(No Model.)

W. H. INLOES, W. D. JUSTICE & C. F. CHRISTOPHER.

LOCK FOR RAILWAY TURN TABLES.

No. 369,527. Patented Sept. 6, 1887.

Fig 1.

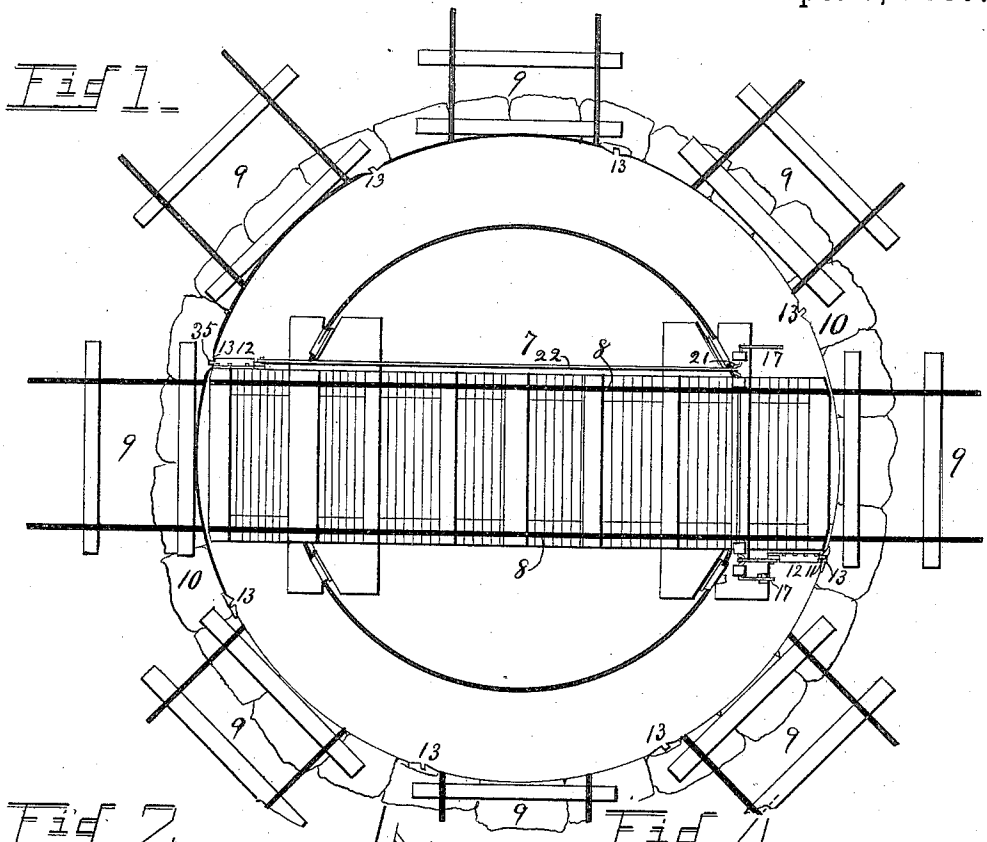


Fig 2.

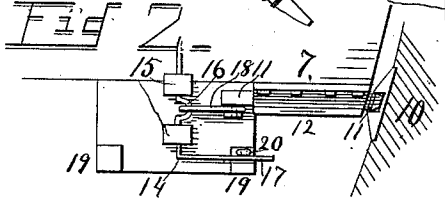


Fig 3.

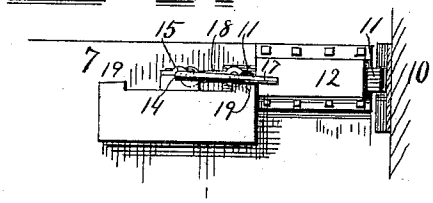


Fig 4.

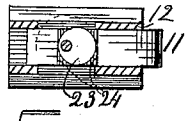


Fig 5.

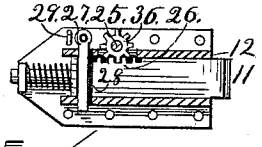
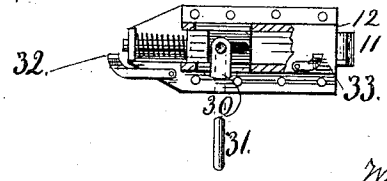


Fig 6.



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UNITED STATES PATENT OFFICE.

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LOCK FOR RAILWAY TURN-TABLES.

SPECIFICATION forming part of Letters Patent No. 369,527, dated September 6, 1887.

Application filed June 17, 1887. Serial No. 241,607. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. INLOES, WILLIAM D. JUSTICE, and CALVIN F. CHRISTOPHER, citizens of the United States, residing at Asheville, in the county of Buncombe and State of North Carolina, have invented certain new and useful Improvements in Locks for Railway Turn-Tables; and we 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.

This invention relates to that class of turn-tables for railways which are embedded in the line of one track or at the intersection of a number of tracks and are adapted to turn an engine or a car about upon its own center, so as to reverse it, and then to return it to its former track, or to deliver it either end foremost upon either one of the intersecting tracks. The object of the invention is to securely lock the turn-table with its tracks exactly in line with any one of the tracks with which it communicates, and to enable a person standing upon the turn-table or within the table-pit to operate the lock.

To this end our invention consists in the construction and combination of parts forming a lock for railway turn-tables, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view, on a small scale, of a railway turn-table, showing the position of our lock relative thereto. Fig. 2 is a plan view showing, on a larger scale, the lock and its immediate surroundings when in service. Fig. 3 is a side elevation, partly in section, of the same. Figs. 4, 5, and 6 show modifications of the lock.

7 represents a railway turn-table mounted to turn upon its center or in a circle in any usual manner.

8 represents a portion of track on the table adapted by the turning of the table to any one of the tracks 9, whose lines intersect at the center of the table.

10 represents the circular wall of embankment surrounding the pit in which the table is mounted to turn.

11 represents our locking-bolt fitted in a casing, 12, to slide nearly radially with the center of the table, and adapted to project beyond its casing 12 to engage any one of the sockets 13, which are fixed to the wall of the pit. All of these sockets bear a fixed relation to their respective tracks 9, so that when the bolt 11 enters any one of the sockets 13 the track 8 will be held in exact line with that particular track 9. Each socket 13 is elongated vertically to permit the bolt 11 to descend when the table settles with the weight of an engine, as the table should be locked before service. When the bolt is fully extended, its path of revolution is just within the wall 10 of the pit, so that if the bolt be extended it cannot come in contact with any fixed object except the sockets 13, which are located within the path of the extended bolt.

We have shown various mechanical expedients for sliding and locking the bolt, any one of which would operate it. The one shown in Figs. 2 and 3 we prefer as being simplest and equally effective with the others.

14 is a rock-shaft journaled to the table 7 at 15, and provided with a crank, 16, and one or more lever arms or handles, 17, whereby the operator may turn the crank. The crank is connected with the bolt 11 by a link, 18, whereby the bolt will be extended or retracted as the crank is turned to the right or left. The handle 17 is adapted to fall upon stops 19, so located in its path as to hold it at rest just when the crank 16 has passed dead-center at either end of its throw relatively to the bolt 11. By this means the bolt may be held securely locked, so that no amount of jar or concussion from passing trains, or from any other cause, could retract it or disengage it from its socket, and yet the lever or handle 17 is free to be worked at an instant's notice.

20 represents a staple wherein a common padlock may be placed to hold the lever locked against evil designers. Another locking-bolt, 35, located at opposite ends of the table, may be operated by the same lever, 17, by means of a reversing-lever, 21, and connecting-rods 22.

The eccentric 23, Fig. 4, acting against shoulders 24 of the bolt 11 to slide it and to hold it either extended or retracted, is an equivalent of the crank 16 and link 18, connected with

the bolt, and may be more economical to make. This would act as a lock if it did not quite pass dead-centers, on account of frictional surface.

In the modification shown in Fig. 5 the crank 16 and link 18 are substituted by a gear-wheel, 36, mounted on a shaft, 25, to engage a rack of teeth, 26, on the bolt 11. This is an equivalent of a simple lever for slididg the bolt, and has no effect to hold it when extended or retracted. For the latter purpose we provide a key, 27, adapted to slide transversely through a slot in the casing 12 behind a shoulder, 28, of the bolt 11. This key may in turn be locked by means of a padlock at the staple 29.

By means of our locking-bolt, constructed as described, a railway turn-table may be rigidly secured against turning with its track communicating with another track, and yet be left free to rise and fall with the weight of its load. The bolt will be held rigidly set, either extended or retracted, while all parts are free to be reversed by the hand-lever, and the operations may be performed by any person, either on the table or within its pit, thus enabling the persons who turn the table to attend to the lock. There are various other mechanical equivalents for the bolt-operating device shown; but we have shown enough to make known the nature of our invention.

In connection with any style of lever a spring may be arranged to extend the bolt. In that case the lever may act, like that shown in Fig. 5, so as not to lock the bolt, and the sides of the bolt end and the sides of the socket should be so beveled that the bolt will slide over into the socket when brought either way thereto by the turning of the table; or the spring may be used with the locking-lever by substituting the cam 30 for the eccentric 23 and elongating the space therefor in the bolt 11 enough to permit the full throw of the bolt by the spring when the cam 30 hangs down, as in Fig. 6. In this case the hand-lever 31 should hang freely downward when the cam is not in service. By swinging the lever upward to the left the bolt will be withdrawn and will be so held by the handle engaging a spring-stop, 32. 33 is a similar stop at the other end of the path of the lever to hold the bolt extended. Thus the lever 31, with the stops 32 and 33, acts on the same principle as the lever 17 and stops 19.

Having thus fully described our invention, we declare that what we desire to secure by Letters Patent is set forth in the following claims:

1. The combination, with a railway turn-table mounted to revolve in a circle, of a bolt fitted to slide upon the table nearly radially therewith, a hand-lever pivoted to the table and connected with said bolt, and sockets fixed to the circumferential wall of the table-pit, projecting into the path of the said bolt when the latter is extended, the said circumferential wall being located outside of the path of the extended bolt, substantially as shown and described.

2. The combination, with a railway turn-table, a bolt fitted to slide nearly radially thereon and to extend from the edge thereof, a socket secured to the wall of the table-pit and projecting into the path of the extended bolt, an eccentric pivoted to the table and connected with the bolt and provided with a hand-lever, and stops fixed in the circular path of the said hand-lever, substantially as shown and described, whereby the eccentric will be stopped near its dead-centers, for the purpose specified.

3. The combination, with a railway turn-table, of a bolt fitted to slide thereon and to extend beyond its edge, a socket secured to the wall surrounding the said table and projecting into the circular path of the extended bolt, the said surrounding wall being located outside of the said path, the sides of the bolt and the outsides of the sockets being beveled, a spring adapted to extend the bolt, and a lever adapted to operate the bolt, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM H. INLOES.
WILLIAM D. JUSTICE.
CALVIN F. CHRISTOPHER.

Witnesses:
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HENRY A. COOK.