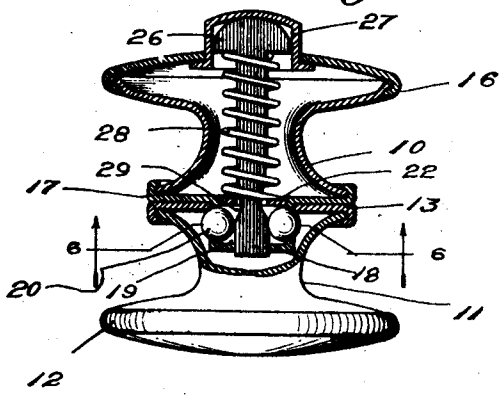
Dec. 15, 1925. 1,566,023

C. P. KUEHNER

SEPARABLE CUFF BUTTON

Filed April 23, 1925

Fig. 1.



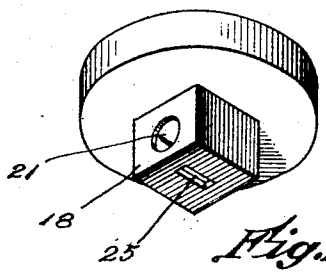


Fig. 2.

Fig. 3.

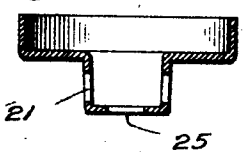


Fig. 4.



Fig. 5.

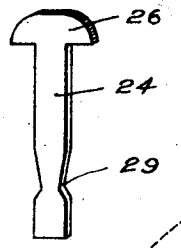
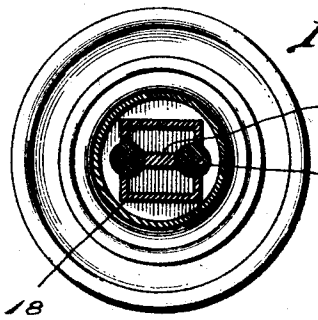


Fig. 6.



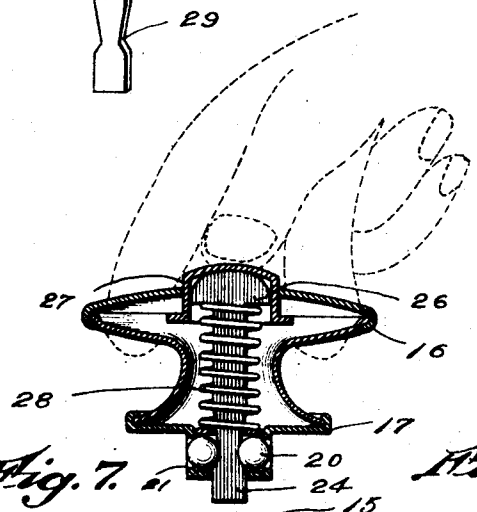
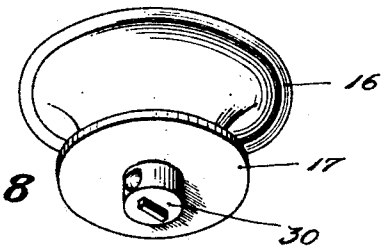


Fig. 7.

Fig. 8



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BY
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ATTORNEYS.

Patented Dec. 15, 1925. 1,566,023

UNITED STATES PATENT OFFICE.

CHARLES P. KUEHNER, OF NORTH PROVIDENCE, RHODE ISLAND.

SEPARABLE CUFF BUTTON.

Application filed April 23, 1925. Serial No. 25,406.

To all whom it may concern:

Be it known that I, CHARLES P. KUEHNER, a citizen of the United States, residing at North Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Separable Cuff Buttons, of which the following is a specification.

This invention relates to an improved construction of cuff button of the separable type; and has for its object to provide a button of this character comprising stud and socket members, the stud member carrying gripping elements to releasably engage the socket member, the gripping elements being controlled by an axially-movable pin operable through the outer head of the stud-member.

A further object of this invention is the provision of a sheet-metal inner head for the stud-member having a hollow projection in which the gripping elements are located for engaging the socket-member.

A still further object of the invention is the provision of angularly-shaped projection on the stud-member for engagement with a correspondingly-shaped opening on the socket member to prevent a relative rotation between the stud and socket members.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a side elevation partly in section illustrating the stud and socket members of a cuff button in locked position.

Figure 2 is a perspective view of the inner head of the stud member showing the angularly-shaped hollow projection thereon.

Figure 3 is a sectional elevation of the inner head of the stud-member.

Figure 4 is a perspective view showing the closure for the hollow projection.

Figure 5 is a perspective view of the axially removable pin for controlling the gripping elements.

Figure 6 is a sectional view on line 6—6 of Figure 1.

Figure 7 is an elevation partly in section of the stud and socket members showing the gripping elements of the stud-member in released position and the stud member as separated from the socket member.

Figure 8 is a perspective view of a modification showing the stud member as provided with a round or circularly shaped hollow projection.

It is found in the practical construction and operation of cuff buttons, of advantage to provide readily operable means whereby the button members are positively locked together so that they cannot be separated except by manual manipulation of the central pin; and to accomplish this object, I have provided a stud member having a hollow projection in which are located laterally-movable ball-gripping elements between which there is located an axially-movable pin held in ball expanding position by a spring and the pin being recessed at a point along its length to permit the balls to move laterally inwardly to released position, the pin being manually operable through the outer head of the stud member by means of a push button; and the following is a detailed description of the present embodiment of this invention showing one construction by which these advantageous results may be accomplished:—

With reference to the drawings, 10 designates the stud member and 11 the socket member of a separable button, the socket member being provided with an outer head 12 and an inner head 13. The inner head consists of a plate 14 having a central opening 15 of a shape corresponding to that of the projection on the stud-member for its reception.

The stud-member is provided with an outer head 16 and an inner head 17, the inner head being constructed from a plate of sheet metal having a hollow projection 18 drawn from the plate in an eyelet machine or by other suitable means, to provide a pocket or cage 19 for the reception of balls or gripping elements 20 which extend outwardly from the projection through openings 21 in the side walls thereof. This case is closed by a plate 22 having an opening 23 therethrough for the reception of an axially-movable pin 24, which pin is also guided by an opening 25 in the bottom wall of the hollow projection. An axially-movably pin 24 extends through the outer head 16 of the stud-member and is provided with an enlarged head 26 which engages a cap or push button 27 projecting through the outer head 16 of the stud member for its manual operation.

This pin is held in outwardly-projecting

position by means of a coiled spring 28 which tends to hold the ball or gripping elements 20 in their outwardly-extending socket-gripping position. The pin is provided with recesses 29 which when moved opposite the balls 20 permit the balls to move laterally or radially inwardly to released position, as shown in Figure 7, in which position the stud-member may be withdrawn from its socket member.

It will be apparent that the spring 28 upon the release of manual pressure on the pin, will serve to draw the end portion of the pin outwardly to expand the balls into their gripping position, it being understood that the openings 21 are smaller than the diameter of the balls so that only a portion of the balls will extend through the openings in order that the ball can not pass through the openings and become lost.

My modification shown in Figure 8 merely illustrates a different shape of the hollow projection 30, the same being round or circular but in other respects similar to the construction here before described.

My improved form of separable button is simple and effective in its construction and is attractive in its appearance and by its use the button members may be positively held against inadvertent separation and may be released only by manual pressure upon the cap or presser button which extends through the outer head of one of the button members.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. A separable cuff button comprising stud and socket members, said stud member having a sheet metal inner head plate with an integral hollow projection to extend into said socket member, socket gripping elements operatively mounted in and projecting from said hollow projection and an axially movable spring pressed pin for moving and holding said elements in expanded position and having a recess therein for permitting said gripping elements to move to released position.

2. A separable cuff button comprising stud and socket members, each having inner and outer heads, the inner head of said stud member having a sheet metal plate provided with a hollow integral projection, locking members mounted in said projection and extending through its side walls for gripping said socket member, and an axially-movable pin in said stud member for controlling the action of said locking members.

3. A separable cuff button comprising stud and socket members, a projection angularly-shaped in cross section carried by said stud member, said socket member having a correspondingly angularly-shaped opening, and means for releasably locking said projection in said opening.

4. A separable cuff botton comprising stud and socket members, each having an inner and outer head, said socket member having an opening in its inner head, the inner head of said stud member having a sheet metal plate shaped to form a hollow projection to extend through the opening in the inner head of said socket member balls extending through the side walls of said hollow projection for engaging the socket member and locking said projection in said opening and a manually axially-movable spring-pressed pin in said stud member for holding them in expanded gripping position and having a recess to permit said balls to move toward each other into released position.

5. A separable cuff button comprising a socket member, a stud member having an inner sheet metal head with a drawn hollow projection having openings in its side and end walls, balls having portions extending outwardly through said projection side wall openings, an axially-movable pin guided in the projection end wall opening and located between said balls for forcing them outwardly into expanded locking position, a spring for normally holding said pin in ball-expanding position, a button extending through the outer head of said stud member for axially moving said pin, said pin having a recessed portion which may be moved opposite said balls to permit them to move inwardly into retracted position whereby said stud member projection may be readily withdrawn from said socket member.

6. A separable cuff button comprising stud and socket members having innner and outer heads, said stud member having a sheet metal inner head with a drawn hollow projection for extending into said socket member, a plate for closing the hollow portion of said projection to form a ball cage, balls within said cage having portions extending outwardly through the walls thereof for locking the projection in the socket member, and an axially movable spring pressed pin for forcing said ball outwardly into gripping position, said pin being operable through the outer head of said stud member.

In testimony whereof I affix my signature.

CHARLES P. KUEHNER.