(No Model.)

R. W. A. DITTMANN.

HINGED BUTTON.

No. 407,643. Patented July 23, 1889.

Fig. 1.

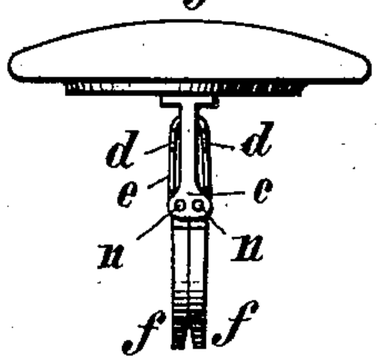


Fig. 2.

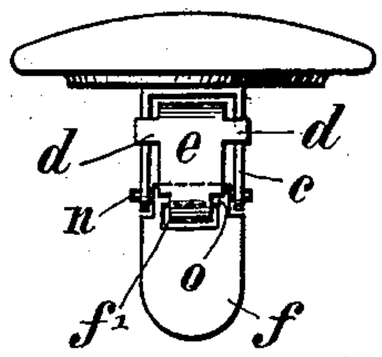


Fig. 3.

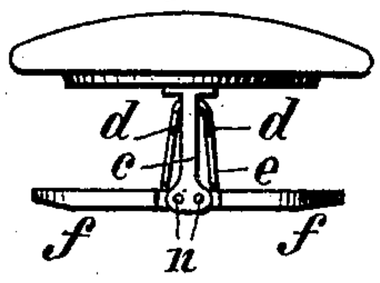


Fig. 4.

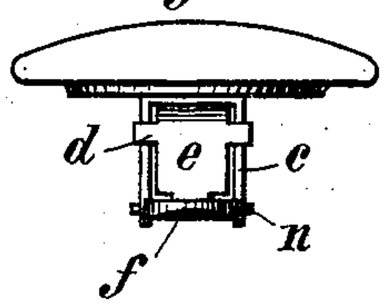


Fig. 5.

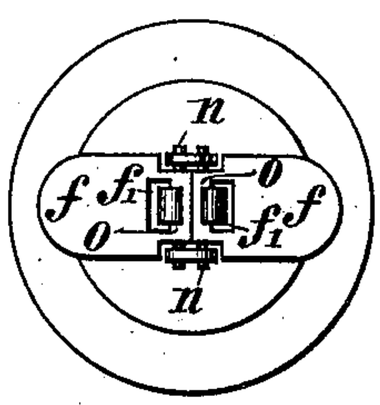


Fig. 6.

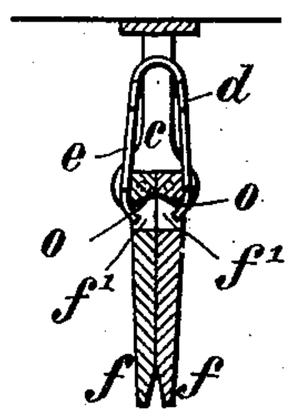
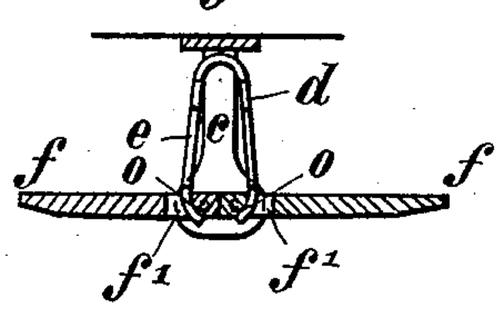


Fig. 7.



Witnesses.
John R. Petree.
Walter Scott.

Inventor,
Robert W. A. Dittmann,
By Paine & Lord,
Attys.

UNITED STATES PATENT OFFICE.

ROBERT W. A. DITTMANN, OF HAMBURG, GERMANY, ASSIGNOR TO AUG. F. RICHTER, OF SAME PLACE.

HINGED BUTTON.

SPECIFICATION forming part of Letters Patent No. 407,643, dated July 23, 1889.

Application filed April 3, 1889. Serial No. 305,818. (No model.) Patented in Germany May 27, 1888, No. 45,825; in Austria-Hungary October 5, 1888, No. 22,716 and No. 39,112, and in England January 30, 1889, No. 97.

To all whom it may concern:

Be it known that I, ROBERT WILHELM AUGUST DITTMANN, a subject of the German Emperor, and a resident of Hamburg, in the German Empire, have invented certain new and useful Improvements in Detachable Buttons or Studs, (for which I have secured Letters Patent in Germany, No. 45,825, dated May 27, 1888; in Austria-Hungary, No. 22,716 and No. 39,112, dated October 5, 1888, and in Great Britain, No. 97, dated January 30, 1889,) of which the following is a specification.

This invention relates to improvements in hinged buttons or studs in which the fastening is effected by means of folding wings or flaps pivoted to the shank of the button, and the object of the same is to afford means for simultaneously operating both folding wings. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figures 1 and 2 represent a button provided with my fastening device in the position when entering the button-holes. Figs. 3 and 4 are two side views, and Fig. 5 a view from below with unfolded wings. Figs. 6 and 7 show two vertical sections of my improved fastening device in enlarged scale.

Similar letters refer to similar parts throughout the several views.

The folding wings *f* are pivoted at *n* to the shank *c* of the button, and are operated by the U-shaped spring *e*, which is guided to slide within the shank by means of small lateral projections *d*. The ends of the two arms of such spring are bent inward to enter the notches *f'* of each of the folding wings *f*. In the open position of the wings, Figs. 1, 2, and 6, the arms of the spring *e* rest against the outer flat face of the heads *o* of the wings, and thus lock the wings in this position, as the heads *o* are eccentrically shaped in relation to their pivots, while they are arrested in the locked position, Figs. 3, 4, and 7, by reason of the extreme ends of the spring *e* bearing against the inclined part of the head *o*. If, therefore, one of the opened folding wings *f* is locked, the corresponding arm of the spring *e* is first bent a little outward—that is to say, the spring is more strained, but at the same time the spring is caused to slide farther into the shank *c* of the button, as it tends to stick to that point of the heads *o* which is most apart from the center of oscillation of the wings, and the spring will follow the movement of the head *o* until the extreme ends of its arms rest upon the incline of the heads, in which position the folding wings are fully unfolded. While the spring *e* is thus moved into the shank by vibrating of one folding wing it will cause the other folding wing to make a corresponding movement until both wings have occupied the position as shown in Fig. 7. In this position of the folding wings the blunt end faces of the heads *o* bear against each other and under the action of the spring the wings are duly arrested. As the tension of the spring *e* is greatest when the wings are unfolded, the motion of either of the wings will cause the other wing to simultaneously follow. If, therefore, one of the folding wings is opened, the spring *e* is drawn back from the shank *c* and thus throws around the other wing *f*, but at the same time the extreme end of the respective arm of the spring *e* will act upon its corresponding folding wing *f*, so that one wing has to be opened or closed, in order to cause the other to follow automatically.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

The herein-described improved button, consisting of the button having a hollow shank, the wings pivoted to said shank at their inner ends and having opposite notches and eccentric heads, and the U-shaped spring sliding in said shank and having lateral projections and bent ends inserted in said notches, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 10th day of March, 1889.

ROBERT W. A. DITTMANN.

Witnesses:
ALEXANDER SPECHT,
DIEDRICH PETERSEN.