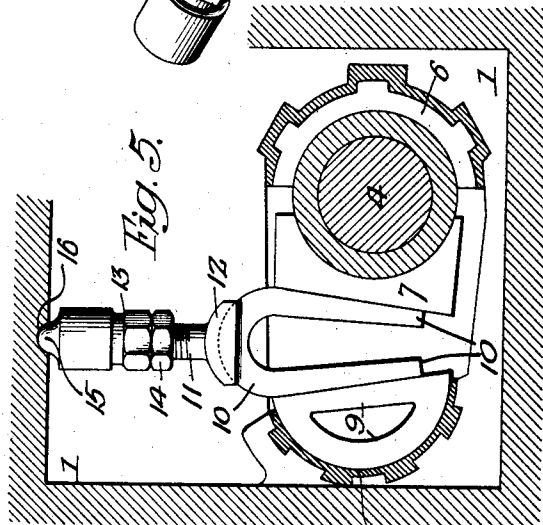
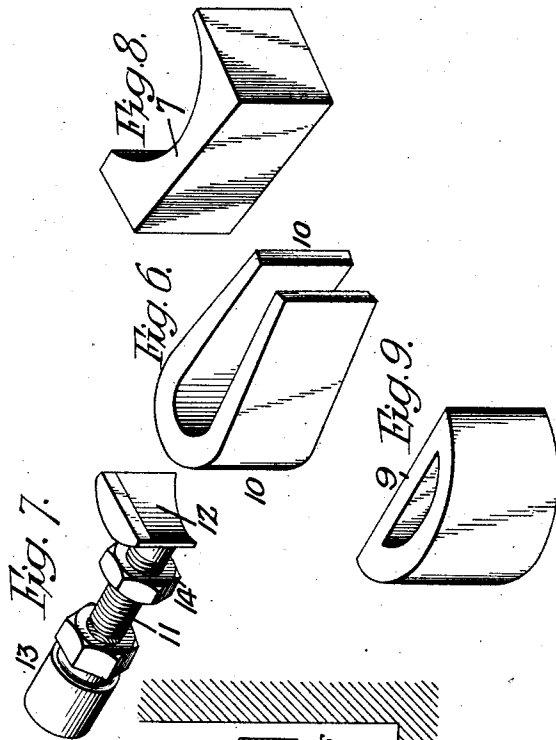
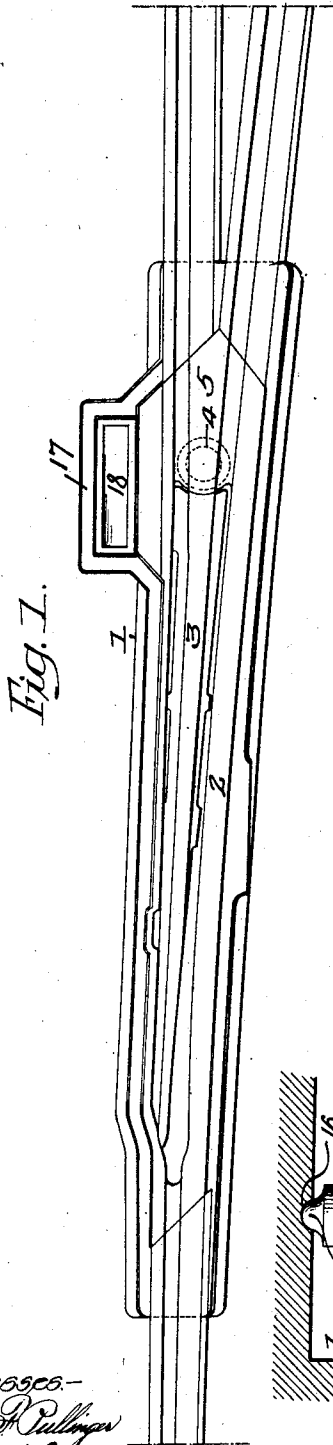


V. ANGERER.
 SWITCH STRUCTURE.
 APPLICATION FILED MAY 16, 1912.

1,037,817.

Patented Sept. 3, 1912.

2 SHEETS—SHEET 1.



Witnesses—
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 Walter A. Burrows.

Inventor.
 Victor Angerer
 by his Attorneys.
 Thomas & Thomas

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2 SHEETS—SHEET 2.

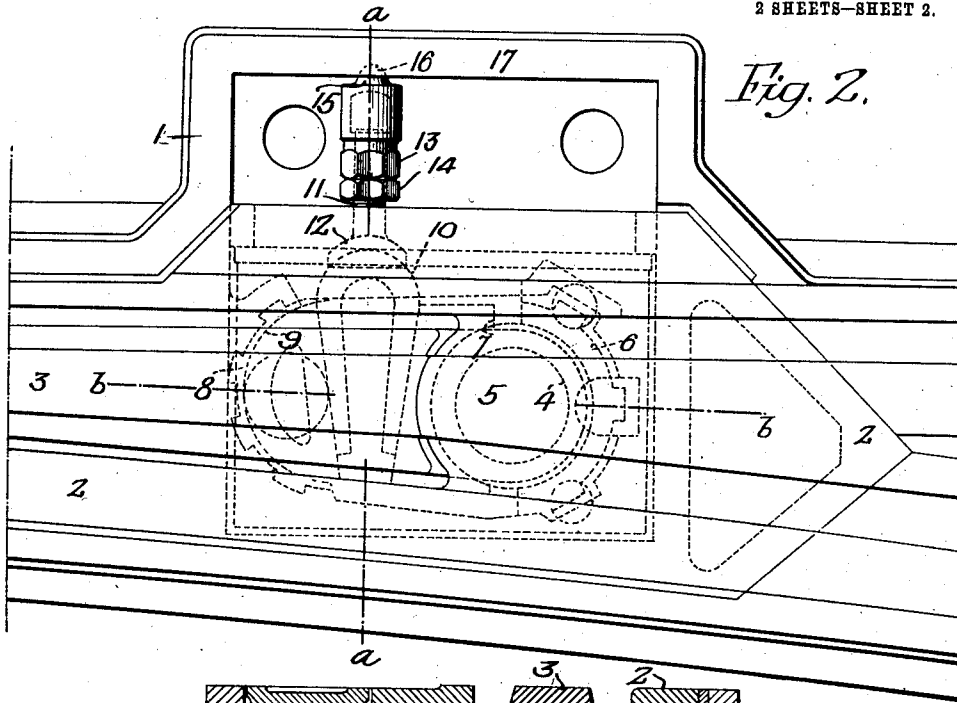


Fig. 2.

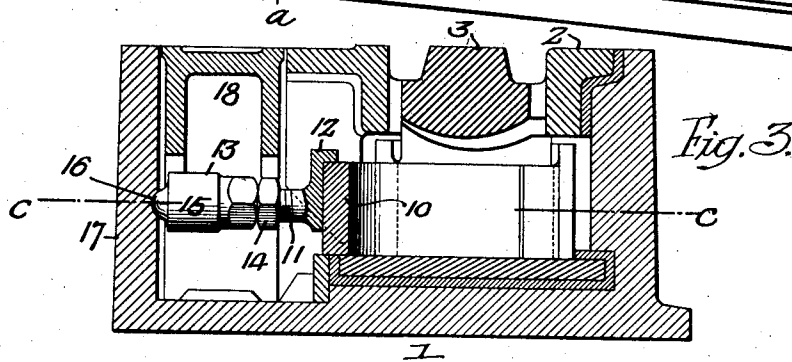


Fig. 3.

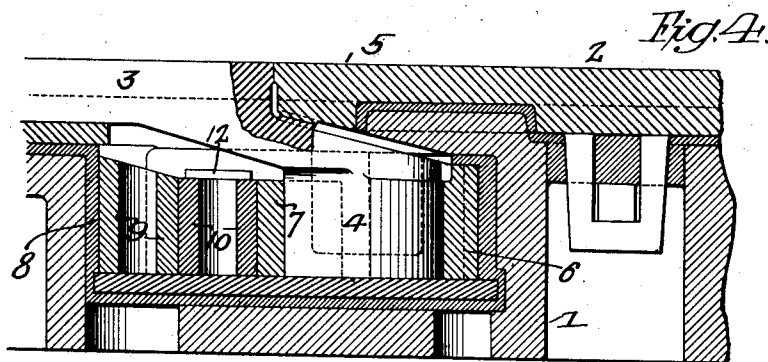


Fig. 4.

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UNITED STATES PATENT OFFICE.

VICTOR ANGERER, OF RIDLEY PARK, PENNSYLVANIA, ASSIGNOR TO WILLIAM WHARTON, JR., & COMPANY, INCORPORATED, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

SWITCH STRUCTURE.

1,037,817.

Specification of Letters Patent.

Patented Sept. 3, 1912.

Application filed May 15, 1912. Serial No. 697,586.

To all whom it may concern:

Be it known that I, VICTOR ANGERER, a citizen of the United States, residing in Ridley Park, county of Delaware, State of Pennsylvania, have invented certain Improvements in Switch Structures, of which the following is a specification.

My invention relates to certain improvements in movable tongue switches.

The object of the invention is to provide means for properly retaining the bearing against the pivot of the tongue, as fully described hereinafter.

The invention also relates to certain improvements in wedges for accomplishing this purpose.

In the accompanying drawings:—Figure 1, is a plan view of a tongue switch illustrating my invention; Fig. 2, is an enlarged plan view of the pivot end of the switch drawn to an enlarged scale; Fig. 3, is a transverse sectional view on the line *a—*a**, Fig. 2; Fig. 4, is a longitudinal sectional view on the line *b—*b**, Fig. 2; Fig. 5, is a sectional plan view on the line *c—*c**, Fig. 3; Fig. 6, is a detached perspective view of the spring wedge; Fig. 7, is a perspective view of the adjusting bolt; and Figs. 8 and 9, are perspective views of the bearing blocks.

In the present instance, the switch structure consists of a cast metal body structure 1, having a hard metal facing portion 2. This facing portion is secured to the top of the body by keys or other fastenings. It will be understood that while I prefer to use a separate hard metal facing portion, in some cases this may be dispensed with and the body and facing made in a single casting, or it may be a composite structure made of rails or other shapes.

3 is the tongue made, as clearly shown in Fig. 1, and having a pivot 4. The heel portion of the tongue is depressed at the pivot and the portion 5 of the switch structure extends over the heel, as illustrated in Fig. 4. The pivot 4 extends into a recessed portion of the body 1 and in the recess directly back of the pivot is a fixed bearing 6. In front of the pivot is a bearing block 7. At the front of the recess is a semi-circular bearing 8 and resting against this bearing is a segmental block 9. Located between the

bearing block 7 and the segmental block 9 is a wedge 10, which tends to hold the bearing block against the pivot and the pivot against the fixed bearing 6. In the present instance, the wedge is forked, as clearly illustrated in Fig. 5, and is made of spring metal so that when the wedge is forced into place between the bearing block 7 and segmental block 9, the fork is closed in, and its tendency to open out again keeps the bearing block 7 against the pivot; taking up the wear on the pivot and its bearings and insuring a neat fit. Both the segmental block 9 and the bearing block 7 have straight surfaces against which the forks of the wedge rest and their opposite surfaces are curved so that the blocks will readily accommodate themselves to the changes in the angle formed by the sides of the wedge, as the wedge is pressed into place or as the fork opens out. In order to hold the wedge in position and to adjust it when necessary, I provide a bolt 11, having a head 12, provided with a concaved surface, which rests against the rounded end of the wedge 10. The upper portion of the head extends over the end of the wedge; holding the bolt in position, as clearly shown in Fig. 3. The bolt extends into a cap nut 13 and is provided with a jam nut 14 for locking it in the position to which it is adjusted. On the end of the cap nut is a projection 15, which rests in a notch 16 in the wall 17 forming part of the structure 1. The recess in which the bearings are mounted is extended laterally, as shown in Fig. 2, and the portion in which the bolt 11 is located is closed by a cover plate 18 so that, upon the removal of this cover plate, the nuts can be adjusted to set up the wedge. The space is sufficiently great so that when it is desired to remove the wedge and the blocks, this can be readily accomplished, the opening being of sufficient size. The switch tongue can be moved forward to allow the root end of the tongue to clear the overhanging portion of the body, after which the tongue can easily be detached from the body.

Thus it will be seen that I am enabled to make a wedge of spring metal, which will automatically take up the wear on the pivot and which can be adjusted, when necessary,

by independent means; the wedge being held in the adjusted position by said means. The wedge can be readily detached when desired so as to allow for the removal of the tongue.

I claim:

1. The combination in a switch structure, of a base; a switch tongue having a pivot; a bearing therefor; and a spring wedge for retaining the bearing in contact with the pivot.

2. The combination in a switch structure, of a tongue having a pivot; a fixed bearing and an adjustable bearing for the pivot; with a spring wedge bearing against the adjustable bearing; and means for adjusting the wedge.

3. The combination in a switch structure, of a base; a tongue having a pivot; a fixed bearing at the rear of the pivot; an adjustable bearing at the front of the pivot; a bifurcated wedge made of spring metal and holding the adjustable bearing against the pivot.

4. The combination in a switch structure, of a body portion; a bearing therein; a tongue having a pivot resting against the bearing; an adjustable bearing block resting against the pivot; a segmental bearing block in front of the adjustable bearing block; with a spring wedge mounted between the

adjustable bearing block and the segmental bearing block.

5. The combination in a switch structure, of a body portion; a bearing therein; a tongue having a pivot resting against the bearing; an adjustable bearing block resting against the pivot; a segmental bearing block in front of the adjustable bearing block; a spring wedge mounted between the adjustable bearing block and the segmental block; with means for adjusting the spring wedge transversely.

6. The combination in a switch structure, of a base having a bearing therein; a tongue having a pivot resting against the bearing; an adjustable bearing block on the opposite side of the pivot; a segmental block resting in a socket in the base; a bifurcated spring wedge mounted between the two blocks; a bolt having a head overlapping the wedge and having a concaved surface resting against the wedge; and a nut on the bolt bearing against the base.

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

VICTOR ANGERER.

Witnesses:

JOS. H. KLEIN,
WM. A. BARR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."