

(No Model.)

J. McNERNEY.

BUTTON.

No. 397,508.

Patented Feb. 12, 1889.

Fig. 1,

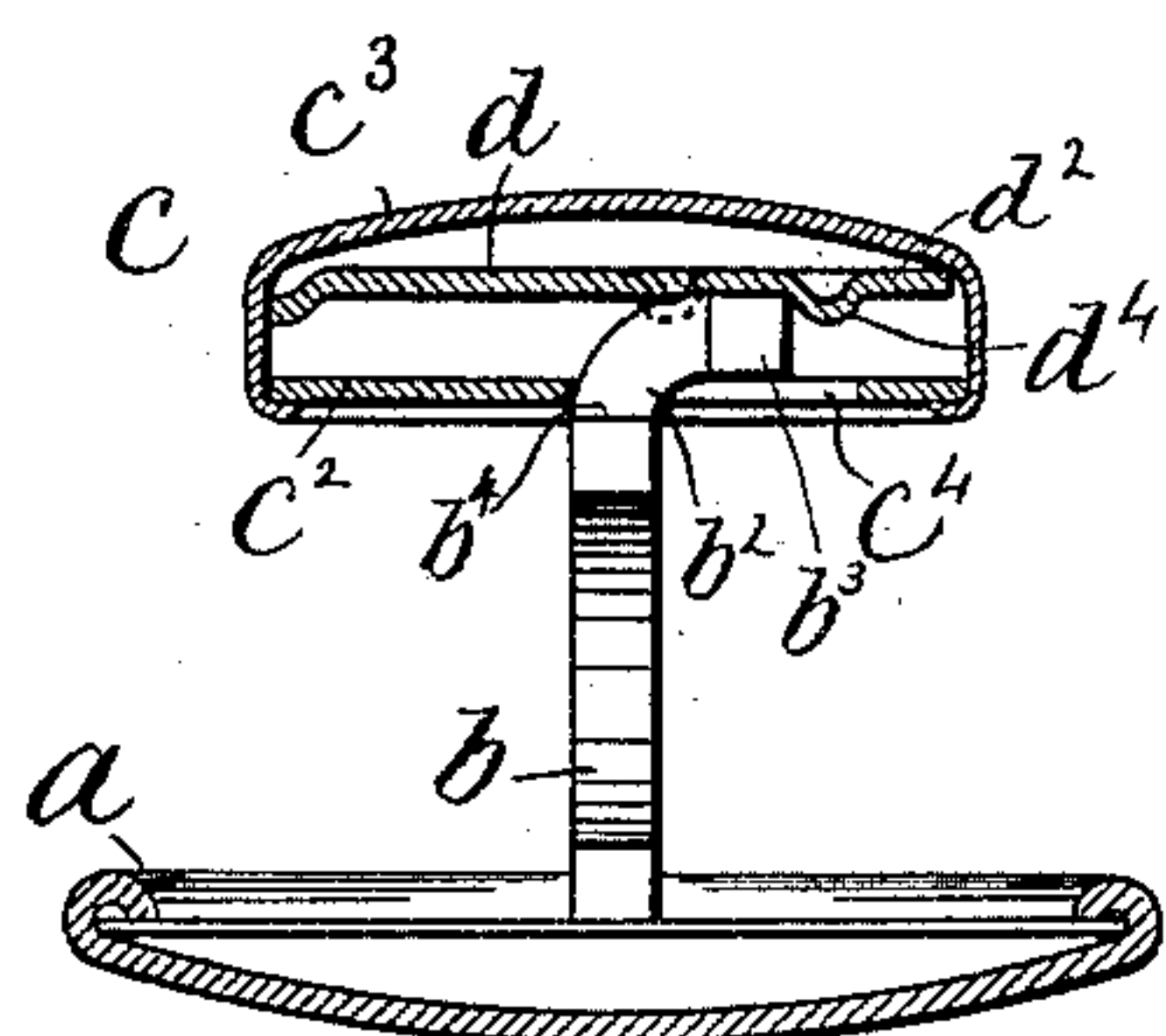


Fig. 2,

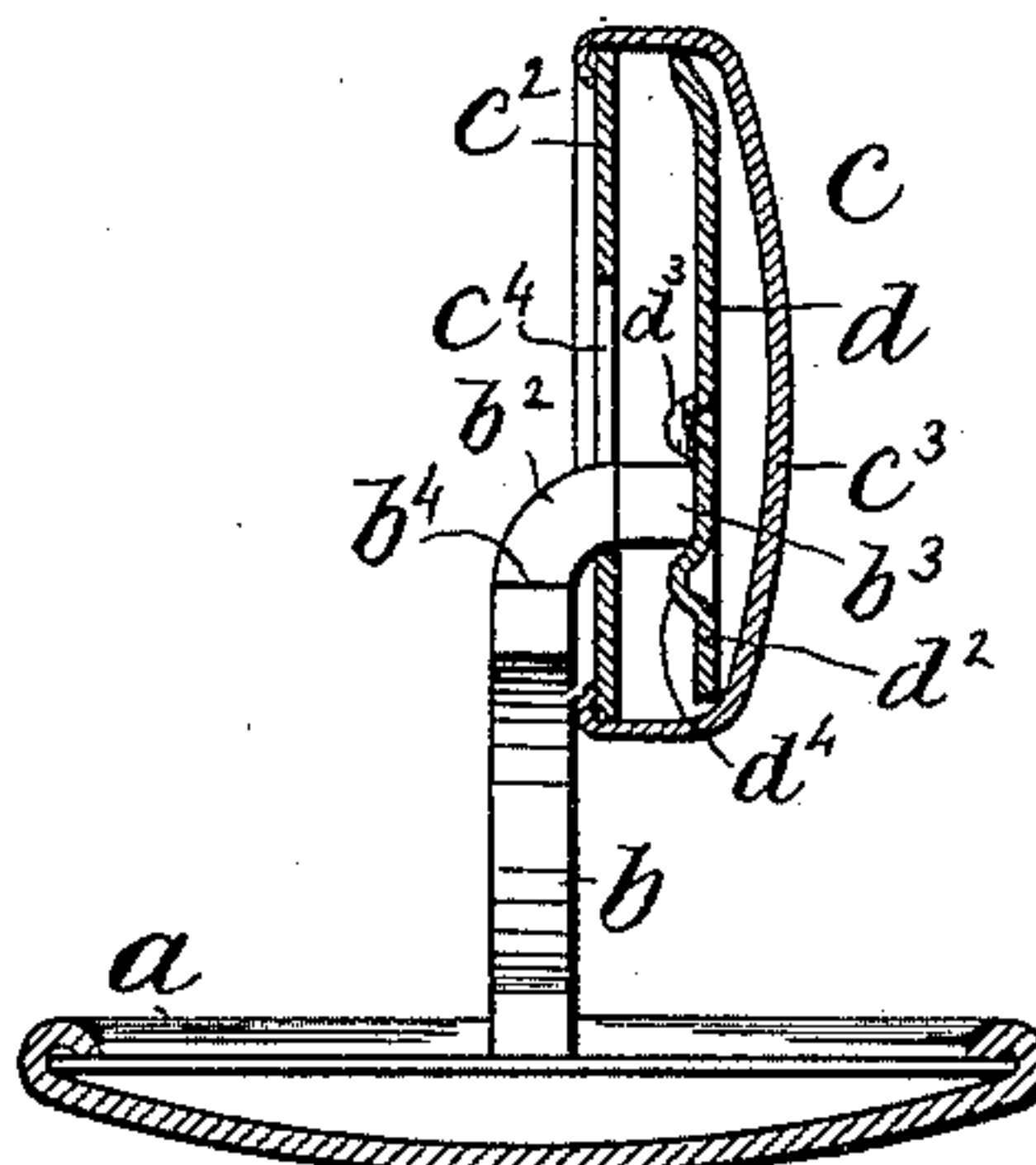


Fig. 3,

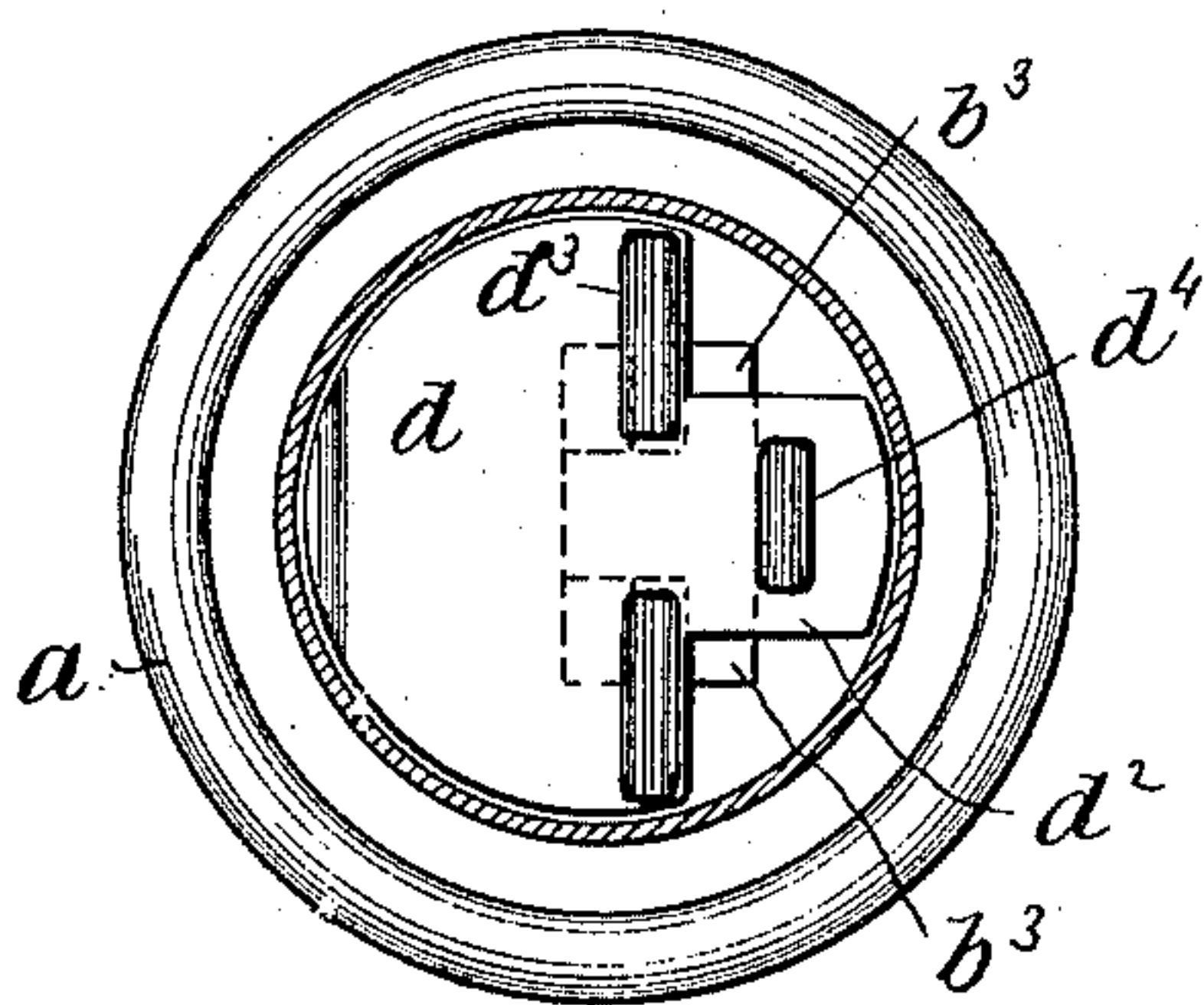


Fig. 4,

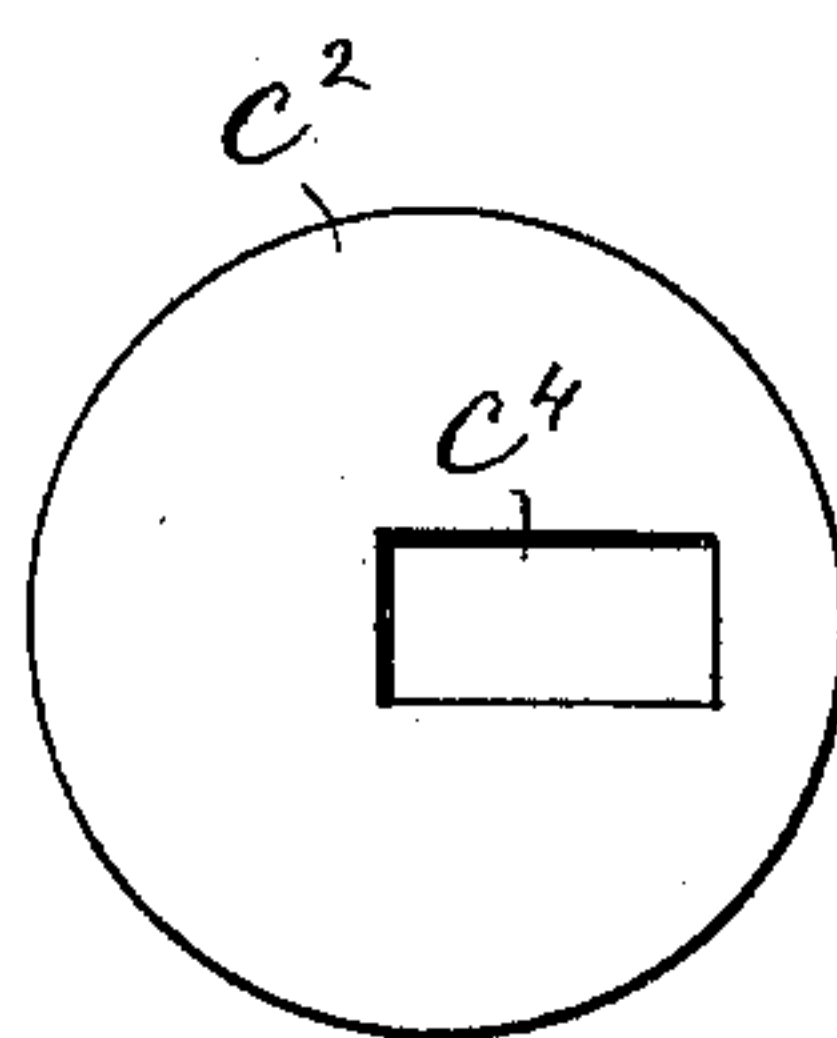


Fig. 5,

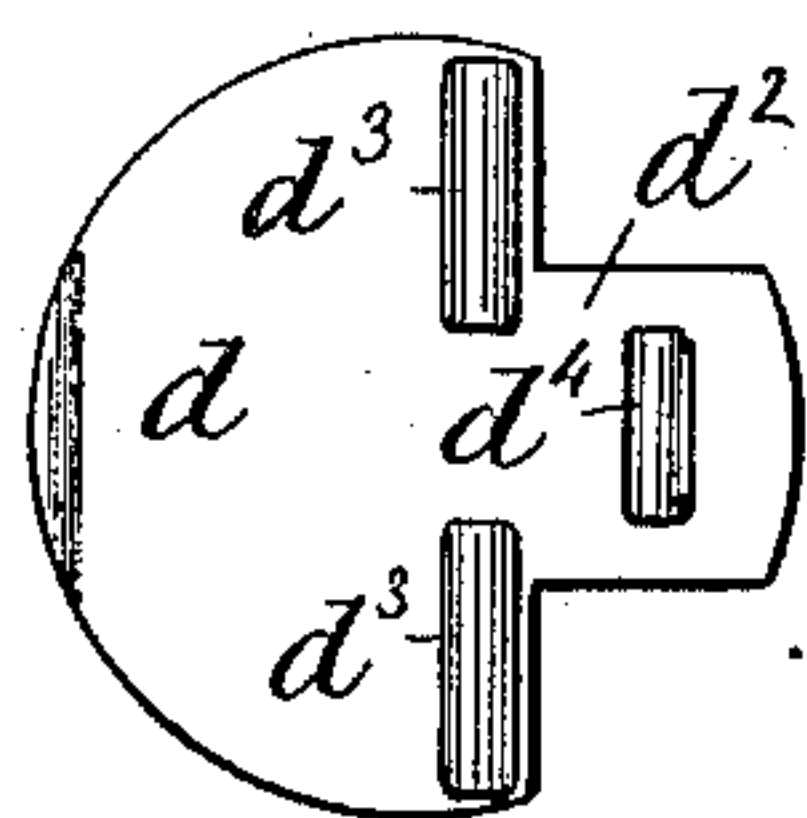
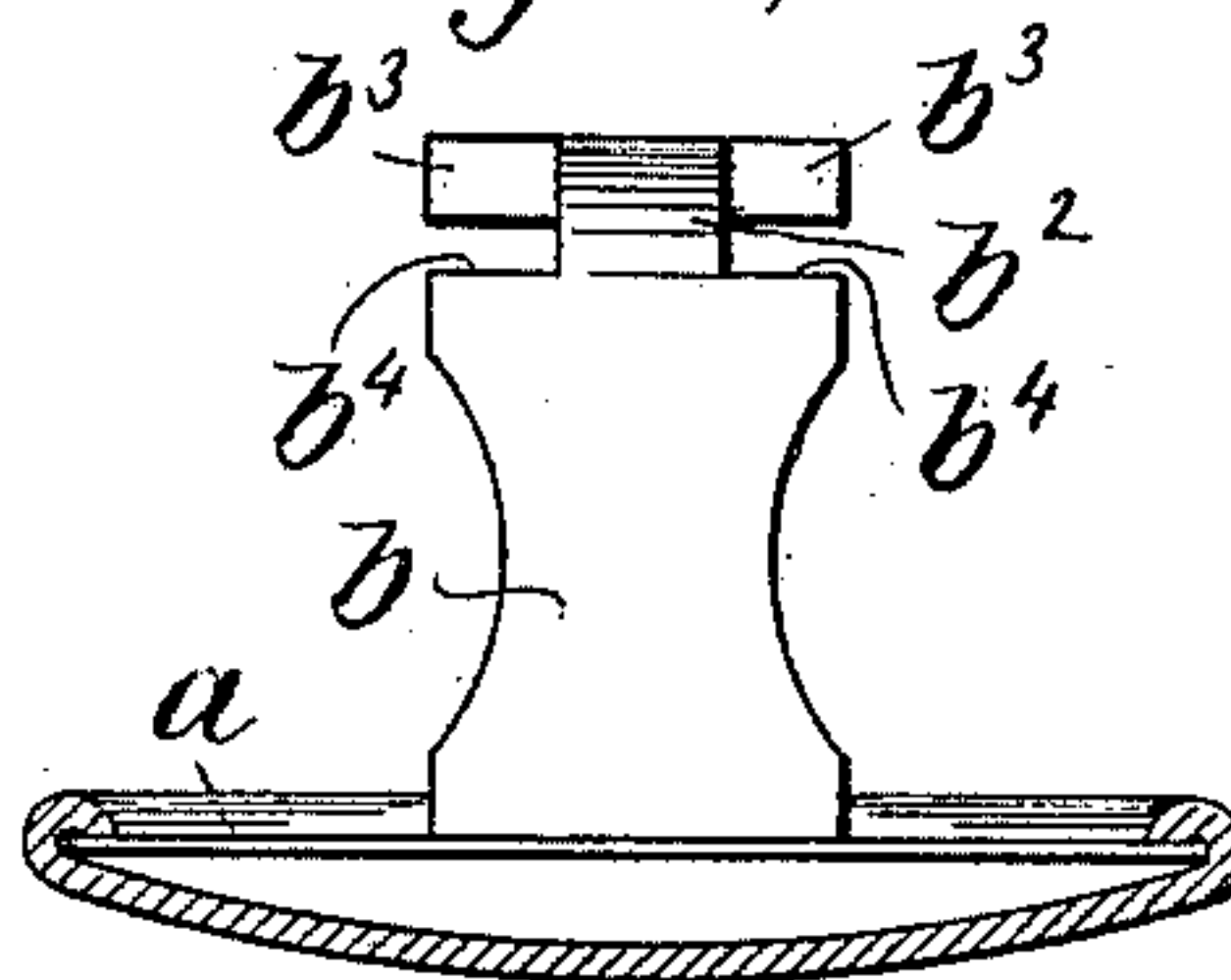


Fig. 6,



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UNITED STATES PATENT OFFICE.

JAMES MCNERNEY, OF ATTLEBOROUGH, MASSACHUSETTS, ASSIGNOR TO
WHEATON, RICHARDS & CO., OF SAME PLACE.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 397,508, dated February 12, 1889.

Application filed October 15, 1888. Serial No. 288,052. (No model.)

To all whom it may concern:

Be it known that I, JAMES MCNERNEY, of Attleborough, county of Bristol, and State of Massachusetts, have invented an Improvement in Buttons, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to a button or stud of the kind commonly known as a "lever-button," having a head so connected with the shank as to be capable of being turned edgewise into line with the shank for the purpose of easy insertion into and removal from the button-hole, and of then being turned and securely held in its normal position at right angles to the shank for retaining the stud securely in the button-hole.

The invention consists in novel features of construction of the button shank and head, whereby the latter is securely fastened upon the shank and is retained in its different positions, said shank having a T-shaped laterally-offset end contained within the button-head, which is made hollow, and also contains within it a holding-plate which is provided with projections that co-operate with the end of the button-shank to hold the same in its different positions with relation to the button-hole.

Figure 1 is a longitudinal section of a stud or button embodying this invention with the head in its normal position or at right angles to the shank; Fig. 2, a similar section with the head in position in line with the shank, so as to pass through the button-hole edgewise; Fig. 3, a sectional view showing the parts in the position shown in Fig. 1, as seen with the top piece or cap of the button-head removed; Fig. 4, a plan view of the bottom plate of the button-head detached; Fig. 5, an end view of the holding-plate that is contained within the button-head, and Fig. 6 a side elevation of the button-shank on a plane of projection at right angles to that of Fig. 1.

The button or stud comprises a base, *a*, and shank *b*, which may be rigidly fastened thereto in any suitable or usual manner. The said shank *b* at its upper end has two lateral recesses, forming a narrow portion, *b*², and two laterally-projecting fingers, *b*³, at the extreme

end, the said narrow portion *b*² being bent or turned at right angles to the main portion *b* of the shank, as best shown in Figs. 1 and 2, and with the said arms *b*³ forming a T-shaped end or extremity, which is offset to one side of the main portion of the shank, as clearly shown in Figs. 1 and 2. By this construction there are also two shoulders, *b*⁴, where the narrow portion *b*² of the shank begins.

The head *c* of the button is composed of a bottom plate, *c*², and cap *c*³, fastened thereto, as shown in Figs. 1 and 2, so as to leave a hollow space between the said plates, which space contains the lateral arms *b*³ or T-shaped ends of the button-shank.

The base-plate *c*² is provided with an elongated opening, *c*⁴, (best shown in Fig. 4,) of sufficient size to permit the T-shaped end of the shank to be passed through when its end is lengthwise of said opening, and after the said end has been thus passed through the opening it is turned so as to bring the T-shaped end across the opening, as shown in Figs. 1, 2, and 3, the said plate *c*² being then held in place between the ends *b*³ of the shank and the shoulders *b*⁴, on which the said plate seats when the button-head is in its normal position, as shown in Fig. 1.

The arms *b*³ are squared, as shown in Figs. 1 and 2, and in order to prevent the button-head from turning about the axis of the shank, so as to bring the T-shaped end of the latter lengthwise of the opening *c*⁴, and also to hold the button-head in its different positions, while permitting it to be moved from the position shown in Fig. 1 to that shown in Fig. 2 and the reverse, the said button-head contains a holding-plate. This holding-plate is made mainly circular in shape, as shown in Fig. 5, to fit within the button-head, against which the edges of the said plate rest, as shown in Fig. 1, with a space between the holding-plate and cap *c*³ of the button-head to permit the holding-plate to yield toward the button-head. The said plate has portions cut away at the sides opposite the part that lies above the end *b*³ of the shank, so as to form a tongue, *d*², that rests against the end of the button-shank, such narrowing or recessing of the sides of the plate making it more yielding. The holding-plate *d* is also provided with two

projections, d^3 , which lie one at each side of the narrow portion b^2 of the button-shank and against the under sides of the T-arms b^3 of said shank, and the tongue d^2 of the holding-plate has a similar projection, d^4 , that rests against the end of the shank. The square arms b^3 at the end of the button-shank are thus retained in the position between the bottom plate, c^2 , of the button-head and the holding-plate d , and are also kept in position with relation to the button-head by the projections d^3 d^4 of the holding-plate, so that when the button is in its normal position, as represented in Fig. 1, the T-shaped end b^3 of the shank is at one side of the middle of the button and the shank itself is at the middle of the button-head, and the pressure of the holding-plate d and bottom plate, c^2 , on the square faces on the end of the button-shank tends to keep the button-head in the position parallel with the base a of the stud or at right angles to the shank b . Then when the stud is to be inserted in a button-hole or removed therefrom the head may be turned from the position shown in Fig. 1 to that shown in Fig. 2, and in such movement the squared ends b^3 will come to the diagonal position between the holding-plate d and bottom plate, c^2 , thus springing them apart from the position shown in Fig. 1, and after the button-head has passed the intermediate position between that shown in Fig. 1 and that shown in Fig. 2 the elasticity of the holding-plate d and bottom plate, c^2 , tends to continue its movement to the position shown in Fig. 2, where the said holding-plate and bottom plate again press against the flat faces of the button-shank. The button-head is then, as shown in Fig. 2, close to the shank and parallel or practically in line therewith, and is also held with its middle point wholly above the end of the button-shank, thus enabling the button and its shank to be readily inserted through or removed from a button-hole. The projections d^3 d^4 of the holding-plate prevent the button-head from being thrown out of position with relation to the button-shank in its movement back and

forth between the positions shown in Figs. 1 and 2. The holding-plate c might be made to give all the spring action required in turning the button-head; but the bottom plate, c^2 , of the button-head usually also yields as the button-shank is turned and contributes by its elasticity to the spring action by which the button-head is thrown from a position intermediate between that shown in Figs. 1 and 2 to either of said extreme positions, and is retained in said extreme position until positively removed therefrom by the operator, and the yielding or spring action may be derived from either one of said parts solely, or partly from both.

The shoulders b^4 assist in holding the button-head in its normal position (shown in Fig. 1) and resist turning it in the wrong direction, and thus prevent the holding-plate and bottom plate of the button-head from being unduly strained or injured from attempts to turn the button-head away from the offset end of the shank instead of toward the said offset end, as is intended.

I claim—

The combination of a button-shank having a narrow portion and lateral arms projecting therefrom at its end, which is turned to one side and offset with relation to the main portion of the shank, and a button-head consisting of a cap or top plate, c^3 , and bottom plate, c^2 , having an opening through which the end of the shank passes, and a holding-plate, d , inclosed in said button-head, having an integral tongue, d^2 , and projections d^3 d^4 , extending from the plane of the plate, said projections d^3 co-operating with the arms of the shank and said projection d^4 co-operating with the extremity of the shank, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES MCNERNEY.

Witnesses:

ALICE J. BRADY,
PHILIP E. BRADY.