

L. A. PICHON & C. M. V. ALLENOU.
COLLAR STUD OR SIMILAR FASTENING.
APPLICATION FILED MAR. 24, 1909.

960,581.

Patented June 7, 1910.
3 SHEETS—SHEET 1.

Fig. 1.

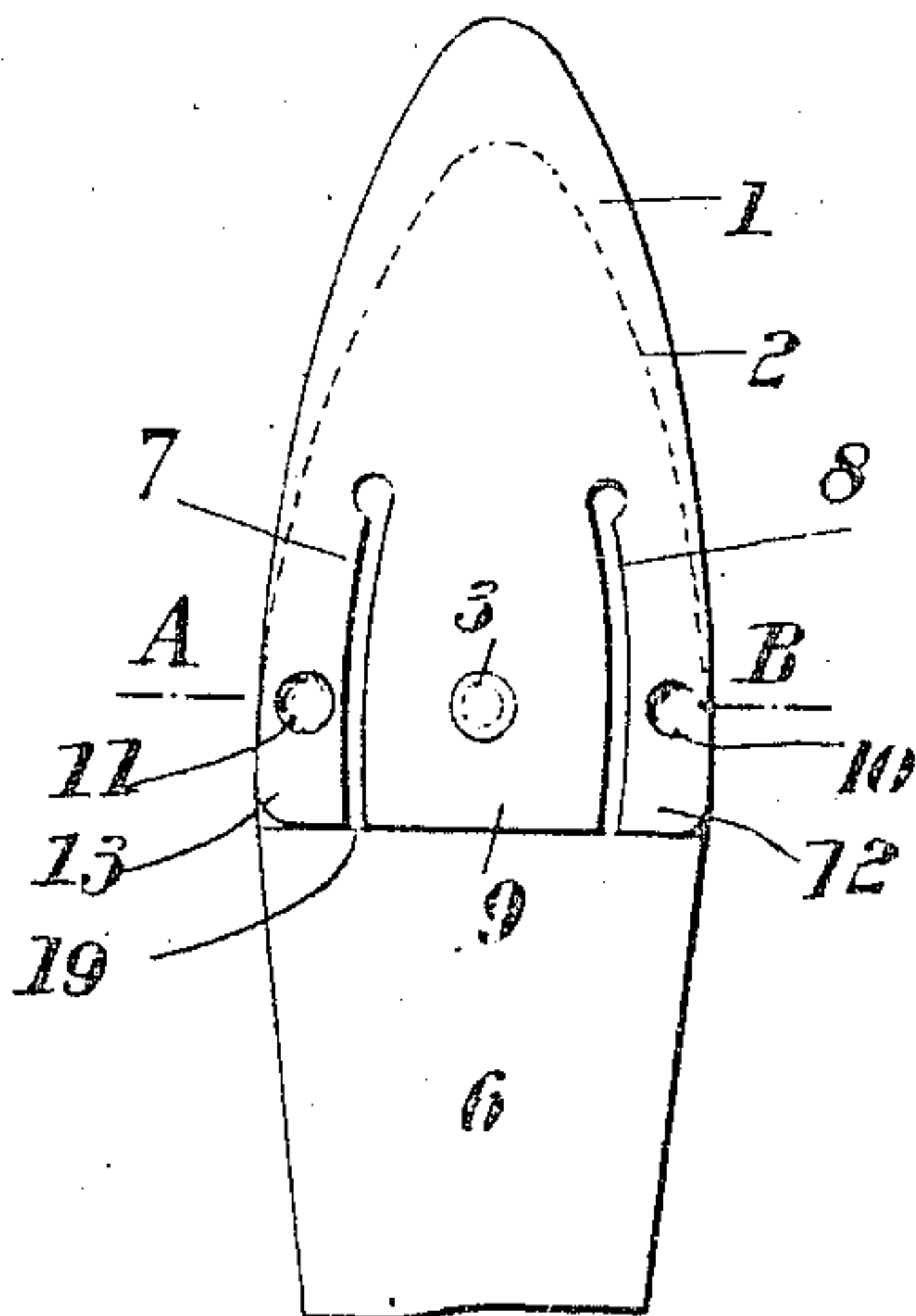


Fig. 3.

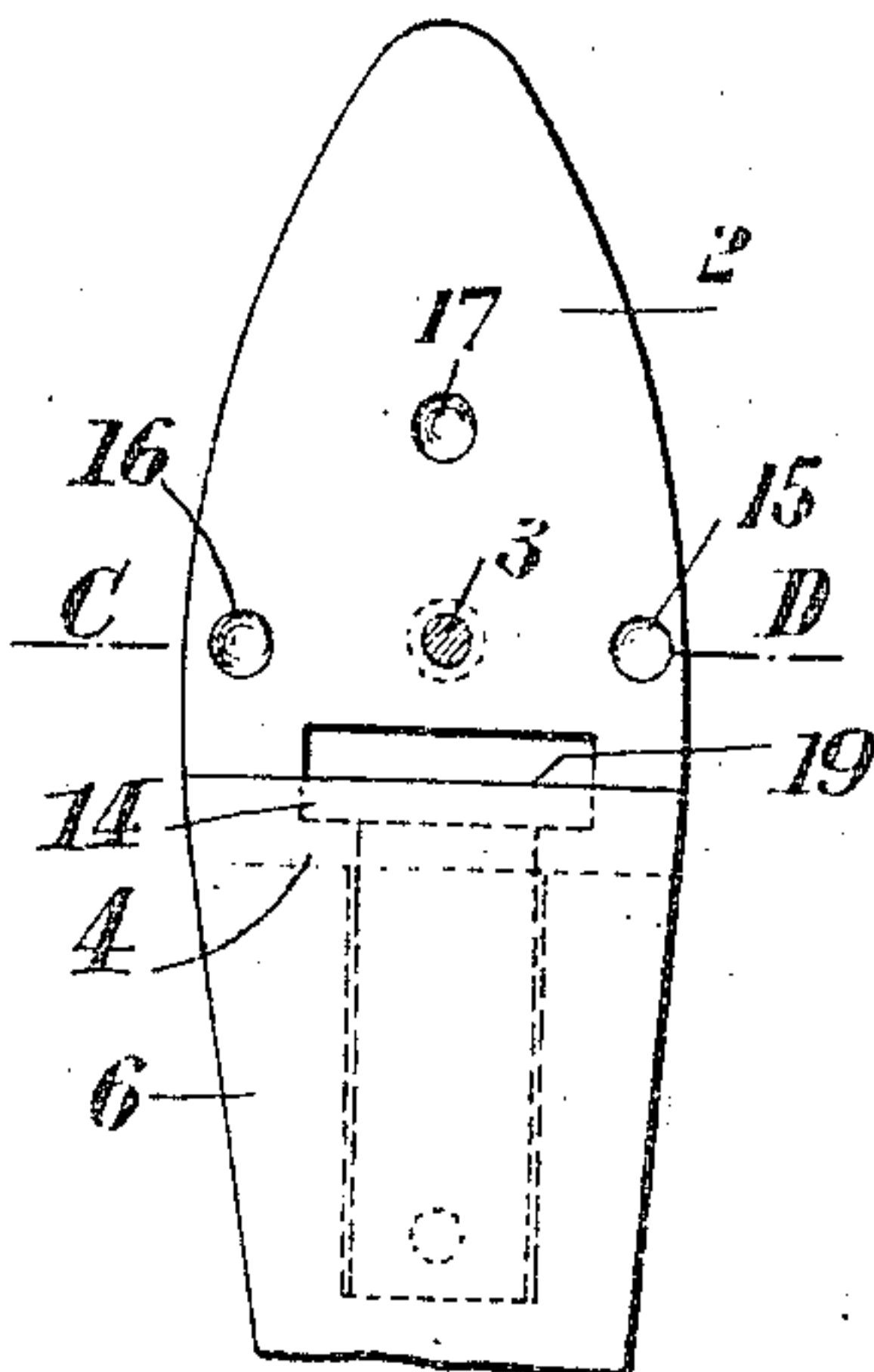


Fig. 5.

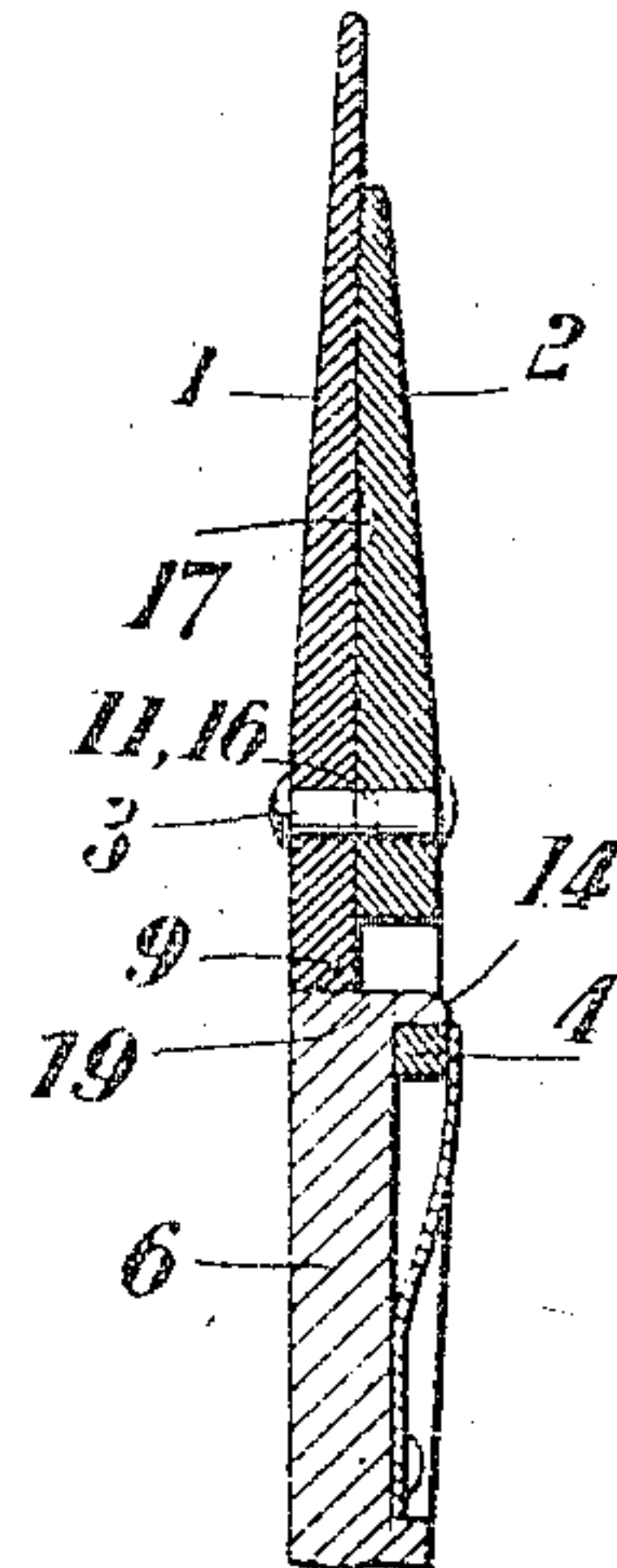


Fig. 6.

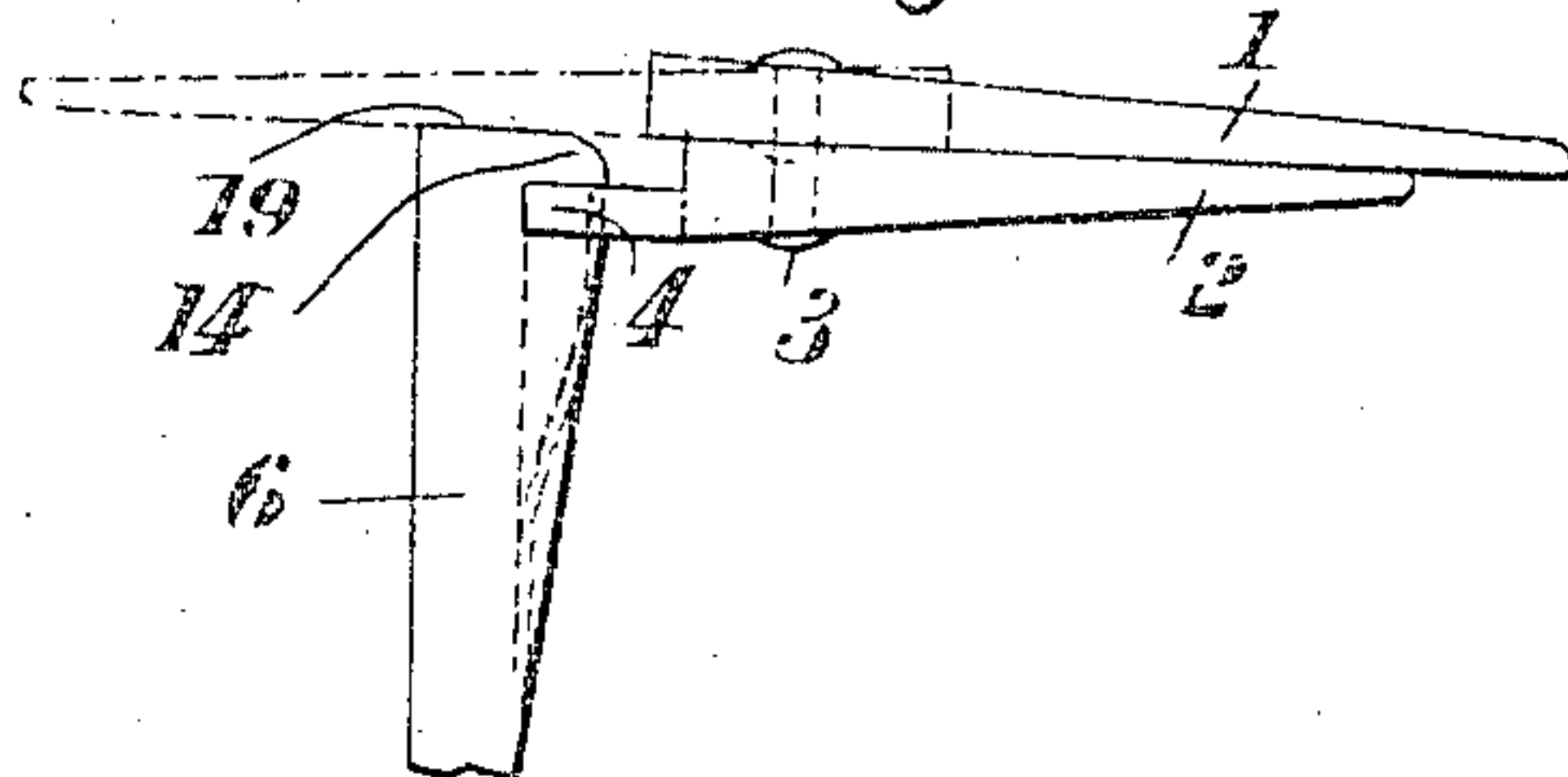


Fig. 2.

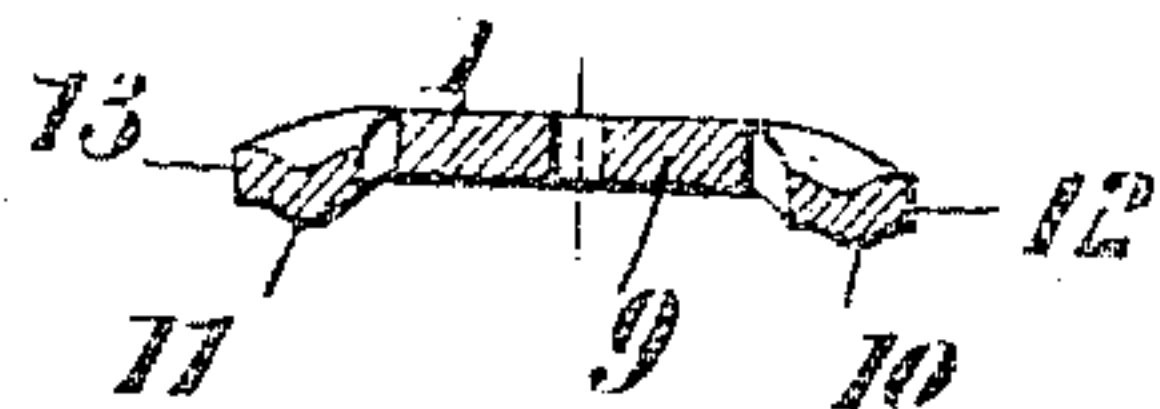


Fig. 4.



Fig. 8.

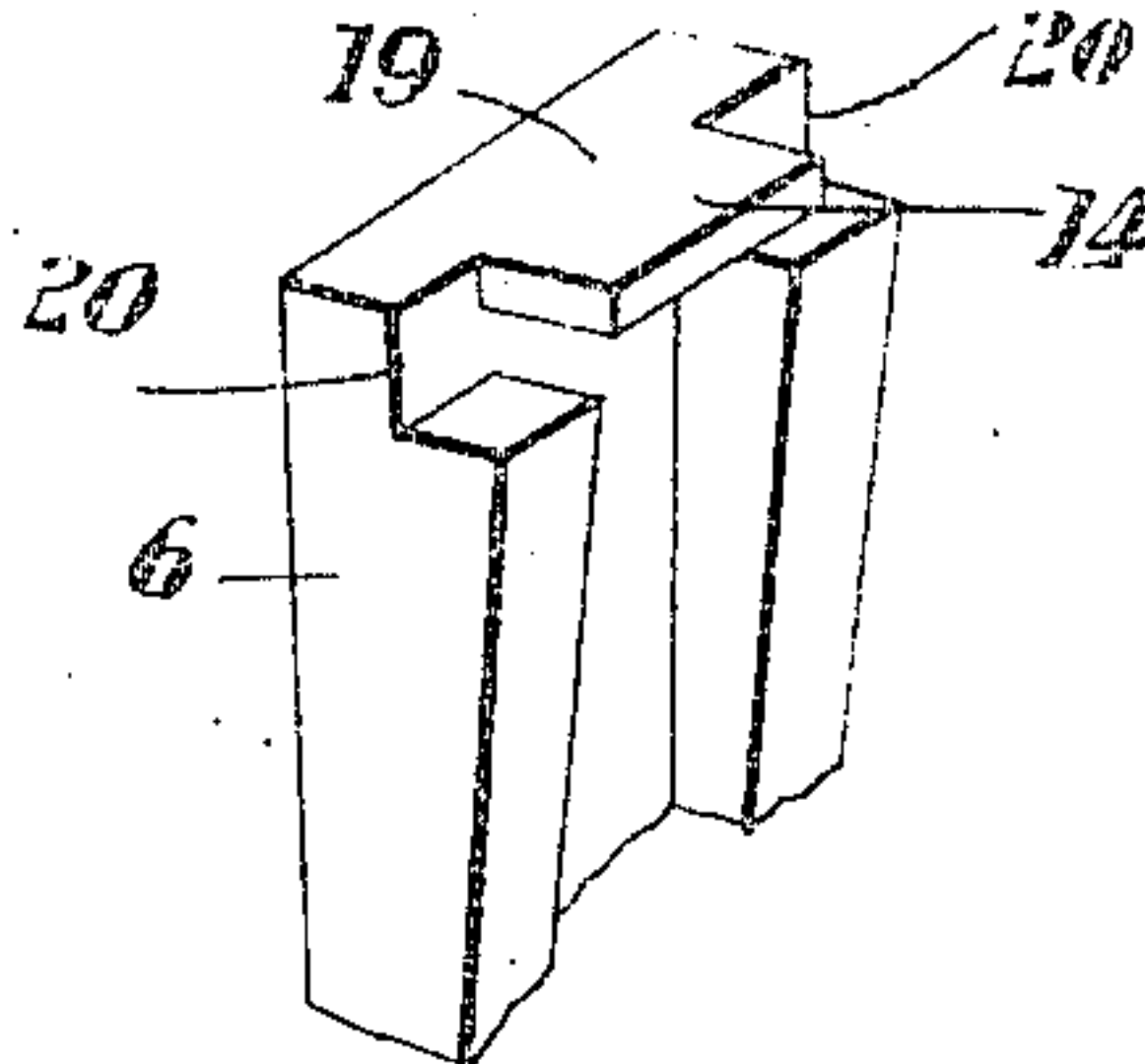
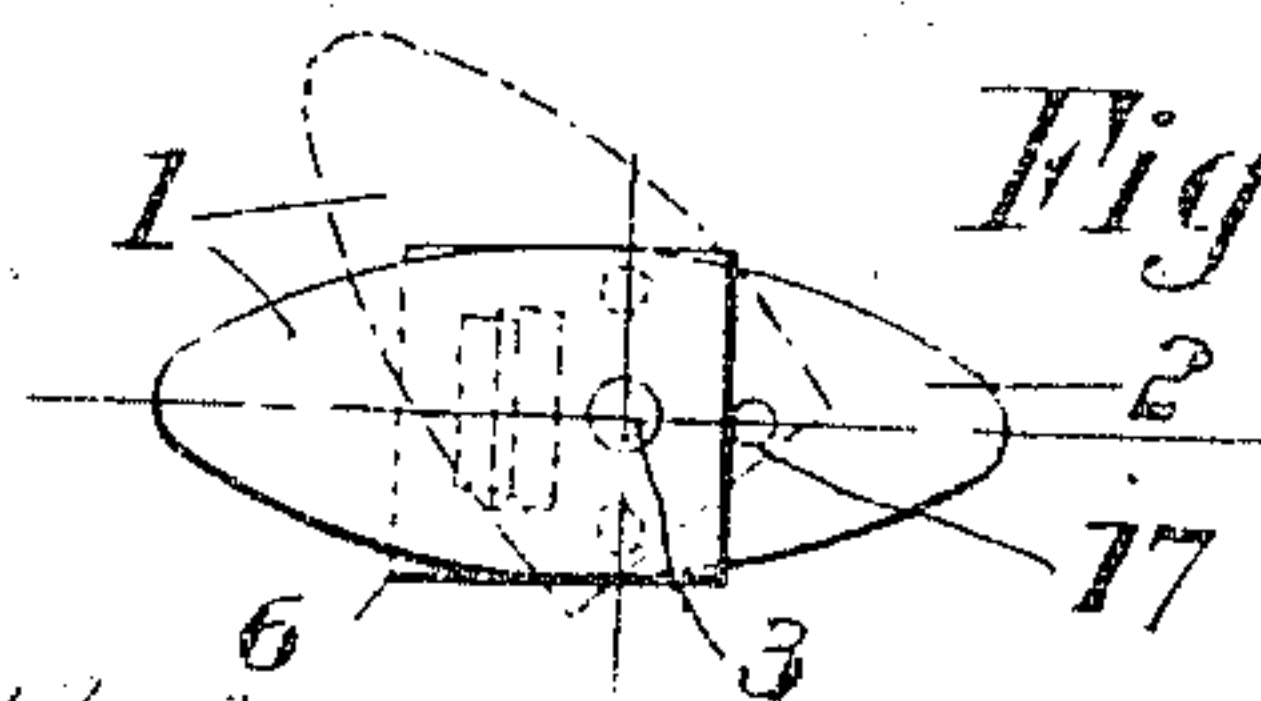


Fig. 7.



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Fig. 9.

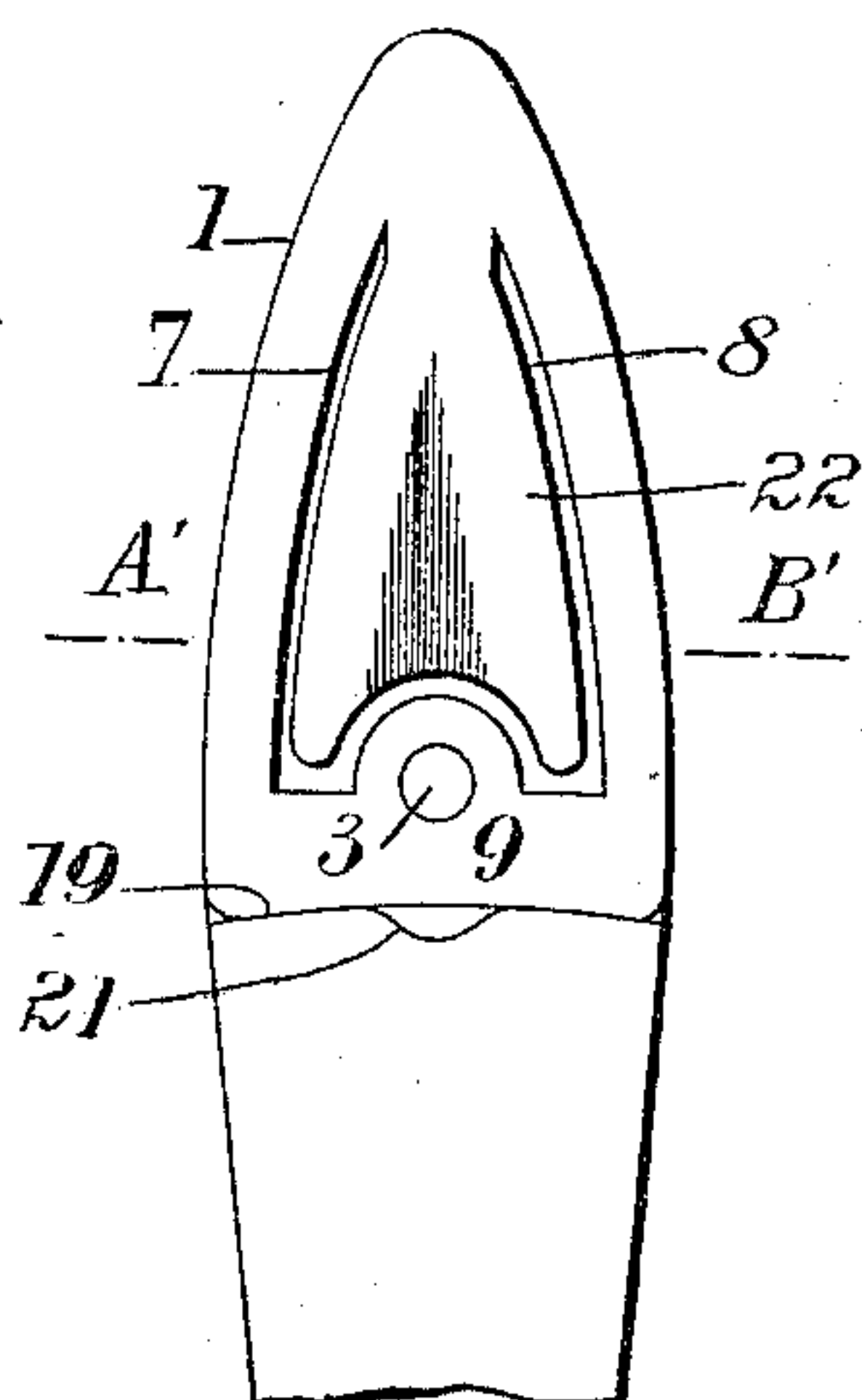


Fig. 11.

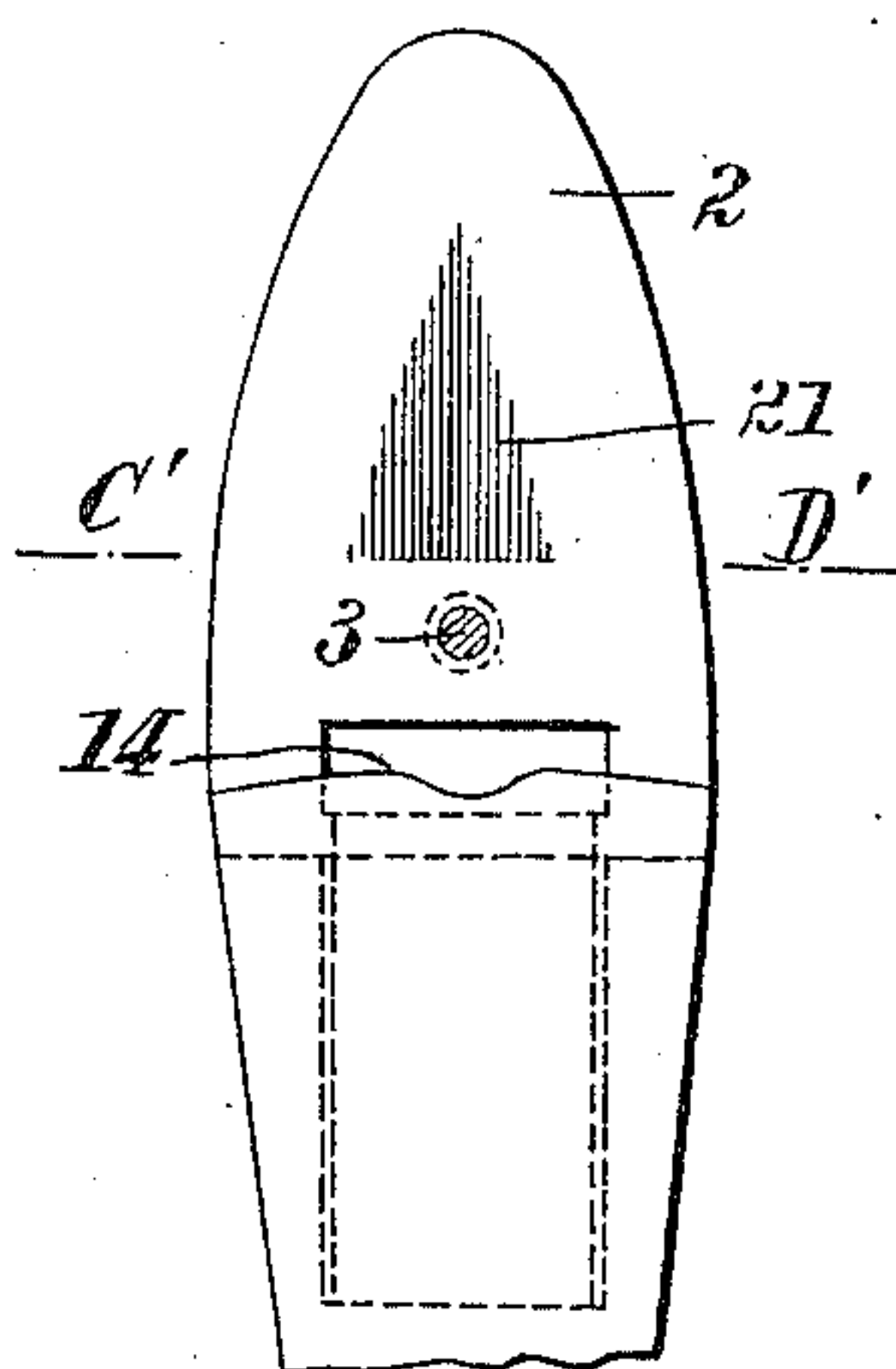


Fig. 13.

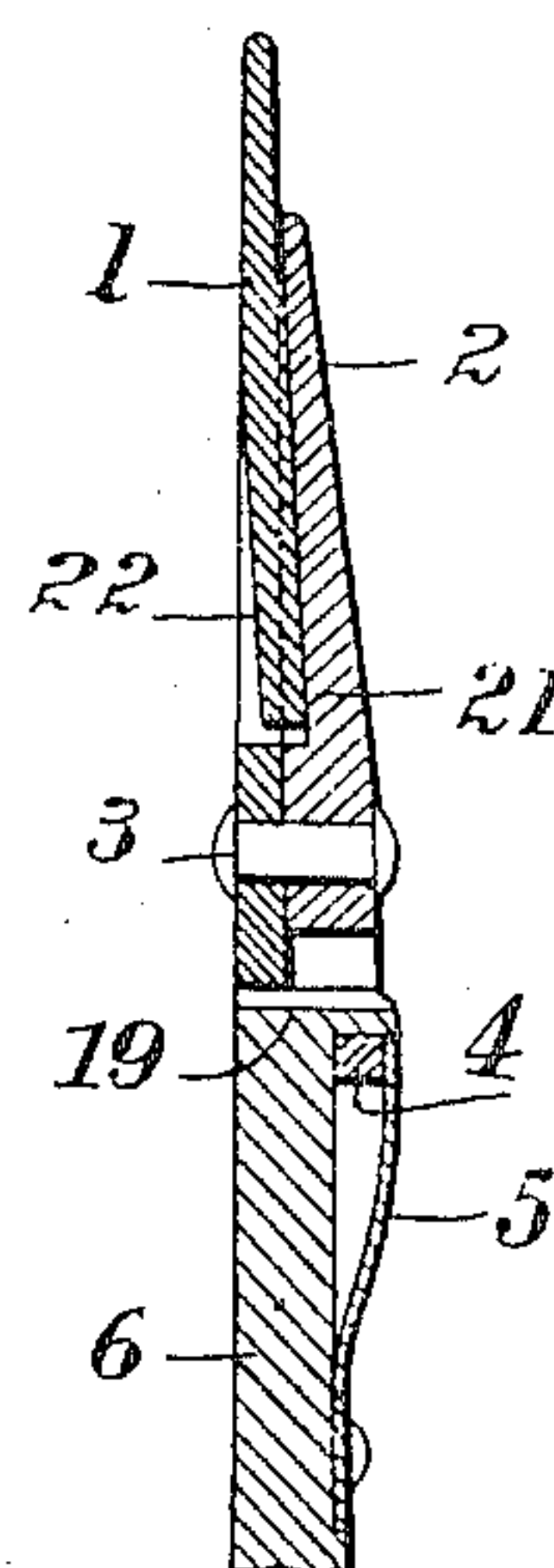


Fig. 10.

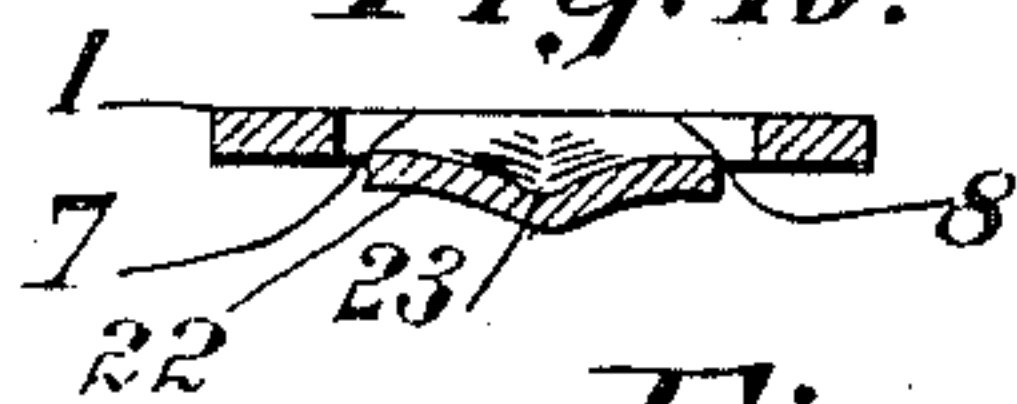


Fig. 12.



Fig. 14.

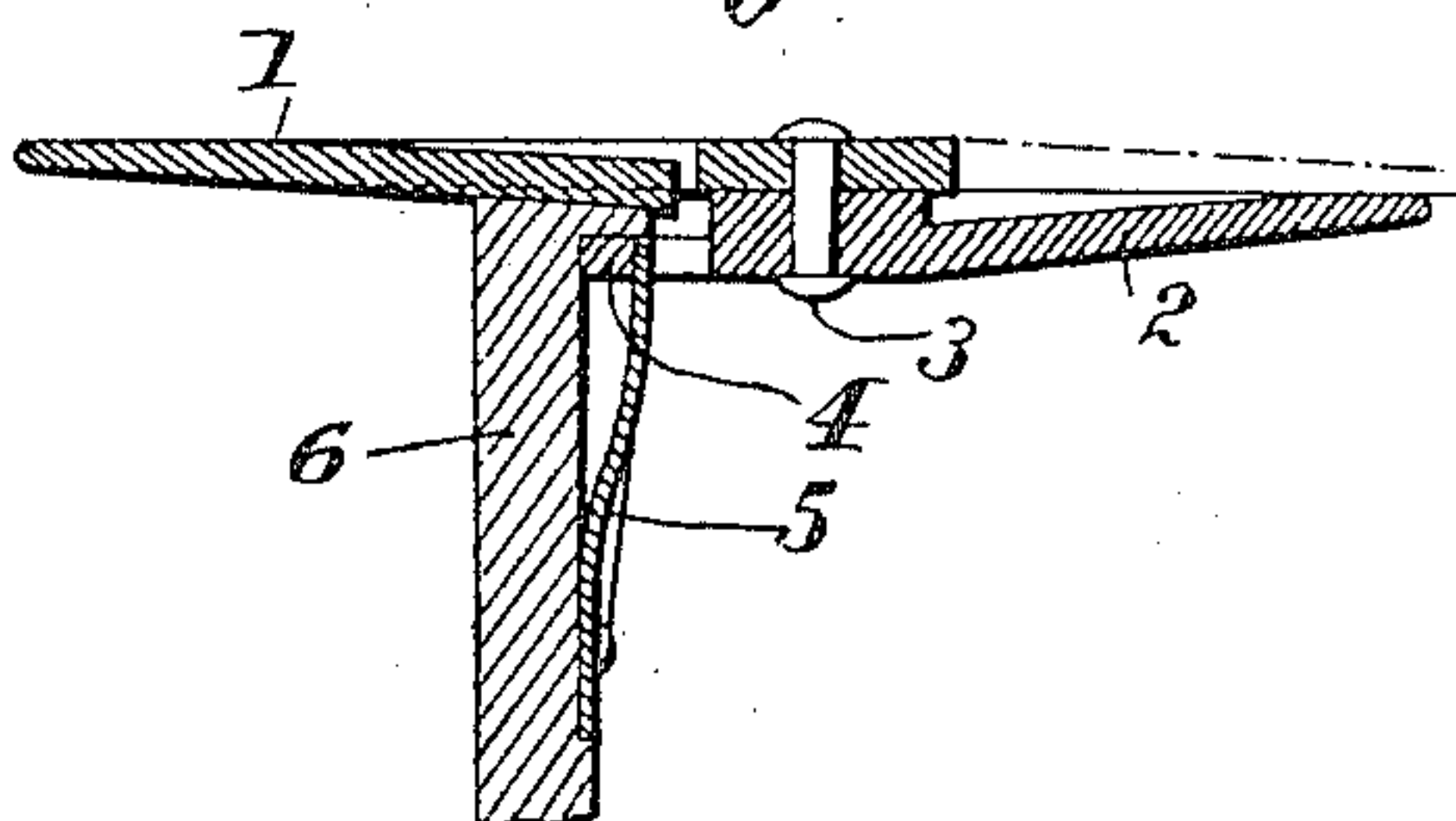


Fig. 17.

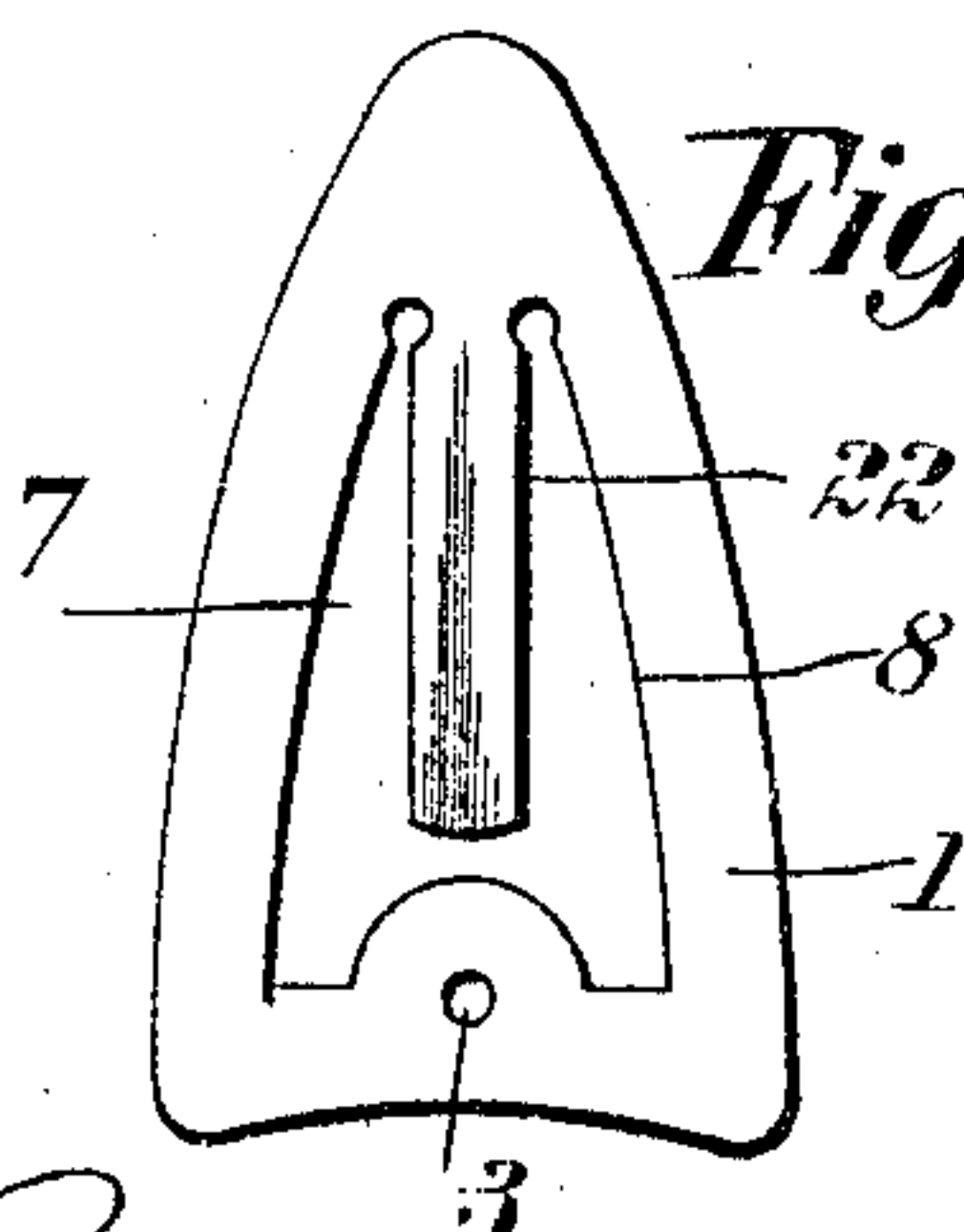


Fig. 16.

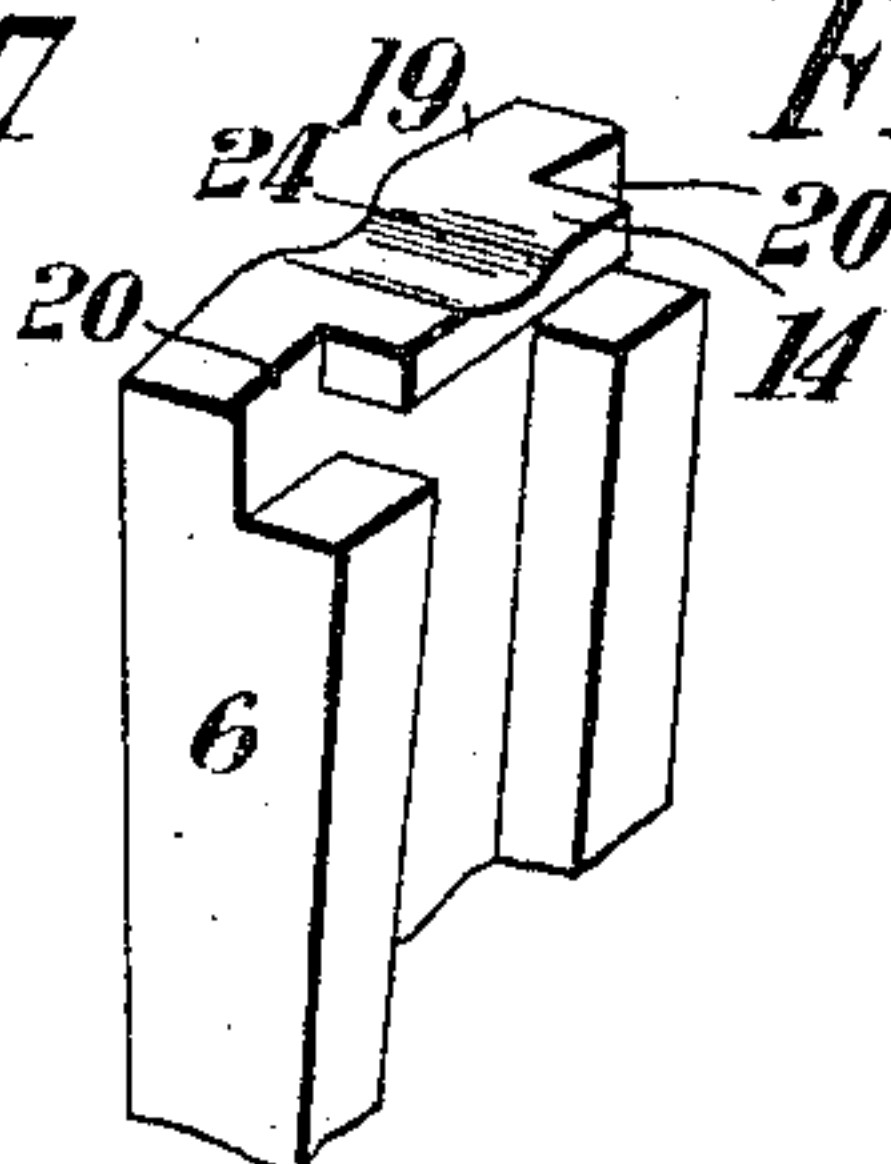
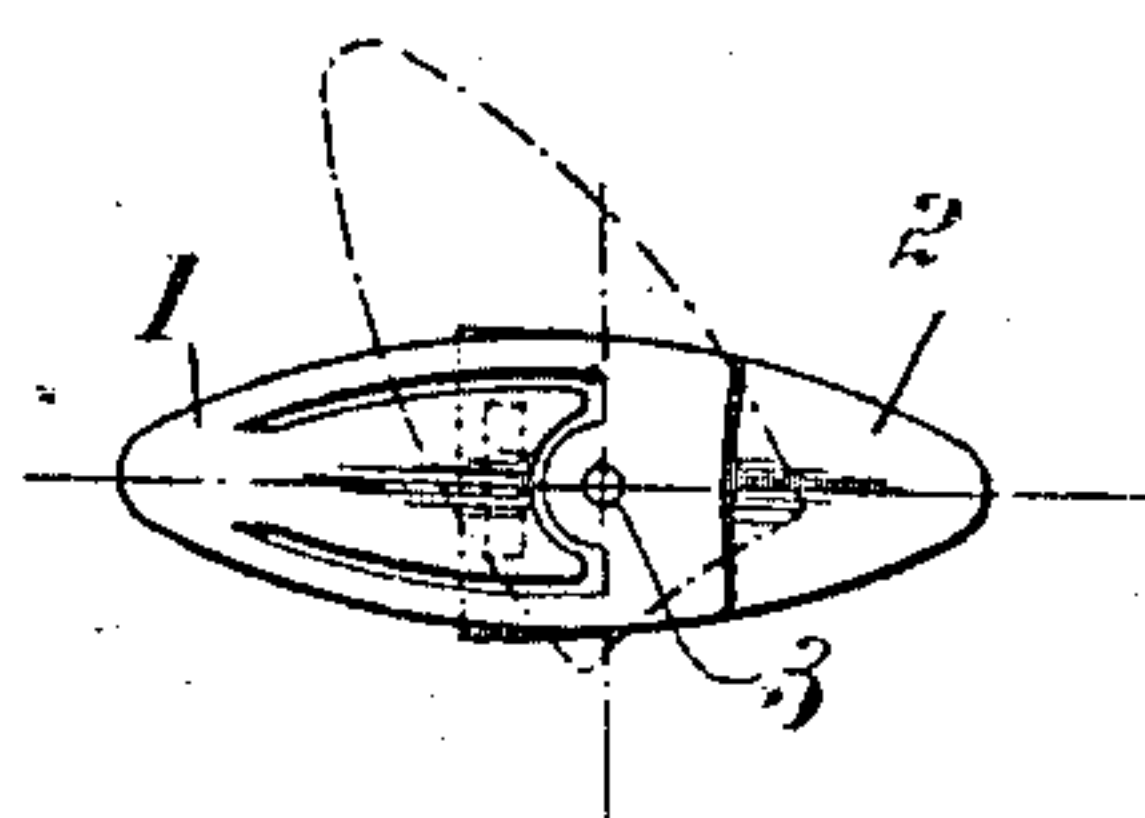


Fig. 15.



Witnesses

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Fig. 18.

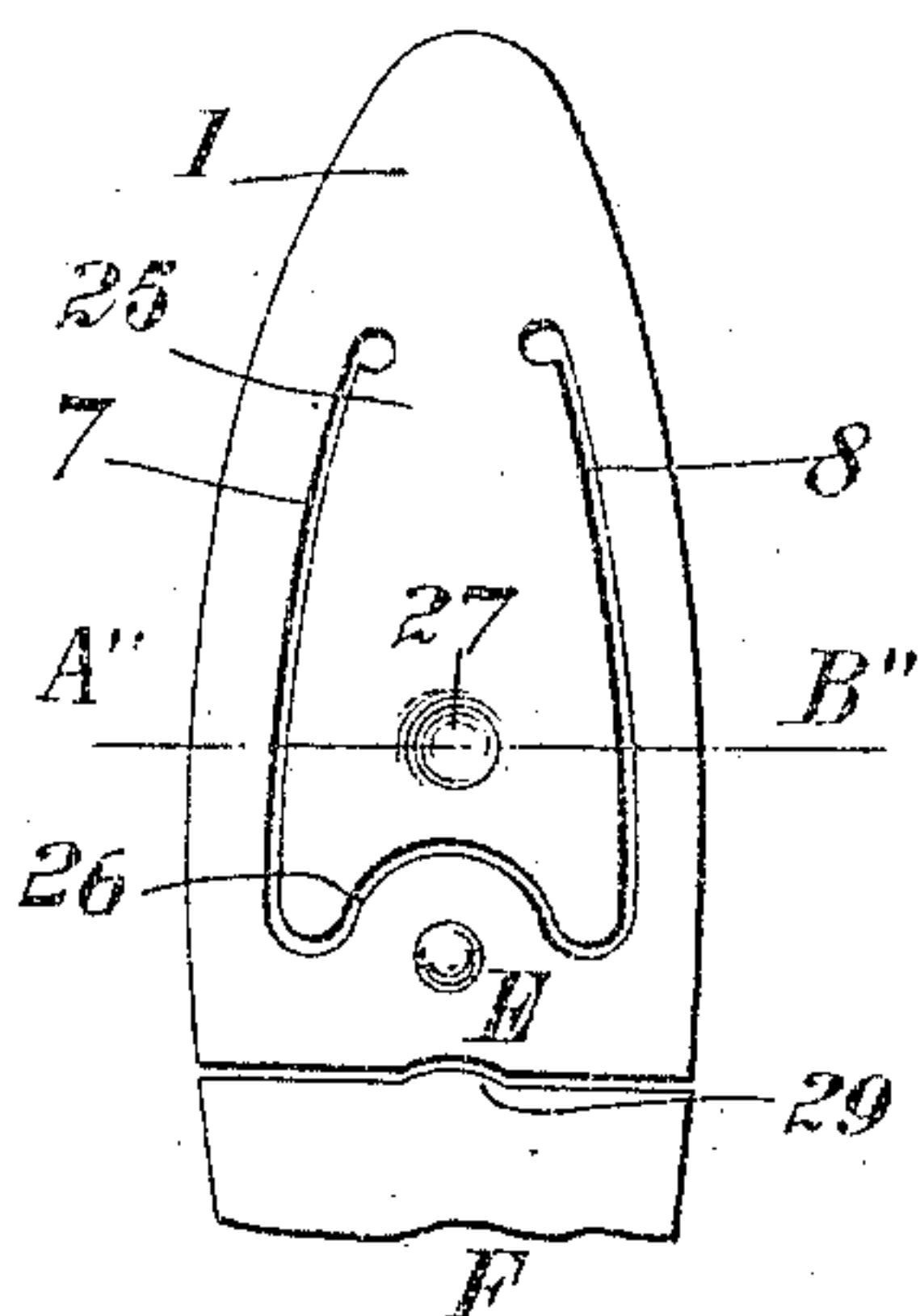


Fig. 21.

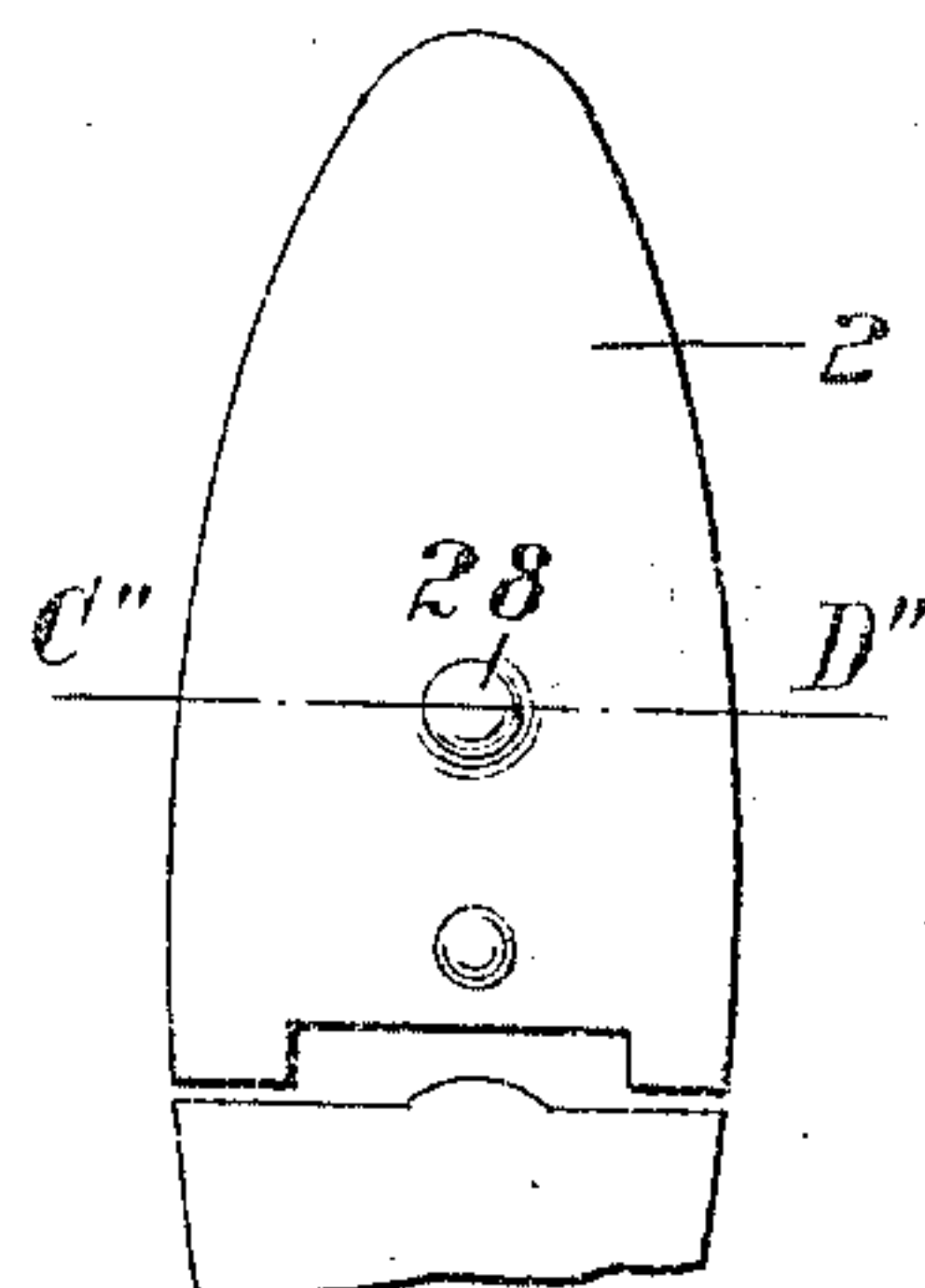


Fig. 19.



Fig. 22.



Fig. 20.

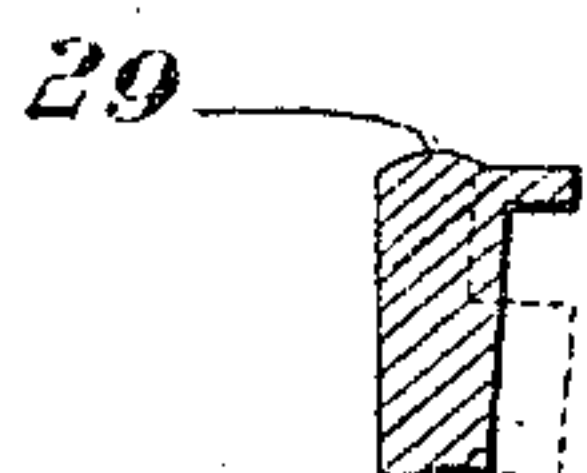


Fig. 23.

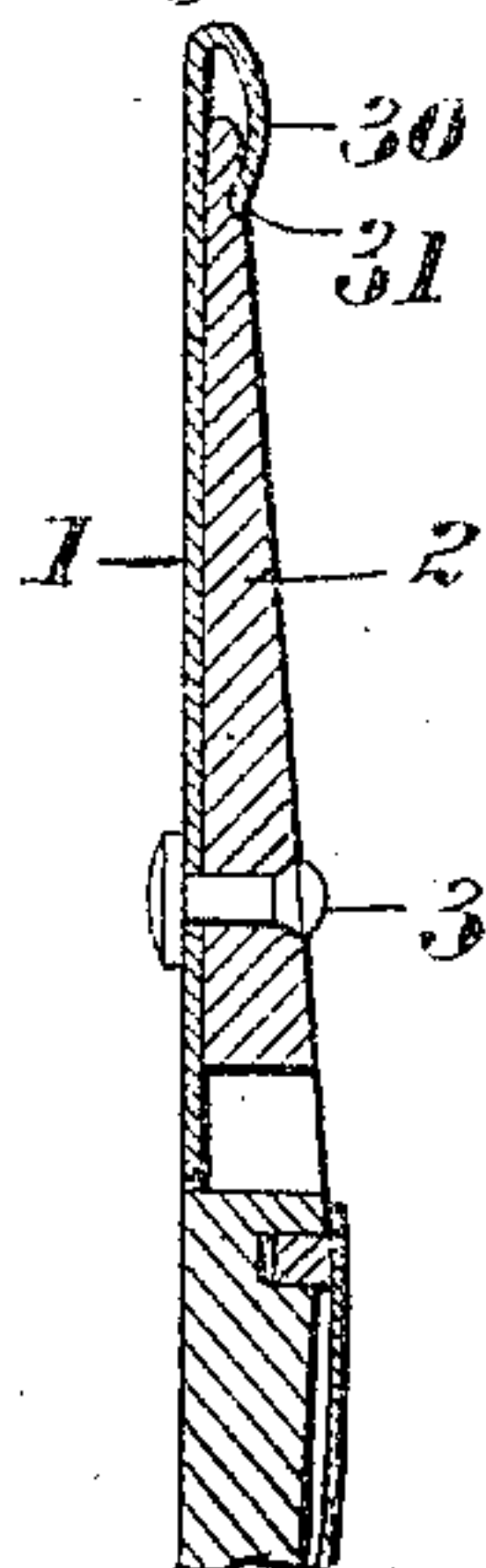


Fig. 24.

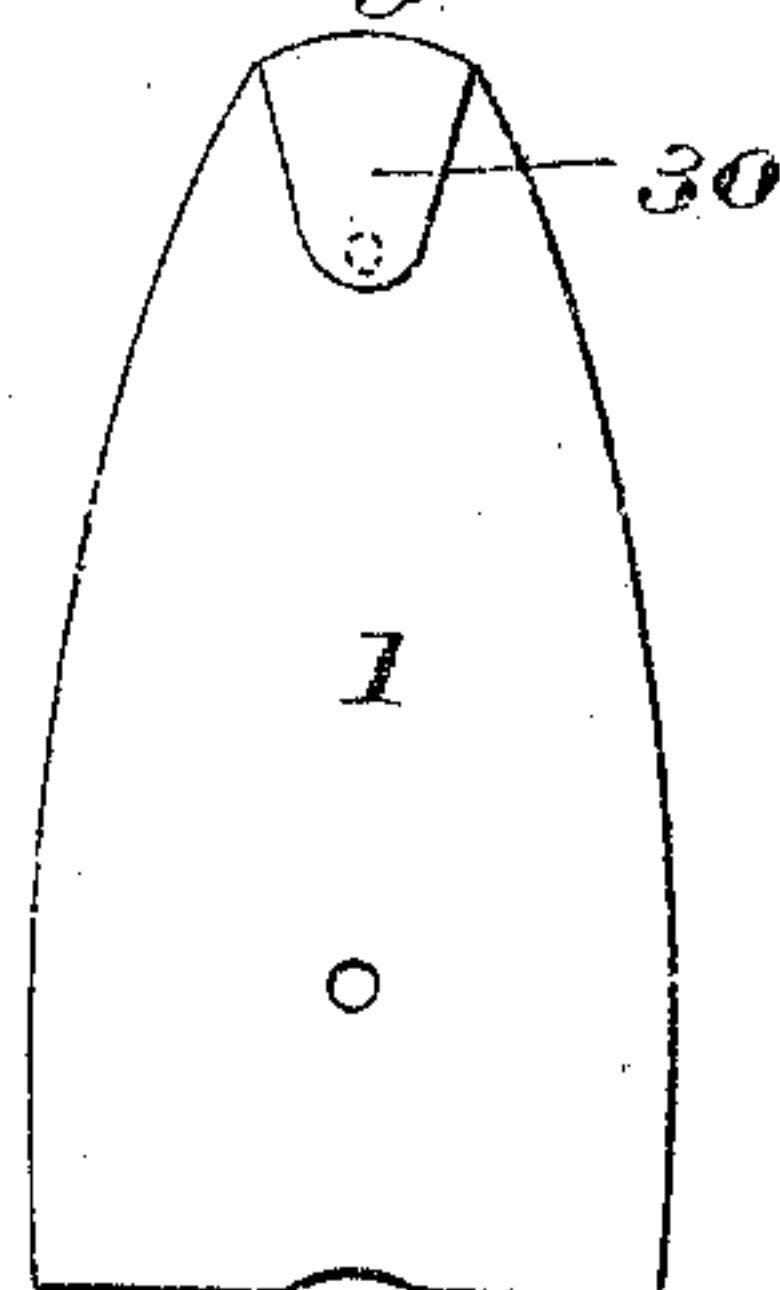
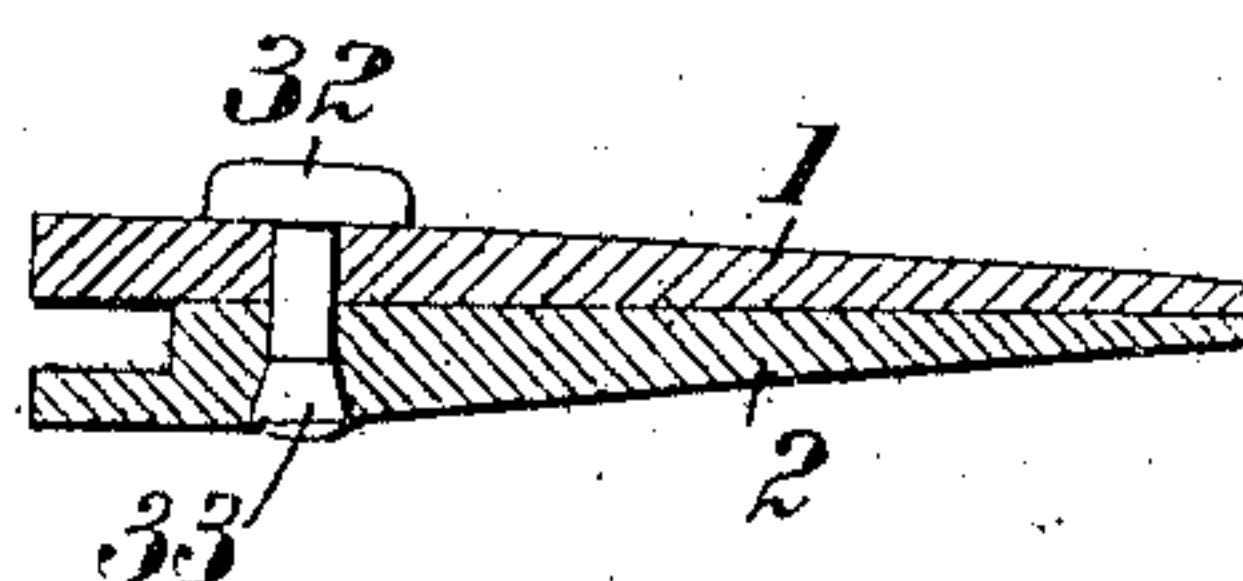


Fig. 25.



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UNITED STATES PATENT OFFICE.

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COLLAR-STUD OR SIMILAR FASTENING.

960,581.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed March 24, 1909. Serial No. 485,400.

To all whom it may concern:

Be it known that we, LOUIS AUGUSTE PICHON and CHARLES MARIE VICTOR ALLENOU, citizens of the French Republic, and residents of Paris, France, and Ville d'Avray, Seine-et-Oise, France, respectively, have invented certain new and useful Improvements in Collar-Studs or Similar Fastenings, of which the following is a specification.

This invention for improvements in collar studs or similar fastenings relates to studs of the kind in which the shanks have movable retaining flaps (hereinafter called heads) mounted thereon in such a manner that to facilitate insertion in a button hole the movable heads are capable of being turned into a position in line with the shank, and after insertion moved into and retained in a position at right angles to the shank to prevent the accidental withdrawal of the stud.

This invention comprises an improved folding button composed of two pivotally connected parts with cooperating locking faces and improved means of mounting the heads to turn on the shank.

In the accompanying drawing furnished by way of example Figure 1 shows the outer face of a pivoted head piece constructed according to this invention. Fig. 2 is a section through A, B in Fig. 1. Fig. 3 shows the inner face of one of the head pieces. Fig. 4 is a section through C, D. Fig. 5 is a section showing the head as turned up for insertion in the button-hole. Fig. 6 is a side elevation of the two head pieces, one of the head pieces as shown in the position indicated in dotted lines acting as a lock when it is turned 180 degrees on its pivot. Fig. 7 is a diagrammatic view illustrating the manner in which the locking head piece is rotated. Fig. 8 is a perspective view of the shank of the stud. Fig. 9 shows a modified form of a head piece in front elevation. Fig. 10 is a section through A—B in Fig. 9. Fig. 11 shows the inner face of the companion member to the head piece shown in Fig. 9. Fig. 12 a section of the same through C', D'. Fig. 13 is a longitudinal section of the head set up for introduction into a button-hole. Fig. 14 shows the two head pieces turned down. Fig. 15 is a diagrammatic view illustrating the method of rotating one of the head

pieces. Fig. 16, is a perspective view of a modified shank portion. Fig. 17 illustrates another form of the head piece shown in Fig. 1. Figs. 18 to 22 relate to a third form of the device: Fig. 18 representing the outer face of a head-piece which rotates around a pivot. Fig. 19 being a section through A'', B'' in Fig. 18. Fig. 20 a section through E, F in Fig. 18. Fig. 21 shows the inner face of the companion member to the head piece shown in Fig. 18. Fig. 22 is a section through C'', D'' in Fig. 21. Fig. 23 is a section of the two turned up head pieces in a fourth form of the device, Fig. 24 illustrating one of the head pieces shown in Fig. 23. Fig. 25 is a sectional view of an embodiment of this invention, showing a modified form of the pivot.

By referring to Figs. 1, 5 and 6 it may be noted, that the stud head is composed of two head pieces 1 and 2 of unequal length. The shorter one 2 is pivoted against the shank 6 of the stud. The longer one 1 is connected with the former by a pivot 3 around which it can turn in the horizontal plane.

The special feature of the head piece 2, consists in its inner face being in contact with that of the head piece 1. It is formed of a flat part, which at one of its ends is provided with a preferably integral pivot 4. The end portion of the head piece 2 near the pivot is recessed, and the thickness of the head piece itself must be large enough, so that the companion head piece may be rotated in a horizontal plane without interfering with the top of the shank, as clearly illustrated in Figs. 5 and 6. On the inner face of the head piece 2 moreover are cavities 15, 16 two at least of which are symmetrically arranged on a line that runs through the center of the pivot 3 and at equal distances from the lower part 4 of the head piece. A third cavity 17 the object of which will be seen hereafter is arranged at an equal distance from the cavities 15, 16 and from the said pivot 3.

The head piece 1 consists of a rigid metal plate in which a hole is drilled for the passage of the pivot 3 and slots 7, 8 which impart, but only to the parts 12, 13 which we will call "tongues" a certain flexibility enabling them to act as springs. For this purpose the tongues are slightly bent back toward the inner face of the head piece 1 as shown in the section A, B, (Fig. 2). The

base 7 of the said head piece 1 is of a form enabling it to embrace the outline of the top of the upper part 19 of the shank 6 (Figs. 5 and 8), the upper part of this shank 6 being formed of two parts, part 19 extending over the whole width thereof, and the smaller part 14 being cut away at 20 to allow play for the pivoted head-piece 2. This arrangement prevents the head piece from swinging from side to side when the two head pieces are connected as shown in Figs. 3 and 5.

The tongues 12 and 13 of the head piece 1 are each formed on their outer faces with cavities arranged symmetrically like those of the head piece 2. These cavities are formed by stamping in the body of the metal forming thereby corresponding projections 10, 11 on the inner face of the said head piece (Fig. 2). The head pieces 1 and 2 occupying the position indicated in Fig. 5 are introduced into the button hole and the two head pieces are then turned toward the right (Fig. 6). The head piece 1 is taken hold of at its end and the piece is caused to describe an arc of a circle of 180 degrees (Fig. 7). In this movement the projections 10, 11 leave the cavities 15, 16, the projection 10 entering the space 16 and the projection 11 the space 15 thus rendering the head piece 1 stationary. The head piece 1 occupying the position indicated by dotted lines in Fig. 6 that is resting against the top 19 of the stem prevents the head piece 2 from rising up. In order to fold the head pieces against each other, the same action is taken but in the inverse sense, thus enabling the head pieces to be put in the position as in Fig. 5. The cavity 17 in Fig. 2 is intended to act as a stop in case the projections 10, 11 should accidentally come out of the recesses 16 and 15 after rotating to the extent of 180 degrees.

The second form of the device, Figs. 9 to 17, differs from the first in the central cavity 17 in the head piece 2 being replaced by a larger depression 21 formed on the central line of the head piece (Figs. 11 and 13) while the head piece 1 which always consists of a rigid plate in which an opening is cut for the passage of the pivot 3 has slots 7, 8 which impart to the central part or tongue 22, there being only one in this case, a certain flexibility that enables it to act as a spring. For this purpose the tongue is slightly bent back toward the inner face of the head piece 1 as shown in the section through A—B (Fig. 10). The said section further shows the recessed form of the tongue so that it may engage frictionally the top 19 of the shank 6 while moving over the same. The tongue 22 has further on its outer face a suitable depression 23 formed like that of the head piece 2 and so as to correspond therewith. This depression is

formed by indenting the metal and the indented portion projects into the recess of the inner face of the head piece 2. It may be observed further that in the form of the device which constitutes the invention a recess 24 which will be further referred to later on runs through the parts 14 and 19.

The head pieces 1 and 2 occupying the position indicated in Fig. 13 are introduced into the button hole, the two head pieces together are folded over so as to occupy the position illustrated in Fig. 14, wherein head piece 1 is indicated in dotted lines. The head piece is then taken hold of by the end and caused to describe an arc of a circle of 180 degrees (Fig. 15). In this movement the projection 23 coming out of the recess 21 enters the recess 24 in the top 19 of the stem 6 thus rendering the head piece 1 stationary. The head piece 1, occupying the position indicated in Fig. 14 in full lines prevents the head piece 2 from rising up since in rising it would strike the top 19 of the shank 6. In order to effect the unlocking the same action is taken but inversely, thus enabling the projection 23 to return into the recess 21 and consequently to replace the head pieces in the position shown in Fig. 13.

The modification of the stud shown in Fig. 17 does not differ from the form shown by Fig. 9 except in the shape of the tongue 22 which is narrower.

The third form of the device (Figs. 18 to 22) is similar to the embodiment illustrated in Figs. 9 to 17 but with the following modifications. The tongue 25 as shown in Fig. 18 is formed not only by lateral excisions 7 and 8 but by end excisions 26. The inner face of the head piece 1 has a recess 27 which corresponds with a projection 28 on the inner face of the head piece 2 and after being rotated 180 degrees registers with a projection 29 on the top of the shank 6. Thus the head piece 1 is rendered stationary when the recess 27 is engaged by the projection 28 or 29.

Figs. 23 and 24 represent a device by means of which the thickness of the head piece 1 can be reduced while the stability of the device is preserved and without straining the head of the rivet-pivot 3 when the two head pieces are being turned. For this purpose the upper part of the head piece 1 is bent so that this bent over portion 30 of the head piece 1 may engage the flattened end 31 of the piece 2. This form of the device is particularly suitable for small shirt studs. In the form shown in Fig. 5 the pivot 3 which connects the head pieces 1 and 2 may have a head 32 coming over the head piece 1 for keeping it in contact with the piece 2 and a corresponding rivet-head 33 is countersunk into the head piece 2.

Having now fully described our said in-

vention, what we claim and desire to secure by Letters Patent, is:—

1. A stud of the class described comprising in combination a shank, a head piece, 5 pivotally mounted on said shank, a second head piece pivotally connected with said first named head piece and rotatable in a plane parallel to the plane of the first-named head piece, and means for locking 10 the combined head pieces in alinement with the axis of said shank.

2. A stud of the class described comprising in combination a shank, a head piece pivotally mounted on said shank, a second 15 head piece pivotally connected with said first named head piece and rotatable in a plane parallel to the plane of said first-named head piece, said second head piece being provided with a foot portion to engage the top portion of said shank and to 20 lock the combined head pieces in alinement with the axis of said shank.

3. A stud of the class described comprising in combination a shank, a head piece 25 pivotally mounted on said shank and provided with a plurality of indentations, a second head piece pivotally connected with said first named head piece and rotatable in a plane parallel to that of said first-named 30 head piece, said second head piece being provided with resilient portions and with a

plurality of projections thereon, said projections being adapted to register with said indentations when said head pieces are in superposition and in alinement with respect 35 to each other.

4. A stud of the class described comprising in combination a shank, a head piece pivotally mounted on the top portion of said shank, a second head piece pivotally 40 connected with said first named head piece and rotatable in a plane parallel to that of the first-named head piece, said second head piece being provided with a foot portion adapted to engage the top portion of said 45 shank when said head pieces are in alinement with the axis of said shank and preventing rotation of said second head piece with respect to said first named head piece, and said second head piece being adapted 50 to engage the top portion of said shank, when said head pieces are in a position perpendicular to the axis of said shank and in alinement with respect to each other.

In testimony whereof we have hereunto 55 set our hands in presence of two witnesses.

LOUIS AUGUSTE PICHON.

CHARLES MARIE VICTOR ALLENOU.

Witnesses:

ADOLPHE STURM,

ELLWOOD AUSTIN WEEDEN.