

(No Model.)

B. J. ANGELL.
DETACHABLE BUTTON.

No. 299,099.

Patented May 27, 1884.

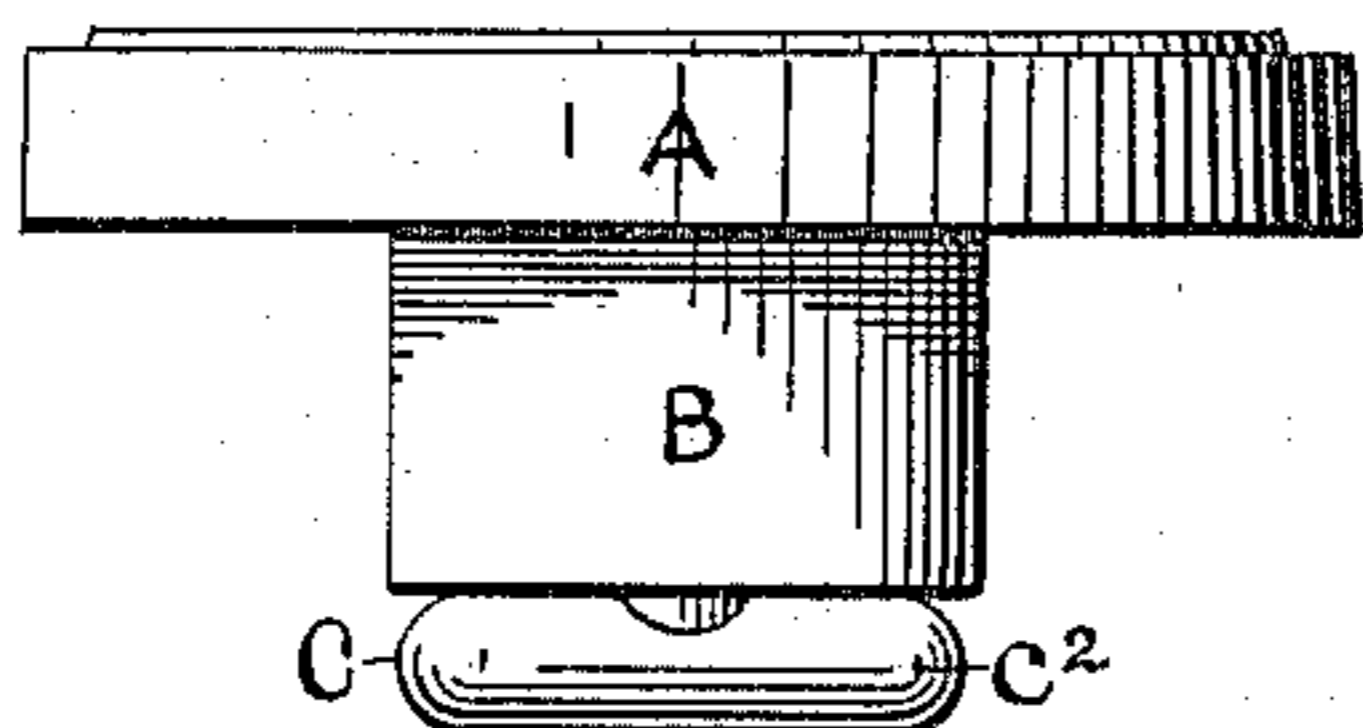


FIG. 1.

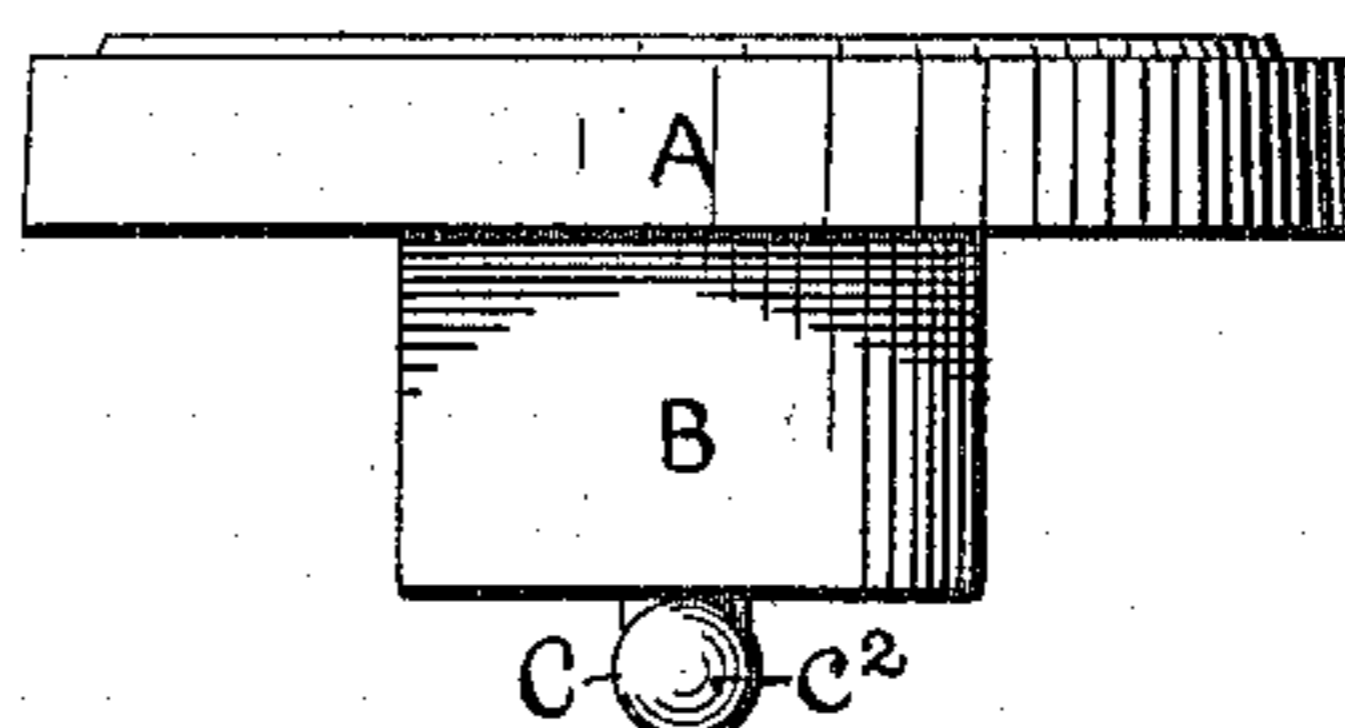


FIG. 2.

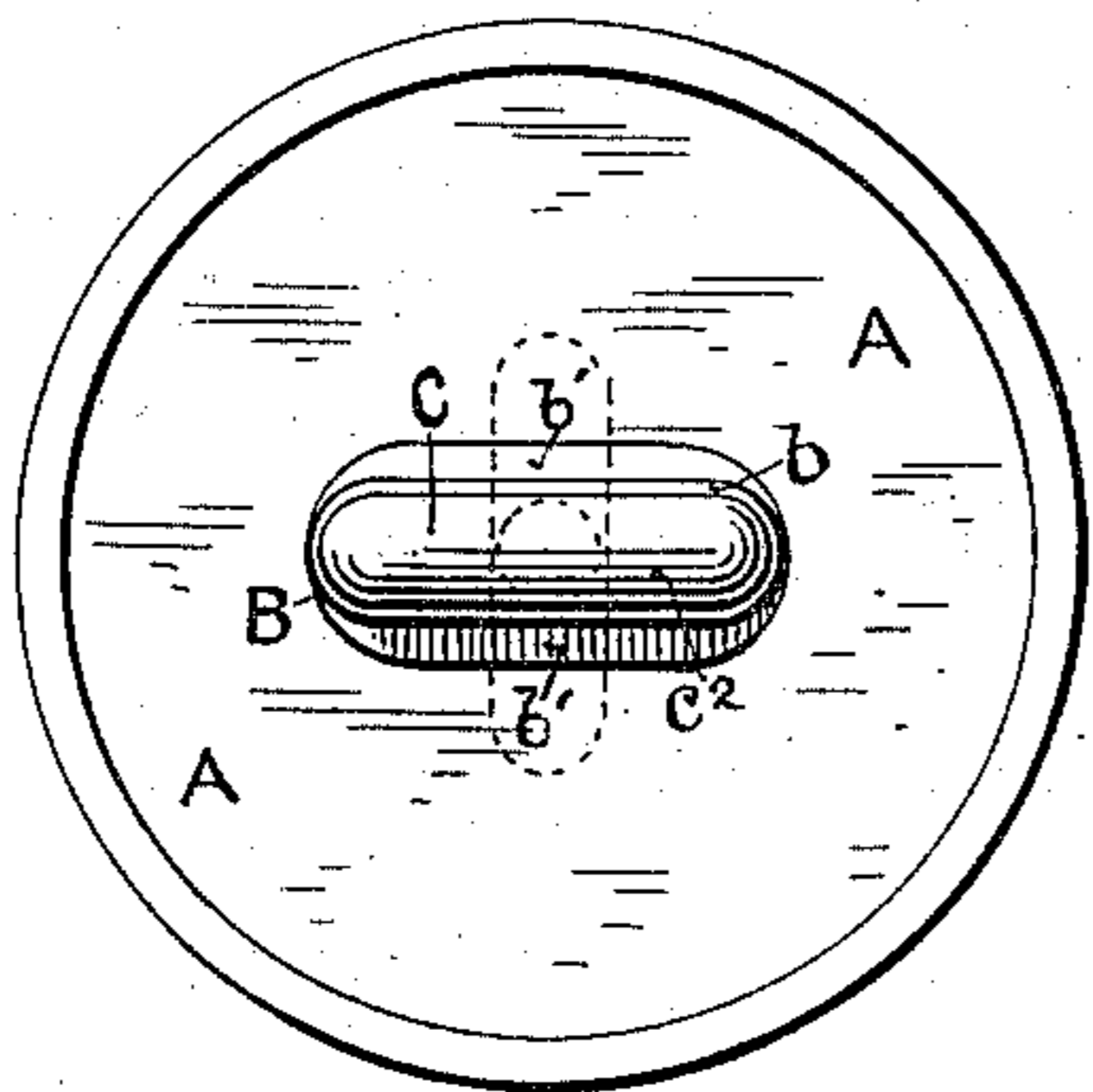


FIG. 3.

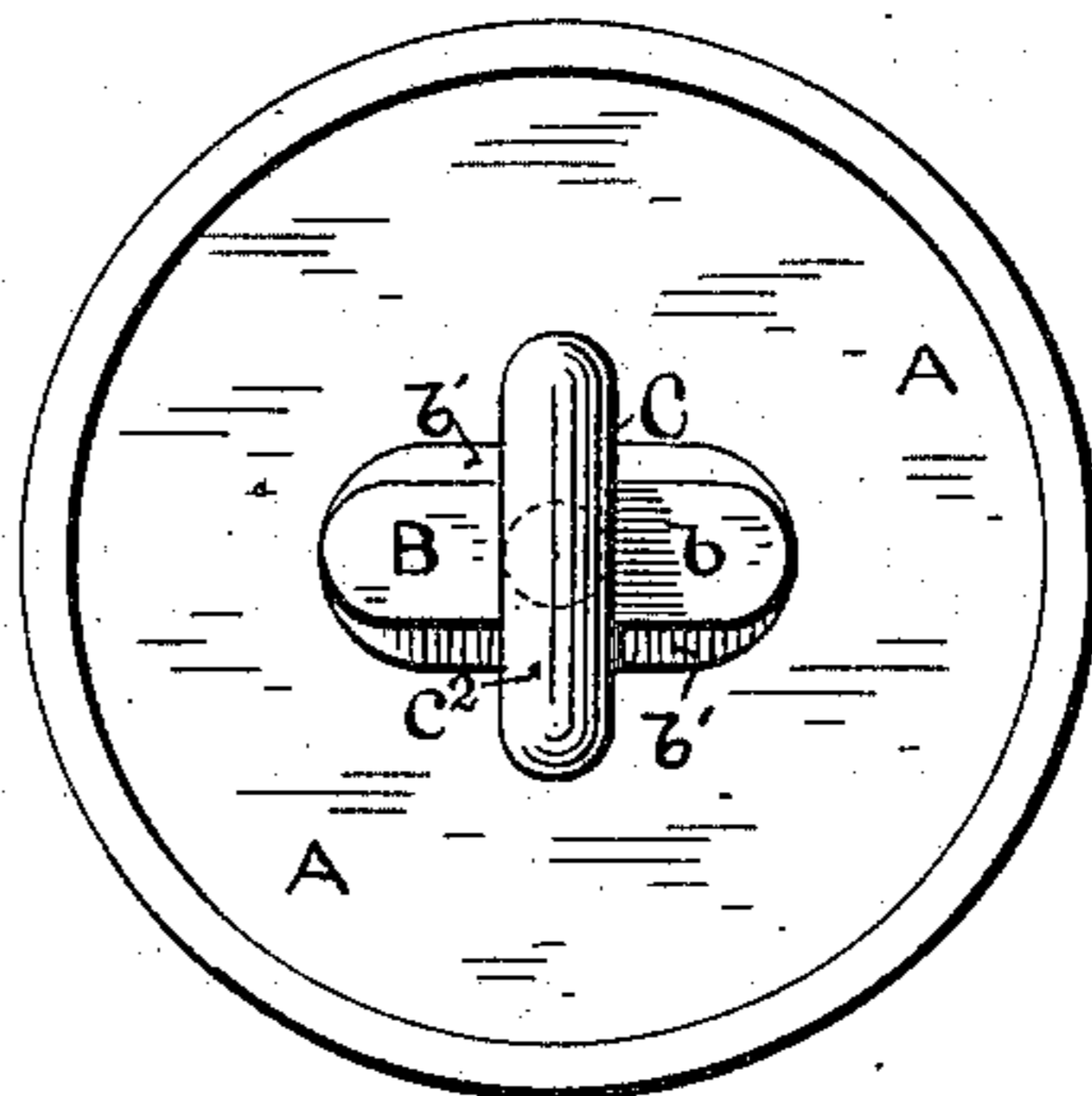


FIG. 4.

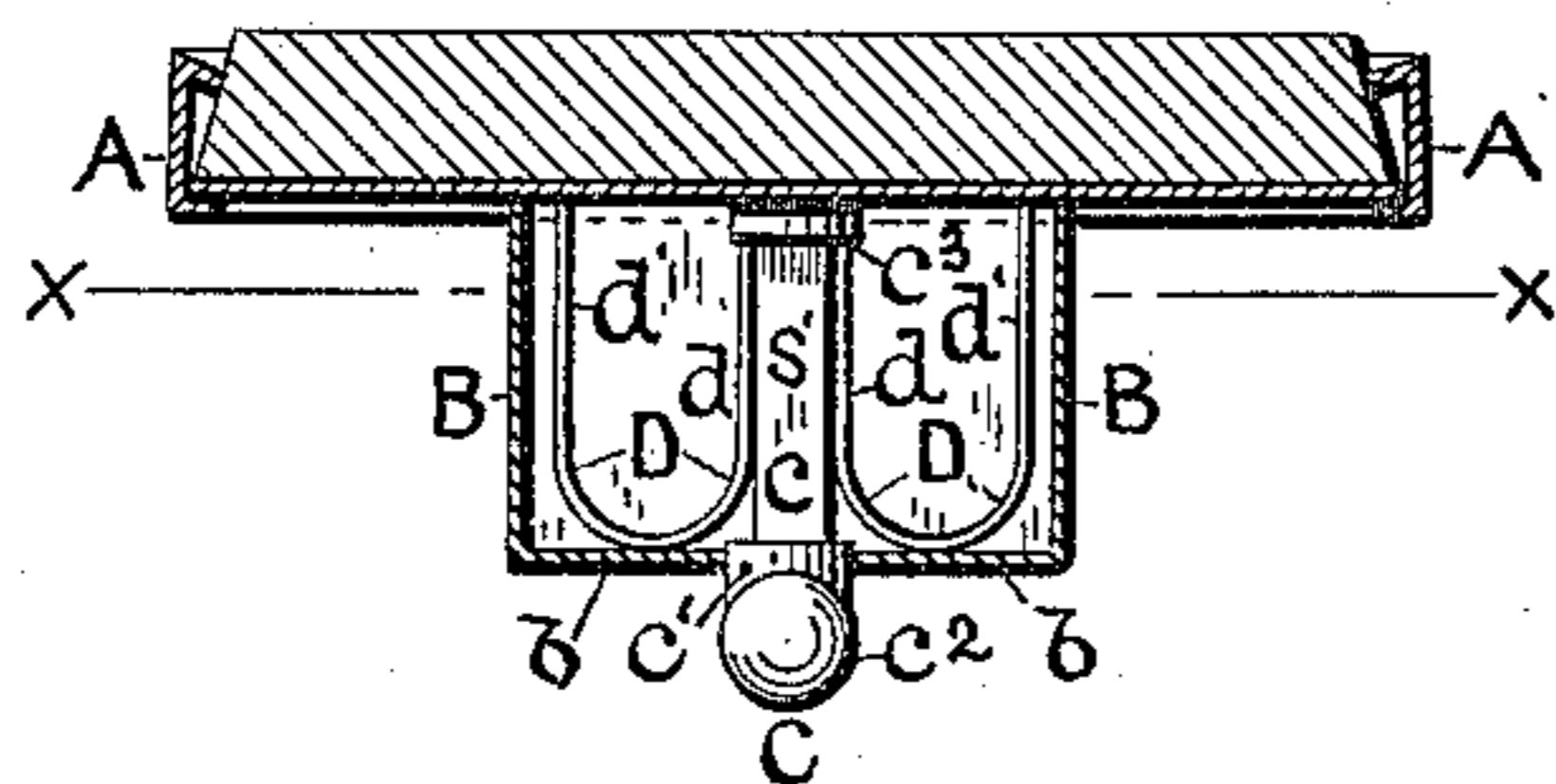


FIG. 5.

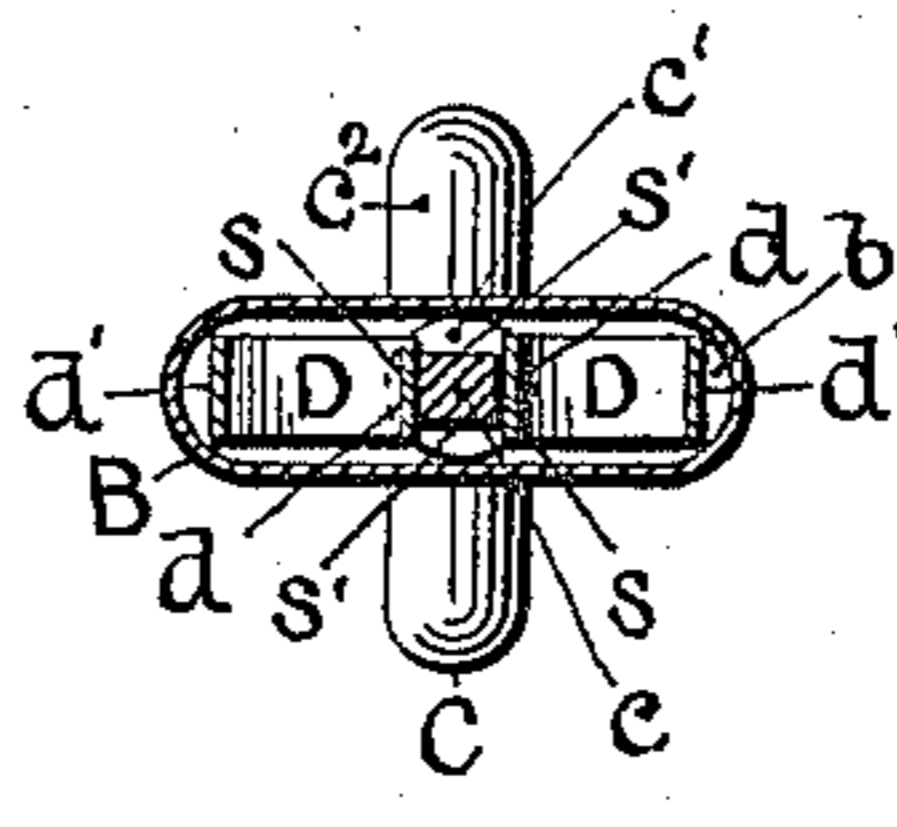


FIG. 6.

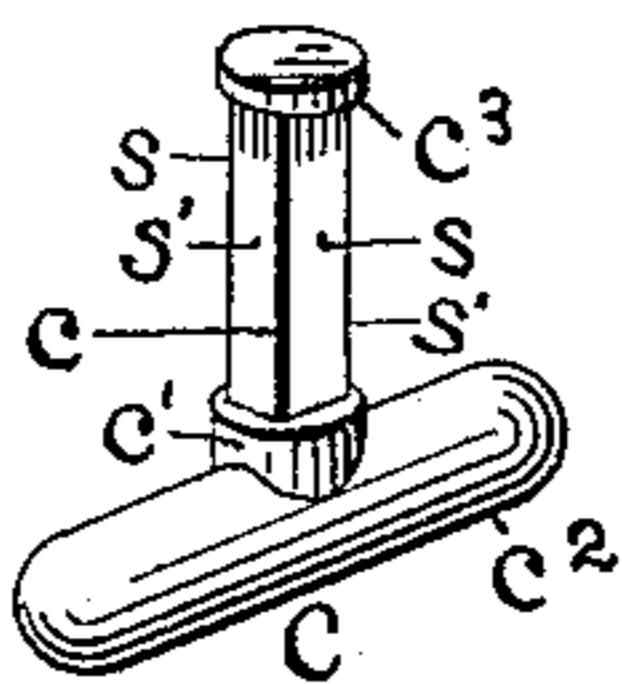


FIG. 7.

WITNESSES.

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BENJAMIN J. ANGELL, OF ATTLEBOROUGH, MASSACHUSETTS.

DETACHABLE BUTTON.

SPECIFICATION forming part of Letters Patent No. 299,099, dated May 27, 1884.

Application filed February 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN J. ANGELL, of Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Detachable Buttons; and I do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a description thereof.

10 This invention consists in a detachable button having a hollow stem rigidly secured to the button-head, a T-shape member having cam-surfaces formed on its shank portion, and mounted to revolve axially in said hollow stem and with relation to the button-head, and springs located within and inclosed by the stem and engaging the shank of the T-shape member to hold the head thereof in position.

20 It also consists in providing the inner end of the T-shape member with a shoulder, and in arranging the springs to engage said shoulder, and thereby retain said member in the stem, as will hereinafter appear.

25 Referring to the drawings, Figure 1 represents a side view of the button with the head of the T-shape member in position to allow the button to be applied. Fig. 2 shows the same with the head of the T-shape member in position to retain the button in place. Figs. 30 3 and 4 represent rear views of the button, with the head of the T-shape member in the positions shown in Figs. 1 and 2, respectively. Fig. 5 represents a vertical section of the button, with the T-shape member in the position shown in Fig. 2. Fig. 6 shows a transverse section on line $x x$ of Fig. 5. Fig. 7 shows the T-shape member in perspective.

35 A is the button-head, which may be of any preferred style or construction. To the back of this head a hollow stem, B, is rigidly secured by solder or other means. As shown in Fig. 4, the stem B is oblong in plan, and has its free end b closed. The end b is perforated to form a bearing for the cylindrical portion c' of the shank c of the T-shape member C, which is mounted to revolve axially in said stem and with relation to the button-head. Located within the stem B are two U-shape springs, D, the inner arms, d , of which engage 45 the shank of the member C, and the outer arms,

d' , of which bear against the walls of the stem, as shown in Fig. 6. In order that the head c^2 of the member C may be retained in a position to hold the button in place, and also in order that it may be retained in a position to allow 55 the button to be applied, the shank c is furnished with cam-surfaces or flattened portions $s s$ and $s' s'$, as shown in Figs. 6 and 7, against which the inner arms, d , of the springs bear, the said arms engaging the surfaces $s s$ when 60 the head c^2 of the member C is in the position shown in Figs. 2 and 4, and engaging the surfaces $s' s'$ when said head c^2 is in the position shown in Figs. 1 and 3. If desired, however, the flat surfaces $s' s'$ may be dispensed with. 65

As shown in Figs. 5 and 7, the inner end of the shank c is provided with a shoulder, c^3 , and, as shown in Fig. 5, the ends of the arms d of the springs D take bearing against said shoulder, the ends of the arm d' bear against 70 the back-plate of the button-head, and the central portions or bends of said springs bear upon the end b of the stem B. By this arrangement the member C is held in the stem and is free to be turned axially with relation 75 to the button-head. The member C may be held in the stem B, however, by springs D of other forms than U shape—as, for instance, by springs of ω form, as will be readily understood. 80

In assembling the parts of the button, the shank of the member C is passed through the perforation in the end b of the stem B, the springs are forced into their positions within the stem, so that their inner ends are under 85 the shoulder c^3 , and the stem is soldered or otherwise rigidly secured to the button-head. Preferably, the inner end of the stem is provided with flanges b' , as shown in Figs. 3 and 4, to afford a broader surface for soldering the 90 stem to the button-head.

Although I prefer to retain the member C in the stem B by causing the inner ends of the springs D to engage a shoulder, c^3 , on the shank of said member, yet the member may be re- 95 tained in the stem, so as to revolve therein and with relation to the button-head by other suitable means—as, for instance, by a bridge-piece forking the shank c and engaging the shoulder c^3 , and soldered to the inner walls of 100

the stem, the ends of the springs being shorter than shown.

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

5 1. A detachable button composed of a head, a hollow stem, B, rigidly secured thereto, a T-shape member mounted to revolve axially in said stem and with relation to the button-head, and having cam-surfaces on its shank
10 portion, as described, and springs located within the hollow stem and engaging the shank of the T-shape member to hold the head of said member in a position to lock the button in place, substantially as set forth.

2. The combination of the stem B, the T- 15 shape member C, having cam-surfaces upon its shank portion, as described, and provided with a shoulder, c^3 , and springs D, which engage the shank of the stem and the shoulder thereon and hold the T-shape member in the 20 stem, substantially as set forth.

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Witnesses:

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HENRY J. STAPELTON.