

No. 731,806.

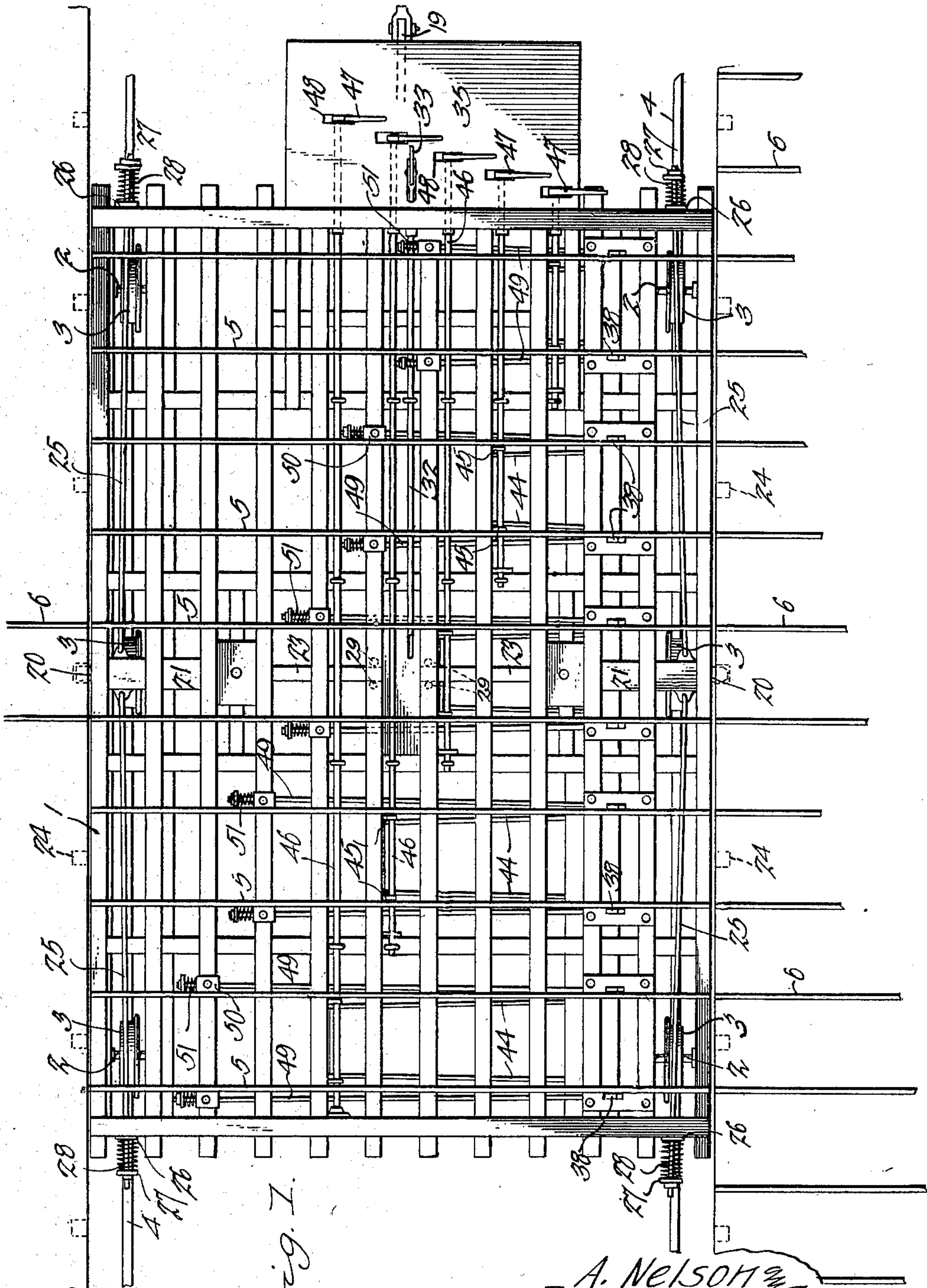
PATENTED JUNE 23, 1903.

A. NELSON & F. X. HERRMANN.
RAILROAD TRANSFER TABLE.

APPLICATION FILED OCT. 18, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses
W. H. Stewart
H. J. Piley

Fig. 1.

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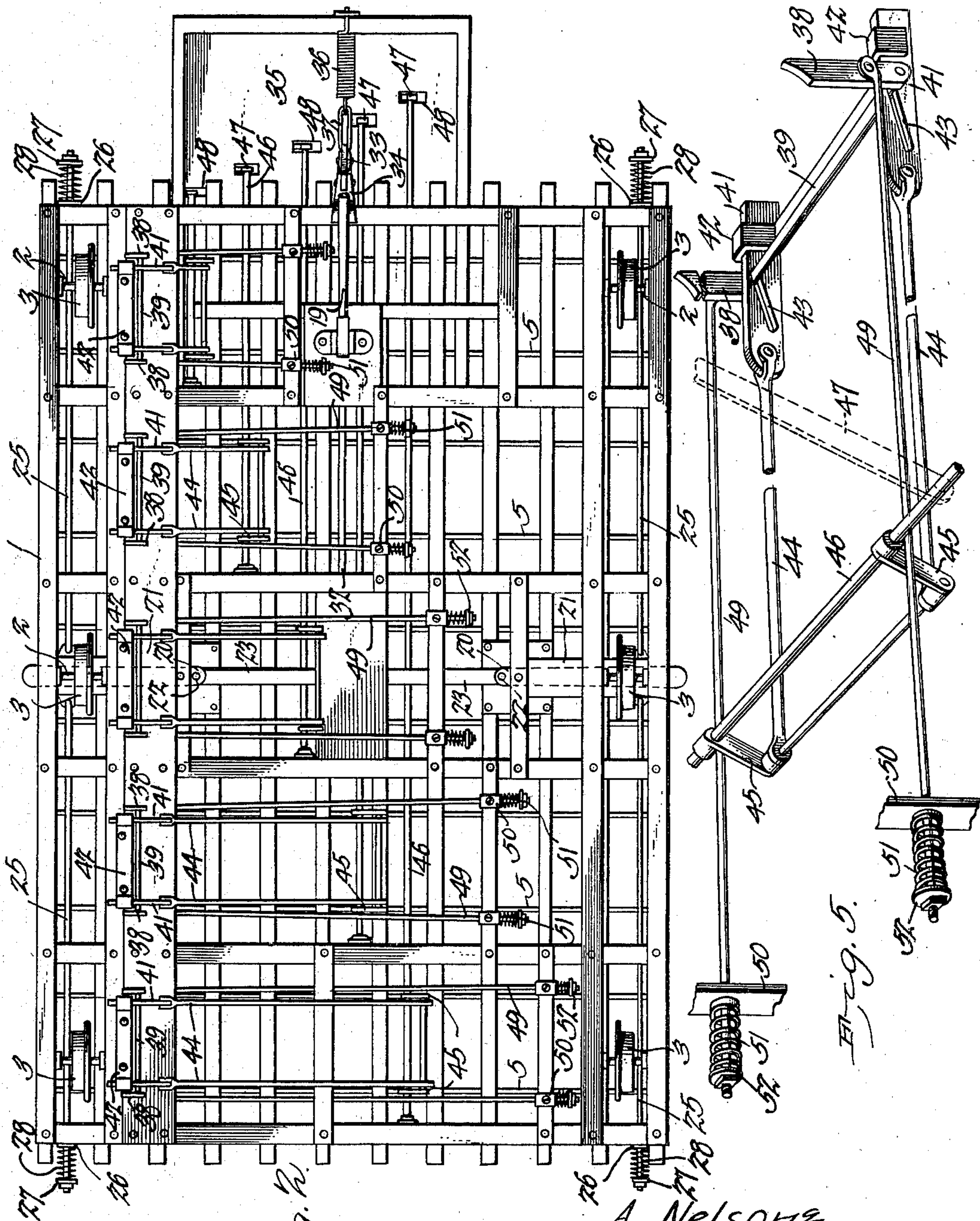
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Fig. 2.

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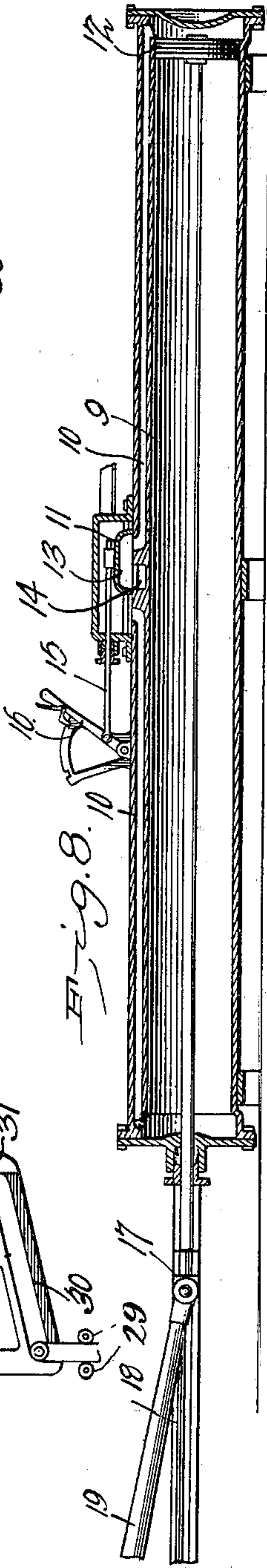
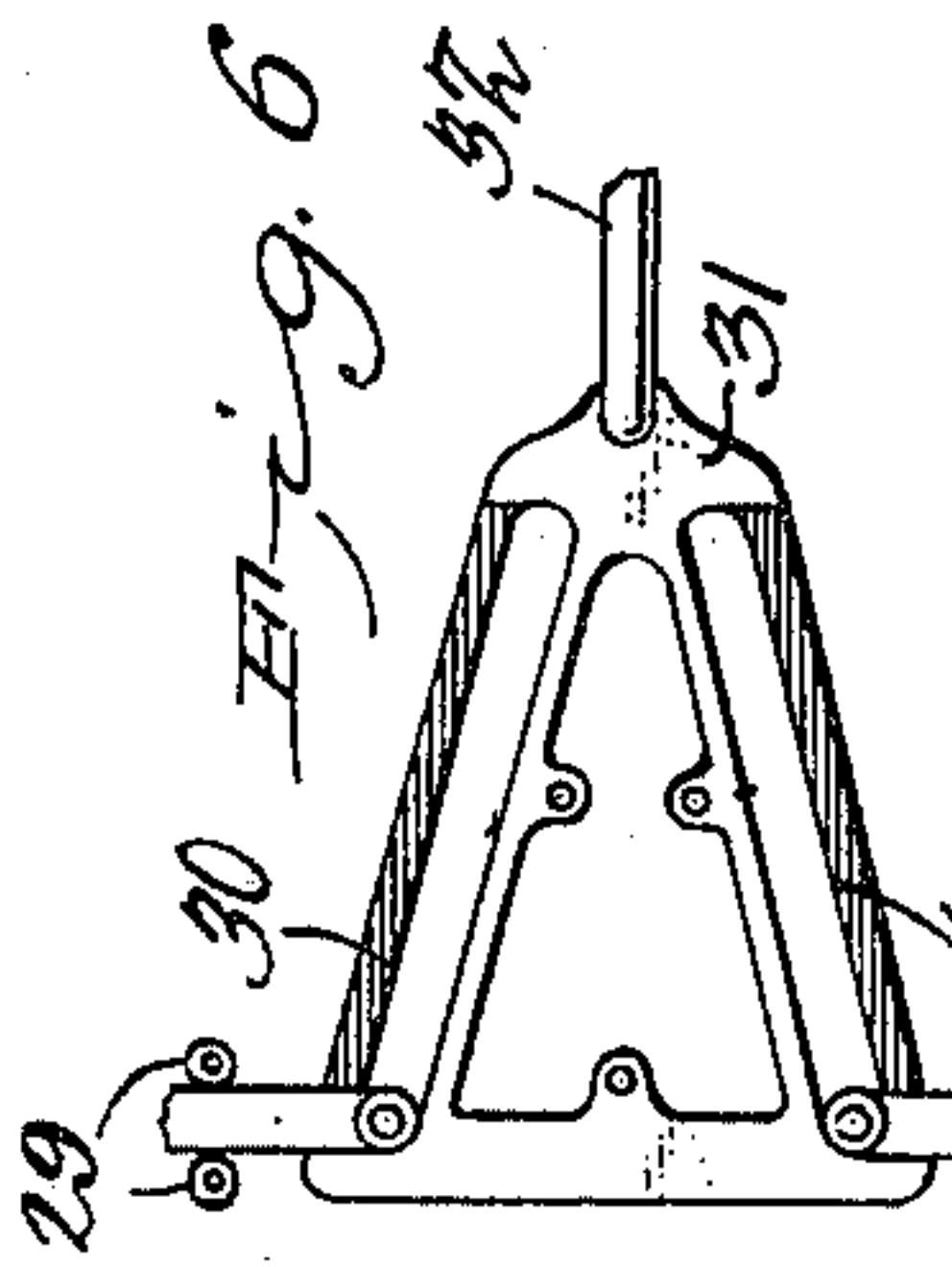
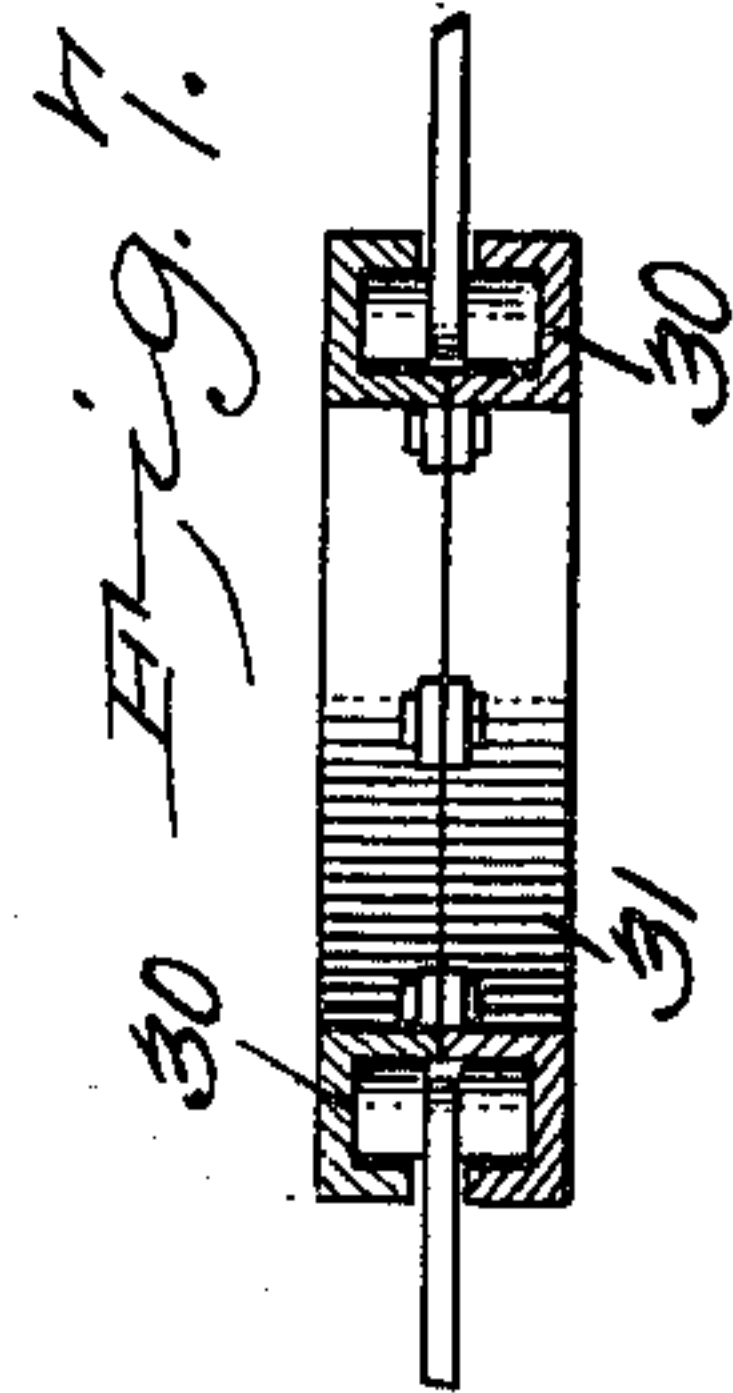
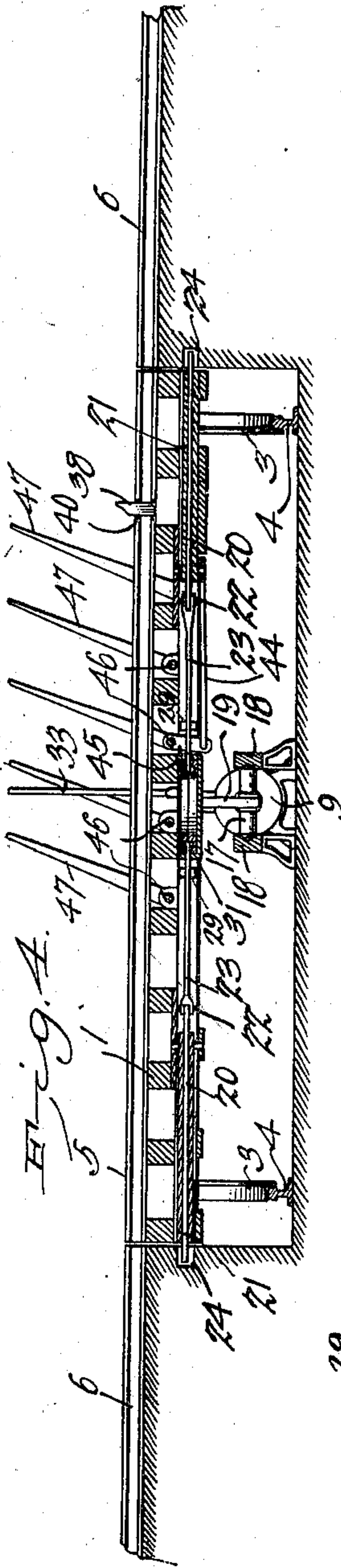
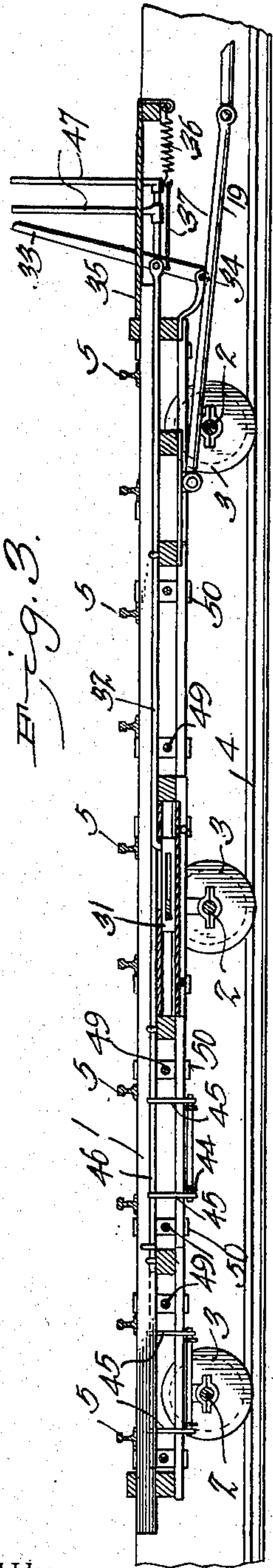
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3 SHEETS—SHEET 3.



Witnesses

E. J. Stewart
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by

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UNITED STATES PATENT OFFICE.

AUGUST NELSON AND FRANK X. HERRMANN, OF MANITOWOC, WISCONSIN;
SAID HERRMANN ASSIGNOR TO M. V. COCHEMS, OF STURGEON BAY,
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RAILROAD TRANSFER-TABLE.

SPECIFICATION forming part of Letters Patent No. 731,806, dated June 23, 1903.

Application filed October 18, 1902. Serial No. 127,883. (No model.)

To all whom it may concern:

Be it known that we, AUGUST NELSON and FRANK X. HERRMANN, citizens of the United States, residing at Manitowoc, in the county of Manitowoc and State of Wisconsin, have invented a new and useful Railroad Transfer-Table, of which the following is a specification.

The invention relates to improvements in railroad transfer-tables.

The object of the present invention is to improve the construction of railroad transfer-tables, more especially the means for operating the same, and to provide a simple and comparatively inexpensive one of great strength and durability adapted to be readily handled and capable of rapidly transferring cars from one track to another, whereby the cars of a train may be quickly distributed.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a plan view of a railroad transfer-table constructed in accordance with this invention. Fig. 2 is a reverse plan view of the same. Fig. 3 is a vertical sectional view taken longitudinally of the platform. Fig. 4 is a similar view taken transversely of the platform. Fig. 5 is a detail perspective view illustrating the construction of the mechanism for retaining the cars on the table. Figs. 6 and 7 are detail views illustrating the construction of the reciprocating wedge. Fig. 8 is a sectional view of the steam-cylinder.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a transversely-movable table, which may be constructed of any suitable material and which is provided at intervals with shafts or axles 2, disposed longitudinally of the rails and provided at intervals with car-wheels 3. The shafts may be journaled in any suitable manner, and the car-wheels 3 are arranged upon rails 4, disposed transversely of the tracks and located below the same in a suitable pit, or the tracks may be elevated, if desired. Any desired number of tracks

may be provided, as will be readily understood; but the transfer-table is preferably provided with five tracks 5, as indicated in Fig. 1 of the drawings, and is designed to be operated in connection with tracks 6. These tracks are designed in practice to be located at the upper end of a yard and to be connected above and below the transfer-table by suitable switches, which may also be utilized in transferring the cars from one track to another. The upper switches may be omitted, if desired, and in practice the transfer-table and the adjacent portions of the tracks below the same are designed to be arranged at a sufficient inclination to cause the car to move downward off the transfer-table when released, as hereinafter explained. By this construction a car may be run on the transfer-table, uncoupled from the rest of the train, and the transfer-table moved to aline the car with another rail, and as soon as the car on the transfer-table is released it will move downward off the same by gravity. By this means the cars of a train may be quickly distributed to their respective tracks.

The transfer-table is preferably operated by means of a steam-cylinder 9, provided at opposite sides of its center with feed-ports 10 and having a slide-valve 11. The feed-ports communicate with the interior of the cylinder, adjacent to the ends thereof, in order to impart a full stroke to the piston 12, and the slide-valve, which is arranged within a suitable valve-casing, is provided with a hollow lower portion forming a chamber 13, which is always in communication with an exhaust-port 14 and with one of the feed-ports 10, whereby steam is admitted at one end of the cylinder and is permitted to exhaust from the opposite end of the same. The slide-valve is connected by a suitable rod 15 with an operating-lever 16, and the steam or other fluid for operating the piston may be supplied in any suitable manner, as will be readily understood. The piston-rod is connected with a cross-head 17, mounted in suitable ways 18 and connected with the center of the transfer-table by means of a connecting-rod 19.

The platform is locked against movement to retain its tracks 5 in register with the adjacent tracks 6 by means of a pair of yield-

ably-supported slidable bolts or locking-bars 20, arranged in suitable guides 21 and connected by pivots 22 with bars 23. The outer ends of the bolts are adapted to engage notches or recesses 24, located at opposite sides of the pit or space in which the transfer-table operates and forming shoulders for engaging the bolts. The guides 20 consist of movable casings provided at opposite sides with ears and pivoted to cushioned rods 25, which are arranged in pairs at opposite sides of the table. Each guide-rod 25 has its outer portion arranged in a suitable guide 26 and is provided at its outer end with a stop 27, and a coiled spring 28 is disposed on the outer portion of the rod 25 and is interposed between the guide 26 and the stop 27. The rods 25 may be cushioned in any other desired manner, and they are adapted to permit a limited lateral movement of the bolt to relieve the same when the said bolts engage the notches. The inner ends of the connecting-rods, which are arranged between suitable guide-rollers 29, are provided with antifriction-rollers or other suitable devices and are engaged with divergent ways 30 of a reciprocating wedge 31, which is operated by the means hereinafter described. The reciprocation of the wedge is adapted to extend and retract the locking bars or bolts, as will be readily apparent.

The reciprocating wedge, which may consist of separate castings or sections secured together, as illustrated in Figs. 6 and 7, can be constructed in any other desired manner, and it is connected at its apex by a rod 32 with an operating-lever 33, fulcrumed at its lower end on a suitable bracket 34 and extending upward through a slot or opening of an extension or platform 35 at one end of the transfer-table. The rod 32 is connected with the wedge above the pivotal point of the lever, which is also connected with a coiled spring 36, located in rear of the lever 33 and adapted to draw the wedge forward to carry the sliding bolts into engagement with the recesses 24 when the bolts are free to move, and it is also adapted to hold the bolts in engagement with the said recesses. The operating-lever 33 is designed to be provided with a suitable locking device, such as a spring-actuated detent and a toothed segment, for holding the bolts out of engagement with the recesses 24. The coiled spring 36, which is located beneath the platform 35, is preferably secured at one end to the framework of the same, and its other end is connected by a link 37 with the lever, as clearly shown in Fig. 3 of the drawings.

The cars are retained on the transfer-table by means of vertically-movable locking-blocks 38, arranged in pairs at each track, and preferably connected by a transverse rod 39. The vertically-movable locking-blocks 38, which are arranged in suitable recesses 40 of the rails, have their upper ends recessed or cut away to conform to the configuration of

the wheels of a car, and they are moved vertically by means of slides 41, arranged in suitable guides 42 and provided with inclined slots 43, which receive the transverse rod 39, whereby when the slides are reciprocated the locking-blocks 38 will be moved vertically. The slides are connected by rods 44 with arms 45 of a rock-shaft 46, extending to the extension or platform of the table and provided thereat with an upwardly-extending operating-arm 47. These operating-arms, which extend upward through slots 48 of the extension or platform of the transfer-table, are located at different points, the rock-shafts being gradually increased in length from one side of the extension or platform, as clearly shown in Fig. 2. The operating arms or levers of the rock-shafts and the operating-lever which controls the locking device for holding the transfer-table stationary are arranged within convenient reach of a person standing upon the extension or platform. By this arrangement the operator is enabled to control the locking mechanism and the means for holding the cars on the table and the cars may be readily released when they are brought in alinement with the proper tracks.

The recesses or cut-away portions 42 of the rails are of sufficient size to permit the vertically-movable blocks to have a limited oscillatory movement, and these blocks are connected with cushioned rods 49, which cushion the blocks when the cars come in contact with the same, whereby the blocks are relieved of jar and strain. The rods 49, which are connected at their inner ends with the blocks, have their outer ends arranged in suitable guides 50 and are engaged by springs 51, interposed between the guides 50 and suitable stops 52, as clearly illustrated in Fig. 5 of the drawings. These cushioned rods are arranged in pairs, as shown; but they may be mounted in any other desired manner.

The locking devices may be advantageously employed on rotary transfer or turn tables, and the cushioned rods may be trussed or otherwise braced to secure the necessary strength; also, steam, air, hydraulic pressure, electricity, or any other motive power may be employed for actuating the transfer-table, and we desire it to be understood that various changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. The combination with a reciprocating transfer-table, of a cylinder having its axis arranged in the plane of movement of the table, a piston disposed in the cylinder, a cross-head connected with the piston, cross-head guides, a bar connecting the cross-head with the platform, a plurality of laterally-yieldable bolts carried by the table, and guides or recesses for the reception of said bolts, substantially as specified.

2. The combination of a vertically-movable locking-block, a cushion connected with the block to resist transverse movement, and means for raising and lowering the block, substantially as described.

3. The combination of a vertically-movable locking-block, a rod connected with the block, a coiled spring disposed on the rod and engaging the said cushioned block, and means for raising and lowering the block, substantially as described.

4. The combination of a vertically-movable block, a reciprocating slide having inclined edges connected with and arranged to raise and lower the block when the slide is reciprocated, and means for operating the slide, substantially as described.

5. The combination of a vertically-movable locking-block, a reciprocating slide provided with an inclined slot connected with the block and arranged to raise and lower the same when the slide is reciprocated, substantially as described.

6. The combination of vertically-movable locking-blocks, a rod connecting the same, reciprocating slides having inclined slots receiving the rod, a rock-shaft provided with arms connected with the slides, and means for operating the rock-shaft, substantially as described.

7. The combination of vertically-movable locking-blocks, a transverse rod connecting the same, reciprocating slides having inclined slots receiving the transverse rod, a rock-shaft having arms connected with the slides, means for operating the rock-shaft, and longitudinal rods provided with cushioning devices and connected with the blocks, substantially as described.

8. The combination of a transfer-table, a reciprocating bolt, a guide receiving the bolt, cushions arranged at opposite sides of the guide and connected with the same, and means

for operating the bolt, substantially as described.

9. The combination of a transfer-table, sliding bolts, connecting-bars pivoted to the bolts and provided with antifriction devices, a reciprocating device having divergent ways receiving the antifriction devices and the connecting-bars, means for operating the reciprocating devices, and antifriction devices forming guides for the connecting-bars, substantially as described.

10. The combination of a transfer-table, opposite bolts, an actuating device provided with divergent guides or ways connected with the bolts and adapted to move the same inward and outward, and means for operating the said device, substantially as described.

11. The combination of a transfer-table, oppositely-disposed bolts, a reciprocating wedge connected with the bolts and adapted to move the same inward and outward, a spring for moving the wedge in one direction, and means for moving the wedge in the opposite direction, substantially as described.

12. The combination of a transfer-table having an extension or platform at one end, locking mechanism for holding the transfer-table stationary provided with an operating-lever arranged at the extension or platform, locking devices for retaining cars on the table, and operating levers or arms arranged at different points on the extension or platform and connected with the locking devices, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

AUGUST NELSON.

FRANK X. HERRMANN.

Witnesses:

O. F. REUTHHER,

FRANK A. MILLER.