

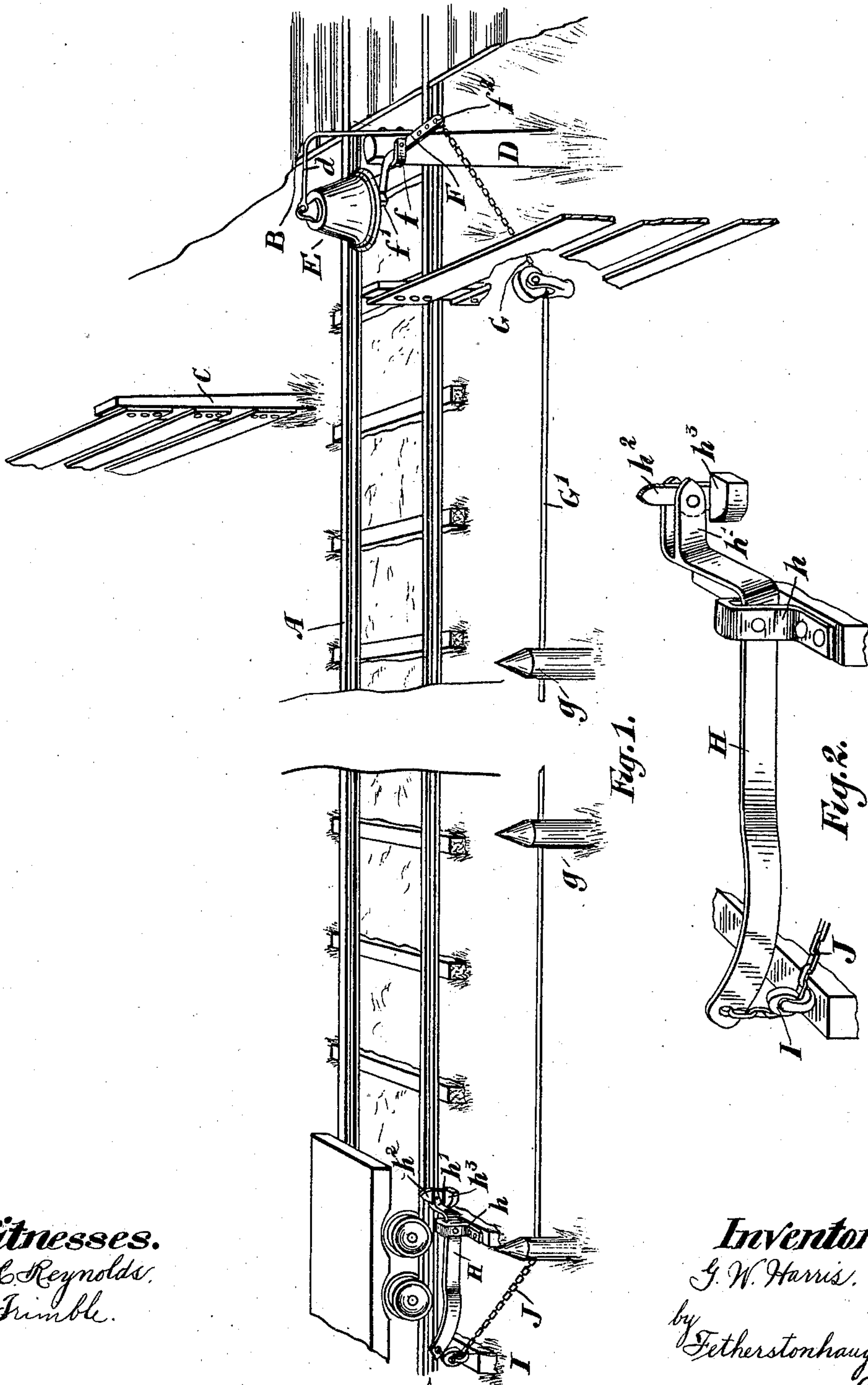
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Patented Nov. 12, 1901.

G. W. HARRIS.
RAILWAY SIGNAL.

(Application filed Aug. 14, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 686,293, dated November 12, 1901.

Application filed August 14, 1901. Serial No. 72,048. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON HARRIS, of the town of Brampton, in the county of Peel, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Railway-Signals, of which the following is a specification.

My invention relates to improvements in railway-signals; and the object of the invention is to devise a simple, positive, and effective device for giving warning at the crossing of the approach of a train and one which will act with equal facility no matter at what distance the operative device may be placed from the signal device; and it consists, essentially, of a pull or other signal apparatus located at the crossing and provided with a lever operating the hammer of the bell, such lever being connected by wire and chain to the operative device, which consists of a lever pivoted in a suitable bracket on one of the ties and having the free end thereof forked and provided with a weighted rocking detent, which is designed to be operated from the treads of the wheels of the engine and cars as they pass over the rail and the detent, the parts being otherwise constructed and arranged in detail as hereinafter more particularly explained.

Figure 1 is a perspective view of a portion of a railway track and crossing, showing the parts involved in my invention. Fig. 2 is an enlarged detail of the operating-lever.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the railway-track, which is shown intermediately broken away, B the crossing, and C the fence at one side of the crossing.

D is a post, on the upper end of which is supported by a bracket-arm d the bell E.

F is a lever pivoted in the bracket f , attached to the post, having a hammer-shaped end f' , which is designed to strike the bell in order to give the alarm. Of course instead of a bell any other suitable signal device may be employed, and I do not wish to limit myself to the class that may be utilized.

At the end of the lever F, I provide a series of holes f^2 , one of which is designed to receive the end of the chain G, which is attached to the pull-wire G'. The pull-wire G' is supported on suitable pulleys on posts g similarly

to that on which the semaphores are supported and which is commonly known.

H is a lever, which is pivoted in a bracket h on one of the ties, such lever being provided with an L-shaped forked short arm h' , in which is suitably pivoted the rocking detent h^2 , which is provided with a weighted lower end h^3 . The fork of the arm h' is tapered or curved at the end and the lower weighted end of the rocking detent extends laterally.

It will be noticed that the upper end of the rocking detent is beveled off. The long end of the lever H extends over another tie, on which is held a guiding-pulley I. There may be several holes in the long end of the lever, as indicated, and to one of these holes is connected the chain J, which is connected to the end of the pull-wire G'.

My device operates simply as follows: Upon the train passing along in the direction indicated by arrow the outer portion of the treads of the wheels of the trucks of the engine and cars will successively come in contact with the detent h^2 and will thus throw the detent forwardly in the direction in which the train is going, the projecting weighted lower end striking against the forked end, thereby causing the wheels, which slightly project over the edge of the track, to depress the detent, and consequently the end of the lever, as in this instance when the detent is slightly tapered the lever and detent are practically one. Upon this being done of course the opposite end of the lever is thrown upwardly and gives the desired pull to the lever F at the opposite end, so as to strike the alarm-bell. It will be seen, however, that on the train passing in the opposite direction the detent will swing freely—that is, the lower end will pass upwardly without any liability of depressing the free end of the lever and disturbing the operating device. I so arrange my operative device that there will be no alarm caused after the train has passed the crossing and when it is not necessary.

It will be seen that the chain J may be connected to different points on the end of the lever H, as well as on the lever F, and no matter what distance there may be, within reasonable limits, between the signal device and the operative device, the chain may be connected to the lever at such a distance

from its pivot-point that the depressing of the detent at the opposite end of the lever, and consequently of such end of the lever, will serve to operate on the lever at the signal end, so as to strike the bell on its operation. This is of course an important desideratum and is the result of a good deal of thought in order to get a long leverage, so as to give the same amount of pull to the wire G'.

10 What I claim as my invention is—

1. In a railway-signal, the combination with the bell located and provided with a suitable support at the crossing and a lever and hammer connected thereto designed to operate the bell and pull-wire and chains connected to the end of the lever, of the operative lever located along the track at any desired distance and pivoted in a suitable bracket, a guiding-pulley located underneath the long end of the lever and the chain passing from the end of the long arm of the lever over the guiding-pulley to the pull-wire and a rocking weighted detent pivoted in the short end of the lever and having the upper end of the

detent extending normally above the level of the rails and to the outside thereof as and for the purpose specified. 25

2. In a railway-signal the combination with the bell located and provided with a suitable support at the crossing and a lever and hammer connected thereto designed to operate the bell and pull-wire and chains connected to the end of the lever, of the operative lever located along the track at any desired distance and pivoted in a suitable bracket and provided with a long arm and a short L-shaped arm having a forked end with arc-shaped ends, the rocking detent provided with a laterally-projecting lower weighted end and tapered upper end designed to extend and project slightly above the rail to the outside and in proximity thereto as and for the purpose specified. 35 40

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Witnesses:

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