C. L. Spencer.

Railroad Switch.

No. 21,631. Patented Sept. 28, 1858.

Fig. 1

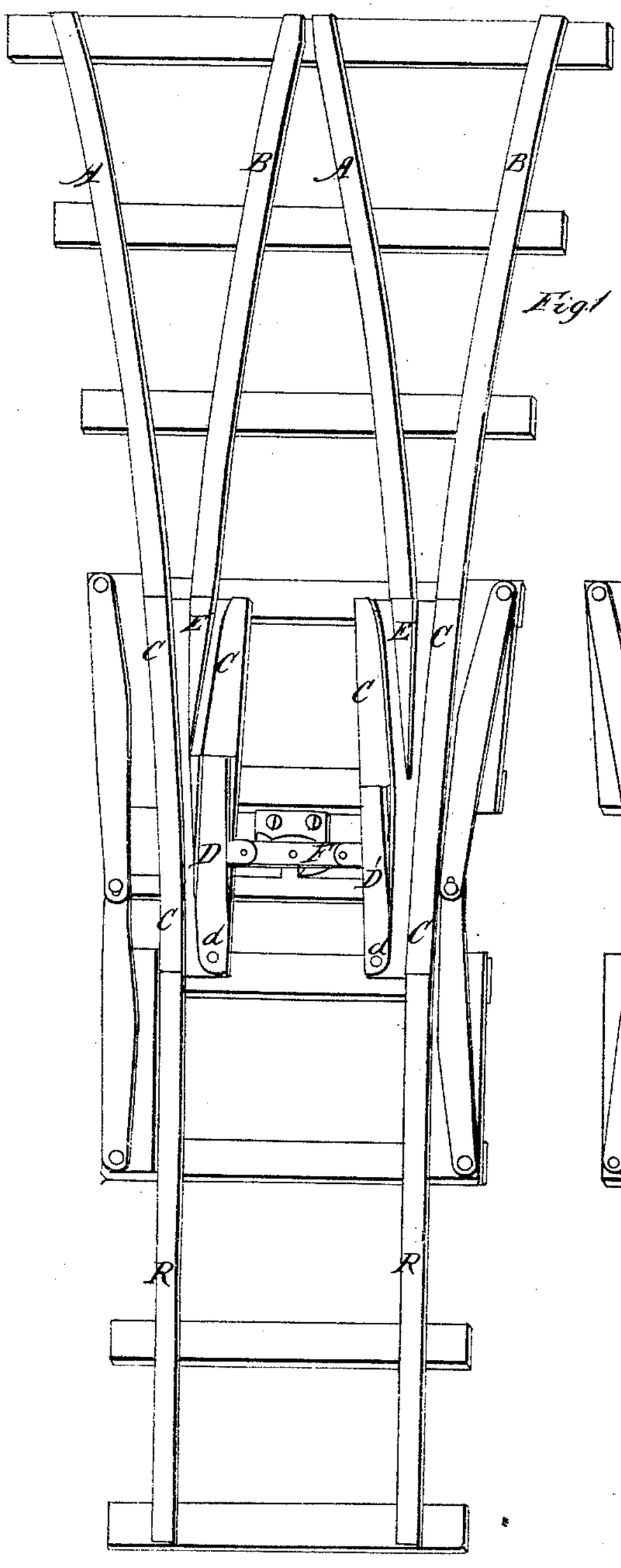

Fig. 2

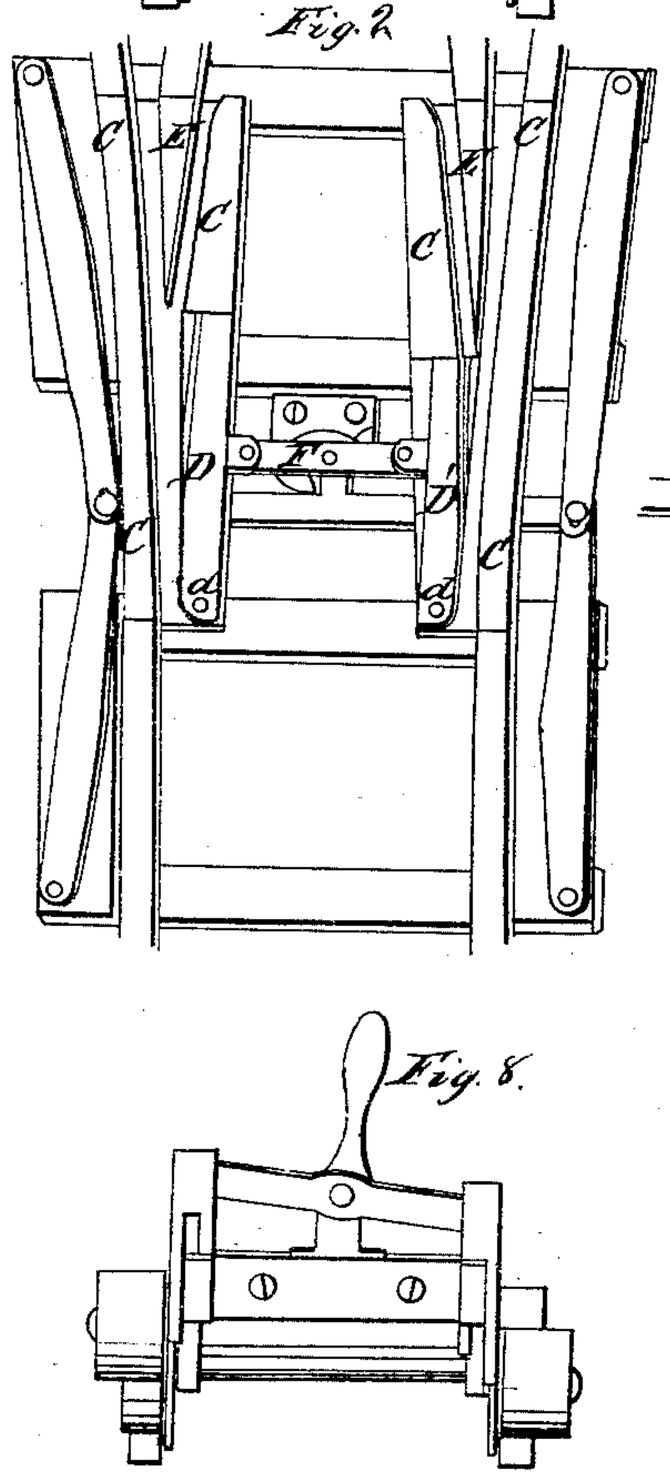

Fig. 3.

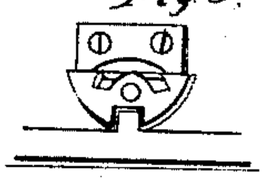

Fig. 4.

Fig. 5.

Fig. 6.

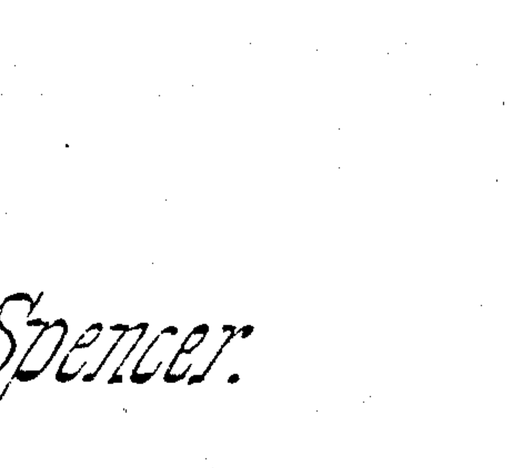

Fig. 7.

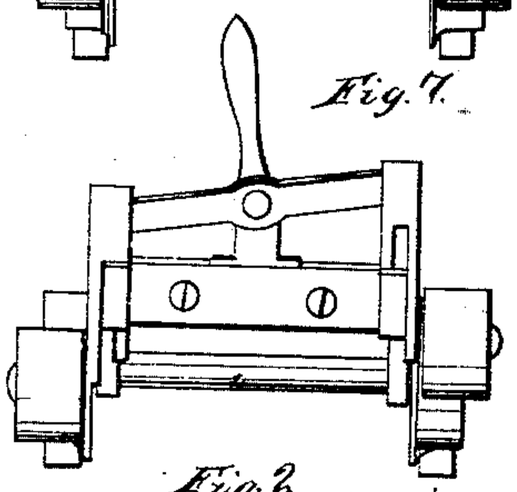

Fig. 8.

Fig. 9.

Inventor.
Charles L. Spencer

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

CHARLES L. SPENCER, OF PROVIDENCE, RHODE ISLAND.

RAILROAD-SWITCH.

Specification of Letters Patent No. 21,631, dated September 28, 1858.

To all whom it may concern:

Be it known that I, CHARLES L. SPENCER, of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Railroad-Switches; and I do hereby declare that the following specification, taken in connection with the drawings annexed, is a full, clear, and exact description thereof.

Figure 1, represents a main track R, R with my improved switch in such position that a train passing over it will be guided upon the left hand track A, A. Fig. 2, shows the position of the switch when the train is to be guided upon the right hand track, B, B. Figs. 3, 4, and 5 show a convenient form of lock to be used when the switch is to be acted upon by the train itself. Figs. 6, 7, 8, and 9 show a device to be attached to the car or locomotive for the purpose of operating the switch by the moving train.

The same letters indicate like parts in all the drawings.

A railway switch will be more valuable and useful than the old switches in common use, in proportion as it is capable of being easily worked so as to be operated by the moving train if desired, and in the event of an accident or intentional misplacement of the switch—in the proportion in which the danger of injury to life and property is diminished. In both these respects I claim that my improvement is superior to any device which is employed or which is known to me.

Let R, R represent the main track of a railway and A, A B, B, two tracks diverging from each other both of which are as required to be connected with R, R. In order to direct a train upon either track at pleasure I use two frog guiding rails, C, C, C and C, C, C the outside wheel treads of which are immovably connected with the rails of the main track R, R, and the corresponding outside rail of the diverging tracks as shown in Fig. 1. The frog of one of the guiding rails (it is immaterial which) is longer than the other in order to give a positive direction to the train and to prevent the flange of the wheel striking against or on the wrong side of the point of the other frog. D, D′ are sections of the guiding rail of the same thickness as the height of the main rail above the bed of the guiding rail each of which sections is pivoted at *d*, on the guiding rail of which it is a part and the two are united and moved together by the shackle connection F.

Moving now the inside sections D D′ to the left as shown in Fig. 1 the track A, A, is connected with R, R and the section rail D, acting upon the flange of the car wheel guides the car upon the left hand track. Moving now the inside sections D D′ to the right as shown in Fig. 2 the track B, B is connected with R R and the section rail D′ acting upon the flange of the car wheel guides the car upon the right hand track.

It will be observed that no part of the tread rail is moved at all in order to change the direction of the train but that the path of travel is determined solely by the position of the inside section rails.

Suppose now the switch to be misplaced as it would be, if the train were, for instance, on the track B, B, and proceeding toward the track R, R. In such case the only obstruction which is presented is the end of the section of the one guide rail D, (the track of the opposite wheel being in such case unobstructed) and the shock that is experienced, at most comparatively light is materially lessened by the inclined channel groove as a guiding path for the flange of the wheel with which D and D′ are provided. It will readily be seen that with this description of switch the probability that an engine would run off the track when the switch is wrongly set is hardly any greater than if the track was entirely unbroken.

If it is desired to use this improvement with an attachment to the engine or car so that the switch can be set by the train it can readily be done by the use of the contrivances for such purpose now known or by the arrangement exhibited in the drawings.

What I claim as my invention and desire to secure by Letters Patent is—

The use of two frog guiding rails having the tread rails immovable, but an inside movable section of each guiding rail, capable of working simultaneously together for the purpose of influencing the course of a train of cars when proceeding in one direction and of preventing injurious consequences in case the switch is improperly set when the train is proceeding in the opposite direction constructed applied and operated substantially as described.

CHARLES L. SPENCER.

Witnesses:

WM. E. GREEN,

JOSEPH G. HAYWARD.