

(No Model.)

E. ZÖLLER & J. T. GARDNER.

HINGED SHOE BUTTON.

No. 347,410.

Patented Aug. 17, 1886.

Fig. 1

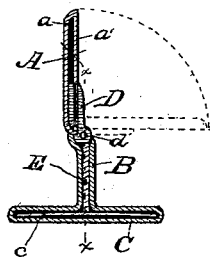
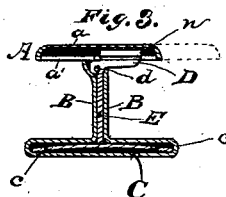
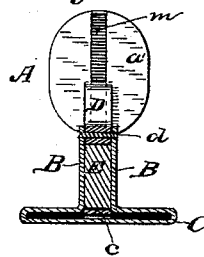


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDMUND ZÖLLER AND JOHN TIFFIN GARDNER, OF INDIANAPOLIS, INDIANA;
SAID ZÖLLER ASSIGNOR TO SAID GARDNER.

HINGED-SHOE BUTTON.

SPECIFICATION forming part of Letters Patent No. 347,410, dated August 17, 1886.

Application filed December 19, 1885. Serial No. 186,236. (No model.)

To all whom it may concern:

Be it known that we, EDMUND ZÖLLER and JOHN TIFFIN GARDNER, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Shirt-Buttons; and we 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.

Our invention relates to shirt buttons and studs; and the object of our invention is to make a hinged-top button, in which the top or cap can be turned up into line with the post for convenience in buttoning and equal ease and convenience in unbuttoning.

The accompanying drawings illustrate the mechanism by which this is accomplished.

Figure 1 is a vertical sectional view on a line through the longitudinal axis of the cap, showing the button ready for insertion; Fig. 2, a vertical sectional view through the line *x*, (see Fig. 1,) and with the cap raised, as in Fig. 1; Fig. 3, the same view of the button as is shown in Fig. 1, with the exception that the cap is folded instead of raised.

Similar letters refer to similar parts throughout the several views.

A is the top or cap, made of the upper and lower plates, *a* and *a'*, with a space between the two.

m is a slot in the under plate, and running from rim to rim through the middle.

D is a slide working in the slot *m*, and having grooved sides to receive the edges of the slot.

n, Fig. 3, is a spring pressing against the slide D, to keep the slide from becoming loose by wear.

d' is a cam-lug on the under side of the slide at the end, with a hole through it to receive a pin, *d*, by which the slide and cap are hinged to the post B.

B is a hollow post fastened at one end to the shoe *c*, and having ears at the opposite end with holes to receive the pin *d*, making a hinge by which the slide and cap are attached to the post.

C is the shoe of the button.

c is a spring lying on the shoe and bearing against the end of the pin E, pressing the pin away from the shoe.

E is a pin inside of the hollow post B. One end of the pin bears against the cam-lug *d'* on the slide D and the opposite end rests on the spring. The pin E is free to move longitudinally, and the spring *c* keeps it pressed constantly against the cam-lug.

To use our button, the cap is pressed to one side on the slide D, as shown in dotted lines in Figs. 3 and 1. Both cap and slide are then revolved on the pin *d* to the position shown in Fig. 1, in which position the cap and post are readily thrust through the button-hole and the cap folded down into position.

One great objection to buttons of this class heretofore has been the difficulty with which they were removed from the button-hole, especially in stiffly-starched goods.

Heretofore the cap has been made to fold up against the side of the post, widening the post at the top and forming an abrupt projection, which catches on the goods at the side of the button-hole.

In our button the hinge slides to the rim of the cap, allowing the cap to turn edge up on the end of the post, making a standard of uniform thickness throughout with no abrupt projections, and therefore easily extracted from the button-hole.

Having thus fully described our invention, what we claim as new, and wish to secure by Letters Patent, is—

1. The cam-lugged slide D, adapted to slide in the slot *m* of the plate *a*, in combination with the slotted cap A, spring *n*, post B, hinged to the cam-lugged end of the slide D, foot C, pin E, and spring *c*, substantially as specified.

2. The combination of the cap A, cam-lugged sliding hinge D, spring *n*, post B, pin *d*, pin E, foot C, and spring *c*, substantially as described and specified.

In testimony whereof we affix our signatures in presence of two witnesses.

EDMUND ZÖLLER.

JOHN TIFFIN GARDNER.

Witnesses:

S. A. MINTURN,

L. A. MINTURN.