

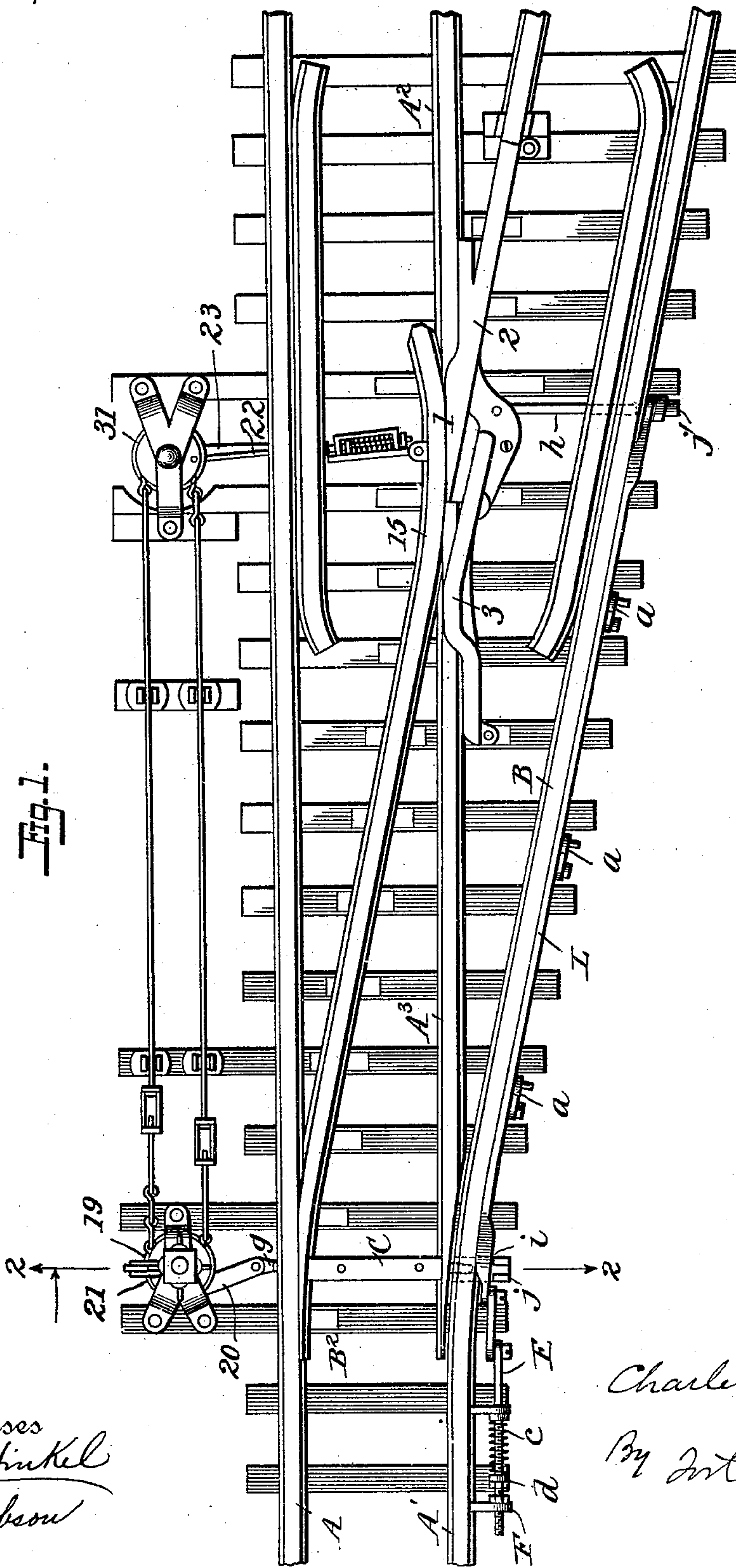
(No Model.)

3 Sheets—Sheet 1

C. B. PRICE.
RAILROAD SWITCH.

No. 515,361.

Patented Feb. 27, 1894.



Witnesses
J. G. Hinkel
A. H. Dobson

Charles B Price
Inventor
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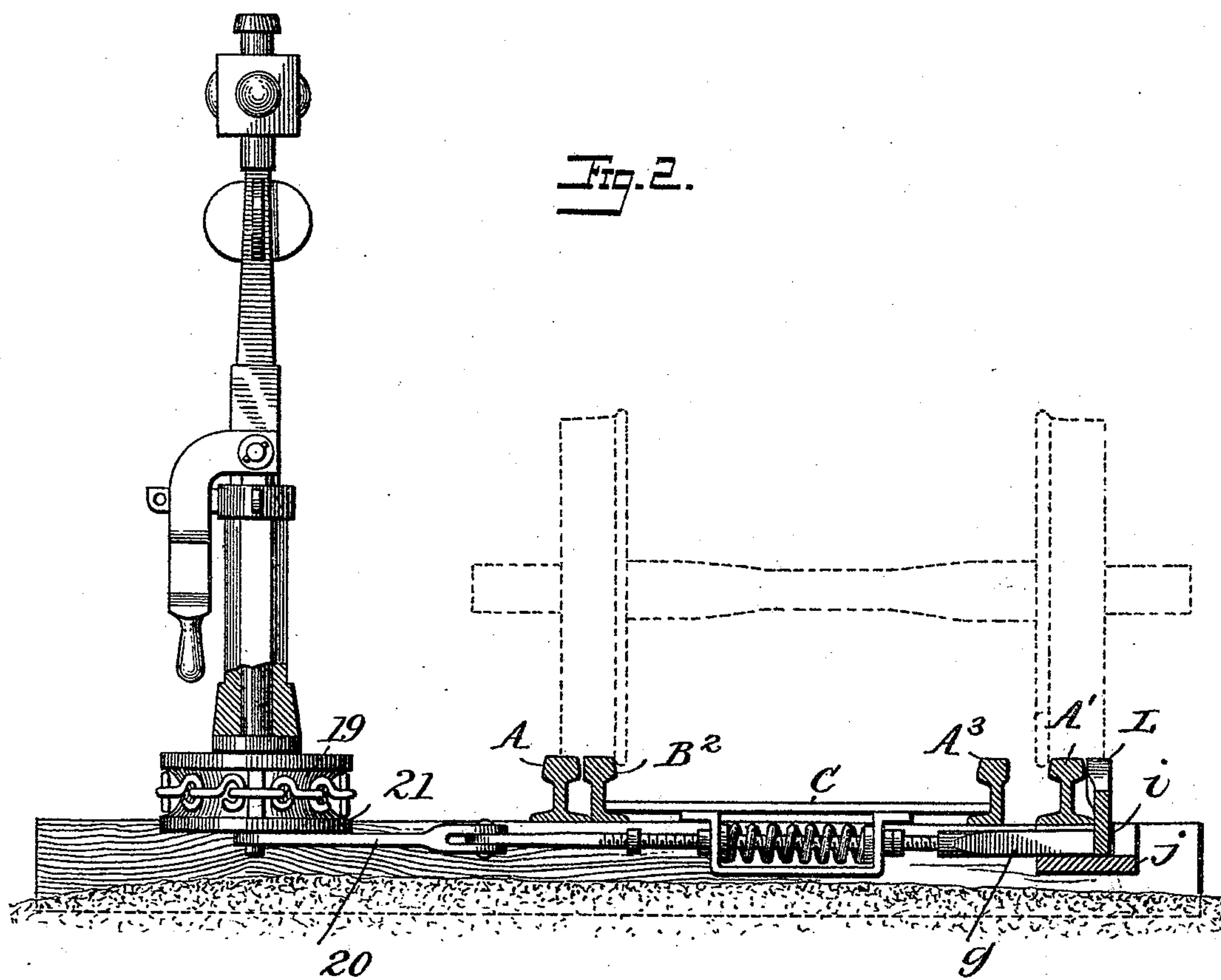
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3 Sheets—Sheet 2.

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3 Sheets—Sheet 3.

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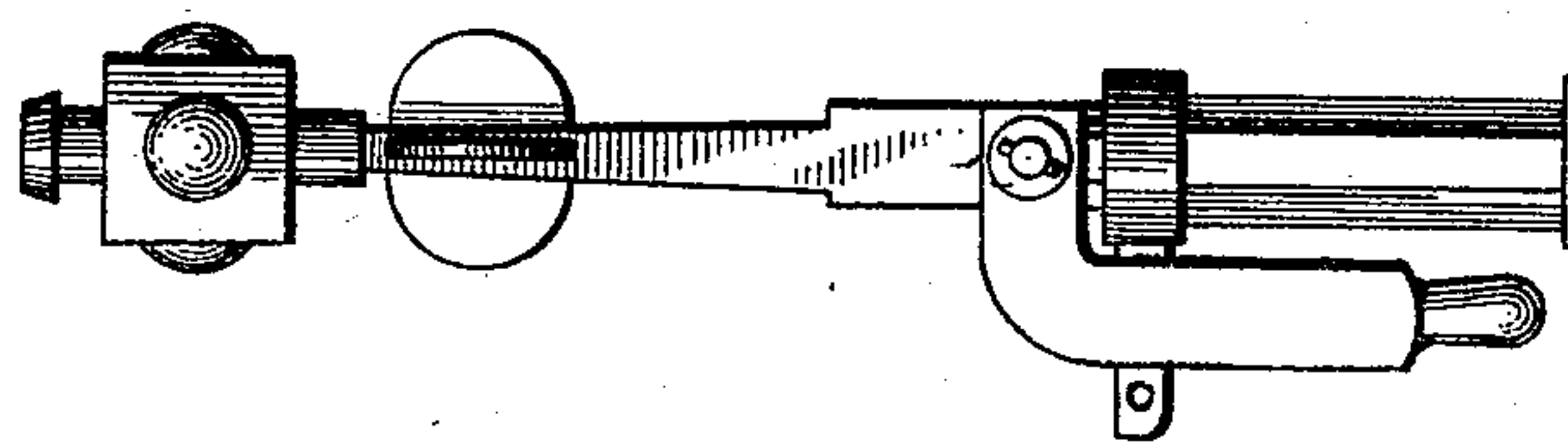


Fig. 3.

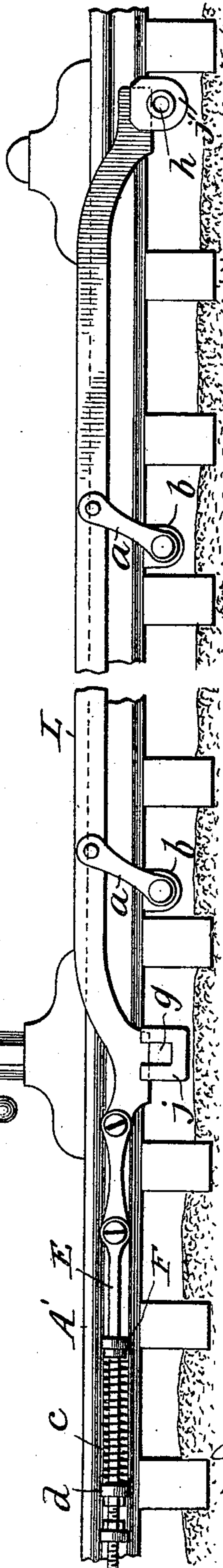
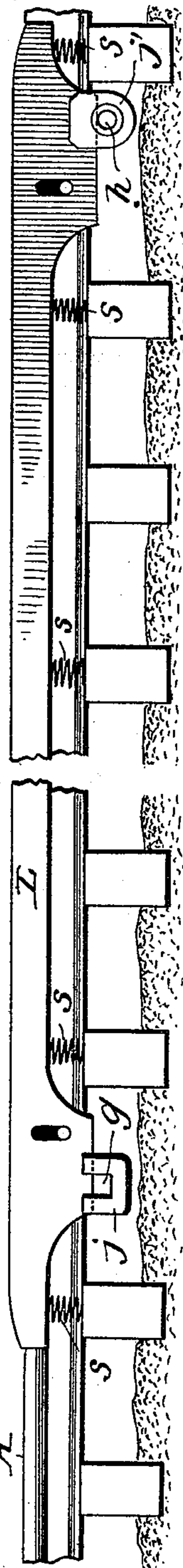


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES B. PRICE, OF PITTSBURG, PENNSYLVANIA.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 515,361, dated February 27, 1894.

Application filed November 11, 1893. Serial No. 490,677. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. PRICE, a citizen of the United States, residing in Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a specification.

My invention relates to that class of switch devices in which there are two separated but connected movable sections, as for instance, the movable switch point, and another movable point or frog section at a distance from the first, and my invention consists in the combination with such separated sections, of locking devices arranged to be held in position by the wheels of a train so that neither section can be shifted so long as any of the wheels of the train are between the two sections, as fully set forth hereinafter and as illustrated in the accompanying drawings in which—

Figure 1 is a plan of sufficient of a siding junction and switching devices to illustrate my improvement. Fig. 2 is an enlarged section on the line 2—2, Fig. 1; Fig. 3, an enlarged side view, showing the locking bar adjacent to the rail; Fig. 4, a view illustrating a modification.

In illustrating my invention in Figs. 1, 2 and 3, I have shown the same in connection with a switch and two-part frog as in the Letters Patent No. 398,975, issued to me March 5, 1889. In this construction, A, A' are the main track rails the latter prolonged into the rail B of the side track. A² is the stationary part of one of the main track rails in line with the rail A', and A³ is a movable portion of said main track rail tapered to form one of the points of the switch connected by a bar C with the other movable point B², forming part of the siding rails. The movable frog 1, consists of two pivoted sections 2, 3, and a pivoted or spring rail section 15. The spring rail 15 is connected by a rod 22, and the pivoted frog sections are connected by a rod 23 with crank pins on the operating disk 31 of the switch stand, so that the spring rail may be brought to and carried from one side of the main rail A² as the frog sections are brought to and carried from the opposite sides. The bar C, connected with the switch point, is connected by a rod 20 with a crank

pin on the disk 19 which turns with the disk 21 of the switch stand, all as in the patented device before referred to.

I have found that in the practical use of said patented device the switch-tender will sometimes throw the switch and change the position both of the switch points and of the frog sections immediately upon the last wheels of the train passing from the main track to the siding rails, so that when said wheels reach the frogs, they are derailed. Similar accidents are apt to result in other switch devices where there is any considerable distance between the switch points and other connected points, parts or sections. To obviate this difficulty, I combine with the switch points or rails and with the movable frogs or other movable devices distant from the switch points, locking devices of a character to be held in place to lock both the switch points and the frog so long as any of the wheels of the train are upon any portion of the track between the two movable parts or sections of the device. Said locking devices may be of different constructions and arrangements, consisting preferably, however, of a vertical movable bar normally in position to be depressed by the wheels of the train into position to obstruct the movement of parts connected with the switch points and with the frog.

As shown, the locking bar L, which may be in one or more sections, is arranged at the outer side of the outer siding rail B, so that it will be wholly out of the way of trains upon the main track, thereby reducing wear upon the bar and its appliances, and as shown in Figs. 1, 2 and 3, the said bar is supported by inclined links *a, a*, pivoted at their upper ends to the sides of the bar and at their lower ends to brackets *b* bolted to the under side of the rail A.

The body of the bar L is normally in position above the face of the rail B, being thus held by a spring *c*, bearing on a lug *d* upon a rod E sliding in a bracket F and connected to the end of the bar L.

The bar L extends from a point adjacent to the switch points to a position adjacent to the frog or other movable part connected with the switch points, and each end of the bar is bent down so that when the bar is in its

lowest position, one end will be opposite the end of a rod *g* extending from the bar *C* connecting the switch points, while the opposite end will be opposite the end of a bar *h* connected with the frog, so that the position either of the switch point or of the frog cannot be changed until the bar *L* is elevated, which can only result when the wheels of all the cars have passed beyond the frog.

As shown the rod *g* is a prolongation of the rod 20 and slides in a bracket *j* bolted beneath the rail and having a transverse slot *i* for guiding the end of the bar *L*, and the rod *h* slides in a similar bracket *j'*.

I have found that by the use of a locking bar arranged when depressed to obstruct the movements of parts connected with the switch points and frog or other sections, the class of accidents before referred to cannot take place as neither the switch points nor the frog or like devices can be shifted so long as any of the wheels of the train depress the locking bar extending between the switch and the frog.

As an illustration of a different means of mounting the locking bar, I show the same in Fig. 4 arranged to slide vertically and supported by springs *s, s*.

While I have illustrated the locking bar in connection with my patented safety frog, it will be evident that the same may be used in connection with switching, signaling and other devices where there are two movable parts or sections at a distance from each other, and where one part should not be shifted until the last wheels of the last car have passed both sections. It will therefore be evident that the locking bar may be used in place of the detector bar in some systems of safety switches avoiding the necessity of moving such detector bars from the switch house by the direct action of the switch levers.

Without limiting myself to the precise construction and arrangement of parts shown, I claim as my invention—

1. The combination with the separated connected movable sections of a switch, of a movable bar extending between said sections in position to be depressed by the wheels of a

train, means for maintaining the bar normally in an elevated position and parts extending from said sections in position to make contact with said bar when the same is depressed, substantially as set forth.

2. The combination with a siding rail of a bar extending along and normally projecting above said rail, movable switch sections adjacent to the ends of the bar, and rods extending from said switch sections in position to make contact with said ends, when the bar is depressed, substantially as set forth.

3. The combination with the rods *g, h*, extending from separated movable sections of the switching device, of a movable bar arranged adjacent to one of the rails in position to obstruct the movements of the rods when depressed, and means for normally elevating the bar, substantially as set forth.

4. The combination with the movable switch points and movable frog sections, of rods *g, h*, and a bar extending along side of one of the rails in position to obstruct the movement of the rods when depressed, and means for maintaining the bar in an elevated position, substantially as set forth.

5. The combination with the rail of a track, of a bar extending normally above the face of said rail, a spring device for maintaining the bar normally in said position, and rods *g, h*, extending from movable sections of the switch in position to make contact with the bar when the latter is depressed, substantially as described.

6. The combination with a track rail, of a bar supported by links at one side of said rail, a spring for elevating the bar, separated switch sections, and a rod extending from each section in position to make contact with the bar when the latter is depressed, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHAS. B. PRICE.

Witnesses:

M. A. CARMODY,
H. G. OLIPHANT.