

P. K. DUBINSKY.  
RAILWAY SWITCH STRUCTURE.  
APPLICATION FILED MAY 8, 1909.

933,167.

Patented Sept. 7, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

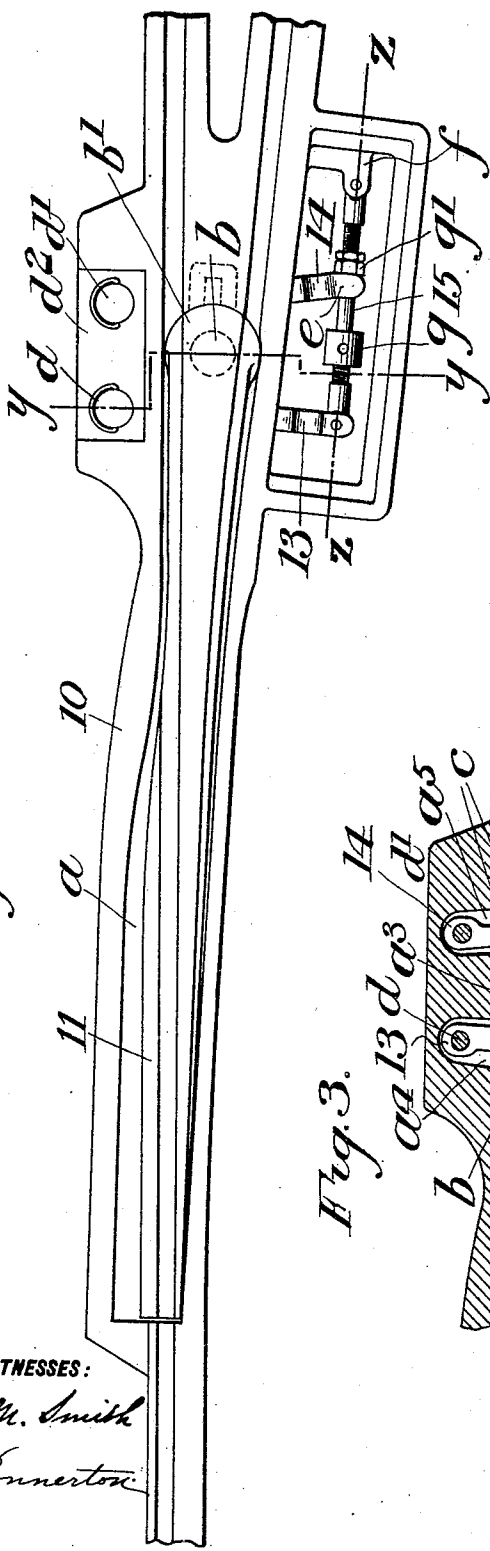


Fig. 2.

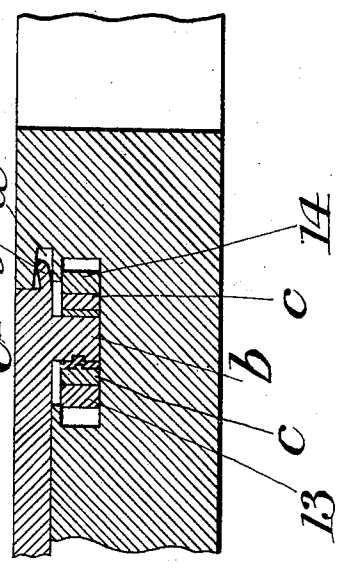
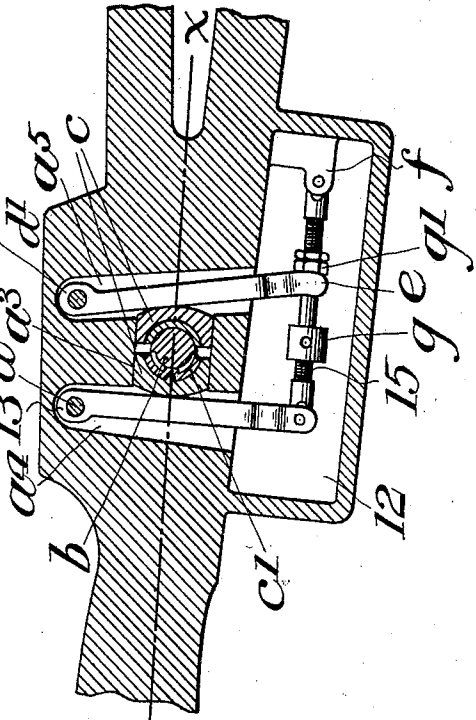


Fig. 3.



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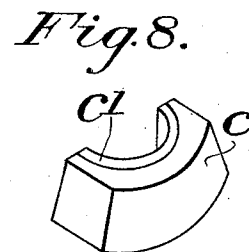
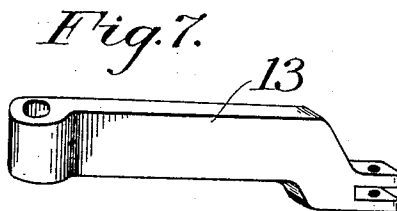
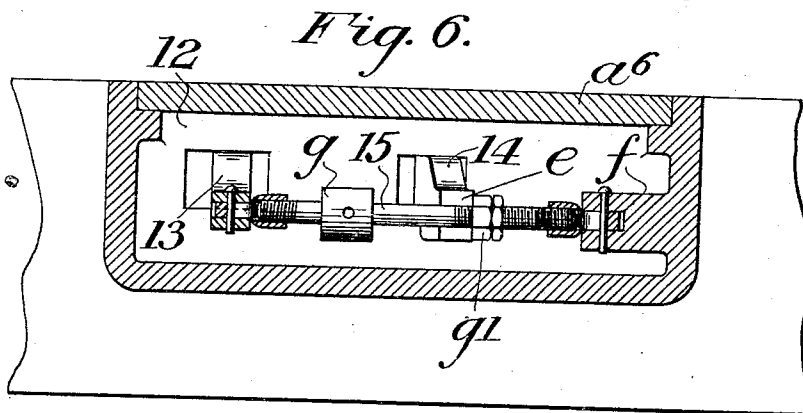
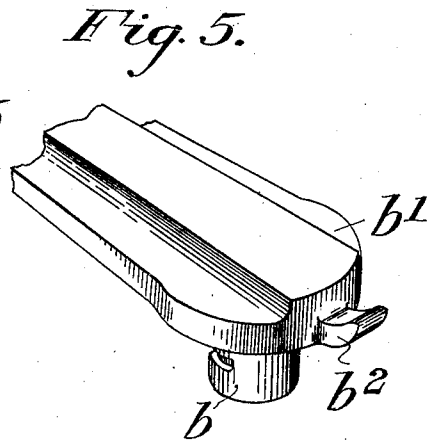
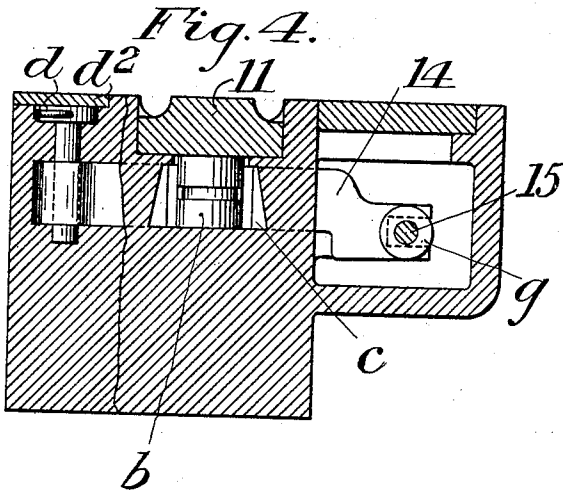
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

PROCOR K. DUBINSKY, OF PHILADELPHIA, PENNSYLVANIA.

## RAILWAY-SWITCH STRUCTURE.

933,167.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed May 8, 1909. Serial No. 494,771.

To all whom it may concern:

Be it known that I, PROCOR K. DUBINSKY, a subject of the Czar of Russia, but now residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Switch Structures, of which the following is a specification.

13 My invention has relation to means to automatically take up wear at the heel end of a movable tongue switch structure; and in such connection it relates to the constructive arrangement of bearings for the heel end of  
15 the movable tongue switch structure and to means for quickly taking up wear of said tongue without having to disarrange the members of the switch-structure.

20 The nature and characteristic features of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, in which—

25 Figure 1, is a top or plan view of so much of a movable tongue switch structure as serves to illustrate the main features of my said invention. Fig. 2, is a vertical longitudinal broken sectional view taken on the line *x, x*, of Fig. 3, of the movable tongue  
30 and the switch-structure thereof, showing the pivot at the heel end of said tongue and the end curve lip of the same arranged to engage the upper wall of a recess provided in the body of the switch-structure therefor.  
35 Fig. 3, is a horizontal sectional view of sufficient of the switch-structure and pivot of the tongue to show the movable bearings therefor and the means operatively arranged to be manipulated sidewise, in a conduit, of the  
40 switch-structure, to take up wear at the heel end of said tongue without disturbing the location of the same. Fig. 4, is a vertical transverse sectional view on the line *y, y*, of Fig. 1. Fig. 5, is a perspective view in  
45 broken section of the movable tongue of the switch-structure detached therefrom, showing the pivot of the same and curved end bearing lip thereof. Fig. 6, is a vertical sectional view on the line *z, z*, of Fig. 1, through the conduit of the switch-structure, showing the take-up means for the heel end of said  
50 tongue in case of wear thereof. Fig. 7, is a perspective view of one of the cross-bars of the said take-up means; and Fig. 8, is a similar view of one of the movable bearings

adapted to be mounted in the switch-structure, for the pivot of the tongue and which are arranged in the structure so as to be affected or shifted by the take-up means.

Referring to the drawings 10, is the switch-structure. 11, is the tongue of said structure mounted in a groove *a* thereof, to permit of the same being swung from one position to another therein. The heel end *b'*, of the tongue is provided with a depending pivot  
65 *b*, and an end curved lip *b'*, arranged so as to enter and engage the upper wall of a recess *a'*, of the said structure, as clearly illustrated in Fig. 2.

*a*<sup>3</sup>, is a central chamber in the body of the  
70 switch-structure 10, which merges into cross channels *a*<sup>4</sup> and *a*<sup>5</sup>, on both sides and beyond the chamber *a*<sup>3</sup>, as clearly illustrated in Fig. 3. These channels merge into a side conduit  
75 12, with a removable cover *a*<sup>6</sup>. In the chamber *a*<sup>3</sup>, are mounted two-part semi-circular bearings *c*, with which the tongue-pivot *b*<sup>1</sup>, in operative position engages. The preferred shape of the two-part bearings *c*, will be understood from Figs. 3 and 8. These  
80 bearings may be faced interiorly with hardened metal *c*<sup>4</sup>, as illustratively shown in Figs. 2, 3 and 8. In the cross-channels *a*<sup>4</sup> and *a*<sup>5</sup>, are arranged rods 13 and 14, pivotally supported at one of their ends by means  
85 of removable lift-pins *d, d'*, extending downward through the switch-structure into the body of said channels *a*<sup>4</sup> and *a*<sup>5</sup>, as clearly illustrated in Fig. 3, and which rods bear against the two-part semi-circular bearings  
90 *c*. At the opposite ends of the said rods 13 and 14, within the conduit 12, one of these rods 13, is pivoted to a threaded bar of the take-up means 15, for the tongue 11. This  
95 bar passes through a slotted end *e*, of the rod 14, of the said means and is also pivotally connected with a bracket *f*, projecting from the conduit wall, as clearly illustrated in Figs. 1, 3 and 6. This bar 15, is provided with a fixed nut *g*, and carries a movable  
100 jam-nut *g*<sup>1</sup>, Fig. 3, for readily shifting the rods 13 and 14, toward and away from the movable bearings *c*, for the tongue-pivot *b*, within the switch-structure 10, to readily  
105 compensate for wear of the said tongue due to constant shiftings back and forth of the tongue 11, in the groove *a*, of the structure 10, as will be fully understood from Fig. 1. The lift-pins *d, d'*, housed in the switch  
110 structure are protected by means of a re-

movable cover-plate  $d^2$ . When wear at the heel end of the tongue 11, has occurred, by simply removing the cover-plate  $a^6$ , of the conduit 12, and turning with a wrench or  
 5 other implement, the fixed nut  $g$ , the bar 15, which will be revolved, so that wear of the tongue-pivot  $b$ , within its bearings  $c$ , can be thus readily taken up and the movable  
 10 nut  $g^1$ , then can be shifted, by turning, in a forward direction toward the rod 14, on the threaded portion of the said bar 15, to thereby quickly accomplish, the desired degree of  
 15 take-up required so as to insure reliable action of the tongue 11, within the groove  $a$ , of the structure 10.

Having thus described the nature and objects of my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a switch-structure having a pivotal  
 30 tongue, movable bearings for said pivot, pivotal-means normally contacting with said bearings and take-up means movably connected with the structure and bearings, substantially as and for the purposes described.
- 25 2. A grooved and recessed switch-structure having a tongue movable in said groove and with the heel portion of said tongue provided with a pivot and an end lip to engage in the recess of said structure, movable  
 30 bearings for said pivot, means pivotally mounted in said structure and engaging said bearings and take-up devices connected with

said means, substantially as and for the purposes described.

3. A switch structure having a tongue pivotally arranged therein, movable bearings  
 35 for said pivot, pivotal rods normally contacting with said bearings and take-up means connected with said rods, substantially as and for the purposes described.

4. A switch structure having a tongue pivotally arranged therein, movable bearings  
 40 for said pivot, rods mounted in said structure to contact with said bearings and provided at one end with lift-pins and at the  
 45 opposite end in pivotal and slip connections with take-up means, provided with fixed and movable devices, substantially as and for the purposes described.

5. A switch structure having a grooved  
 50 and recessed body with a tongue pivoted in said body and entering said recess, the pivot of said tongue provided with movable bearings and take-up means movably connected  
 55 with said structure and bearings, substantially as and for the purposes described.

In witness whereof, I have hereunto set my signature in the presence of two subscribing witnesses.

PROCOR K. DUBINSKY.

Witnesses:

THOMAS M. SMITH,  
 BENJ. STOTT.