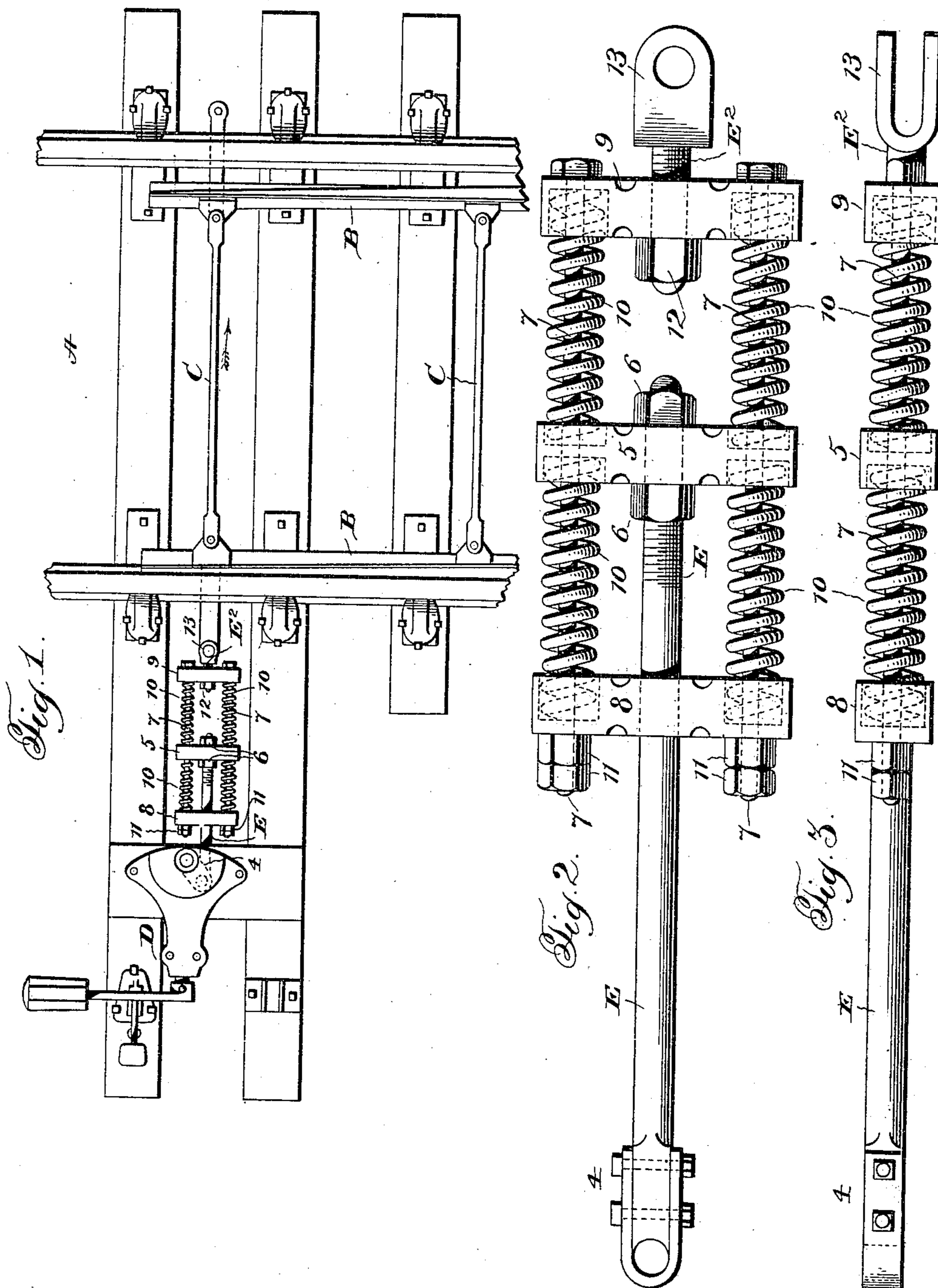


No. 825,617.

PATENTED JULY 10, 1906.

E. J. SHOFFNER.
TRACK SWITCH.
APPLICATION FILED NOV. 2, 1905.



Witnesses:
Jas. E. Hutchinson
G. E. McNeil

Inventor.
Edward J. Shoffner,
By Roy E. Burnham, Attorney

UNITED STATES PATENT OFFICE.

EDWARD J. SHOFFNER, OF ROANOKE, VIRGINIA.

TRACK-SWITCH.

No. 825,617.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD J. SHOFFNER, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented certain new and useful Improvements in Track-Switches, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates particularly to adjustable automatic connecting-rods for railway-track switches; and it is an object of the invention to provide improved means for connecting the switch-stand with the switch-points which shall have any or all of the following advantageous features: readily accessible and adjustable means whereby the tension of the springs forming part of the connecting-rod can be easily altered to meet 20 changing conditions of service, to take up wear resulting from use, and to meet other conditions, automatic means whereby when the switch is set for one line of track rolling-stock can pass from the other line of track without injury to switch or rolling-stock, and 25 certain details of construction, hereinafter more fully explained, which make the mechanism strong and capable of long-continued use without necessity of repair.

30 The details of construction and arrangement of parts contemplated by this invention are disclosed in the accompanying drawings, forming part hereof, wherein a preferable embodiment of the invention is shown for purposes of illustration and in which like reference characters refer to corresponding parts in the several views, whereof—

Figure 1 is a plan view showing a portion of a track-switch, a connecting-rod including 40 adjustable springs, and a switch-stand. Fig. 2 is an enlarged view of the tension mechanism, and Fig. 3 is a side view of the same.

Having reference more particularly to the drawings, A indicates a main track; B, 45 switch points or rails connected by cross-rods C; D, the switch-stand, and E a rod connecting the switch-stand with the switch. Connecting-rod E is connected at one end with the operative elements of switch-stand D, a shackle 4 being provided for that purpose, and at the other end said rod is screw-threaded and passes through a centrally-apertured cross member 5, to which it is adjustably secured by nuts 6. Parallel bolts or 55 rods 7 pass through apertures near the ends of cross members 5, 8, and 9, member 5 be-

ing arranged intermediate said other two members. Disposed around bolts 7 and between cross members 5 and 8 and between cross members 5 and 9 are coil-springs 10, 60 which seat in recesses or countersinks in the complementary faces of said members, the whole being held together by exertion of nuts 11 on bolts 7. Cross member 8 is centrally apertured for the passage there- 65 through of connecting-rod E, and cross member 9 is similarly apertured for the reception of rod E², which is adjustably secured thereto by nuts 12 and which is provided with a shackle member 13 for connection 70 with the switch-points.

As will be readily seen, tension of springs 10 is easily altered by movement of nuts 11, which will cause members 8 and 9 to contract or retract, as the case may be, and, further, tension of said springs is also altered by 75 movement of either or both the sets of nuts 6 and 12.

When the switch is thrown in direction of the arrow, Fig. 1, springs 10 between cross 80 members 5 and 9 will be operated against. When the movement is in opposite direction, springs 10 between cross members 5 and 8 will be operated against, and when rolling-stock passes from a track to which the switch 85 is shut to the other track one or the other of the sets of springs will give, as the case may be, to permit the necessary movement of the switch-points, the springs serving to return the points to their set position in an obvious 90 manner.

The two sets of springs 10 exerting pressure in opposite directions against cross member 5, that member and the other elements of the spring device are held firmly but 95 yieldingly in position.

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

1. In a switch mechanism, means whereby 100 the switch-rails are moved, said means comprising a plurality of cross members, a link attached to an intermediate cross member, rods connecting said cross members, and resilient means on said rods and interposed between said cross members, whereby the 105 switch-rails are yieldingly held in place.

2. In a switch mechanism, in combination with movable switch-rails, means whereby said rails are moved, said means comprising 110 a plurality of apertured cross members, a rod passing through an intermediate cross mem-

ber and adjustably held thereto by nuts, bolts passing through said cross members, coil-springs disposed around said bolts and between said cross members, and means on
5 said bolts whereby tension of said springs is altered.

3. In a switch mechanism, in combination with movable switch-rails, means whereby said rails are moved, said means comprising a
10 plurality of apertured cross members, a rod passing through an intermediate cross member and adjustably held thereto by nuts, bolts passing through said cross members, coil-springs disposed around said bolts and
15 seated in recesses in said cross members, and means on said bolts whereby tension of said springs is altered.

4. In a switch mechanism, in combination with movable switch-rails, means whereby
20 said rails are moved, said means comprising outer cross members, connecting means on one of said outer cross members, a rod passing through another of said outer cross members, an intermediate cross member having
25 said rod passed therethrough and adjustably held thereto by nuts on said rod, bolts passing through said cross members, springs disposed between said cross members, and means on said bolts whereby tension of said
30 springs is altered.

5. In a switch mechanism, in combination with movable switch-rails, means whereby said rails are moved, said means comprising outer cross members, a connecting means on
35 one of said outer cross members, a rod passing through another of said outer cross members, an intermediate cross member having said rod passed therethrough and adjustably held thereto by nuts on said rod, bolts passed
40 through said cross members, coil-springs disposed around said bolts and between said cross members, and means on said bolts whereby tension of said springs is altered.

6. In a switch mechanism, in combination
45 with movable switch-rails, means whereby said rails are moved, said means comprising

outer cross members, a connecting means on one of said outer cross members, a rod passing through another of said outer cross members, an intermediate cross member having said
50 rod passed therethrough and adjustably held thereto by nuts on said rod, bolts passed through said cross members, coil-springs disposed around said bolts and seated in recesses in said cross members, and means on said bolts
55 whereby tension of said springs is altered.

7. In a switch mechanism, in combination with movable switch-rails, means whereby said rails are moved, said means comprising outer cross members, a link passed through
60 one of said outer cross members and adjustably held thereto by nuts on said link, a rod passing through another of said outer cross members, an intermediate cross member having said rod passed therethrough and ad-
65 justably held thereto by nuts on said rod, bolts passing through said cross members, springs disposed between said cross members, and means on said bolts whereby tension of said springs is altered.
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8. In a switch mechanism, in combination with movable switch-rails, means whereby said rails are moved, said means comprising outer cross members, a link passed centrally
75 through one of said outer cross members and adjustably held thereto by nuts on said link, a rod passing centrally through another of said outer cross members, an intermediate cross member having said rod passed centrally therethrough and adjustably held
80 thereto by nuts on said rod, bolts passed through said cross members near the ends thereof, coil-springs disposed around said bolts and seated in recesses in said cross members, and nuts on said bolts whereby
85 tension of said springs is altered.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD J. SHOFFNER.

Witnesses:

A. R. BOWDRE,
M. O. FRANKLIN.