

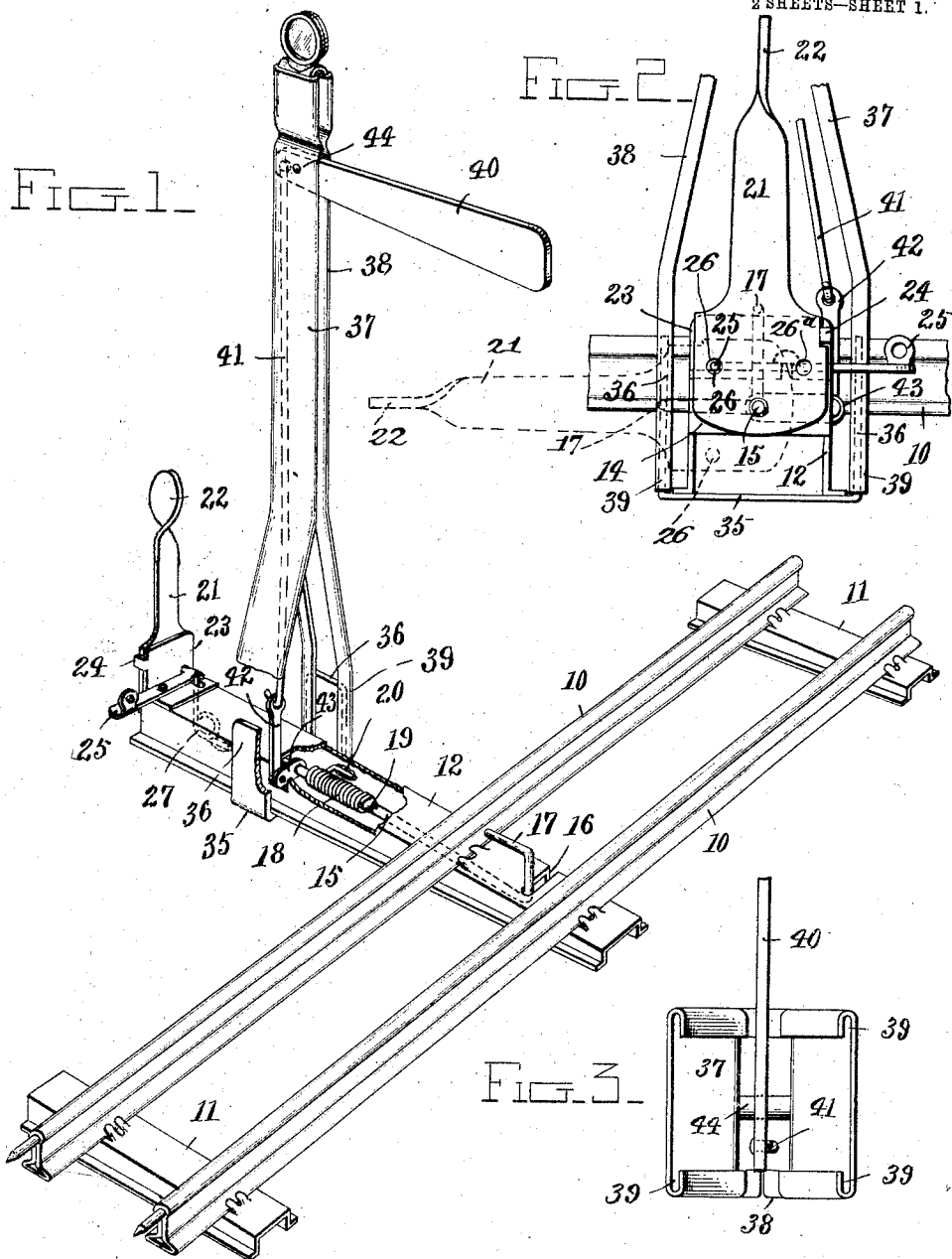
No. 874,009.

PATENTED DEC. 17, 1907.

C. A. HOTCHKISS.
TOY RAILWAY TRAIN STOP AND SIGNAL.

APPLICATION FILED JUNE 14, 1907.

2 SHEETS—SHEET 1.



Witnesses

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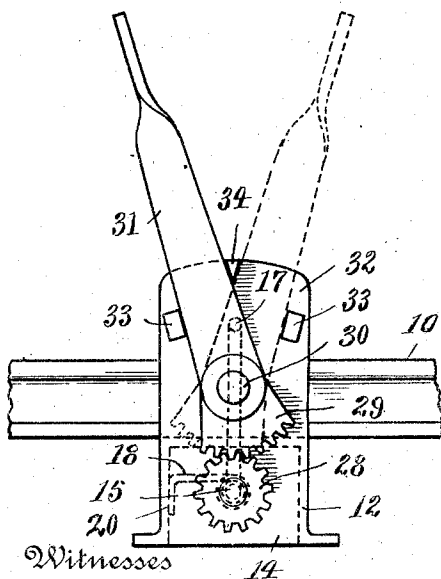
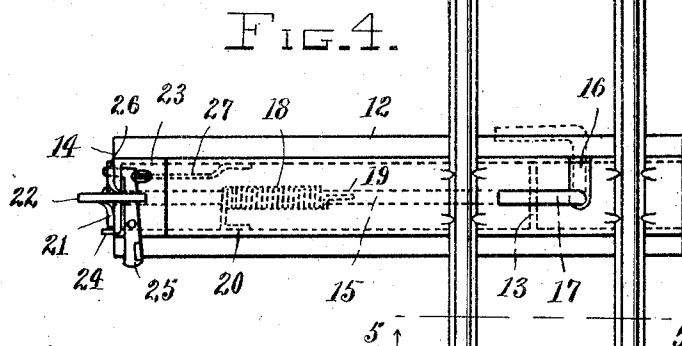
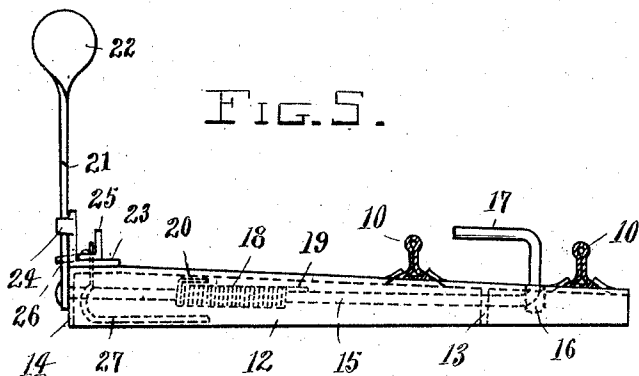
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UNITED STATES PATENT OFFICE.

CHARLES A. HOTCHKISS, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE IVES MANUFACTURING CORPORATION, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

TOY-RAILWAY-TRAIN STOP AND SIGNAL.

No. 874,009.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed June 14, 1907. Serial No. 378,940.

To all whom it may concern:

Be it known that I, CHARLES A. HOTCHKISS, a citizen of the United States, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Toy-Railway-Train Stops and Signals, of which the following is a specification.

My invention relates to toy railway train stop and signal devices, and is designed as a part of a regular miniature railway equipment.

Toy railways of the class to which my invention belongs are now constructed of sheet metal sections adapted to be detachably connected together, and the trains designed for use upon such tracks are likewise formed largely of sheet metal and operated by a clock spring movement. It will be obvious however, that other styles of tracks than that shown and referred to may be employed, and likewise other styles of trains or individual cars can be used in connection with a stop and signal constructed in accordance with my invention.

It is the object of my invention to provide in connection with a track of the class described, a check or stop, to be engaged by suitable brake mechanism applied to a locomotive or car, and whereby said brake is automatically tripped and set to stop a train; to so construct the stop that it may be shifted in or out of the path of travel of the locomotive brake mechanism, further to provide a signal device that is adapted to be connected with the stop if desired, and operated simultaneously with the operation of the stop, and finally to design such parts in a simple, durable and practical manner, and so as to permit of their convenient assemblage or detachment, as may be required in setting up, taking down and packing a miniature railway system.

Upon the accompanying two sheets of drawings, forming a part hereof, similar characters of reference denote like or corresponding parts throughout the several figures and of which,

Figure 1, shows a perspective view partially broken away of a section of toy railway track with my improved train stop applied thereto, and signal device connected to said train stop mechanism. Fig. 2, is an enlarged detail end view partially broken away of stop

and signal device as seen from outer or far side of track shown in Fig. 1. Fig. 3, is an enlarged bottom end view of detachable signal pole shown in preceding figures. Fig. 4, is a detail plan view of track section showing my train stop only connected thereto. Fig. 5, is a cross section taken on line 5—5 of Fig. 4, and Fig. 6, shows an enlarged end view of modified form of train stop operating mechanism.

Referring in detail to the characters of reference marked upon the drawings, 10 indicates rails which as shown are formed of sheet metal and secured to end sleeper 11 and a longer intermediate sleeper 12 to form a track section. The sleeper 12 is hollow and extends out upon one side of the track section to inclose and support the stop and signal mechanism. This sleeper like the rest of the construction is designed to be formed principally of sheet metal which is stamped out and worked up inexpensively.

Journaled within a bridge piece 13 and end piece 14 of the sleeper 12 is a rocker rod 15 the inner end portion of which is turned out through a slot 16 of the sleeper at a point intermediate the rails and then returned back parallel with the main rod to form an arm 17 for engagement by the locomotive brake mechanism (not shown). A spring 18 wound about the said rod with an end secured thereto as at 19 and the other attached to side of sleeper as at 20, serves to normally hold the rod in position shown in Figs. 1, 4 and 5, with arm disposed upward in the path of travel of locomotive. The said rod extends out through the end bridge 14 and has secured thereto a lever 21, the upper end of which is twisted and bent to right angle to form a signal plate 22, that may be painted red, and is thus clearly visible down the line of track. Upon the sleeper 12 is secured an angle plate 23 having a lug 24 disposed forward in line with the side edge of lever 21 to form a stop for the same when it and the arm 17 are in their vertical positions.

A pawl 25 is pivoted to angle plate 23 and its inturned end projects through a hole in angle bracket to engage orifices 26 or 26^a in lever. A spring 27 secured to side of sleeper projects up through a slot in sleeper and angle plate to engage the said pawl in a way to retain it in engagement with one of the orifices in the lever as shown in the several

figures. This spring actuated pawl thus locks the lever in a vertical position as shown in Figs. 1, 2, 4 and 5 when engaging the orifice 26 as seen in Fig. 2, to form a rigid stop as against engagement by a train from either direction and also serves to again lock and hold it in a horizontal position against the action of the spring 18 when engaging the orifice 26^a, as indicated in dotted lines Fig. 2. When said pawl is released from this position it allows the said spring to again throw both arm and lever to a vertical position as shown when the pawl is withdrawn.

In the modification illustrated in Fig. 6, I have shown a pinion 28 upon end of rocker rod 15 that is engaged and operated by a segment 29 upon a lever 31 pivoted to stud 30 upon an extension 32 of plate 14. Lugs 33 and 34 are secured to this plate to form stops for movement of lever. The outer stop 33 serves to limit the outward throw of lever while the inner one which is not so high, serves to hold the lever in either of its set positions. Said lever being moved by said intermediate lug by being first sprung out slightly to clear it and move over said lug.

The foregoing described construction comprises a stop which may be set to engage and stop a train, having suitable brake mechanism, and is designed so as to be swung down out of the way when not to be used. In connection with the above described rocker shaft and operating connections, I also employ a semaphore style of signal arm which is detachably connected in a way to be operated thereby, and likewise so as to be taken down, or set up as occasion may require, and which comprises the following described mechanism as will be seen from Figs. 1, 2 and 3. To the underside of the sleeper 12 is secured a strip 35 having end portions 36 that are disposed up on either side of the sleeper and serve to detachably support the signal post 37. This post 37 is formed of a sheet metal strip folded to form spaced vertically disposed parallel portions, having their edges turned in to form an outer smooth reinforced edge 38 and a spaced groove 39 at either edge of each lower end. These grooves in lower end as formed serve to detachably engage the side edges of the upturned ends 36 in a way to permit of said post being slipped on or off from side ends as desired. In the upper end and intermediate the sides of post is pivotally hung a signal arm 40 adapted to swing upon a pin 44 from a lower to a horizontal or distended position by reason of its connection with rocker shaft 12. To the short end of the signal arm 40 is connected a rod 41 which is hooked into an eye of a link 42 that freely passes through a slot in the sleeper. The opposite end of this link is connected to an arm 43 secured to the rocker shaft 12. It will therefore be

apparent that as the rockershaft is shifted a quarter turn as is necessary to throw the stop, and lever from a horizontal to a vertical position the signal arm would likewise be moved from a lowered to a raised or distended position and vice versa.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

1. In a toy railway train stop of the class described, the combination with a sleeper having attached rails, of a rocker shaft mounted in the sleeper having an arm disposed outwardly from the sleeper for engagement by a train, a spring for normally holding the shaft and arm in one position, and means for shifting the shaft and arm to a second position.

2. In a toy railway train stop, the combination with a pair of rails and a sleeper attached thereto, of a rocker shaft journaled upon the sleeper and having an arm disposed outwardly intermediate the two rails and in the line of travel of a train when passing over the rails, means for normally holding the shaft and arm in one position, and a lever for operating said shaft and arm to shift them to a second position against the action of said holding means.

3. In a toy railway train stop, the combination with a pair of rails and a sleeper attached thereto, of a rocker shaft journaled upon the sleeper and having an arm disposed outwardly in the line of travel of a train when passing over the rails, means for normally holding the shaft and arm in one position and a lever for operating said shaft and arm to shift them to a second position against the action of said holding means, and means for retaining said lever, shaft and arm in a position opposite to that normally obtained by the action of said holding means.

4. In a railway train stop of the class described, the combination with a pair of rails having an attached sleeper, of a rocker shaft journaled in said sleeper having an arm disposed outwardly therefrom and intermediate of the said rails, a spring for normally holding the shaft and arm in a raised position and a connected lever for operating the shaft to raise the arm to lower position, and spring actuated means to engage the lever to hold the arm in such lowered position against the action of the before mentioned spring.

5. In a toy railway train stop the combination with a pair of rails, of a hollow sleeper attached thereto, a rocker shaft journaled longitudinally within the hollow sleeper and having an arm projected upward through the said sleeper, a spring engaged with both shaft and sleeper to normally hold the arm in one position, a lever connected with projecting end of shaft on outside of sleeper having a signal plate on upper end and disposed longitudinally with the said

sleeper and means for retaining shaft and arm in a position opposite from that normally held by the action of the spring.

6. In a device of the class described, the combination with a pair of rails having a sleeper attached thereto, of a rocker shaft journaled in the sleeper, a spring connected with the rocker shaft adapted to normally hold it in one position, an attached lever and means for placing the shaft in a position different from that normally held by the spring, a post connected to the sleeper and a semaphore arm pivoted in the post and connections intermediate the arm and rocker shaft whereby the said arm is operated through the shaft by a lever connected thereto.

7. In a device of the class described, the combination with a pair of rails and an attached sleeper, of a rocker shaft journaled in the sleeper, a lever for rocking the shaft, a post connected with sleeper, a semaphore arm pivotally mounted in the post, connections intermediate the rocker shaft and semaphore arm whereby it is operated by the movement of the shaft and lever.

8. In a device of the class described, the combination with a pair of rails and an attached sleeper, of a plate secured to the sleeper having an upwardly deflected end, a post having a socket to engage said upturned end whereby the post may be detachably connected to the sleeper.

9. In a device of the class described, the combination with a pair of rails and an attached sleeper, of supporting ends projecting upward from the sleeper, a sheet metal post having ways to engage said upturned ends to permit of its detachable connection to the sleeper.

10. In a device of the class described, the combination with a pair of rails and an attached sleeper, of a plate secured to the sleeper having upwardly deflected ends, a post having ways to engage said upturned ends whereby it may be detachably connected to the sleeper, an arm pivoted to said post, a lever and connections intermediate thereof and an arm whereby the latter may be raised and lowered.

11. In a device of the class described, the combination with a sleeper, of a signal post detachably supported thereon, a signal arm pivoted to the post, a spring for normally holding the arm in one position, and a lever for operating the arm against the action of the spring.

12. In a device of the class described, the combination with a sleeper, of a plate secured to the sleeper having upwardly deflected ends, a post having ways to engage said upturned ends whereby it may be de-

tachably connected to the sleeper, an arm pivoted to the post, a spring for normally retaining the arm in one position and a lever connection with the spring and arm for shifting the latter.

13. In a device of the class described, the combination with a pair of rails and an attached sleeper, of a post detachably connected to the sleeper, a semaphore arm pivoted to the post, a rocker shaft bearing an arm disposed adjacent to the rails for engagement with a train, connections intermediate the shaft and semaphore arm, and a spring for normally retaining both arms in a raised position, and a lever for operating the parts to lower the said arms.

14. In a device of the class described, the combination with a pair of rails and an attached sleeper, of a plate secured to the sleeper having upwardly deflected ends, a post comprising a pair of spaced strips secured together at their upper ends and each having ways in their lower portions to engage the upturned ends of plate connected to the sleeper, a semaphore arm pivoted intermediate the spaced strips of the post, and a lever connected with said semaphore arm for operating the same.

15. In a toy railway train stop of the class described, the combination with a sleeper having attached rails, of a rocker shaft mounted in the sleeper having an arm disposed outward from the sleeper for engagement by a train, a spring for normally holding the shaft and arm in one position and means for shifting the shaft and arm to a second position, a post secured to the sleeper, a semaphore arm pivoted to the post and connections from the semaphore arm to the rocker shaft whereby it is operated by the latter.

16. A combined train stop and signaling device comprising a pair of rails having an attached sleeper, a rocker shaft mounted therein having an arm disposed outward adjacent to the said rails, means for setting the arm in either a raised or lowered position, a detachable post connected with the sleeper, a semaphore arm pivoted to the post, a detachable connection intermediate said semaphore arm and rocker shaft whereby the semaphore arm is disconnected with the detachment of the post.

Signed at Bridgeport, in the county of Fairfield, and State of Connecticut, this 11th day of June, A. D., 1907.

CHARLES A. HOTCHKISS.

Witnesses:

ELBERT O. HULL,
C. M. NEWMAN