

No. 754,396.

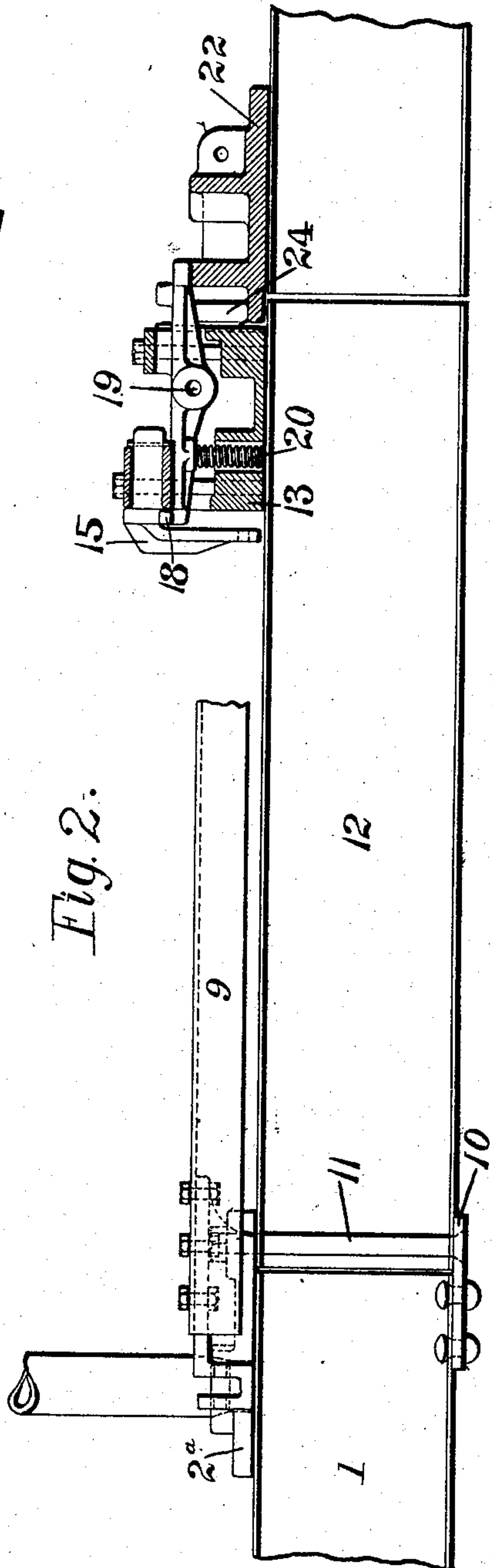
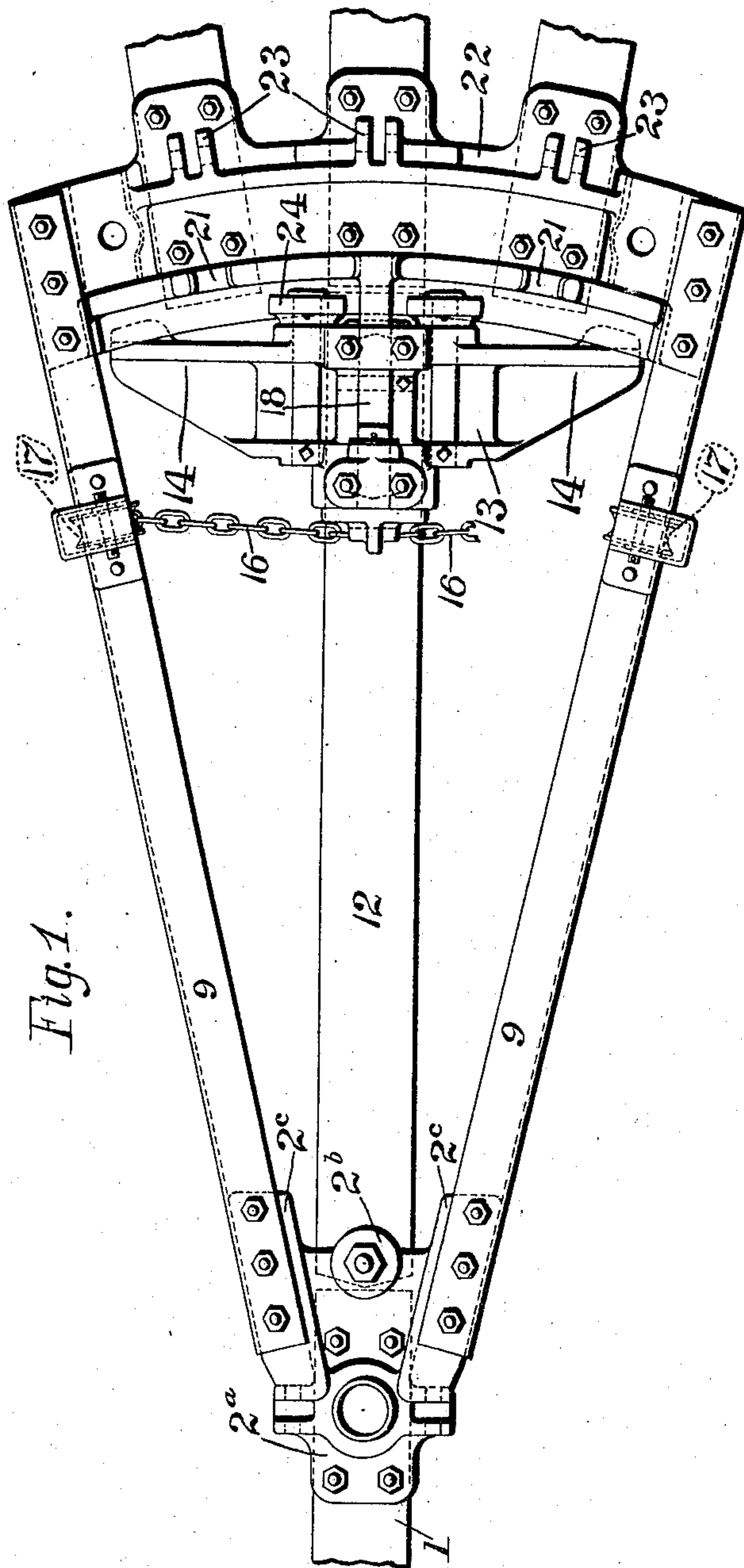
PATENTED MAR. 8, 1904.

G. F. STEEDMAN.
OVERHEAD TRACK SYSTEM.

APPLICATION FILED NOV. 2, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses.
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3 SHEETS—SHEET 2.

Fig. 3.

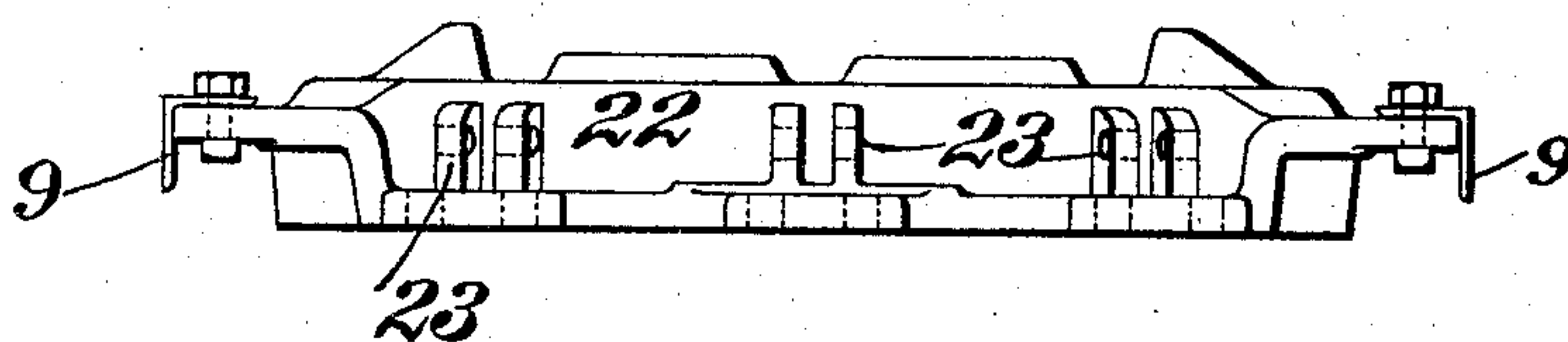
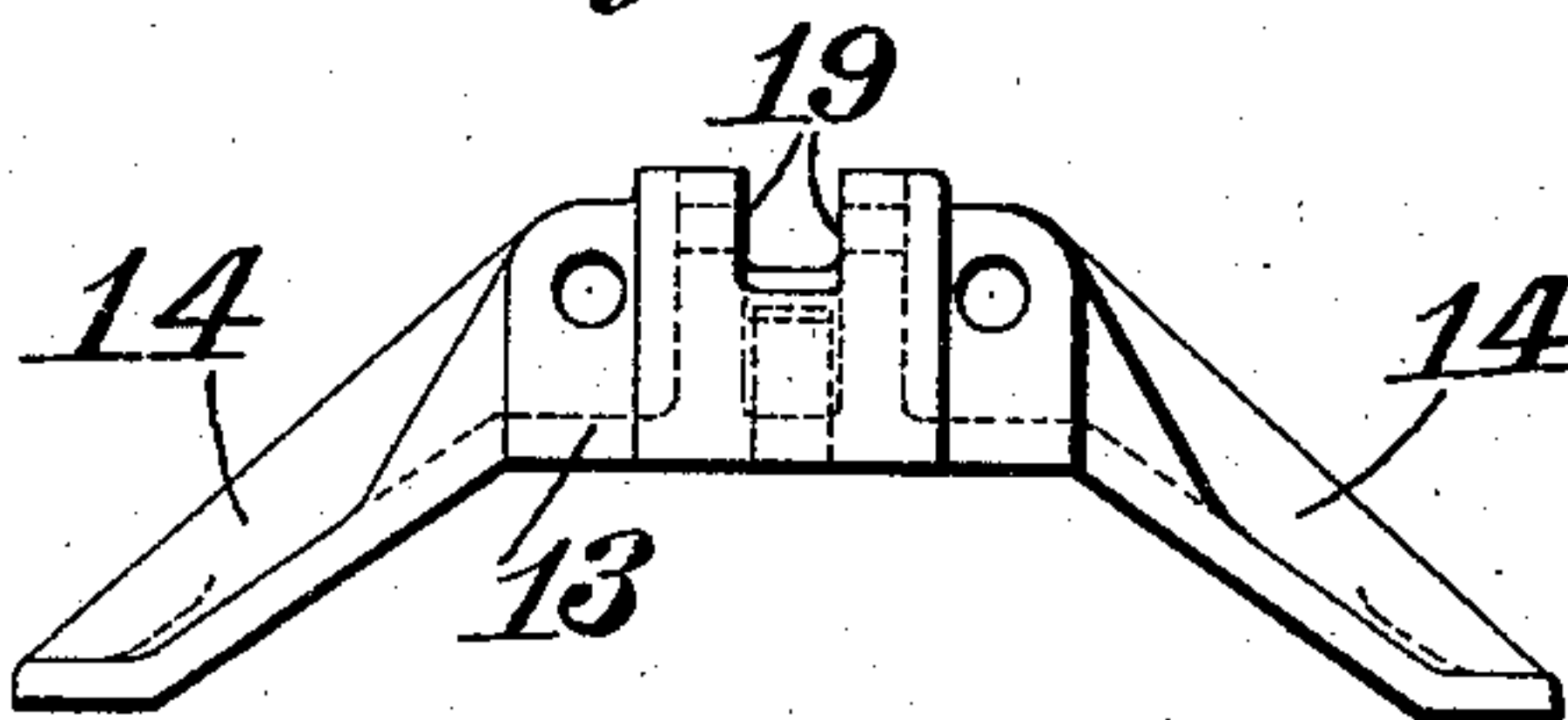


Fig. 4 .



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3 SHEETS—SHEET 3.

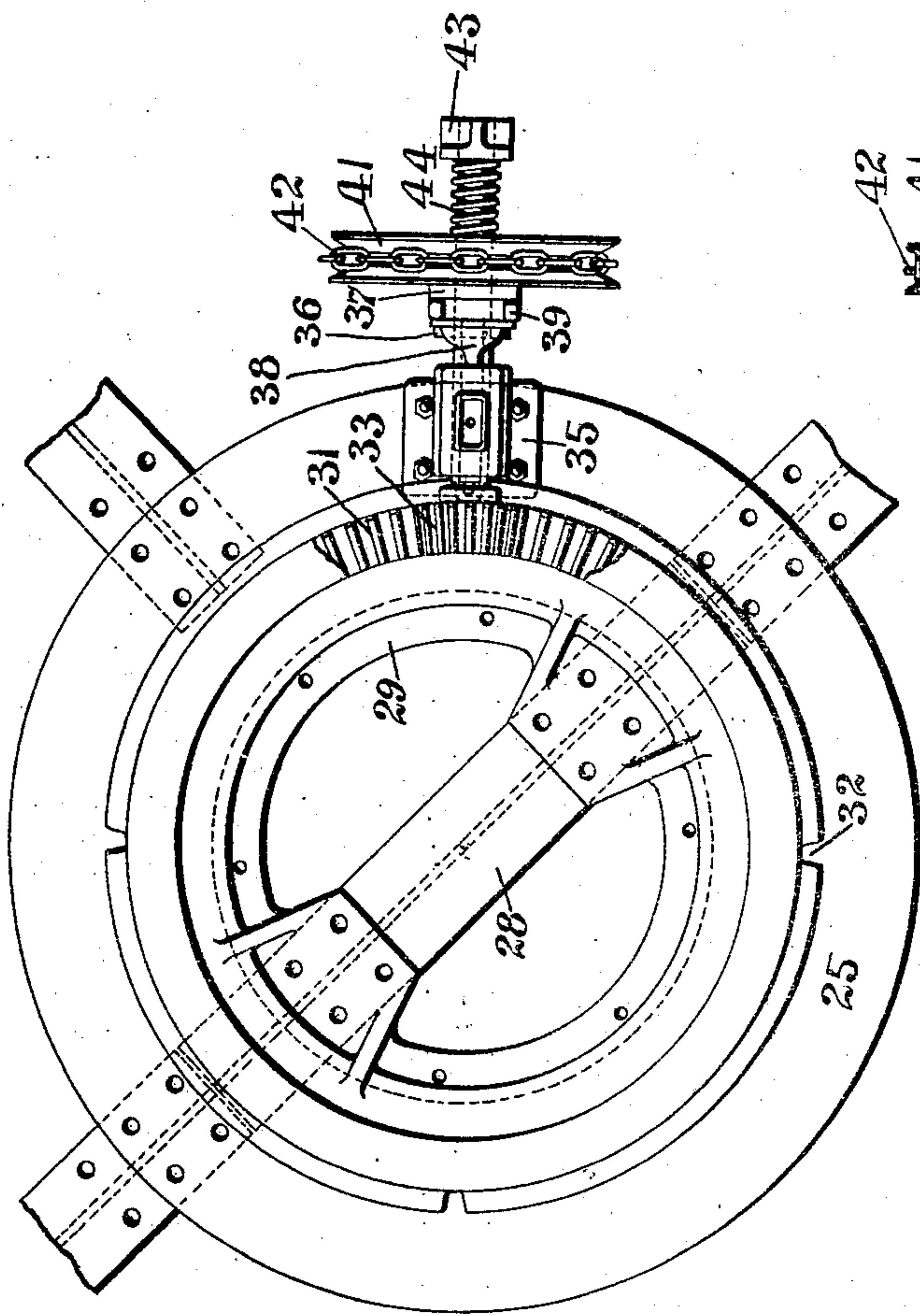


Fig. 5.

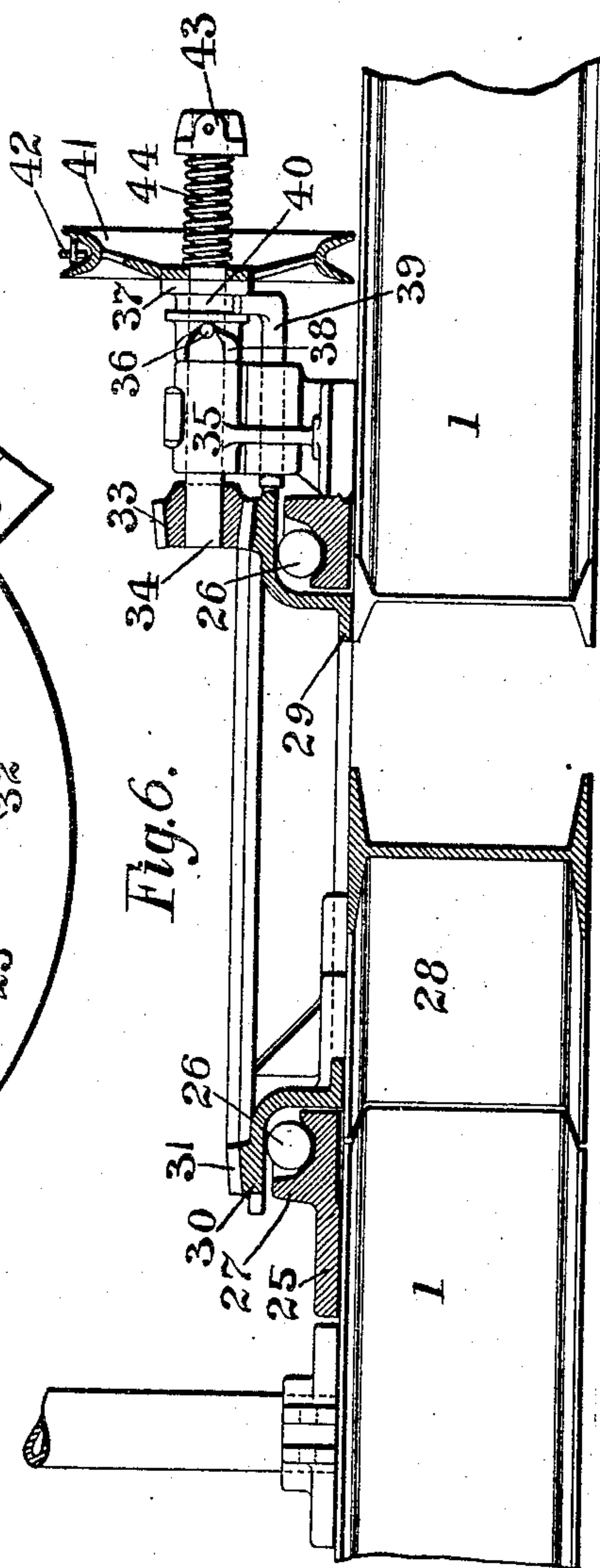


Fig. 6.

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UNITED STATES PATENT OFFICE.

GEORGE F. STEEDMAN, OF ST. LOUIS, MISSOURI.

OVERHEAD-TRACK SYSTEM.

SPECIFICATION forming part of Letters Patent No. 754,396, dated March 8, 1904.

Application filed November 2, 1903. Serial No. 179,600. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. STEEDMAN, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Overhead-Track Systems, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of a switch in the system. Fig. 2 is a side elevational view, partly in section, of said switch. Figs. 3 and 4 are detail views of the switch-castings. Fig. 5 is a top plan view of a crossover used in the improved system, and Fig. 6 is a vertical sectional view through said crossover and its operating mechanism.

This invention relates to new and useful improvements in overhead-track systems used in plants and factories, and particularly contemplates the improvement in turn-tables or switching mechanism to be used in connection therewith.

Referring now to Figs. 1 to 3, inclusive, 1 indicates the main track, which is supported at its end by a casting 2^a, provided with a pivot-bolt support 2^b and extensions 2^c for the attachment of brace-angles 9. A bottom pivot-plate 10 is secured under the track 1 for receiving the lower end of the pivot-bolt 11. This pivot-bolt is the axis about which the switch-tongue 12 moves, said switch-tongue being preferably made up of material having a corresponding section to the main track 1. The outer or free end of the switch-tongue carries a casting 13, preferably on its upper face, which casting extends on each side of the switch-tongue to form guards 14. (See Fig. 4.) Casting 13 affords a bearing for a T-shaped lever 15, whose lower end has a chain 16 connected thereto, said chain extending on each side of the lever and passing over rollers 17, secured in brackets attached to the angle-braces 9. The cross-head of lever 15 coöperates with the T-shaped end of a lever 18, pivoted at 19 in casting 13, the inner end of said lever being held up by a spring 20. The outer

or free end of lever 18 coöperates with notches 21 in a casting 22, bridging the ends of the tracks to which the switch-tongue is common. This casting 22 is provided with lateral lugs for the attachment of the angle-braces 9 and may also have lugs 23 for the attachment of diagonal brace-rods. When the parts are in the positions shown in Fig. 1, it is obvious that a carrier on either of the side tracks cannot pass beyond the guards 14. In this position of the parts the switch-tongue provides a way for the carrier from the main track 1 to the central group of tracks. In order to move the switch-tongue to either of the side tracks, it is only necessary to pull the end of the chain 16 on that side to which it is desired to move the switch-tongue, when the inner end of lever 18 will be depressed, raising the outer end of said lever out of its notch, and a continued pull on chain 16 will swing the switch-tongue in the desired direction. In order to facilitate the movement of the switch-tongue and also provide a support for the free end thereof, rollers 24 are mounted in casting 13 and bear upon a track extension of casting 22. When the switch-tongue 12 is in line with any of the groups of tracks connected to casting 22, the spring 20 exerts its energy to force the outer end of lever 18 down into its alining notch, and the operator is thus made sensible of the fact that the tongue is in alinement with one of the groups of tracks, and by releasing the chain or cord the switch-tongue will be brought to a position of rest opposite one of the groups of tracks. If, however, the operator wishes to move the switch-tongue beyond the track at which it seeks to stop because of the action of the outer end of lever 18, a continued pull on the chain 16 will depress the inner end of lever 18, raising its outer end out of the recess, and will move the switch-tongue 12 onward to the next track.

The crossover (indicated in Figs. 5 and 6) is in the nature of a turn-table and may be installed at any point in the system where two or more tracks cross each other. The capacity of this crossover is only limited by the size of the tracks and their ability to be grouped around the supporting-ring, sufficient clear-

ance being allowed for the carrier. This supporting-ring is indicated at 25, to the under side of which are connected the ends of said tracks 1. Ring 25 extends inwardly beyond the ends of tracks 1 and has formed on its upper face a ball-race, in which are located balls 26. Around this ball-race is a guard-flange 27. 28 indicates the crossing track, which is of the same section as the tracks 1, said crossing track being suspended from a ring-casting 29, having a marginal flange 30 resting on the balls 26. The upper face of this marginal flange 30 is formed with gear-teeth 31, and in addition the marginal flange 30 is provided with notches 32 at appropriate points corresponding to the positions of the tracks 1 entering the crossover. 33 indicates a pinion in mesh with the teeth 31, said pinion being mounted upon the end of a shaft 34, which shaft finds a bearing in a casting 35, secured at some appropriate point to the ring-casting 25. 36 indicates a pin or stud in the shaft 34, with which coöperates the cam-faces of a sliding sleeve or hub 37. These cam-faces are so proportioned that when the sleeve or hub is rotated it may move independently of the shaft 34 for approximately one-quarter of a revolution, when it is arrested by the high part of the cam 38 and locked against further independent rotation. This independent rotation of sleeve 37 results in sliding said sleeve longitudinally the shaft 34, and this longitudinal motion is utilized to operate a locking-stud 39, slidingly mounted in casting 35 and having its outer bent end engaging an annular groove 40 in the hub 37. The inner end of this locking-stud coöperates with the notches 32 in the marginal flange 30 of the crossover ring-casting and holds the crossover-track 28 in proper alinement with diametrically opposite entering tracks 1. In order to operate the sleeve 37, I conjoin thereto a chain-pulley 41, over which passes, preferably, an endless chain 42 within convenient reach of the operator. The outer end of shaft 34 is provided with a cap-piece 43, between which and the chain-sprocket 41 is arranged a spring 44, whose energies are exerted at all times to force the sprocket-wheel and its conjoined sleeve inwardly or in that position in which the studs 36 rest in the low part of the cam-faces. The operation of this crossover is as follows: By rotating the chain-sprocket 41 the sleeve 37 will be moved outwardly on the shaft through the cam-faces thereof until the high part of the cam 38 prevents further independent rotation, and by this time the locking-bolt 39 will have been lifted out of its receiving-notch in the flange 30. Continued application of power in the same direction will now rotate the pinion 33 and motion will be imparted to the ring-casting 29 and its crossover-track 28. This motion continues until the pin 39 is opposite the next notch 32, when said pin will drop into said notch and

bring the parts to a position of rest. Of course continued application of power to the chain will repeat the operation, and the motion of the crossover-track may be continued as far as desired.

I am aware that minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In an overhead-track system, the combination with a main track, of a switch-tongue pivotally mounted at its terminal, a casting supporting a group of tracks with which said switch-tongue is designed to aline, means for moving the switch-tongue in alinement with the several tracks in the group, and braces extending from the extremities of the said casting to a supporting-casting for the terminal of the main track; substantially as described.

2. In an overhead-track system, the combination with a main track, of a casting for supporting its end, a pivot-bolt mounted in said casting, a switch-tongue arranged on said pivot-bolt, a casting for supporting a plurality of tracks with which the switch-tongue is adapted to aline, and braces extending from the extremities of said last-mentioned casting and connected to the supporting-casting for the main-track terminal; substantially as described.

3. In an overhead-track system, the combination with a switch-tongue carrying a guard-casting at its free end, of a supporting-casting for a plurality of branch tracks, means on the guard-casting for supporting the free end of the switch-tongue, notches in said supporting-casting, and means on the guard-casting for coöperating with said notches to lock the switch-tongue in alinement with a branch track; substantially as described.

4. In an overhead-track system, the combination with a switch-tongue, of a plurality of branch tracks with which the same is capable of being alined, a supporting-casting for said branch tracks, said supporting-casting having notches, means mounted on the switch-tongue for coöperating with said notches to lock the switch-tongue in alining positions with the branch tracks, and devices coöperating with said locking means for moving said switch-tongue from one branch track to another; substantially as described.

5. In an overhead-track system, the combination with a switch-tongue, of a plurality of branch tracks with which the same is capable of being alined, a supporting-casting for said branch track, said supporting-casting having notches, means mounted on the switch-tongue for coöperating with said notches to lock the switch-tongue in alining position with the

branch track, and a common means cooperating with the locking means for releasing the same and for moving said switch-tongue from one branch track to another; substantially as described.

6. In an overhead-track system, the combination with a switch-tongue, of a spring-pressed lever pivotally mounted on the free end thereof, a notched member with which said lever cooperates to lock the switch-tongue in different adjusted positions, a T-shaped lever cooperating with said spring-pressed lever, and a chain connected to said T-shaped lever and extending on each side thereof whereby when said chain is pulled the T-shaped lever is operated to raise the spring-pressed lever out of its notch, a continued pull on the chain moving the switch-tongue; substantially as described.

7. In an overhead-track system, the combination with a main-track terminal, of a supporting-casting therefor, a switch-tongue pivoted adjacent to said terminal, a group of branch tracks, a supporting-casting for said branch tracks, braces connecting said two supporting-castings, a lever pivotally carried by the free end of the switch-tongue for cooperating with notches in the supporting-casting for the group of branch tracks to lock the switch-tongue in different adjusted positions, a T-shaped lever cooperating with said first-mentioned lever to raise it out of its receiving-notch, pulleys on the connecting-braces, and a chain connected to said T-shaped lever having its ends passing over said pulleys; substantially as described.

8. In an overhead-track system, the combination with a main track, of a switch-tongue, a group of branch tracks, means for locking

the switch-tongue in position to aline with any of said branch tracks, and means for releasing the switch-tongue, said means also being utilized to move the switch-tongue from one branch track to another; substantially as described.

9. In an overhead-track system, the combination with a movable transfer-track, of a spring-impelled device mounted thereon and designed to fit in notches to aline the transfer-track with a fixed track, and a flexible connection for releasing the spring-impelled device; and by which flexible connection the transfer-track is moved; substantially as described.

10. In an overhead-track system, the combination with a plurality of converging tracks, of a ring-casting for supporting the ends of the same, a gear cooperating with said ring-casting and carrying a crossing-track member, a pinion for rotating said gear, a shaft upon which said pinion is mounted, a spring-impelled bolt for engaging notches in said gear for alining the crossing track with two diametrically opposite converging tracks, a chain and sprocket-wheel feathered on said shaft and whose hub portion is provided with cam-faces for moving said bolt, and a spring on said shaft for restoring the sprocket-wheel and its cam-faced hub to normal position; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 26th day of October, 1903.

GEORGE F. STEEDMAN.

Witnesses:

F. R. CORNWALL,
GEORGE BAKEWELL.