an inner plate provided with a central opening, and a series of radial slots forming a series of inwardly-extending spring portions surrounding the opening, a stem extending from the top cap through the opening in the plate and having lateral extensions in its end adapted to seat in the depressions in the stem to lock the two mem-

bers together, and a supplementary device composed of a tubular stem and an end plate adapted to be mounted upon the tubular stem of the base member with its end plate against the exterior of the cloth and its opposite end against the spring portions of the inner plate of the locking member, as set forth.

10. An improved separable button, comprising a base member, a locking member having a spring-plate, and a supplementary device for raising the button proper from the article to which it is attached and having its outer end against the spring-plate; said spring-plate forming an inclosing bottom for the locking member and a spring for holding said members and the supplementary device in their locked position with a spring tension.

11. An improved separable button adapted to be attached to articles of clothing and the like, comprising a base member having a tubular stem, a locking member having a top cap and an inner plate provided with a central opening, and divided by a series of slots into a series of spring portions surrounding the opening, a stem extending from the top cap through the opening in the inner plate, and adapted to engage in the tubular stem of the base member to lock the two members together, and a supplementary device composed of a tubular stem and an end plate adapted to be mounted upon the tubular stem of the base member with its end plate against the exterior of the cloth and its opposite end tensioned against the spring portions of the inner plate of the locking member, as set forth.

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Witnesses:

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