

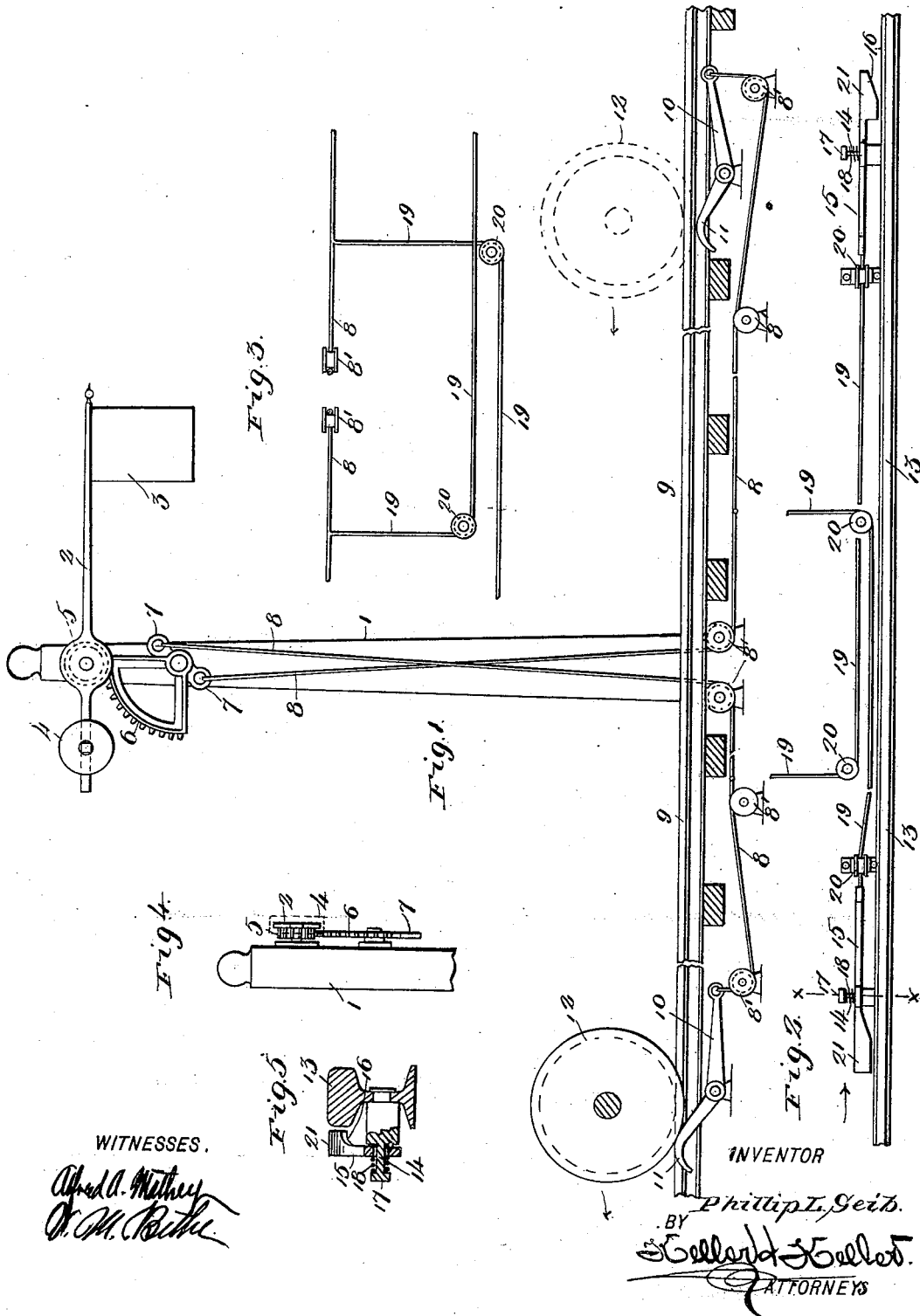
No. 645,758.

Patented Mar. 20, 1900.

P. L. SEIB.  
AUTOMATIC RAILROAD SIGNAL.

(Application filed Sept. 15, 1899.)

(No Model.)



WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC RAILROAD-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 645,758, dated March 20, 1900.

Application filed September 15, 1899. Serial No. 730,653. (No model.)

*To all whom it may concern:*

Be it known that I, PHILLIP L. SEIB, a citizen of the United States, residing at Millstadt, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Automatic Railroad-Signals; 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.

My invention relates to improvements in automatic railroad-signals; and it consists in the novel combination and arrangement of parts, as will be hereinafter more particularly described and claimed.

In the drawings, Figure 1 is a side elevation of a portion of my invention with the railroad in section, showing one rail thereof. Fig. 2 is a top plan view of the opposite rail of the railroad, showing the remaining parts of my invention. Fig. 3 is a top plan view of the wire-rope connections between the appliances used on either side of the railroad. Fig. 4 is a side elevation of the upper end of the signal-post; and Fig. 5 is a cross-section of the rail and parts carried thereby, taken on the line *xx* of Fig. 2.

The object of my invention is to construct a simple, practical, and durable automatic signal for railroads, or one that is adapted to be actuated by the flanges of the wheels of the cars or locomotive, whereby a flag or other signal will be dropped or displayed at a crossing at a suitable distance from the same as the train approaches and at the same time automatically elevate the said flag or signal after the train has passed the crossing, the parts comprising my invention being so constructed and arranged that the signal or flag will be automatically operated notwithstanding the direction or movement of the train.

Referring to the drawings, 1 represents a post which is located to one side of the ordinary crossing, to the upper end of which is movably secured a flag staff or pole 2, one end of which carries a flag or signal 3, which is adapted to be dropped in a horizontal position, as shown in Fig. 1, and upon the opposite end of said pole is adjustably secured

a weight 4, whereby the said pole or staff is counterbalanced.

Secured to the flagstaff 2 about its pivotal connection is a pinion 5, which meshes with a segmental gear 6, which is also pivoted or movably secured to the post 1 below the said pinion, and forming an integral part of said segmental gear 6 are two lugs 7, to which are attached one end of the ropes 8, which lead downwardly and pass over suitable pulleys 8' below the track-rail 9, the opposite ends of which are attached to pivoted levers 10, the upper curved ends 11 of which are adapted to be struck by the flange of the wheel 12, which, as represented in the drawings, shows either a car or locomotive wheel.

By the construction and arrangement of the parts as above described it will be seen that as the wheel 12 moves in the direction as shown by the arrow in Fig. 1 the flag or signal will be elevated, which causes the lever 10 to the right of said figure to again be elevated, or, more properly, the end 11 thereof, whereby it may be struck by the wheels of a train moving in the same direction.

In order to cause the signal or flag to be automatically raised and lowered by a train moving in the opposite direction, the parts are constructed and arranged as follows: 13 represents the opposite rail, to the inner surface of which are attached spindles 14, upon which are movably mounted levers 15, having inner inclined surfaces 16, with which the flanges of the wheels cooperate, forcing said levers in a transverse direction upon the spindles, but not depressing them when the train moves in the direction as previously described or indicated by the arrow in Fig. 1. Encircling the spindles 14 and interposed between the heads 17 of said spindles and the levers 15 are coiled springs 18, which operate to cause said levers to assume their normal position after the train has passed the same. Secured to the ends of the long arms of the levers 15 are the ends of two ropes 19, the opposite ends being attached to the ropes 8 at a suitable point along their length, the said ropes 19 passing over suitable pulleys 20 and running transversely across the track after they leave said pulleys. It will thus be seen that should a train pass

along the track in the opposite direction to that previously described the flag or signal will be operated in a like manner.

It is to be observed that should a train move  
 5 in the direction as shown by the arrow in Fig. 2 the ends 21 of the lever 15 will be depressed, in which action the latter will not be operated in a transverse direction upon the  
 10 spindles 14, but will be operated in a manner similar to the operation of the levers 10, in which action the signal or flag 3 will be raised and lowered by the passing of the train.

I do not limit myself to the precise construction and arrangement of the parts herein shown and described or the particular application of a flag; but I consider the latter  
 15 preferable to an alarm, which has been found to be very undesirable, the same having a tendency to frighten horses, whereas the flag  
 20 will indicate the approach of a train and have the same effect without the noise and objectionable feature heretofore mentioned.

Having fully described my invention, what I claim is—

25 An automatic railroad-signal, comprising a suitable post, a flagstaff movably secured to the same, and carrying a suitable flag, a weight adjustably secured to one end of said staff, a pinion secured to the staff about its  
 30 pivotal connection, a segmental gear also mov-

ably secured to said post below the pinion, and adapted to cooperate with the latter, lugs forming a part of said segmental gear, levers secured adjacent to one of the track-rails at a  
 35 suitable distance from the crossing, and adapted to be actuated by the wheels of the train, ropes, one end of which are attached to said levers having their opposite ends attached to the lugs forming a part of the segmental gear,  
 40 rollers over which the said ropes pass, a second set of levers movably secured adjacent to the opposite rail, at a suitable distance from the crossing, spindles upon which the levers are mounted, springs encircling said spindles, and bearing against the sides of said levers,  
 45 said last-named levers having inclined faces with which the flanges of the wheels of the train cooperate, when moving in one direction, ropes, one end of which are attached to one end of the said levers, and having their  
 50 opposite ends attached to the first-named ropes at a suitable distance along their length, and rollers over which the said ropes pass, as and for the purpose described.

In testimony whereof I affix my signature 55 in presence of two witnesses.

PHILLIP L. SEIB.

Witnesses:

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