(No Model.)

C. C. CHAMPENOIS.

CUFF BUTTON OR STUD.

No. 524,523. Patented Aug. 14, 1894.

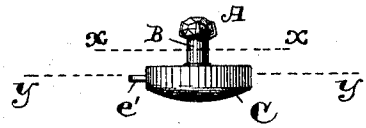

Fig. 1

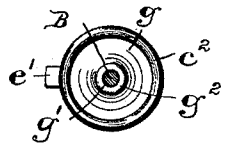

Fig. 2

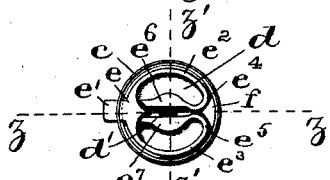

Fig. 3

Fig. 4

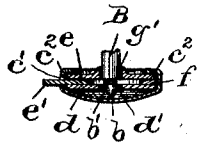

Fig. 5

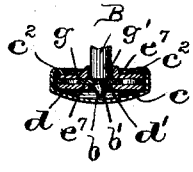

Fig. 6

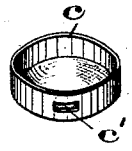

Fig. 7

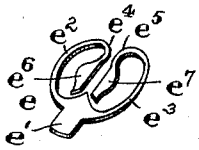

Fig. 8

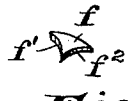

Fig. 9

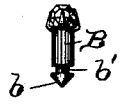

Fig. 10

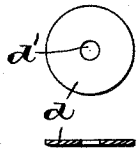

Fig. 11

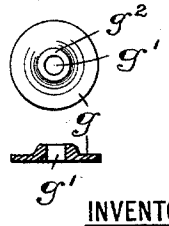

Fig. 12

WITNESSES:

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B. Mortimer Tisdale

INVENTOR:

Charles C. Champenois,
BY Fred'k C. Fraentzel, ATT'Y.

UNITED STATES PATENT OFFICE.

CHARLES C. CHAMPENOIS, OF NEWARK, NEW JERSEY.

CUFF-BUTTON OR STUD.

SPECIFICATION forming part of Letters Patent No. 524,523, dated August 14, 1894.

Application filed April 16, 1894. Serial No. 507,681. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. CHAMPENOIS, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Cuff-Buttons or Studs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has reference to that general class of buttons, which are composed of a back-plate and a separate combined post and front plate, or suitable ornament connected therewith, and means for detachably connecting said post with said back-plate.

The invention therefore consists in the novel combination of a spring-yoke provided with a finger or push-piece with the back-plate and the removable shank or stem, by means of which a cuff button or stud can be made, adapted to be used in garments and whereby said button or stud is securely held in position in the button hole and may be readily detached or inserted.

My invention further consists in the peculiar construction of the spring-yoke and a finger or push-piece connected therewith, which is arranged in the interior of the shell comprising the back-plate, and engages with the end of the button shank or stem to hold the parts in their locked engagement.

The invention further consists in certain novel arrangements and combinations of parts, to be hereinafter more fully described and finally embodied in the clauses of the claim.

In the drawings herewith accompanying, in which the invention is represented as a shirt stud:—Figure 1 is a side view of my novel form of button. Fig. 2 is a horizontal section, taken on line x in Fig. 1. Fig. 3 is a similar view taken on line y in said Fig. 1, clearly illustrating the arrangement of said spring-yoke within the casing of the back-plate; and Fig. 4 is a like view of said parts, illustrating the spring-yoke in its operated position. Fig. 5 is a vertical section of the back-plate, taken on line z in Fig. 3, and Fig. 6 is a similar view, taken on line z' in said Fig. 3. Fig. 7 is a detail view of the casing of said back-plate. Fig. 8 is a perspective view of the combined spring-yoke and push or finger piece; and Fig. 9 is a similar view of a certain triangularly-shaped piece, used in the back-plate in connection with said spring-yoke. Fig. 10 is a view of the detachable button shank or stem, and Figs. 11 and 12 are detail views of certain disks used in connection with my invention.

Similar letters of reference are employed in each of the above described views, to indicate corresponding parts.

In said views, A indicates the complete button or stud; B is the post or stem; and C the back-plate, containing the means for detachably connecting said stem with the back-plate. Said back-plate consists essentially of a cup-shaped shell c having in the side thereof an opening c', as will be clearly seen from Fig. 7. Within said shell c, I place a disk d provided with a centrally arranged hole d', and loosely placed upon said disk d is the spring-yoke e, illustrated more especially in Fig. 8. Said spring-yoke is provided with a portion e', forming a push or finger-piece, which normally projects from the opening c' in the side of the shell c. Said spring-yoke is provided with oppositely extending spring-arms e^2 and e^3, which are preferably curved, as at e^4 and e^5, and terminate in two inwardly extending and approximately parallel holding arms e^6 and e^7. Upon said disk d and fitted between the curved portions e^4 and e^5 of said holding arms e^6 and e^7, is a small triangularly shaped operating piece f, the purpose of which will be more fully brought out hereinafter. Said piece f may be firmly held in place on the disk d by being secured thereto, but it is preferably loosely placed thereon, the sides of said spring arms and the inner surface of the back-plate c preventing its displacement. Upon said spring-yoke e is placed a second disk g provided with a centrally arranged hole g' surrounded by a flange g^2. These several parts are arranged within the casing c in the manner just set forth and as illustrated in Figs. 3, 4, 5 and 6, and are secured in position by the beaded or turned down rim c^2 formed by bending over the edge

of said plate, as in any well known manner, as will be clearly evident.

The post or stem B is provided at one end with any suitable ornament and is preferably pointed at its opposite end, as at b, being also provided with an annular recess or notch b', as shown in Fig. 10.

In order to secure the cuff button or shirt stud in the button hole or other opening of the garment, the pointed end of the stem is forced through said opening in the garment and through the opening g' in the disk g, bringing the pointed end b of the post between the two holding arms e^6 and e^7 of the spring-yoke e. By pressing the parts together, said pointed end b presses aside the arms e^6 and e^7 of the spring, until they spring back into the groove or notch b', and firmly prevent the post or stem from being withdrawn from the casing or back-plate, the pointed portion b of said post passing through the hole d' in the disk d and extending into the space between said disk or plate and the curved back of the shell c. To separate the post or stem from its holding engagement with said spring-yoke e, the push or finger-piece e' connected with said spring-yoke is slightly forced inward, thereby bringing the curved portions e^4 and e^5 of said spring against the sides f' and f^2 of the triangular piece f, whereby the holding arms e^6 and e^7 of the spring are caused to assume the position illustrated in Fig. 4. This releases said arms from their holding engagement with the recess or notch b' in said stem or post B, and the parts can be readily separated.

From the arrangement and construction of the several parts comprising my novel form of button, it will be readily seen that a simple and cheap construction is the result, being especially adapted for cuff or other similar buttons, or for shirt studs.

The button or stud can be quickly and securely arranged in position in the button hole and can be readily removed.

Having thus described my invention, what I claim is—

1. The herein described button or stud, comprising therein, two perforated disks d and g, a spring-yoke e between said disks, said yoke having a push or finger piece e', spring-portions e^2 and e^3, and holding arms e^6 and e^7 connected therewith, a triangularly shaped piece f in said casing, against which said spring yoke is forced when the finger piece is operated, to press said arms e^6 and e^7 apart, and a shank or stem adapted to be engaged by said spring-yoke, substantially as and for the purposes set forth.

2. In a detachable button, the combination, of a shank or stem, with a back-plate forming a casing, a spring yoke e having a finger piece e' extending from an opening in the side of said casing, spring-arms e^2 and e^3 connected therewith, said arms having curved portions e^4 and e^5 and holding arms e^6 and e^7 connected with said curved portions, and a triangularly shaped piece f, arranged between said curved portions and adapted to press said arms e^6 and e^7 apart, when said spring-yoke is forced against said piece f, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 12th day of April, 1894.

CHARLES C. CHAMPENOIS.

Witnesses:
FREDK. C. FRAENTZEL,
WM. H. CAMFIELD, Jr.