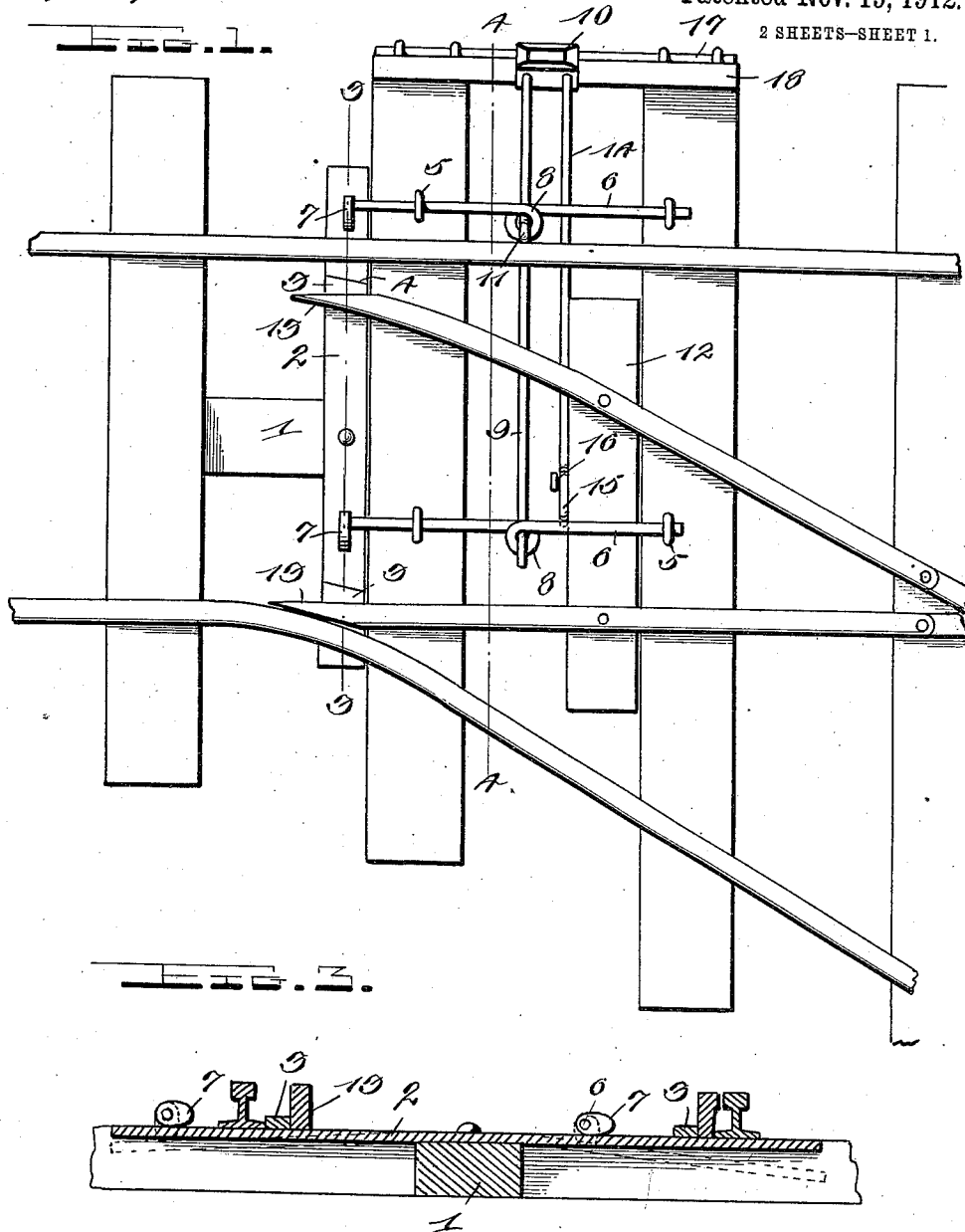


A. W. ROLLINGS & J. H. SWEENEY.
 SWITCH OPERATING MECHANISM.
 APPLICATION FILED JAN. 20, 1912.

1,044,916.

Patented Nov. 19, 1912.

2 SHEETS—SHEET 1.



Witnesses

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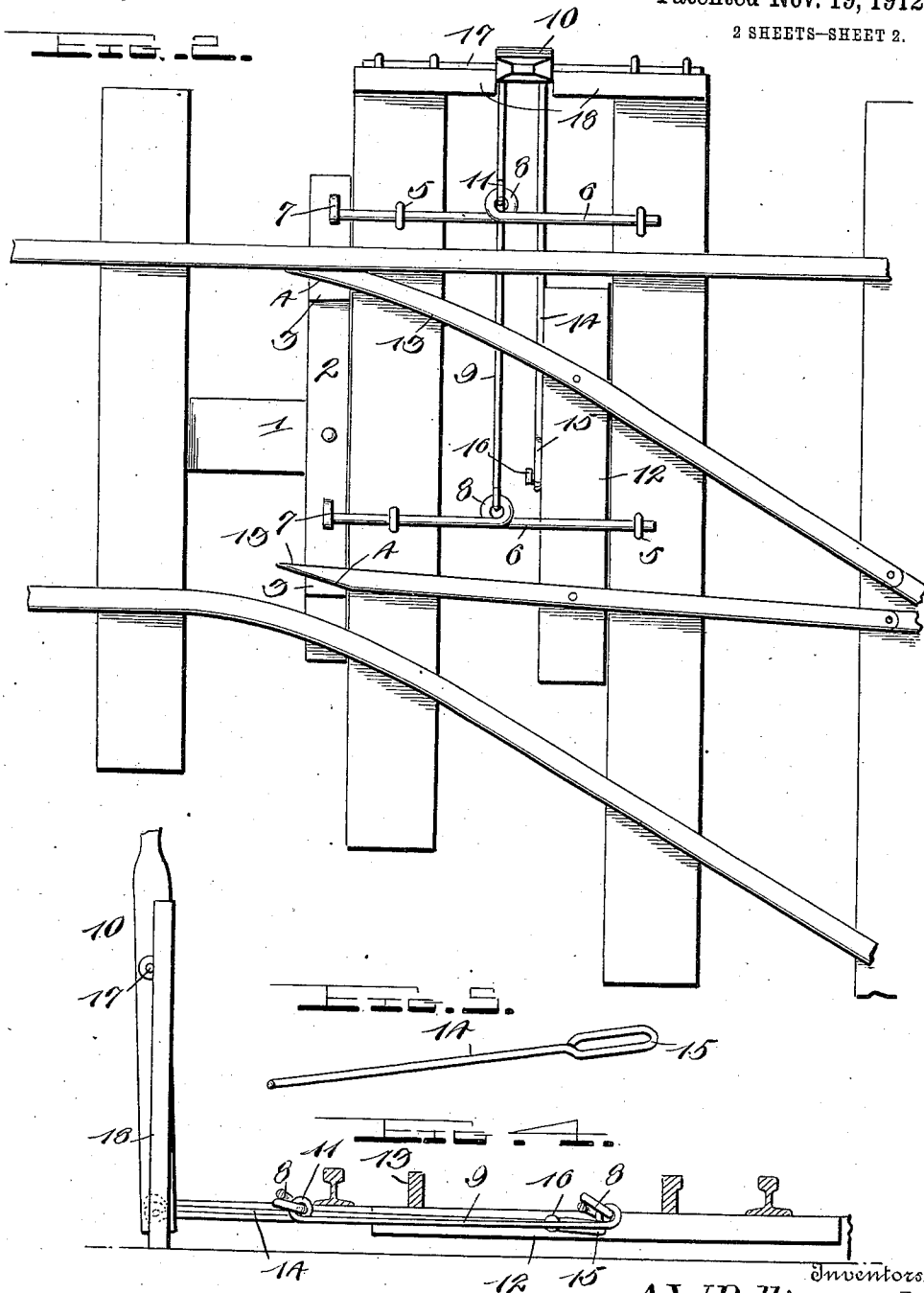
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ALEX WOODS ROLLINGS AND JAMES HENRY SWEENEY, OF MONTGOMERY, ALABAMA.

SWITCH-OPERATING MECHANISM.

1,044,916.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed January 20, 1912. Serial No. 672,285.

To all whom it may concern:

Be it known that we, ALEX WOODS ROLLINGS and JAMES HENRY SWEENEY, citizens of the United States, residing at Montgomery, in the county of Montgomery and State of Alabama, have invented certain new and useful Improvements in Switch-Operating Mechanism, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in switch operating mechanism and has for its object to provide a device of this character whereby the switch points can be easily and quickly thrown to their respective positions.

Another object of the invention is to provide means whereby the switch points will be held in their respective positions until released by actuating the switch lever.

A further object of the invention is to provide a device of this character which will possess advantages in points of efficiency and durability, is inexpensive of manufacture and at the same time is simple in construction and operation.

With the above and other objects in view the invention consists in the novel features of construction and the combination and arrangement of parts hereinafter more fully described, pointed out in the claims and shown in the accompanying drawings, in which—

Figure 1 is a top plan view showing the switch closed and the main track open. Fig. 2 is a similar view showing the switch open and the main track closed. Fig. 3 is a sectional view on the line 3—3 of Fig. 1. Fig. 4 is a sectional view on the line 4—4 of Fig. 1, and Fig. 5 is a detail perspective view of the operating rod that shifts the switch points.

Referring more particularly to the drawings 1 indicates a longitudinal rectangular block of suitable size and length which is disposed between and secured to the ties at the point where the switch intersects the main rails. Mounted on this block 1 is a transversely disposed resilient plate 2 arranged parallel with the ties, said plate being secured at its intermediate portion to the block 1. Secured to the plate 2 near each end thereof are the substantially rectangular blocks 3 said blocks being provided with the inclined side portions 4 adapted to fit against the flange of the rail,

Mounted in suitable bearings 5 and disposed transversely of the ties and arranged parallel with the rails are the shafts 6, having the cams 7 mounted on one end of said shafts and adapted to engage with the ends of the plate 2. The intermediate portion of said shafts are looped to form the eyes 8, and a transverse shaft 9 is provided having its outer end pivotally secured to the lower end of the actuating lever 10 and its intermediate portion looped to form an eye 11 adapted to engage with one of the eyes 8. The end of the shaft 9 is looped in the other of the eyes 8 so that by actuating the lever 10 the shaft 9 will rotate the shafts 6, which in turn will rotate the cams 7 and force the ends of the plate 2 downwardly. A connecting bar 12 is provided to which are connected the movable switch points 13. A transversely disposed rod 14 is provided having one end pivotally secured to the lower end of the lever 10 adjacent the end of the shaft 9, the other end of said rod being bent to form an elongated loop 15 which is slidably mounted on the headed pin 16 carried by the bar 12. The space in the loop 15 is sufficiently large to allow the lever 9 to rotate the shafts 6 far enough so that the cams 7 will force the ends of the plate 2 down, carrying the blocks 3 with them, said blocks being carried down far enough to allow the switch points 13 to pass over them. The actuating lever 10 is pivotally mounted on the rod 17 carried by the vertical supports 18 which are secured to the ends of the ties, said lever being so pivoted to allow the same to swing between the supports 18. It will be clearly understood that other means may be used for connecting the shafts 6 and 9 than that shown and described. Other means may also be used to connect the rod 14 to the bar 12, in place of the loop 15.

In Fig. 1 we have shown the switch closed and the main track open, to throw the switch points the upper end of the lever 10 is pushed inwardly toward the track, the rod 9 rotating the shafts 6 and pressing the ends of the spring plate 2 downwardly until the blocks 3 are below the flange of the rail. The space in the loop 15 is large enough to allow the rod 14 to move over while the cams 7 are pressing down on the ends of the plate 2 and when the end of the loop reaches the pin the cams 7 will have turned enough so that the blocks 3 will be below the switch

points. Further pressure on the rod 10 throws the switch points so that the switch will be open. The cams 7 will be turned far enough to allow the ends of the plate 2 to retain their normal position, the ends of said plates frictionally engaging the under surface of the switch points and the blocks 3 engaging the flange of the rail to hold the points in the position into which they have been shifted.

While we have shown and described the preferred embodiment of our invention it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying our invention into practice without sacrificing any of the novel features or departing from the scope thereof.

What we claim is:—

1. The combination with switch points, of means for shifting the same, a transverse resilient plate fixed at its intermediate portion and having its ends engaging the under surfaces of the switch points, and substantially rectangular blocks carried by the ends of said plate and adapted to engage the side of said points to hold the same in the position into which they have been shifted.

2. The combination with switch points, of means for shifting the same, a transverse resilient plate fixed at its intermediate portion and having its ends engaging the under surfaces of said switch points, substantially rectangular blocks carried by the ends of said plate to engage the side of the points, and means for forcing the ends of said plate downwardly to allow the switch points to pass over said blocks.

3. The combination with switch points, of means for shifting the same, means for holding said points in the position into which they have been shifted, shafts arranged substantially parallel with said points, cams formed on one end of said shafts and adapted to engage said holding means, and means cooperating with said shifting means for rotating said shafts which in turn will rotate said cams and release said holding means.

4. The combination with switch points, of means for shifting the same, of means for holding said points in the position into which they have been shifted, shafts arranged substantially parallel with said points, cams formed on one end of said shafts and adapted to release said holding means when actuated, a transverse shaft connected to said first shafts and adapted to rotate the same, and means cooperating with said shifting means for reciprocating said transverse shaft, rotating said first shafts and actuating said cams to release said holding means.

5. The combination with switch points, of means for shifting the same, of means for

holding said points in the position into which they have been shifted, shafts arranged substantially parallel with said points, cams formed on one end of said shafts and adapted to release said holding means when actuated eyes formed on said shafts intermediate of their ends, a transverse shaft, having its intermediate portion looped in one of said eyes and its end looped in the other of said eyes, and means cooperating with said shifting means for reciprocating said transverse shaft, rotating said first shafts and actuating said cams to release said holding means.

6. The combination with switch points, of a transverse bar connecting the same, a headed pin carried by said bar, a transverse rod, having an elongated loop formed on one end and mounted on said pin, means secured to the other end of said rod for reciprocating the same and shifting said switch points, means for holding said points in the position into which they have been shifted, and means cooperating with said shifting means for releasing said holding means.

7. The combination with switch points, of a transverse bar connecting the same a headed pin carried by said bar, a transverse rod, having an elongated loop formed on one end and mounted on said pin, vertical supports, a lever pivotally mounted on said supports and adapted to swing between the same, the other end of said transverse rod being pivotally connected to the lower end of said lever whereby the same will be reciprocated, when the lever is actuated, to shift said switch points, means for holding said points in the position into which they have been shifted, and means cooperating with said shifting means for releasing said holding means.

8. The combination with switch points, of a transverse resilient plate secured at its intermediate portion and having its ends engaging the under surfaces of said points, substantially rectangular blocks carried by the ends of said plate and engaging the flange of the points, to hold the same in a shifted position, shafts arranged substantially parallel with said points, cams formed on one end of said shafts and adapted to engage the ends of said plate, eyes formed on said shafts intermediate of their ends, a transverse shaft having its intermediate portion looped in one of said eyes and its end looped in the other of said eyes, vertical supports, a lever pivotally mounted on said supports and adapted to swing between them said transverse shaft having the end opposite the looped end pivotally secured to the lower end of said lever a transverse bar connecting said switch points, a headed pin carried by said bar, a transverse rod, having an elongated loop formed on one end and mounted on said pin, the other end of

said rod being pivotally connected to the lower end of said lever, the actuation of said lever rotating the cams and forcing the ends of the plates downwardly to allow the
5 switch points to pass over the blocks, said transverse rod being reciprocated by the actuation of said lever to shift said switch points.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses. 10

ALEX WOODS ROLLINGS.

JAMES HENRY SWEENEY.

Witnesses:

T. H. SEAY,

A. WHITE.

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