

No. 743,835.

PATENTED NOV. 10, 1903.

C. J. DIEGES.
AUTOMATIC CATCH FOR BADGE - PINS, &c.
APPLICATION FILED JULY 16, 1903.

NO MODEL.

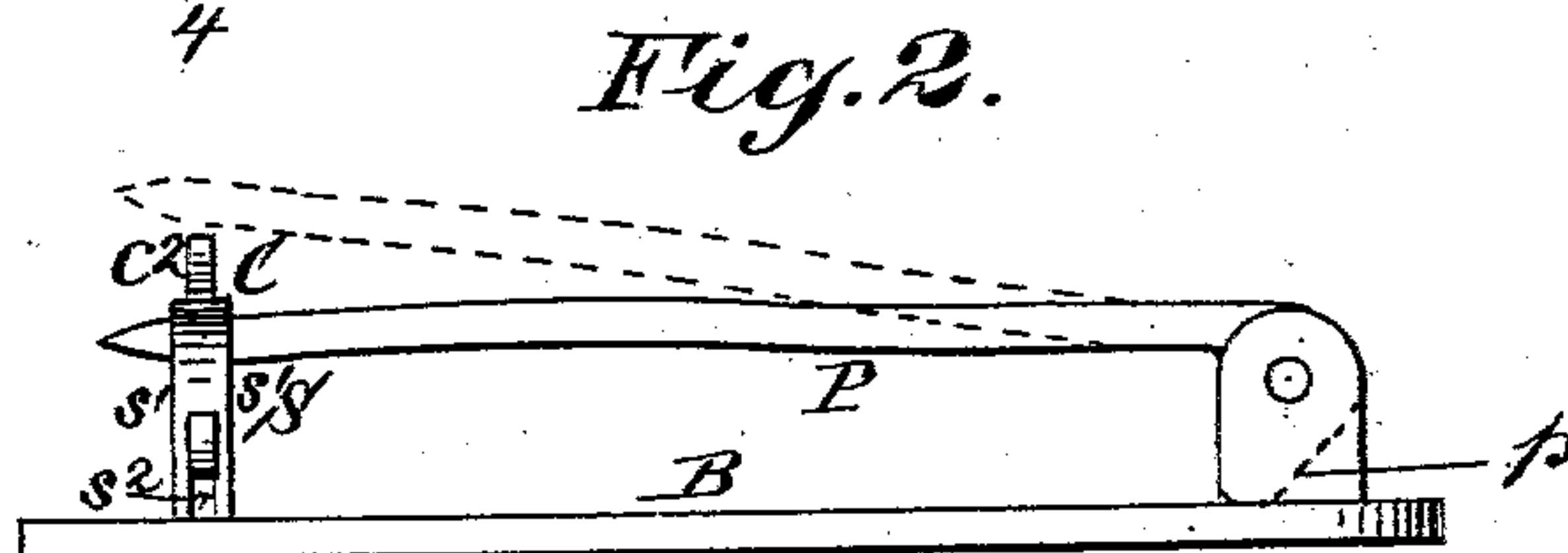
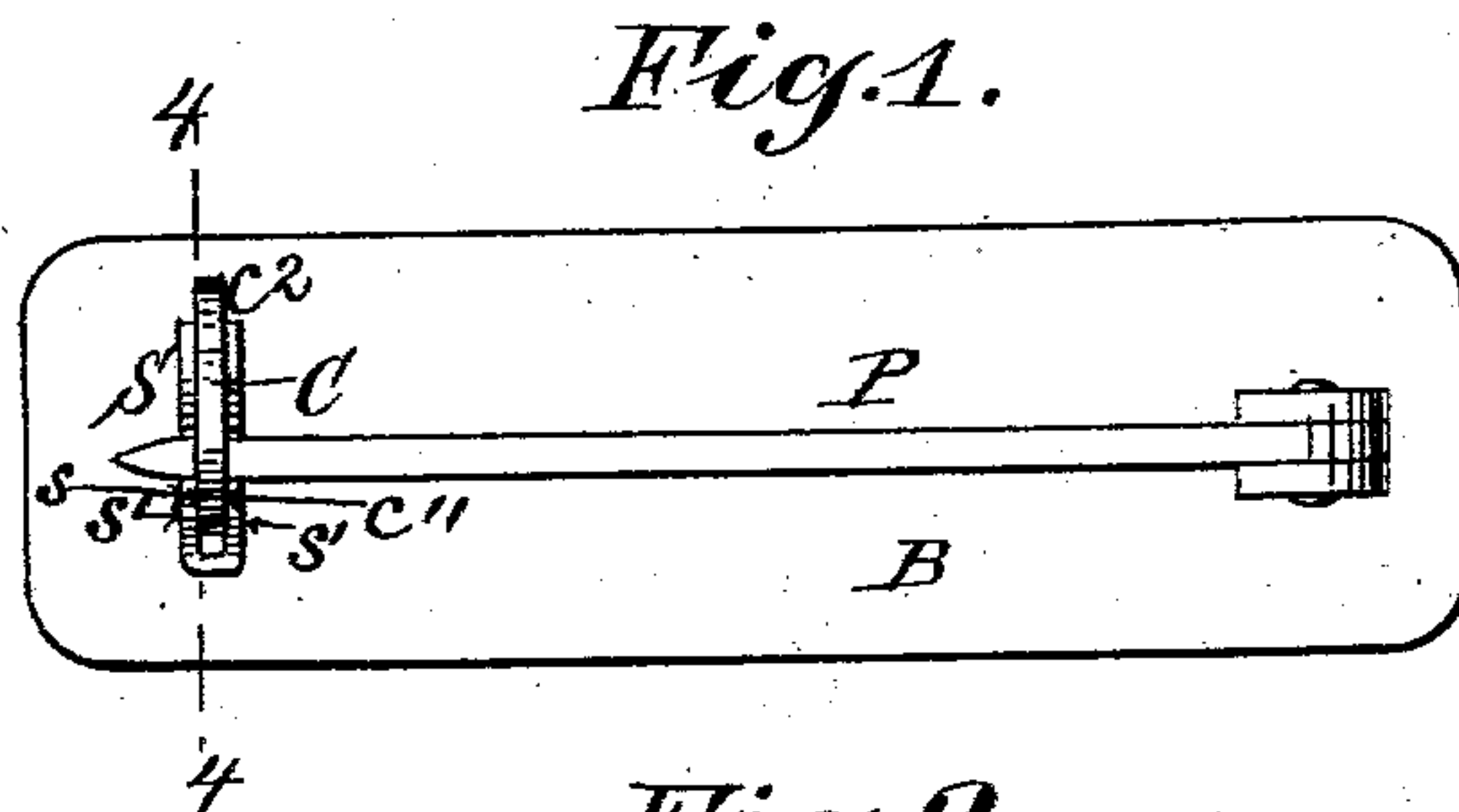


Fig. 3.

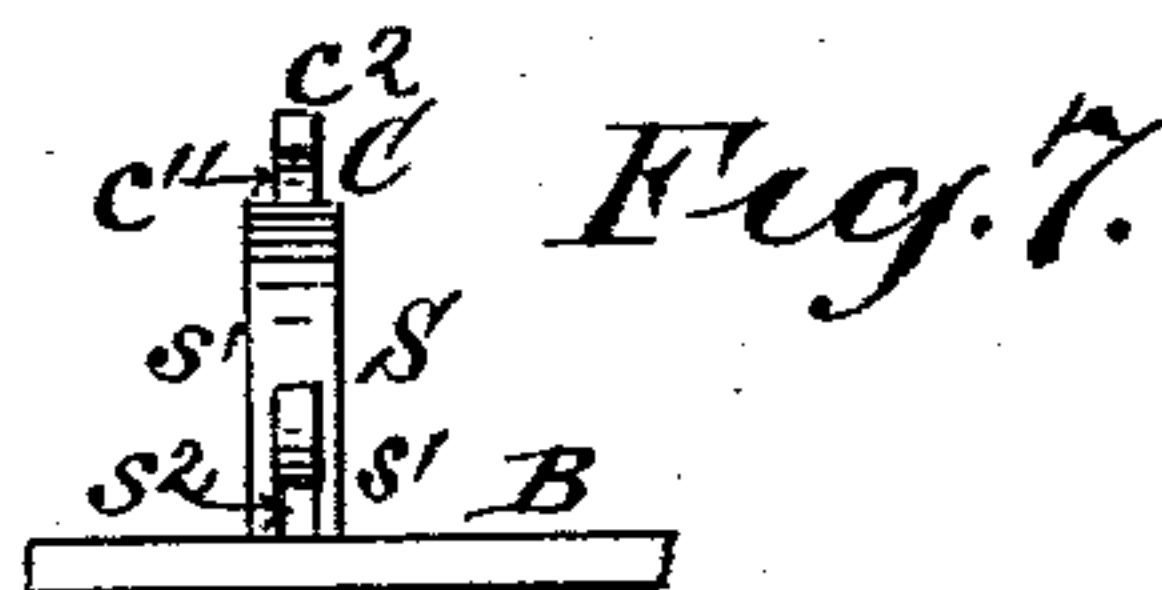
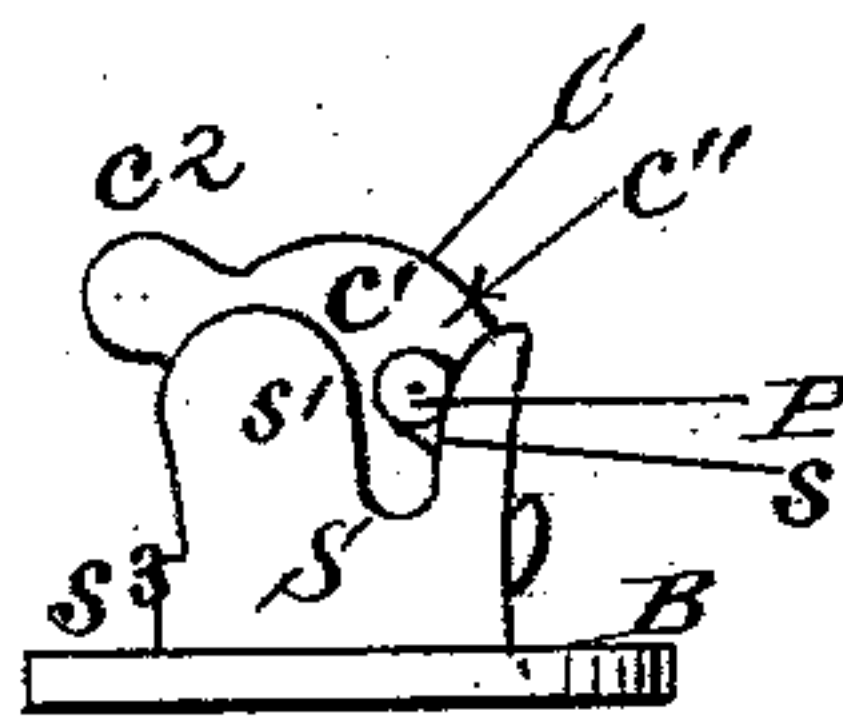


Fig. 4.

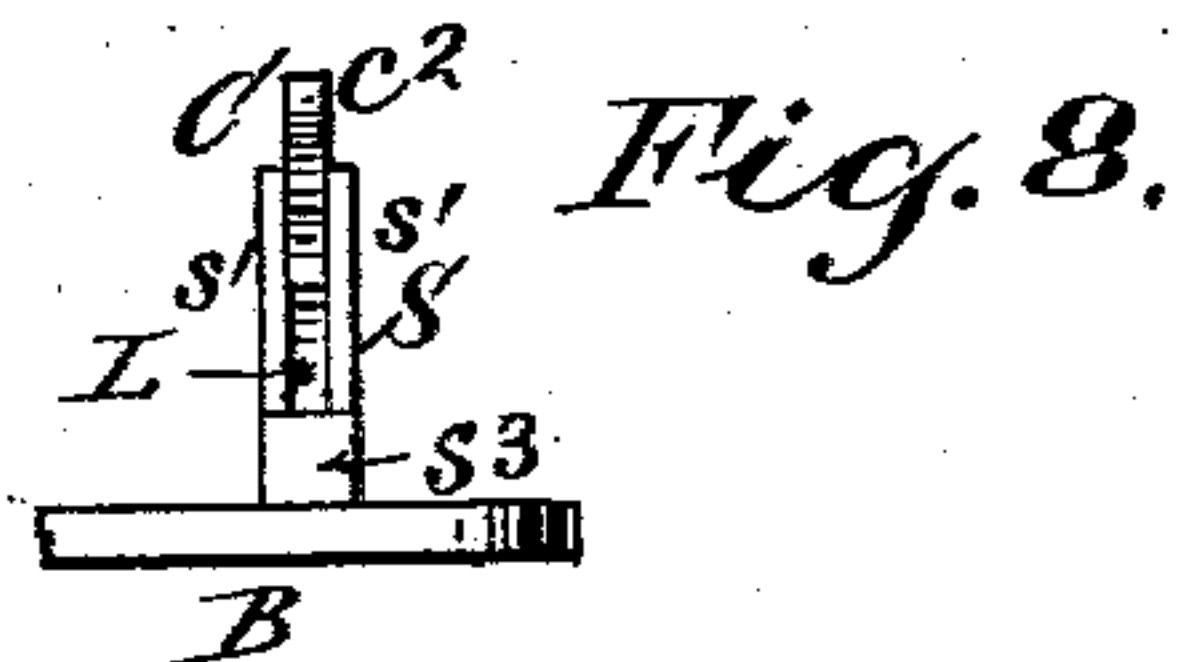
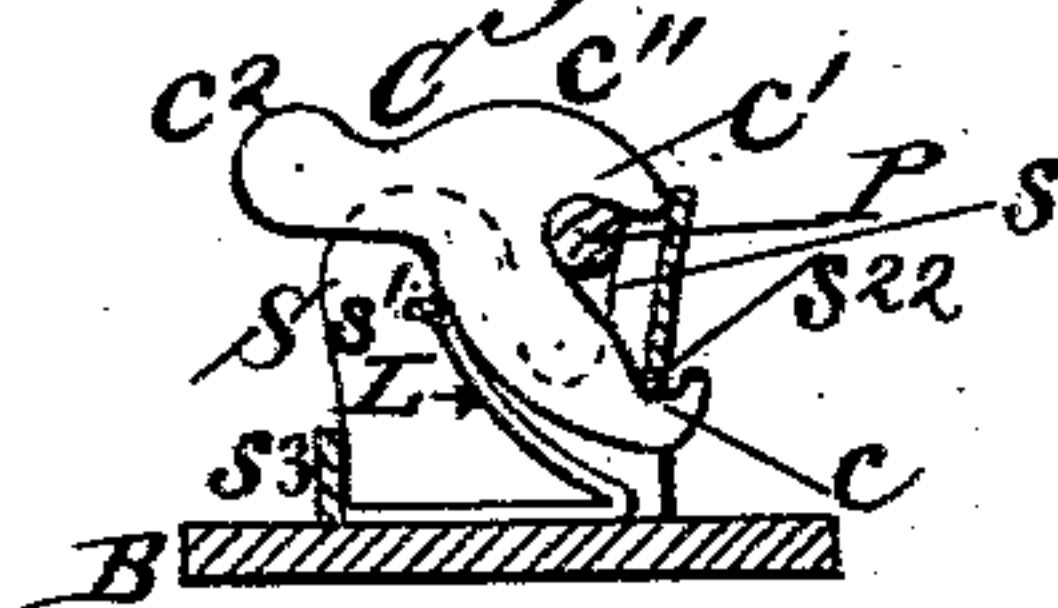


Fig. 9.

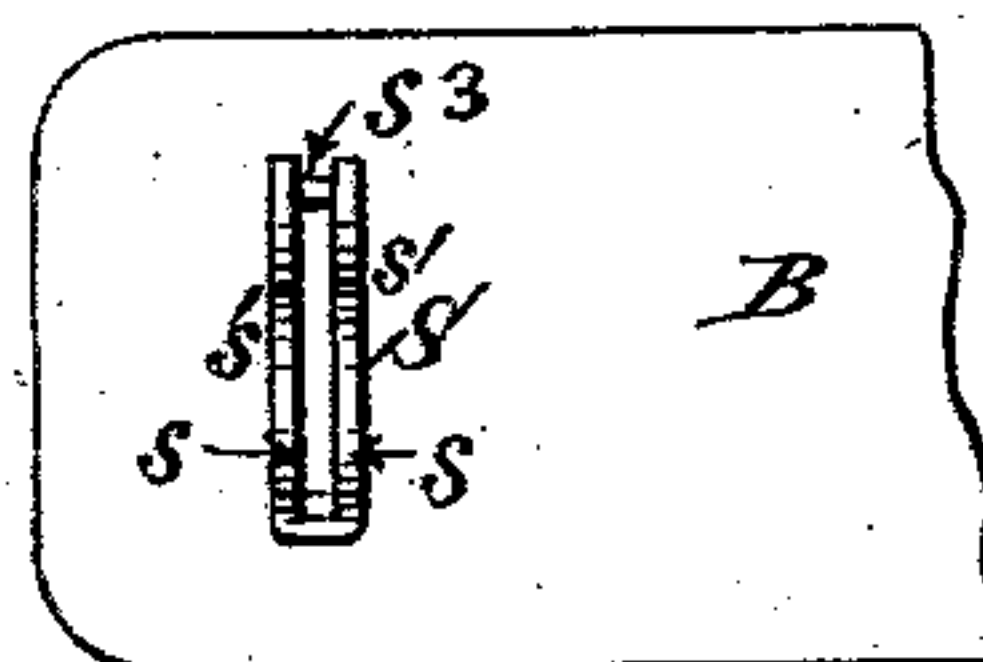


Fig. 5.

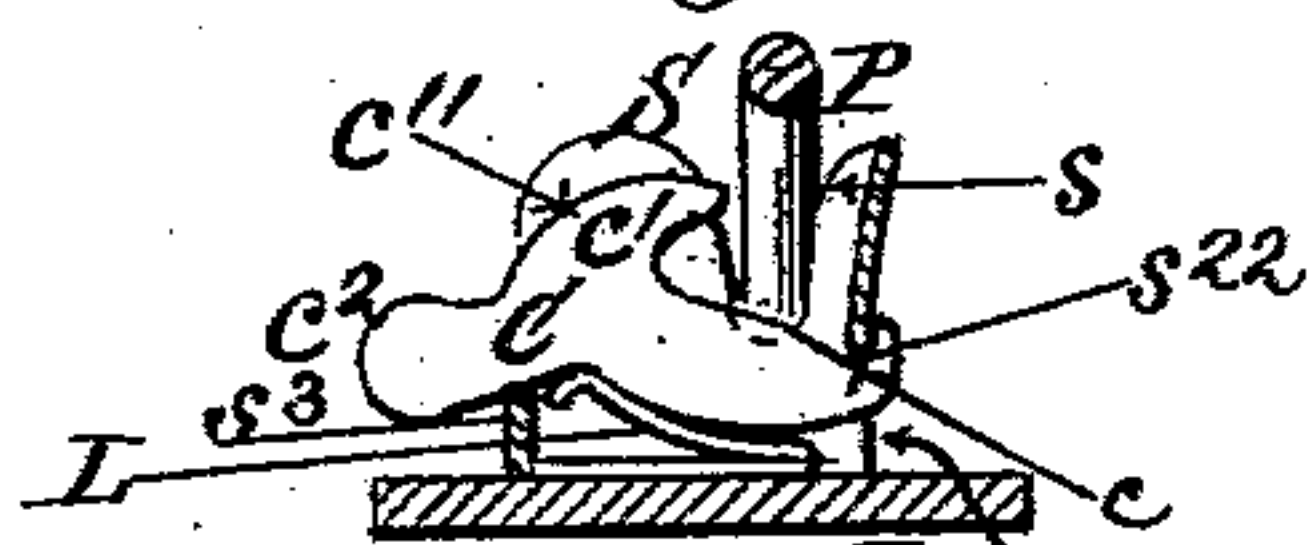
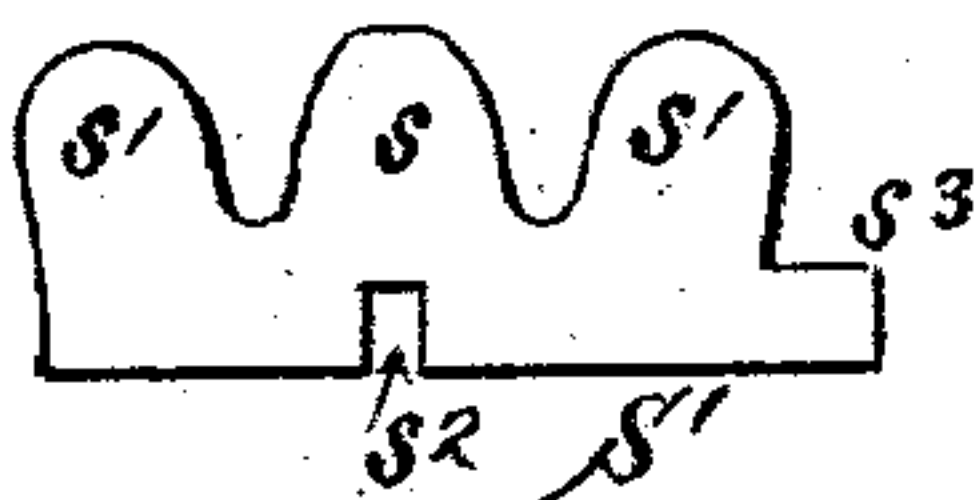


Fig. 6.



Witnesses:
D. W. Gardner.
Frank E. Roach

Inventor:
Charles J. Dieges
By his attorney
Geo. W. Smith

UNITED STATES PATENT OFFICE.

CHARLES JOSEPH DIEGES, OF NEW YORK, N. Y.

AUTOMATIC CATCH FOR BADGE-PINS, &c.

SPECIFICATION forming part of Letters Patent No. 743,835, dated November 10, 1903.

Application filed July 16, 1903. Serial No. 165,719. (No model.)

To all whom it may concern:

Be it known that I, CHARLES JOSEPH DIEGES, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Automatic Catches for Badge-Pins, &c., of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

The object of my invention is to afford a positive automatic catch for brooch, badge, and other similar pins used to secure such articles in place; and it consists, essentially, in the special construction and arrangement of parts hereinafter described and claimed specifically.

In the accompanying drawings, Figure 1 is a view of the back of a plate to which my improved pin-catch is applied; Fig. 2, an edge view of the plate. Fig. 3 is an end view of the plate, showing the pin secured. Fig. 4 is a transverse section upon plane of line 4-4, Fig. 1, showing the catch-lever and spring in elevation and the pin locked in position. Fig. 5 is a view similar to Fig. 4, showing the catch-lever depressed and the pin released. Fig. 6 is a view of the blank from which the socket-piece is formed. Figs. 7 and 8 are respectively views showing opposite edges of the socket-piece. Fig. 9 is a view of the under side of the plate and socket-piece with the catch removed.

B represents the backing or plate of a brooch, badge, or other similar article, to which is pivoted the usual pin P, formed with the toe *p*, which rests against the under side of the plate B when the pin is pressed inward, so that the elasticity of the metal of which the pin is composed may be utilized in releasing the pin P from the catch-lever C, as hereinafter set forth.

The socket-piece S is made integral with the plate B in any suitable manner. I prefer, however, to form it of sheet metal, stamped and bent into the desired shape and soldered or otherwise rigidly secured to the back of the plate B. Thus, as shown in Fig. 6 of the drawings herein, a blank S' may be stamped out with the curved central projections, cheek-pieces *s'*, slot *s*², and tongue *s*³, the central projection when the blank is folded consti-

tuting the double-edged guide *s*, as shown in the other figures, while the edges *s*²² of the slot *s*² becomes the fulcrum upon which the catch-lever C articulates. The tongues *s*³, being folded over at the rear of the socket-piece S, serves to retain the locking-spring L, which is thus held loosely in the lower part of the socket-piece below the catch-lever C, which it tends constantly to maintain in its normal position, as shown in Figs. 4 and 5.

The catch-lever C is formed with a notch *c* at or near its lower extremity, the edge of which notch engages with the fulcrum edge *s*²² of the socket-piece S. The catch-lever is also formed with the locking-hook *c'* and finger-bearing *c*². The upper surface *c''* of the hook *c'* is curved or inclined for the purpose of facilitating the depression of the catch-lever C when the pin P is forced down upon it.

The operation will be readily understood. The depression of the catch-lever against the resistance of the spring L by pressure applied to the pin P not only throws back the hook *c'*, but also bends the pin by reason of the engagement of its toe *p* with the rear side of the plate B. When the pin P is depressed below the point of the hook *c'*, the latter is forced upward and forward by the locking-spring L securing the pin against the guide *s*. When it is desired to release the pin P, the catch-lever C is depressed by means of the finger-bearing *c*². As soon as the point of the hook *c'* clears the pin P, the latter owing to its resilience springs outward clear of the catch, and upon the release of the finger-bearing *c*² the locking-spring throws the catch-lever C back into its normal position. It is thus apparent that the articulation of the catch-lever is effected with the least possible resistance and the minimum of wear, since the engagement of the notched end *c* of the catch-lever with the fulcrum *s*²² may be likened to a knife-edge contact, while the spring is expanded during the normal position of the catch-lever, and hence retains its resilience.

The use of the locking-spring L in connection with the catch-lever C is a novel and distinguishing feature of my structure as compared with the prior state of the art and enables me to dispense with a pivot for said catch-lever C and to substitute for such pivot the knife-edge contact herein described. This

latter feature is of especial importance in the case of very small catches in which the parts are necessarily minute and delicate, it being understood that the accompanying drawings
 5 show the device upon an enlarged scale and that in practice it is frequently necessary to make the whole catch of no greater dimensions than one-eighth of an inch in any direction. Hence the elimination of the pivot is
 10 of practical importance in a commercial sense, since the initial cost of manufacture is not only reduced, but all danger of the catch being rendered inoperative and useless by reason of the looseness or loss of the pivot is
 15 avoided, as well as the tightness and stiffness in action which are apt to arise between the parts by the binding action of the pivot. In my device the catch-lever and its spring rest loosely between the inner side walls of the
 20 socket-piece and have but slight frictional contact therewith.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with the plate and the
 25 pin pivotally connected thereto, of a socket-piece integral with said plate and formed with a fulcrum edge, a catch-lever supported in said socket-piece and formed with a notched bearing for engagement with the said fulcrum
 30 edge, and a spring in said socket-piece arranged to hold said catch-lever in its normal position, substantially as set forth.

2. The combination with the plate and the pin pivotally connected thereto, of a socket-

piece integral with said plate and formed with
 knife-edge fulcrum, a catch-lever supported
 in said socket-piece and formed with a notched
 bearing for engagement with said knife-edge
 fulcrum, and a spring in said socket-piece ar-
 40 ranged to hold said catch-lever in its normal
 position, for the purpose described.

3. The combination with the plate and the pin pivotally connected therewith of a socket-
 piece made of a single piece of sheet metal
 cut and bent into the desired shape and se-
 45 cured rigidly to the said plate, a catch-lever
 engaging with a fulcrum edge formed on said
 socket-piece, and a spring in said socket-piece
 arranged to hold said catch-lever in its nor-
 mal position for the purpose set forth. 50

4. The combination with the plate B, and the pin P, pivotally connected therewith, of the socket-piece C, formed with the fulcrum
 edge s^{22} , the catch-lever C, formed with the
 notch c , for engaging with said fulcrum edge
 55 s^{22} , and the locking-spring L, for the purpose
 described.

5. The combination with the plate B, and the pin P, pivotally connected therewith, of the socket-piece C, formed with the fulcrum
 60 edge s^{22} , and guide s , the catch-lever C, formed
 with the notch c , hook c' , and finger-bearing
 c^2 , and the locking-spring L, for the purpose
 set forth.

CHARLES JOSEPH DIEGES.

Witnesses:

D. W. GARDNER,
 FRANK E. ROACH.