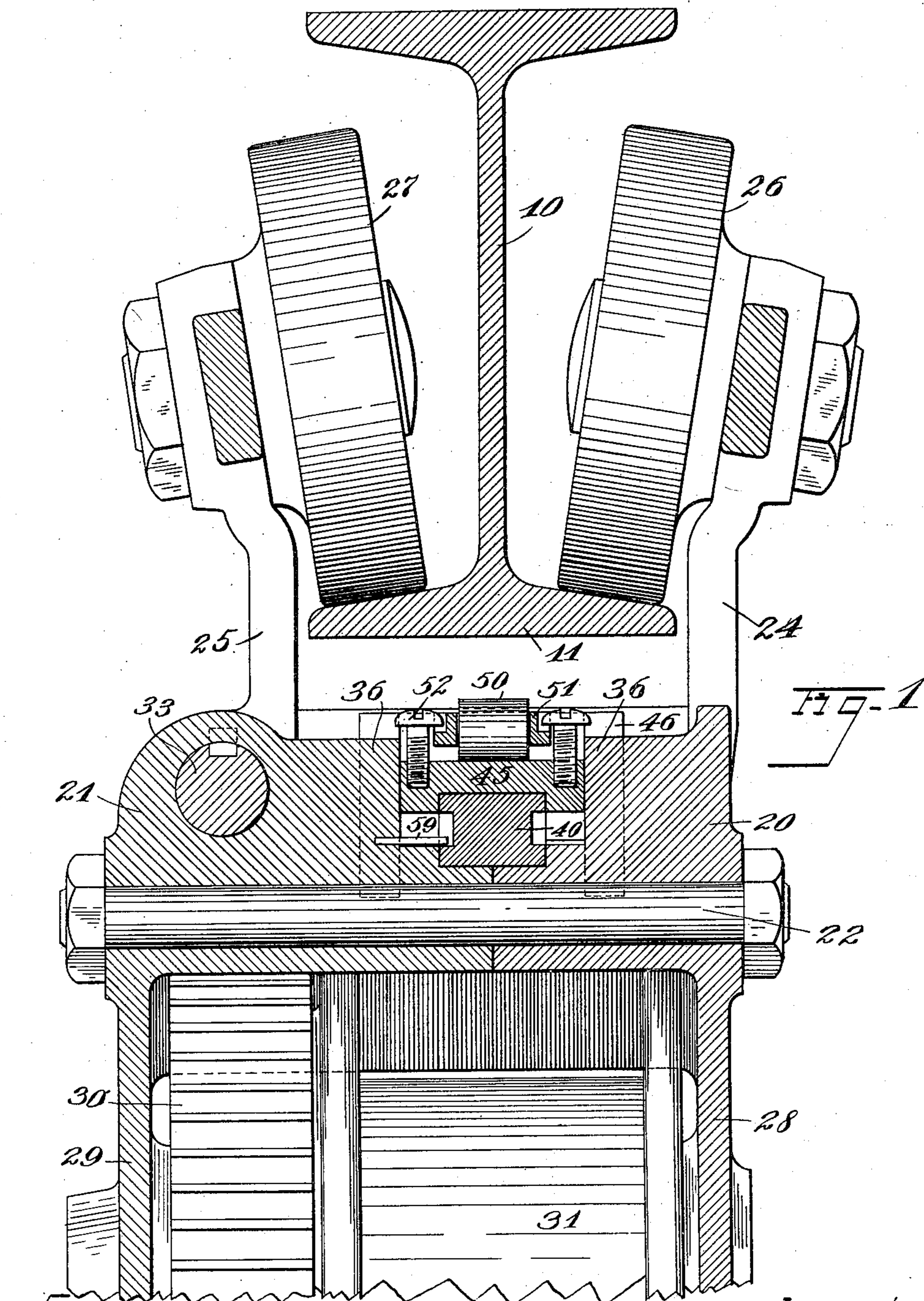


E. Y. MOORE.
TROLLEY CLAMP.
APPLICATION FILED AUG. 27, 1910.

Patented Aug. 1, 1911.

2 SHEETS-SHEET 1.

999,393.



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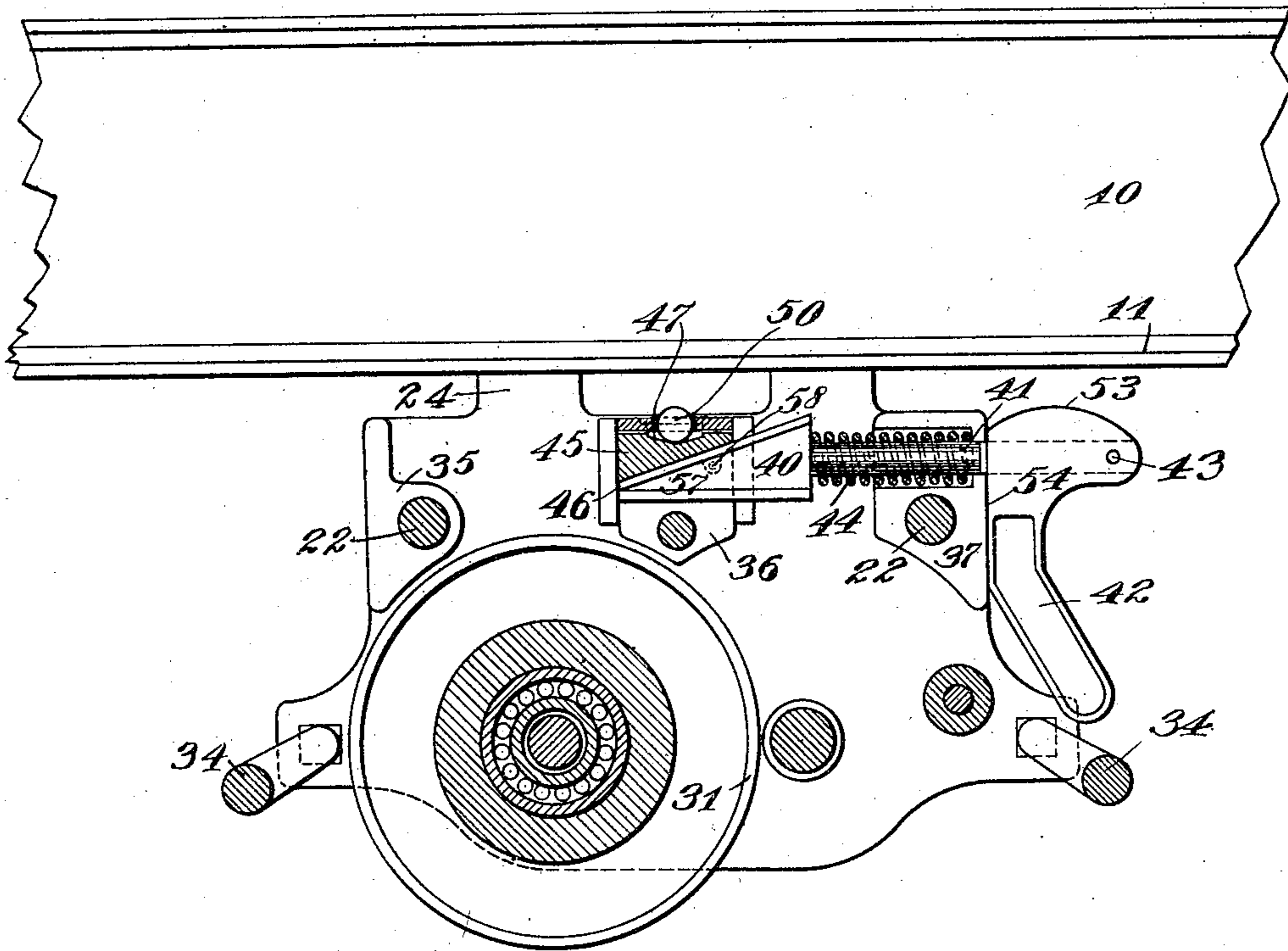


Fig-2

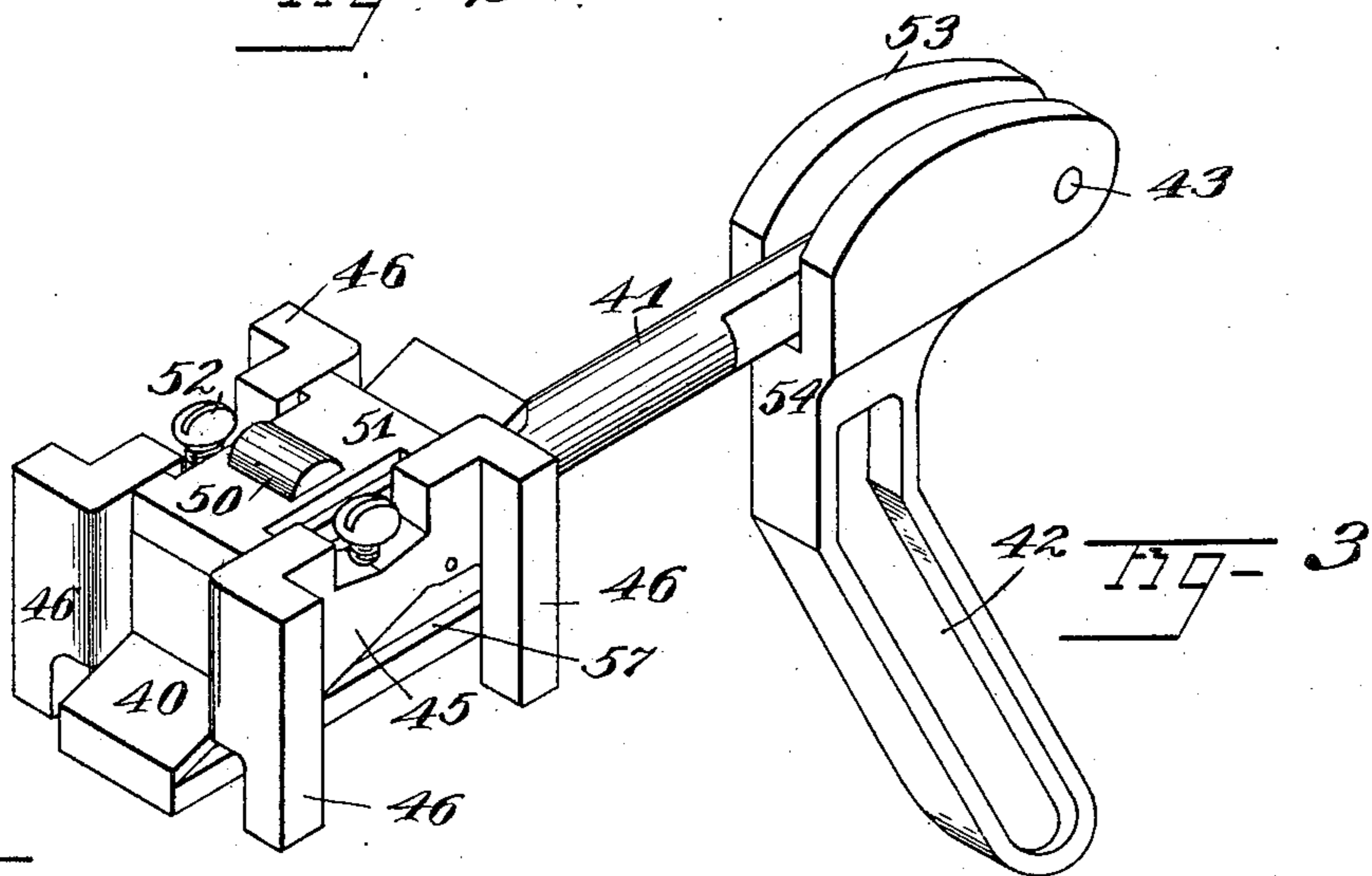


Fig-3

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UNITED STATES PATENT OFFICE.

EDWARD Y. MOORE, OF CLEVELAND, OHIO.

TROLLEY-CLAMP.

999,393.

Specification of Letters Patent.

Patented Aug. 1, 1911.

Original application filed March 3, 1910, Serial No. 547,001. Divided and this application filed August 27, 1910. Serial No. 579,326.

To all whom it may concern:

Be it known that I, EDWARD Y. MOORE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Trolley-Clamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates primarily to improvements in that class of trolleys which depend from an overhead trackway on which they travel, the invention providing an efficient clamp for locking such trolley to its supporting trackway at any desired point.

The characteristics of the clamp may be best understood from the description of a preferred embodiment thereof herein given and from the summarization of essential elements in the claims.

The drawings show the clamp embodied in a trolley hoist having a hinged side arm, which latter feature is described and claimed in my application #547,001, filed March 3, 1910, of which the present application is a division.

In the drawings, Figure 1 is a vertical cross section of a trolley hoist equipped with my clamp, such cross section showing also the supporting trackway; Fig. 2 is a sectional side elevation of such trolley and trackway; Fig. 3 is a perspective view of the clamp detached.

In the drawings, 10 represents the web and 11 the lateral bottom flanges of a suitable I-beam support for the trolley. The trolley frame comprises a pair of members 20—21 which are adapted to stand beneath the I-beam flange 11 and carry the load-supporting mechanism. These members are rigidly secured together, as for example, by the bolts 22, which pass through the members and abutting bosses formed on their inner sides. The frame portion described is supported by upwardly extending side members 24 and 25, which carry two pairs of wheels 26 and 27, adapted to ride on the flanges 11. The member 24 is shown as a portion of the frame part 20, while the member 25 may be hinged to its frame part 21 by the rod 33, but in normal position locked to it. This hinging is for purposes of removal of the trolley from the trackway, as explained in my prior application referred to. In normal operation, however, the arm 25 is rigid with the frame member 21, and

might be a part of it, as far as the present application is concerned.

The rigid body 20—21 supports the load-holding or raising mechanism. Such mechanism may be of a hoisting character, as indicated by the gear 30 and winding drum 31, and is carried by downward extensions 28 and 29, of the members 20 and 21, respectively. These downward extensions may also carry suitable bales or handles 34 for conveniently shifting the trolley.

To efficiently lock the trolley at any desired point I provide the mechanism which constitutes the subject matter of the present application and which will now be described.

The inward projections of the frame members 20 and 21, which abut each other and embrace the through bolts 22, heretofore referred to, may conveniently comprise separated blocks or bosses—Fig. 2 showing three of such bosses, designated 35, 36 and 37. Mounted in the two intermediate bosses 36 of the two frame members 20 and 21, is a slidable wedge 40 which is guided laterally by the vertical walls of the recess which it occupies in the bosses. This wedge has a shank 41 extending through the boss 37 and carrying at its end a cam lever 42 which is bifurcated, as shown in Fig. 3, and extends on opposite sides of the shank and is pivoted to it at 43. A helical spring 44, surrounding the shank and bearing against the base of the socket, which the shank occupies in the boss 37, tends to force the wedge inwardly. Seating on the wedge 40 is a vertically movable block or rider, designated 45. This rider has an inclined lower face complementary to the incline of the wedge. It has four legs 46 which stand respectively on the right and left sides of the wedge and on the front and rear sides of the bosses 36. The rider is accordingly held against lateral displacement, but is adapted to be raised whenever the wedge is forced inwardly. In the upper surface of the rider 45 is a recess 47 which has its bottom inclined from the front and rear, downwardly to an intermediate central line. Occupying the recess is a roller 50. The roller is preferably permanently retained in the recess by means of a keeper 51 which has an opening loosely occupied by the roller, the arcual walls of the opening overhanging the roller sufficiently to retain the roller within the opening. The keeper may shift to some extent, with the

roller but is held on top of the block 45 by overhanging screws 52 mounted therein.

When the parts of the clamp, as described, are in their normal position, as shown in Fig. 2, the clamp is idle. When, however, the lever 42 is forced outwardly and upwardly and the portion 53 of the lever comes opposite the boss 37, the spring 44 forces the wedge inwardly, thereby raising the rider and bringing the roller 50 up against the under side of the I-beam flange. This locks the trolley in place, the slightest movement in either direction rolling the roller up one or the other of the inclines provided by the base of the recess 47 and tightening the clamp. Accordingly, to throw on the clamp, it is only necessary to throw out the lever 42, and the clamping takes place at once, automatically, and very effectively, as has been demonstrated by actual practice. When the parts are in their normal unclamped position, the flat portion 54 of the lever 42 stands against the face of the bosses 37, thereby preventing any accidental application of the clamp, the first outward movement of the clamp drawing the shank 41 outwardly a short distance before the curved portion 53 of the lever comes into action.

The sides of the wedge 40 are preferably grooved or recessed, as shown at 57, and suitable pins 58 and 59 carried respectively by the rider and the frame 21, occupy these grooves, the pin 58 preventing accidental displacement of the rider and roller when the trolley is removed from the track, and the pin 59 preventing lifting of the wedge.

It will be seen, from the above description, that my trolley is easily shiftable by hand from place to place, as desired, the handles 34 furnishing convenient means for such shifting; while the clamp, which is normally idle, as shown in Fig. 2, may be instantly thrown into action by drawing out the lever 42, thus effectively locking the trolley to the track at any desired point.

Having thus described my invention, what I claim is:—

1. The combination, with a trackway, of a trolley frame adapted to be supported thereby, a clamp carried by the frame and comprising a roller adapted to engage the under side of the trackway, and a wedge for raising said roller.

2. The combination, with a trackway, of a traveling frame carried thereby, a roller carried by the frame, and a wedge for forcing the roller into engagement with the trackway.

3. The combination, with a trolley support, of a trolley movable thereon, a wedge carried by the trolley and movable longitudinally thereon, and means movable up and down by said wedge and adapted to engage the under side of the trolley support.

4. The combination with a member movable toward the trackway, of a roller carried by said member and adapted to engage the underside of the trackway, said roller occupying a recess in the member, such recess having a bottom inclining upwardly in opposite directions from an intermediate line.

5. The combination with the frame, of a wedge movable longitudinally, a rider movable up and down by said wedge, and a roller carried by said rider, said roller occupying a recess in the rider, such recess having a bottom inclining upwardly in opposite directions from an intermediate line.

6. The combination with a trolley frame, of a movable block carried thereby and having a recess in its face, a roller in said recess, and a keeper for the roller.

7. The combination, with a trolley frame having a cross portion beneath the trackway, of a wedge movably mounted in said cross portion, a block having four legs which stand on opposite sides of the wedge and on opposite sides of the said cross portion of the frame member, said block carrying means to engage the underside of the trackway.

8. The combination, with a trolley frame having a cross portion beneath the trackway, of a wedge movably mounted in said cross portion, a block having four legs which stand on opposite sides of the wedge and of the frame member, said block having a recess in its upper face, such recess having an inclined bottom, and a roller occupying the recess.

9. The combination with a frame, of a wedge slidably mounted therein, a clamping device operated by said wedge, a cam for moving the wedge in one direction, a spring for moving it in the other, a rider on the wedge, and a roller seating in a recess in the rider.

10. The combination with a frame, of a wedge slidably mounted therein, a clamping device operated by the wedge, a spring surrounding the shank of the wedge and tending to force it into clamping position, and a cam lever mounted on the shank of the wedge and adapted to hold it out of clamping position.

11. The combination with a trolley frame, of supporting wheels adapted to ride on the lower flange of an I-beam and a clamping device carried by the frame and adapted to engage the underside of the I-beam, said device comprising a roller, a vertically movable block carrying it, and a shiftable wedge for raising the block.

12. The combination of a trolley frame adapted to stand beneath an I-beam flange and having members extending upwardly on opposite sides thereof, wheels carried by said members adapted to track on said flange,

and a clamping device mounted on said frame and comprising a longitudinally shiftable wedge, a vertically movable block riding on the wedge and having a recess
5 with an inclined bottom, and a roller in said recess adapted to engage the bottom of the flange when the wedge raises the block.

13. In a combined trolley and hoist, the combination with a frame portion adapted
10 to stand beneath an I-beam flange, upwardly extending side members, supporting wheels carried thereby riding on the flange, the frame having lower depending side members, hoisting mechanism mounted in
15 such depending side members, a clamping device mounted on the upper side of the frame beneath the I-beam flange and including mechanism movable longitudinally,
20 and mechanism raised thereby to engage the underside of the trackway, and a lever at the end of the hoist for operating the clamping device.

14. In a mechanism of the class described, the combination with a trolley frame and
25 supporting wheels adapted to roll along a trackway, of a movable clamping roller, and a seat for said roller carried by said frame and inclining from an intermediate position in both directions toward the trackway.

15. In a mechanism of the class described, 30 the combination, with a trolley frame, of a wedge carried thereby, a rider on said wedge, and a movable clamping device held by said rider.

16. In a mechanism of the class described, 35 the combination, with a trolley frame, of supporting wheels carrying it and adapted to ride on a trackway, a member movably carried by said frame, a clamping roller loosely seating in said member, and means 40 for moving said member toward the trackway on which the trolley travels.

17. The combination, with the trolley frame, of a clamping roller, and a member carried by the frame and having an inclined 45 seat for said roller.

18. The combination, with the trolley frame, of a clamping roller, a member carried by the frame and having an inclined seat for said roller, and mechanism for 50 moving said member to present the roller to a trackway on which the trolley travels.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

EDWARD Y. MOORE.

Witnesses:

V. MUMFORD MOORE,
CLARENCE PAGE.