No. 830,455. PATENTED SEPT. 4, 1906.

A. C. SCARR.

RAILWAY TURN TABLE.

APPLICATION FILED OCT. 17, 1905.

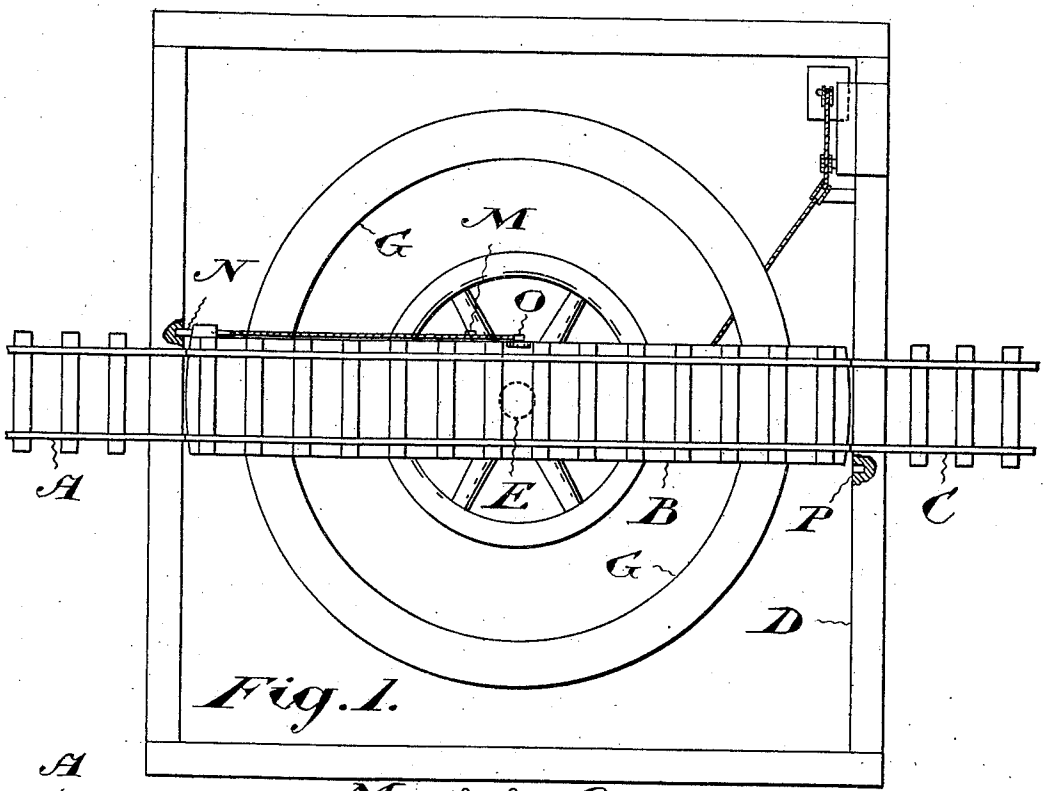

Fig. 1.

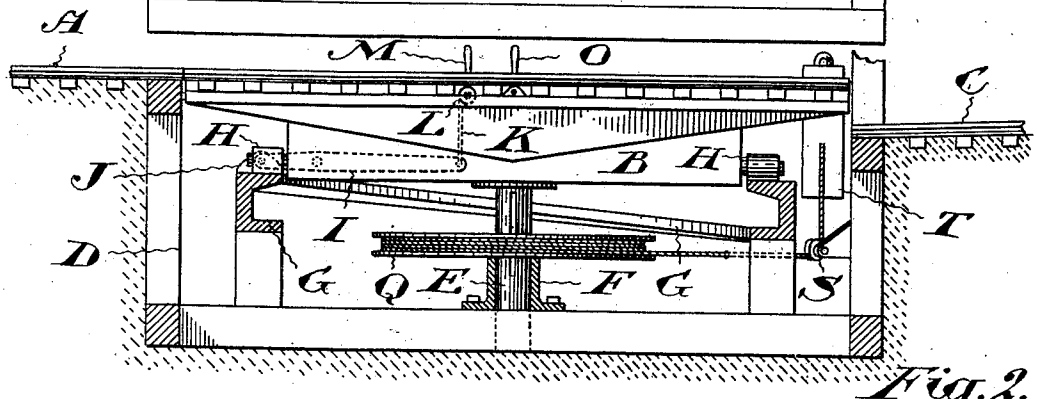

Fig. 2.

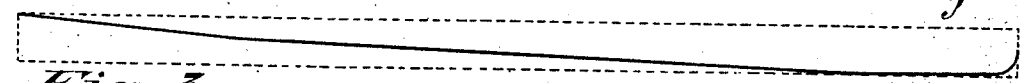

Fig. 3.

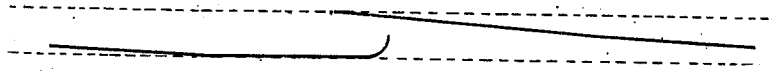

Fig. 4.

WITNESSES:

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RAILWAY TURN-TABLE.

No. 830,455. Specification of Letters Patent. Patented Sept. 4, 1906.

Application filed October 17, 1905. Serial No. 283,088.

To all whom it may concern:

Be it known that I, ABRAHAM C. SCARR, of the town of Harriston, in the county of Wellington, Province of Ontario, Canada, have invented certain new and useful Improvements in Railway Turn-Tables, of which the following is a specification.

My object is to devise a railway turn-table in which the weight of rolling-stock on the table effects the turning movement; and my invention consists, essentially, in supporting the turn-table in such a manner that a descending movement of the table and its load furnishes the power for turning the table on its center, the load being taken off at a lower level than that at which it was taken on, substantially as hereinafter more specifically described and then definitely claimed.

Figure 1 is a plan view of a turn-table constructed in accordance with my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a development of one of the helical ways. Fig. 4 is a development of parts of the two helical ways.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is a track leading to the turn-table, B the turn-table, and C the track leading from the turn-table. The turn-table B is located in a suitable pit D. From the under side of the turn-table projects an axle E, journaled within the sleeve F and vertically movable therein. Within the pit are suitably-supported helical ways G, upon which run the friction-rollers H, suitably journaled upon the frame of the turn-table. From this construction it follows that the turn-table being free to move vertically its weight tends to cause the friction-rollers to roll down the helical ways, thus imparting a rotary movement to the turn-table, and this tendency of the turn-table to rotate and at the same time to descend is much increased when the turn-table is loaded with a heavy engine and tender. As the most power is required in starting, in order to overcome the inertia of the load the helical ways are of greater pitch at their upper ends than at the lower, as indicated at the left-hand in the development in Fig. 3. After that the pitch is lessened until at the end the incline may disappear entirely. At the extreme lower end of each helical way an upturned portion is preferably formed to stop the rotary movement of the turn-table with as little jar as possible. Of course other buffer arrangements might be employed instead of the device suggested. As the turn-table in rotating is at the same time lowered, it is necessary that the track C should be on a lower level than the track A, and it is also preferably given an upgrade in order that it may gradually rise to the original grade-level.

While it will be possible to so arrange the pitch of the helical ways that control of the speed of rotation will be unnecessary, yet as the device must operate under varying conditions and with varying weights I prefer to provide a suitable brake by means of which the rotary motion may be checked as desired. Any suitable device may be used for this purpose; but in the drawings I show a brake-lever I, pivoted on the frame of the turn-table and carrying at its outer end a brake-shoe J. The end of the lever is shown as operated by a cable K, wound on a suitable drum L, to which is connected an operating-lever M. By operating the lever to clamp to brake-shoe on the upper side of the helical way a sliding friction may be substituted for the rolling friction of one of the rollers H and the speed of rotation thus controlled as desired.

In order to lock the turn-table in either its initial or lowered position, I provide a spring-actuated latch N of ordinary construction and operated by means of a hand-lever O. When the turn-table is in its initial position, this latch engages a suitable keeper formed in or secured to the side of the pit. When this latch is withdrawn, the turn-table is free to move around and down the helical ways. In the lowered position the latch will engage the keeper P, formed in or secured to the side of the wheel-pit.

Various means may be employed to return the turn-table to its original position. I show, however, for this purpose a drum Q, connected with a feather-key to the axle E. A cord wound on this drum is carried around and over suitable guide-pulleys S and is secured to a weight T. This weight should be sufficient at least to counterbalance the weight of the turn-table and preferably heavy enough to provide the necessary power to rotate the turn-table back to its original position. The feather-key allows the axle to

slide through the wheel as necessary, so that the cable will not be interfered with by the helical ways.

The operation of the device is substantially as follows: At a good many locations where a Y or loop is not practicable or convenient for the purpose of turning a locomotive and tender end for end it becomes necessary to employ a turn-table. These are usually operated by hand and require four or five men to operate them. Even then ten or twelve minutes are consumed in making the turn. With my device the engine and tender or other rolling-stock passes onto the turn-table from the track A. The latch is then released, and the weight of the locomotive and tender causes the turn-table to descend the helical ways, at the same time turning on its central pivot. At the point at which it is desired to take off the rolling-stock the turn-table is stopped and the rolling-stock run out onto the track C. Thus the weight of the turn-table and its load is utilized to give the necessary power to effect the turning movement, and this I claim is the essential feature of my invention, all the details being subject to many changes of construction.

What I claim as my invention is—

1. A rotatable turn-table in combination with helical ways on which the turn-table is supported, whereby a vertical movement of the table effects a simultaneous rotary movement; the ways being greatest in pitch at the top and of less pitch near the bottom, substantially as described.

2. A turn-table rotatable and vertically movable on a central pivot in combination with helical ways between the center and ends on which the turn-table is supported, whereby a vertical movement of the table effects a simultaneous rotary movement, and a brake engaging one of the ways to control the rotary movement of the turn-table, substantially as described.

Toronto, October 14, 1905.

ABRAHAM C. SCARR.

In presence of—
J. EDW. MAYBEE,
CHS. BATE.