F. P. PERKINS.

RAILWAY SWITCH MECHANISM.

APPLICATION FILED JUNE 11, 1909.

942,927.

Patented Dec. 14, 1909.

2 SHEETS—SHEET 1.

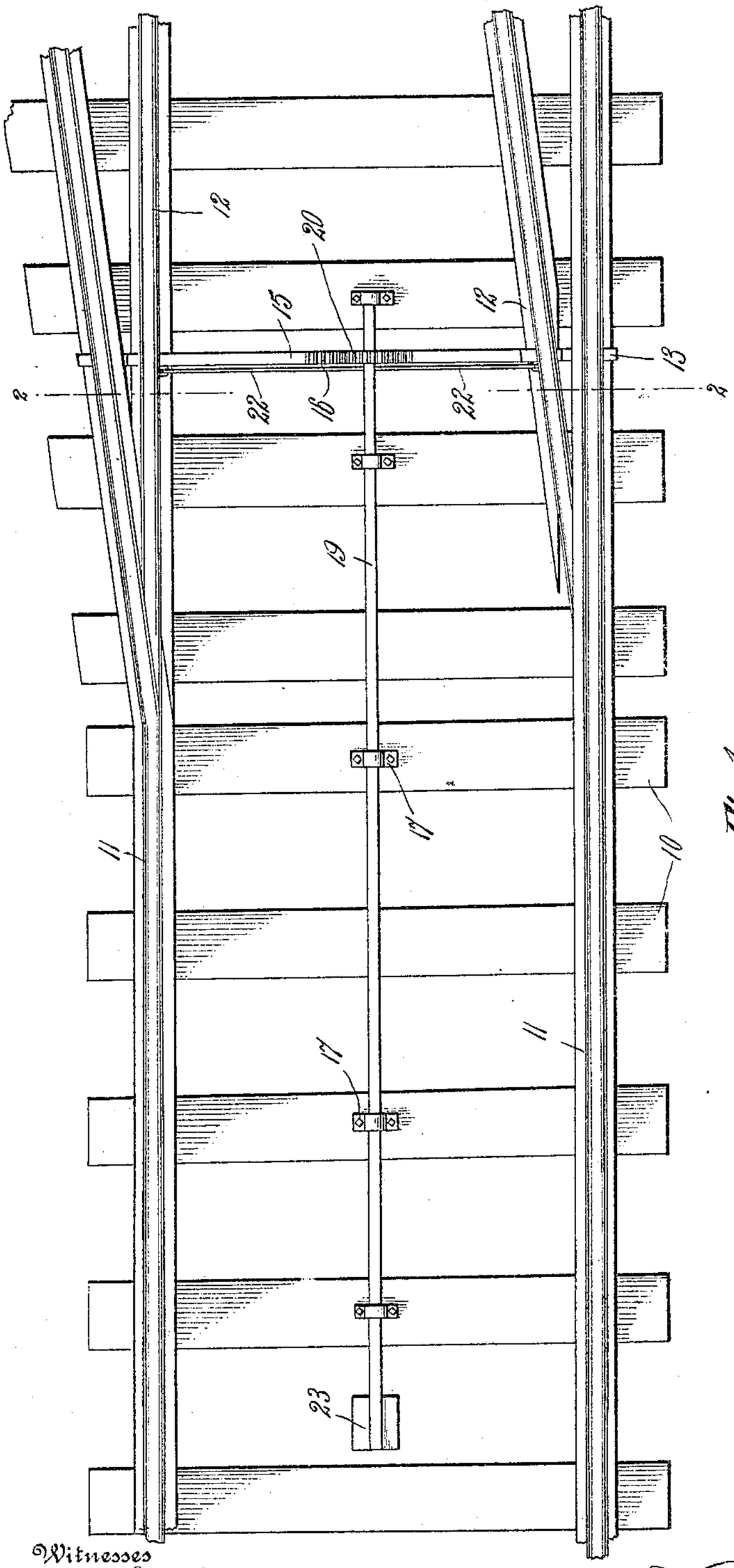

Fig. 1.

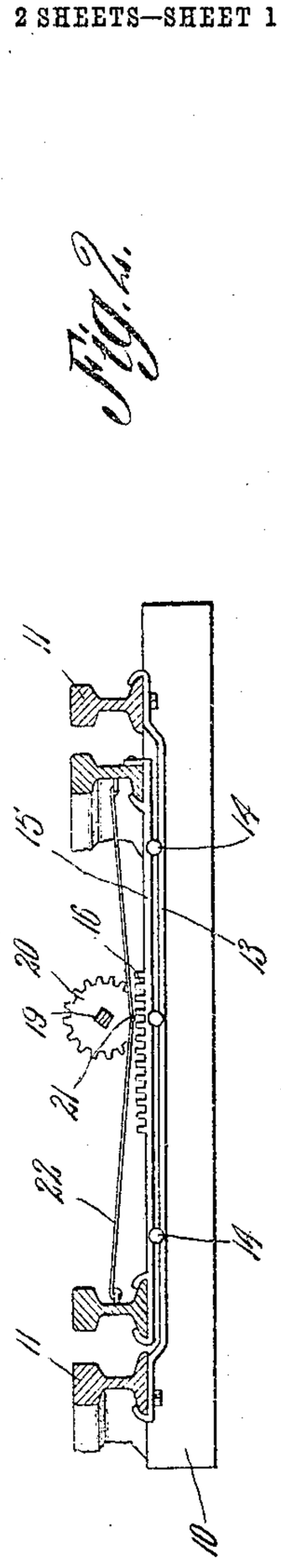

Fig. 2.

Witnesses

J. H. Crawford

Inventor

Fred P. Perkins,

By Lyndale Lyndale

Attorneys

F. P. PERKINS.

RAILWAY SWITCH MECHANISM.

APPLICATION FILED JUNE 11, 1909.

942,927.

Patented Dec. 14, 1909.

2 SHEETS—SHEET 2.

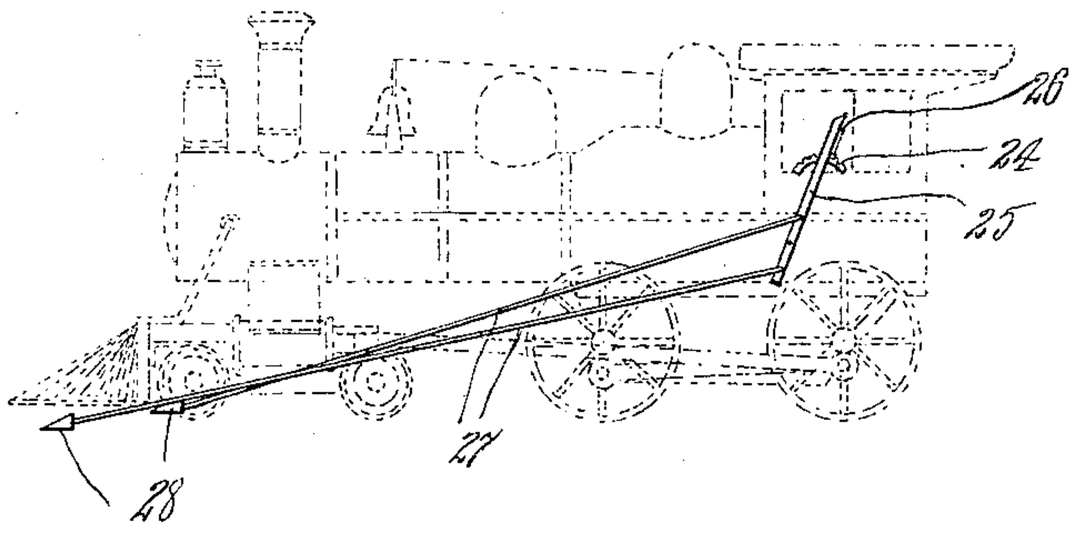

Fig. 3.

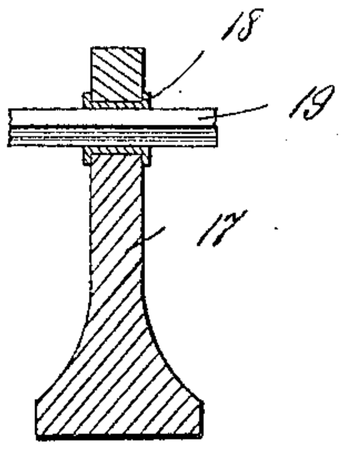

Fig. 5.

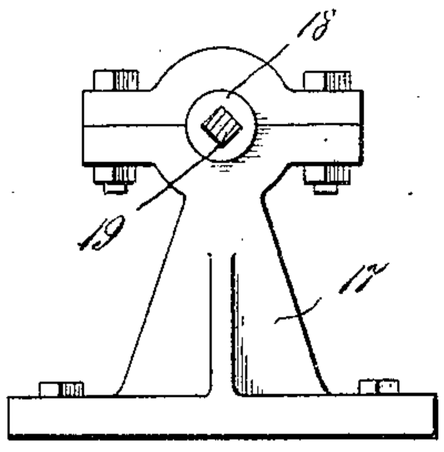

Fig. 4.

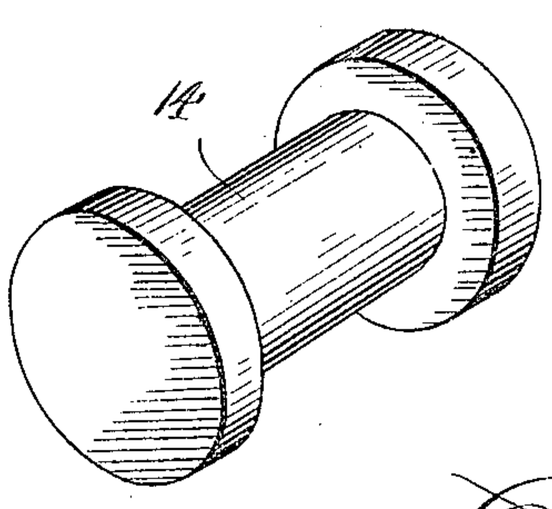

Fig. 6.

Witnesses
J. H. Crawford

Inventor
Fred P. Perkins.

By Chandlee & Chandlee.

Attorneys.

UNITED STATES PATENT OFFICE.

FRED P. PERKINS, OF BATESVILLE, MISSISSIPPI.

RAILWAY SWITCH MECHANISM.

942,927. Specification of Letters Patent. Patented Dec. 14, 1909.

Application filed June 11, 1909. Serial No. 501,566.

To all whom it may concern:

Be it known that I, FRED P. PERKINS, a citizen of the United States, residing at Batesville, in the county of Panola, State of Mississippi, have invented certain new and useful Improvements in Railway Switch Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railroads and has special reference to an automatic railway switch mechanism.

One object of the invention is to improve the general construction of devices of this character.

Another object of the invention is to provide a device of this character which shall be constructed in an extremely simple manner while at the same time being efficient in operation.

With the above and other objects in view the invention consists in general of a railway switch and a novel form of actuating mechanism therefor.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a top plan view of a railroad switch constructed in accordance with this invention. Fig. 2 is a transverse section thereof on the line 2—2 of Fig. 1. Fig. 3 is a detail view of the end of the switch operating shaft and the engine or rolling stock supported actuating mechanism. Fig. 4 is a detail elevation of one of the supporting stands for this invention. Fig. 5 is a vertical median section through the stand shown in Fig. 4. Fig. 6 is a detail view of one of the rollers between the rack and bearer bars.

The numeral 10 indicates the ordinary ties of a track and at 11 are indicated the rails. These rails are provided with the usual switch points 12 and these switch points are here shown as being of the type commonly called a point switch. Secured to the line rails 11 is a bearer bar 13 whereon is held a plurality of rollers 14 having flanged ends as clearly indicated in Fig. 6. These rollers 14 are equipped with the flanges so that they may be held from displacement on the bar 13. Secured to the switch points 12 is a rack bar 15 provided with rack teeth 16, preferably disposed in the center thereof. Supported at suitable distances upon the ties are alined bearings 17 each of which is provided with a bushing 18 having a square opening therethrough. Carrying the bearings 17 and extending through the bushing is a square shaft 19 whereon is mounted a gear 20 which meshes with the rack teeth 16. Upon the gear 20 is further formed a pin 21 to which is attached pull rods 22 which have their free ends secured to the switch points 12. These pull rods are for the purpose of assisting the gear in the performance of its work. The end of the bar 19 is provided with a pair of oppositely disposed cam members 23 which are substantially in the form of wedges with their upper faces inclined. Upon the platform of a car or cab of an engine as indicated by the dotted lines in Fig. 3 there is supported a quadrant 24 whereover moves a rock lever 25 provided with a handle 26. To the arm of the rock lever 25 are secured opposed rods 27 carrying at their lower ends cam members 28 which are adapted to coact with the cam members 23. These rods 27 extend through and are guided by the floor of the car or if preferred a suitable sleeve may be located in said floor for the purpose of guiding the rods.

In the operation of the device if the engineer or other operative desires to move over the main line track when he is approaching from the left of Fig. 1 he depresses the right hand member 28. This comes in contact with the member 23 and rotates the rod 19 in such manner that the switch points 12 are moved to open the main line track. When he desires to turn out on the switch he moves the handle 26 to the left and this depresses the left hand member 23 and moves the switch to the open position. It will be obvious that when the turnout is located on the opposite side from that shown the operator will move the handle to the left to stay on the main line and to the right to turn out to the switch, thus moving the handle at all times in the direction of the track on which he wishes to move. It will be further obvious that by mere duplication of these parts on the turnout and the other side of the switch on the main line

the switch may be operated either from the turnout or by a train approaching in the opposite direction on the main line.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that many minor changes may be made in the form and construction of this invention without departing from the material principles thereof. It is not therefore desired to confine the invention to the exact form herein shown and described, but it is wished to include all such as properly come within the scope of the appended claims.

Having thus described the invention, what is claimed as new, is:—

1. In a railway switch operating device, the combination of a railroad track provided with switch points; of a rack bar connecting said switch points, a rod supported longitudinally of said track, bearings on the ties of the track for said rod, a gear fixed on said rod and meshing with said rack bar, oppositely disposed cams held to extend longitudinally of the end of the rod, and a train supported device to engage said cam and rotate the rod in one direction or the other according to the cam engaged, said train supporting device comprising a pair of cam elements, a rock lever, and an operative connection between said cam elements and rock lever to depress one of said elements as the other is raised.

2. In a railway switch operating device, the combination of a railroad track provided with switch points; of a rack bar connecting said switch points, a bar connecting the rails of the track and lying beneath the rack bar, friction rollers between said bars, a rod supported longitudinally of said track and lying between the rails, a gear fixed on said rod and meshing with said rack bar, cam elements formed on the opposite sides of the ends of said rod and extending longitudinally thereof, a rolling stock supported standard, a handled rock lever carried by said standard, bars extending downward from the opposite end of said handled rock lever, and cam elements carried on the lower ends of said bars adapted to contact with one or the other of the cam elements on the rods according as the handle is moved to one side or the other.

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

FRED P. PERKINS.

Witnesses:

RUBEL O. LESTER,

J. C. VALENTINE.