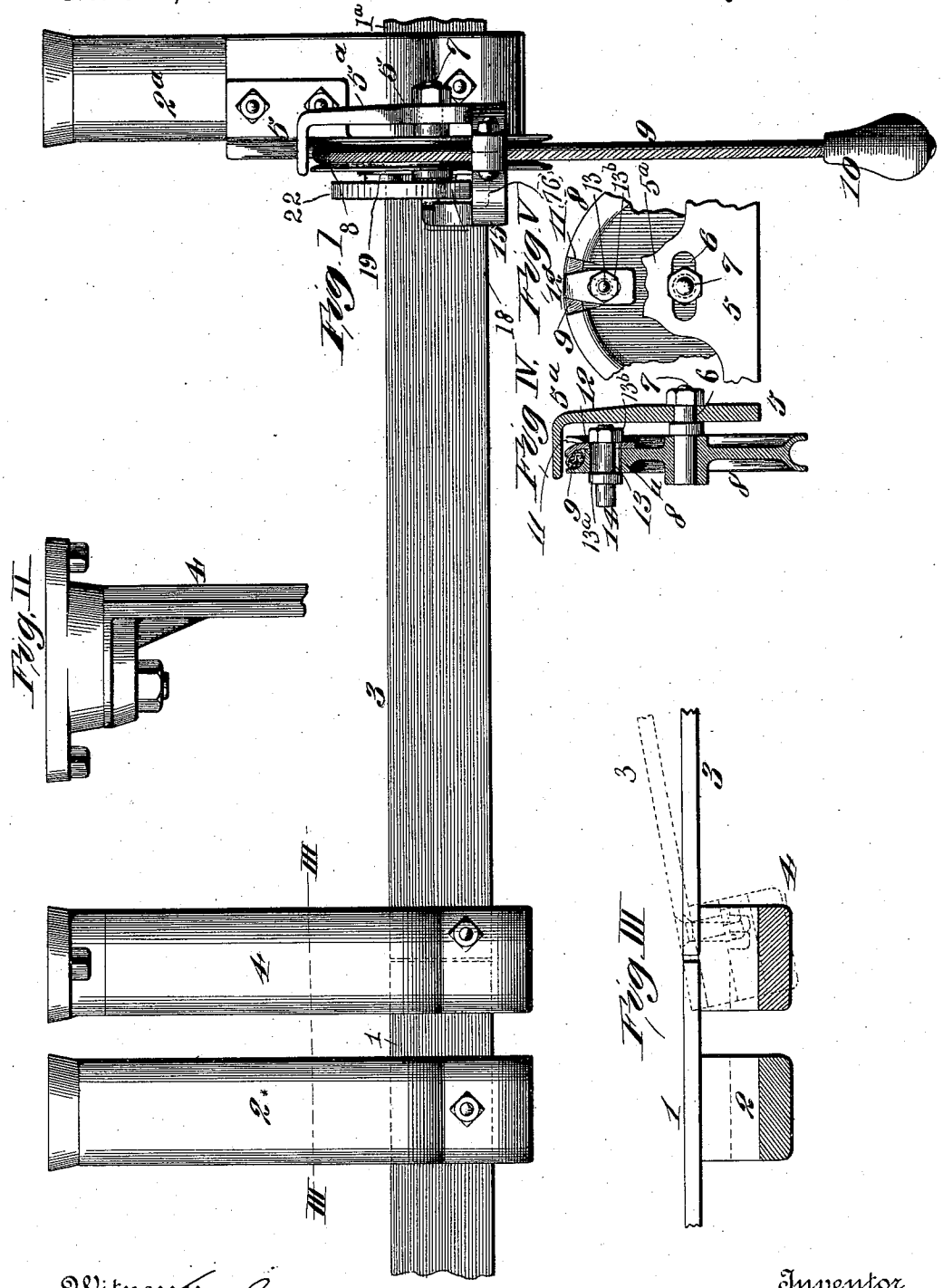
(No Model.) 2 Sheets—Sheet 1.

F. SCHRAUDNER.

OVERHEAD RAILWAY SWITCH.

No. 564,110. Patented July 14, 1896.



Witnesses,
E. L. Knight
Stanley Stoner

Inventor
Frederick Schraudner,
By his Attorneys
Knight Bros.

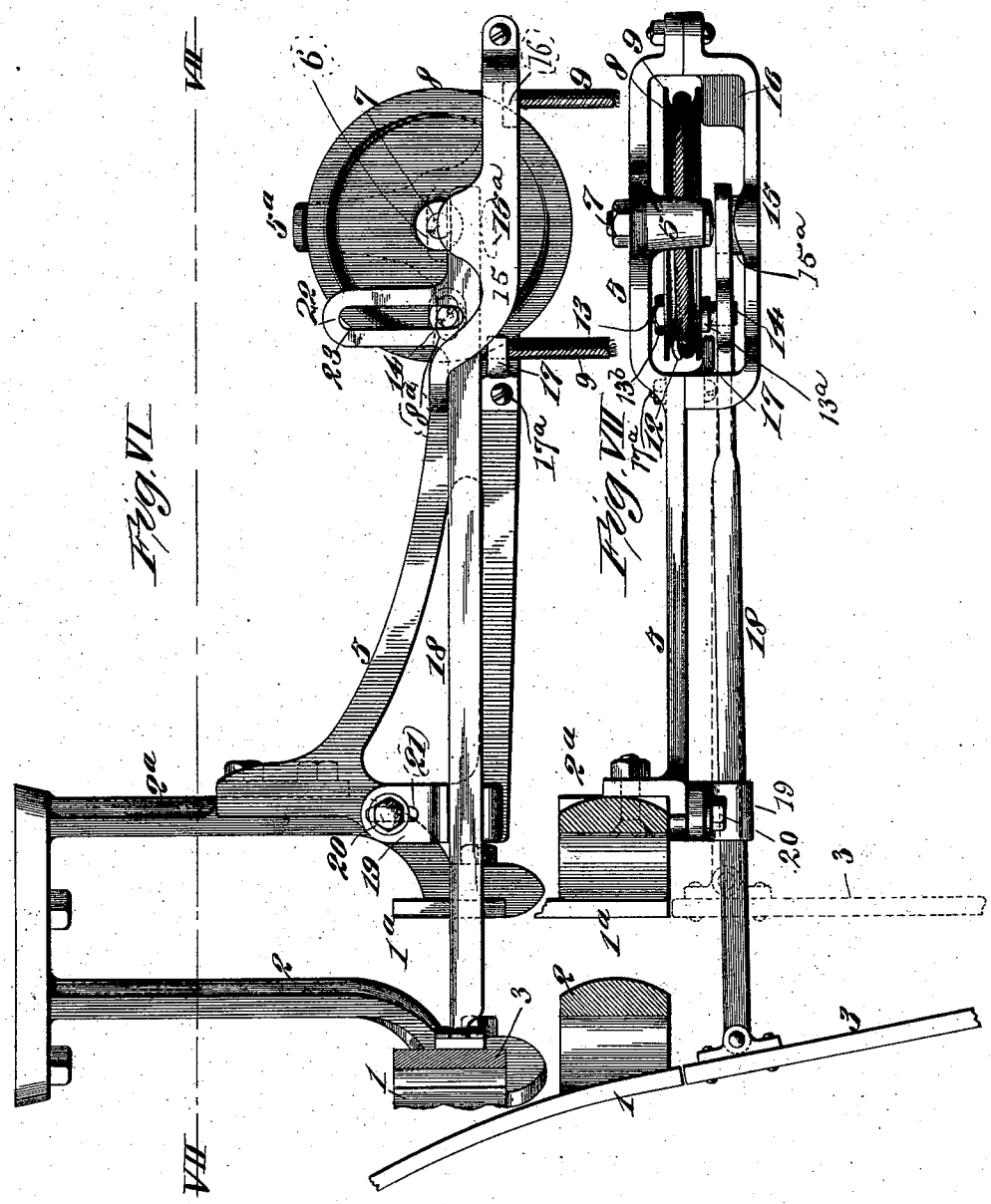
THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

F. SCHRAUDNER.

OVERHEAD RAILWAY SWITCH.

No. 564,110. Patented July 14, 1896.



Witnesses
E. C. Knight
Stanley Stoner.

Inventor
Frederick Schraudner
By his Attorneys
Knight Bros.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK SCHRAUDNER, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO THE GUS V. BRECHT BUTCHERS SUPPLY COMPANY, OF SAME PLACE.

OVERHEAD-RAILWAY SWITCH.

SPECIFICATION forming part of Letters Patent No. 564,110, dated July 14, 1896.

Application filed August 10, 1895. Serial No. 558,864. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK SCHRAUDNER, a citizen of the United States, and a resident of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Overhead-Railway Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My present invention relates to overhead switches for suspended railways, and is an improvement on the switch shown in my patent, No. 434,840, issued August 19, 1890.

My present invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I illustrates a side elevation of a portion of an overhead track and my improved switch. Fig. II is a detail side view of the upper end of the pivoted hanger to which the confined end of the switch-rail is attached. Fig. III illustrates a horizontal section taken on line III III, Fig. I. Fig. IV illustrates a cross-section of the rope-sheave, at a quarter turn from that shown in Figs. I, VI, and VII, through the medium of which the switch is operated. Fig. V is a detail side elevation of the sheave, with a portion of the rope-guard broken away to permit an unobstructed view of the rope-securing clip. Fig. VI is a side elevation of the switch-operating mechanism. Fig. VII is a top view, the section being taken on line VII VII, Fig. VI.

Referring to the drawings, 1 designates the main rail of the railway, which is supported at its end contiguous to the switch by a hanger 2, and 3 designates the switch-rail, which is supported at one end by a pivotally-attached hanger 4, similar to the hanger employed for the same purpose in my Patent No. 434,840, above referred to. At the opposite end of the switch-rail are shown two diverging-positioned rails, 1 and 1^a, supported by hangers 2 and 2^a, and it is with these rails that the free end of the switch is designed to be thrown in line so as to complete the track.

The parts thus far described are all shown in my former patent, and no novelty is herein claimed upon them.

5 designates a bracket secured to the hanger 2^a, and in the outer end of this bracket is an elongated opening 6 that receives a journal rock-shaft 7 that carries a grooved sheave 8, and on the sheave 8 is an operating-rope 9, the two free ends of which are provided with handles 10. The bracket 5 has an upward extension 5^a over the rock-shaft opening that extends above the top of and over the sheave 8 and prevents the escape of the rope from the groove of the sheave.

For the purpose of locking or clamping the rope to the sheave in order that the movement of the rope will always be imparted to the sheave, I form an opening 11 in a flange of the sheave and apply therein a clip 12, the point of which is arranged to be brought into contact with the rope and held by a bolt 13, arranged eccentrically of the sheave and having a collar 13^a and a securing device or nut 13^b. The outer end of this bolt forms a pin 14, the use of which will be presently described.

15 designates a plate secured to the bracket 5 to inclose the sheave at the opposite side from the bracket, on the inner face of which plate at its outer side is a projection 16 that limits the sidewise movement of the sheave, and on the end of the plate 15 is an arm 17 that performs the same office as the projection. The inner end of the plate 15 is held by the bolt 17^a, that passes through the arm 17 on its end.

Pivotally connected to the movable end of the switch-rail is a bar 18 loosely supported and sliding in a block 19, and supported at its outer end by means of a lug 15^a, located on the inner side of the plate 15. This block is vertically adjustable and is held by a bolt 20 fitting in an elongated opening 21 in the block 19, thereby permitting vertical movement of the block for the purpose of bringing the switch-rail into vertical adjustment with the main rail.

The outer end of the bar 18 is provided with a vertical extension 22, having a slot 23 arranged to receive the pin 14 of the bolt

13 on the sheave 8. The opening 8^a, in which the combined bolt and pin 13 fits, is an elongated one, for the purpose of permitting lateral adjustment of the pin to bring the switch-rail into proper horizontal registration with either main rail of the track. This elongated opening 8^a is shown in vertical position in Fig. IV and in dotted lines in horizontal position in Fig. VI.

To operate the switch, one of the handles on the rope is grasped, and on drawing upon it the sheave is caused to rotate, and as it does so the pin 14 is moved in the slot of the extension 22, in which movement it bears against the extension, and draws or pushes the bar 18 in accordance with the direction in which the sheave is rotated, and thus the switch-rail is brought into line with the main rail which is desired to complete the track.

I claim as my invention—

1. In a switch-operating mechanism, the combination of a movable switch-rail, a bar connected to said switch-rail, an adjustable block supporting said bar, a horizontally-adjustable sheave, means for operating said sheave, an adjustable pin carried by said sheave, said pin having engagement with said bar for the purpose of imparting its movement to the switch-rail, substantially as described.

2. A switch-operating mechanism comprising a movable switch-rail, a bracket having a horizontal elongated opening in its outer end, a rock-shaft adjustable in said opening, a sheave mounted on the rock-shaft, a laterally-moving bar having a vertical extension formed with a slot and connected to the switch-rail, a block, secured to the bracket for supporting and guiding said bar in a horizontal line, means for operating the sheave, a bolt secured to the sheave and having a pin playing in the slot of the extension for moving the bar with the switch-rail, substantially as described.

3. A switch-operating mechanism comprising a movable switch-rail, a bracket having a vertical elongated opening, a laterally-moving bar having a vertical extension formed with a slot and connected to the switch-rail, a block for supporting and guiding said bar in a horizontal line, a bolt adjustable in the said opening and by which the block is secured, a sheave mounted on the bracket, means for operating the sheave, a bolt secured to the sheave and having a pin playing in the slot of the extension for moving the bar with the switch-rail; substantially as described.

4. A switch-operating mechanism comprising a movable switch-rail, a bracket, a laterally-moving bar having a vertical extension formed with a slot and connected to the switch-rail, a grooved sheave formed with a radial opening in a flange thereof, and with a radial opening in the body thereof, an operating-rope located in the groove of the sheave, the clip seated in the flange-opening, having its point lapping the rope, the bolt having a pin playing in the extension-slot, adjustable in the body-opening, and securing the clip, to the sheave; substantially as described.

FREDERICK SCHRAUDNER.

In presence of—
E. S. KNIGHT,
STANLEY STOVER.