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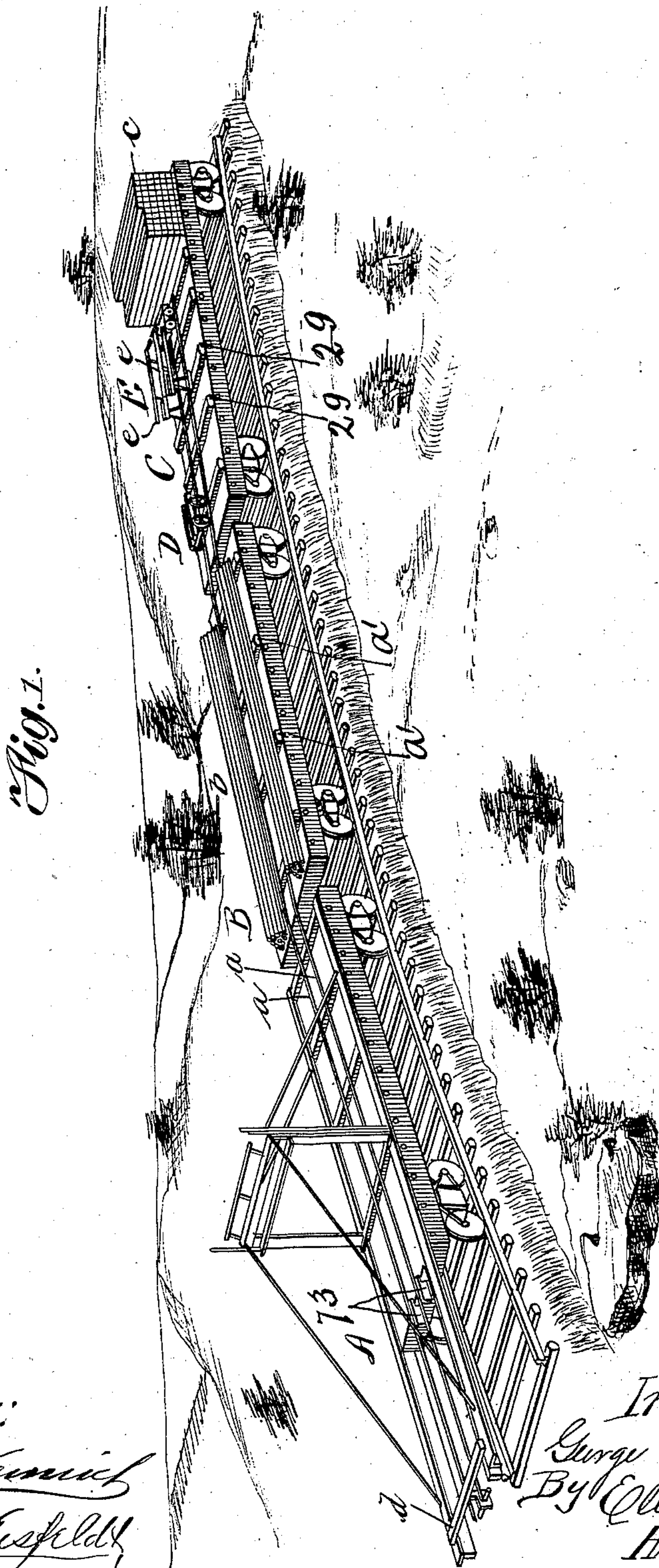
PATENTED FEB. 23, 1904.

G. F. H. HICKS.
RAILROAD TRACK LAYING APPARATUS.

APPLICATION FILED AUG. 7, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses:

Edw. H. Cusfield

Inventor
George F. H. Hick
By Elliott & Hopkins
Attorneys

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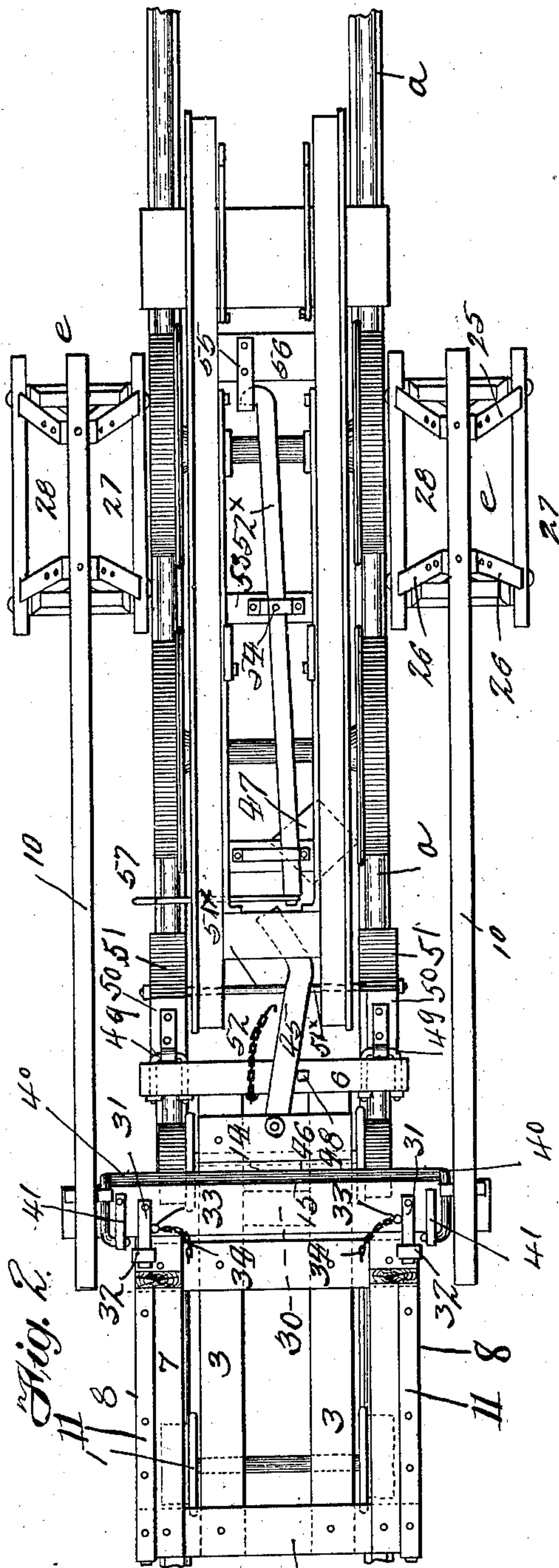
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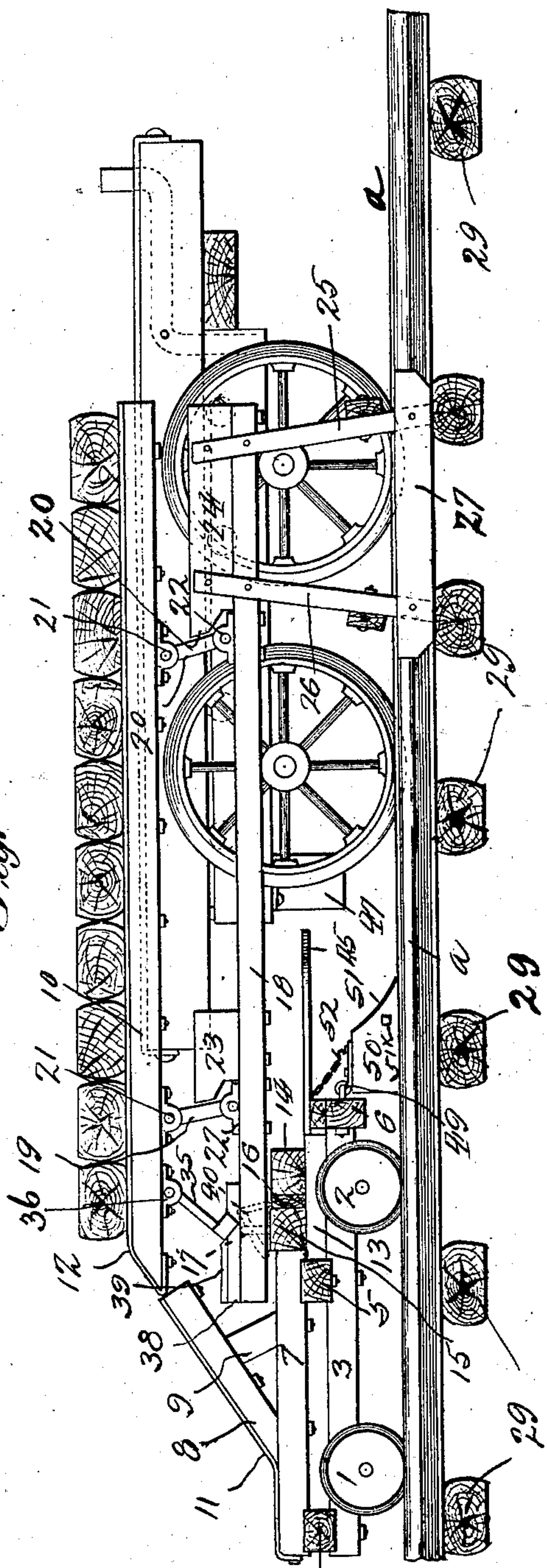


Witnesses:

O. M. Hermann

Edward A. Cofield

Fig. 3



Inventor:
George F. H. Hicks
By Elliott Hopkins
Attorneys.

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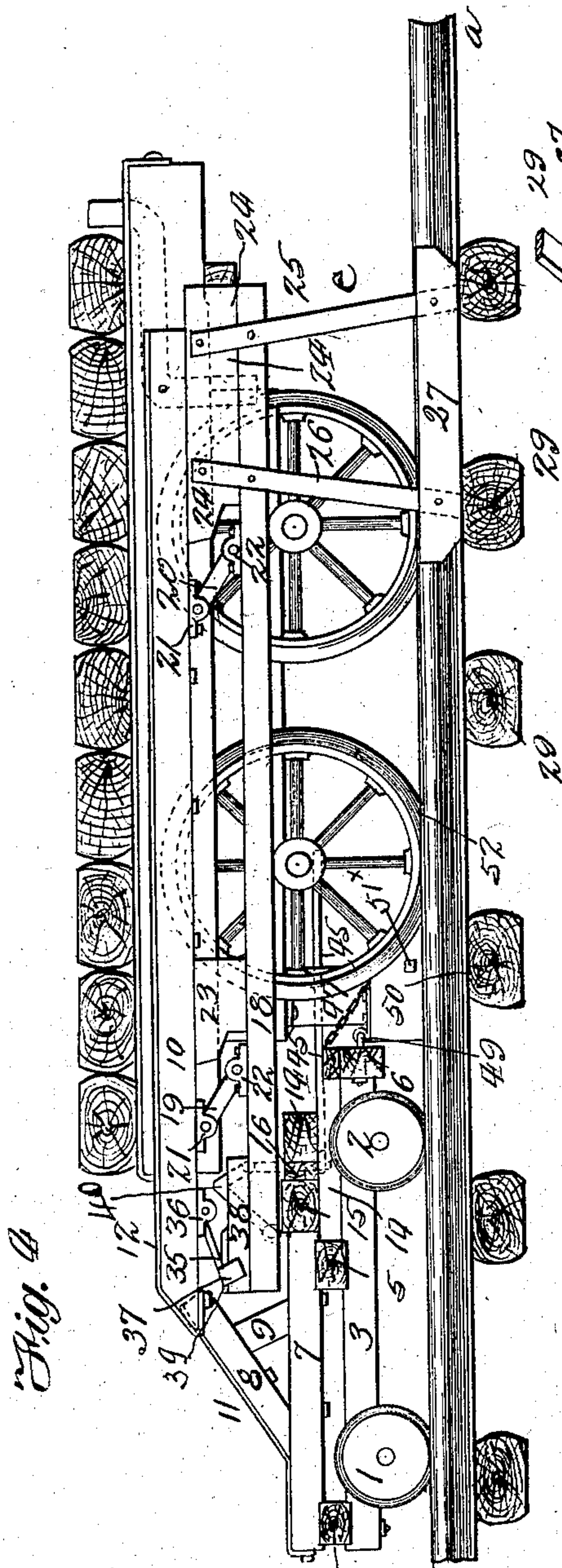


Fig. 4

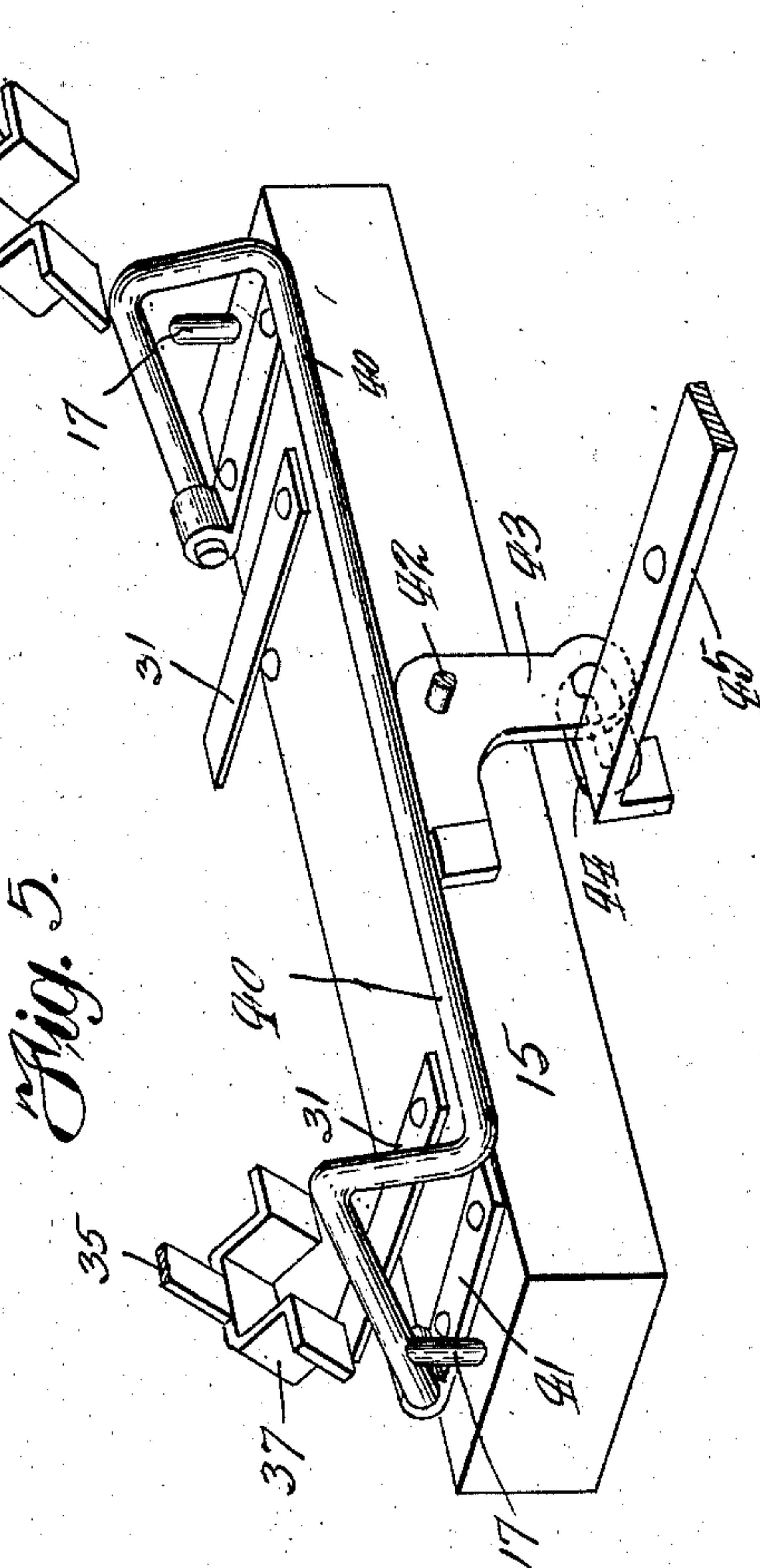


Fig. 5

Witnesses:

Wm. Hennich
Edward A. Esfeldt

Inventor:
George F. H. Hicks
By *Elliott Hopkins*
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE F. H. HICKS, OF CHICAGO, ILLINOIS.

RAILROAD-TRACK-LAYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 752,678, dated February 23, 1904.

Application filed August 7, 1903. Serial No. 168,588. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. H. HICKS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railroad-Track-Laying Apparatus, of which the following is a full, clear, and exact specification.

This invention relates to improvements in a railway-track-laying apparatus, the track of which is at the center of width and extends the entire length of a train of flat-cars on which ties are piled crosswise thereof on the rearward cars and rails lengthwise thereof on the forward cars on each side of said trackway, upon which trackway runs a tie-dumping car supporting ties automatically deposited thereon from a tie-loading car and automatically delivering said ties from the forward or "pioneer" car upon a road-bed upon which a railway-track is to be laid.

More specifically stated, this invention relates to improvements in the tie-loading car above referred to, which receives its load from the ties piled transversely on the track and on the rearward cars of the train and which automatically delivers its load to the dumping-car.

Prior to my present invention and as exemplified in United States Letters Patent No. 676,893, granted me June 25, 1901, tie-loading cars are necessarily substantially wider than the dumping-cars in order that the latter may pass between the side sills thereof to automatically receive ties from the loading-car and which prior to my invention has been mounted upon wheels running freely upon the trackway and with all of the parts thereof permanently connected together, which tie-loading cars have mounted thereon a trackway projecting about half its length beyond the forward end thereof and on which freely travels a supplemental car, which directly receives the ties while at the rear end of the primary tie-loading car and when loaded is pushed forward upon the supplemental trackway to deliver its load to the dumping-car immediately under said projecting end of said supplemental trackway. While such prior structures of tie-loading cars are practically operative there exists among other objections to them that

their movability upon both the principal and supplemental trackways requires them to be either held or frequently blocked in order to hold them up close enough to the pile of ties when loading, which tendency to movement is substantially increased when pushing ties up the incline upon them as is necessary in order to avoid lifting the ties, which is one of the principal objects of a tie-loading car; that said cars are heavy to a degree undesirable and owing to the width cannot be pushed back upon a flat-car loaded with rails when substituting loaded for empty tie flat-cars, or upon the pioneer car, as is desirable from a labor-saving standpoint when making up an entire train-load of rails and ties.

The prime object of my invention is to bodily and directly deliver ties from a tie-loading car upon a dumping-car automatically causing said delivery and in time automatically discharging said ties upon the road-bed of a railway.

A further object of this invention is a tie-loading car which shall be stable against moving along the trackway while being loaded, but which at the same time shall be conveniently movable toward the ties piled on the flat-cars as the ties are exhausted therefrom.

Another object of my invention is to produce a tie-loading car having the advantage above set forth and at the same time such a further construction that the tie-supporting portion and its fixed supports may be conveniently disconnected from and loaded upon the truck of the movable or wheel portion, so as to be in its entirety easily movable along the trackway between the rails piled on one or both sides thereof and to and upon the pioneer car and there remain until filled tie and rail flat-cars have been substituted for empty cars, the connections between the several parts of the loading-car being such that it may be moved to the filled tie flat-cars and again put together in its operative position.

A further object is to provide a tie-loading car with means whereby the dumping-car may be moved entirely under the ties before any of the parts of the tie-loading car are moved and that as soon as the dumping-car has received its load it will be automatically moved

forward in starting for its destination at the forward end of the train, and thereby obviate the necessity of the attendant giving the tie-dumping car its initial forward movement.

5 Another object of my invention is to avoid the necessity of using on a tie-loading car a supplemental car and projecting trackway and to provide a loading-car of maximum compactness and minimum length with cor-
10 responding lightness and strength adapted to deliver the ties from the point at which they are loaded directly upon the tie-dumping car.

A still further object is to provide a tie-loading car with simple and effective means
15 for locking the tie-supporting sills thereof in their raised position for receiving the ties and operated by the dumping-car to cause the said sills to deliver their load of ties upon the dumping-car when directly beneath them.

20 With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said object and certain other objects hereinafter appearing are at-
25 tained, all as fully described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the accompanying drawings, Figure 1
30 illustrates a perspective view of a railway-track-laying apparatus having mounted thereon a tie-loading car embodying my invention, but more particularly illustrating its position on and the operation of a track-laying apparatus. Fig. 2 is a top plan view of my tie-
35 loading car and also of the dumping-car in the position it occupies just before tripping the tie-supporting sills of the tie-loading car and as a result the automatic depositing of the ties upon the dumping-car. Fig. 3 is a side
40 elevation of said two cars in the same position they occupy in Fig. 2. Fig. 4 is a side elevation of the same with the dumping-car in the position it occupies after the ties from the loading-car are deposited thereon and to this
45 end showing the side sills of the loading-car depressed below the side sills of the dumping-car, and Fig. 5 is an enlarged detail perspective view showing the devices on the loading-
50 car for locking its sills in an elevated position and the latch which is operated by the dumping-car for tripping the same.

Referring to Fig. 1 of the drawings, A represents a pioneer car, which is always at the front of the train, B one of any number of
55 railroad-rail cars next thereto, and C one of any number of railroad-tie cars, which said several cars are primarily ordinary flat-cars and having extending lengthwise thereof and about their center of width a narrow track-
60 way *a*, laid upon suitable ties *a'*, and is usually provided, though not so shown, with flexible connections between adjacent cars.

On the rail-car B on each side of said track-
65 way *a*, are piled railroad-rails *b* laid lengthwise of the car, and on the tie-car C are piled

transversely of the car railroad-ties *c*, which ties, however, when there are several tie-cars are directly supported by a trackway *a*, extending underneath them, so that as fast as
70 ties are removed to the tie-loading car said car may be pushed backward closely to the unloaded ties.

Supported on the trackway *a* is a dumping-car D, which receives a load of ties from the
75 loading-car, as hereinafter explained and is then pushed forward to the forward end of the pioneer car, where upon striking a transverse bar *d* it is tilted, and thereby automatically dumps its load of ties upon the graded
80 road-bed and transversely thereof, where they are manually moved to place to receive the railroad-rails.

Between the dumping-car and the ties *c* is a tie-loading car E, which when put together
85 and in its operative position, as hereinafter described, (see Figs. 2, 3, and 4,) is supported at its rearward end by small front and rear car-wheels 1 and 2, respectively, in pairs, run-
90 ning upon the trackway *a*, which car-wheels are secured to a truck composed of side sills 3 and cross-sills 4, 5, and 6.

The cross-sills 4 and 5 have bolted thereto on their upper sides side sills 7 7, upon which,
95 respectively, resting at their lower ends are parallel inclined bars 8 8, supported in their inclined position by braces 9 9 and providing an incline up which the ties being loaded are pushed upon the receiving side sills 10 10 of
100 the tie-loading car, the said incline being faced with iron strips 11 11 and the upper ends of the sills 10 being likewise faced with iron strips 12 to protect them from wear by the friction of the ties pushed over them.

On the side bars 3 between the end bars 5
105 and 6 are blocks 13, supporting parallel transverse sills 14 and 15, the former, 14, being bolted to the car proper and is separated from the sill 15 by blocks 16, secured to sill 14, providing space for pivoting a bell-crank trig-
110 ger to the side edge of the sill 14, as hereinafter described, for tripping the devices locking the side sills 10 in their upper position.

From the sill 15 and toward the opposite
115 ends thereof project pins 17 17, (see Fig. 5 and also dotted lines Fig. 3,) which serve to removably hold the lower and fixed side bars 18 18, which are directly below the movable
120 side bars 10, which side bars 10 and 18 are respectively connected by links 19 toward the forward end thereof and links 20 toward the forward ends thereof pivoted at their opposite
125 ends to bearing-blocks 21 21, secured to the upper sill 10 and bearing-blocks 22 22, secured to the lower sills 18.

On the side sills, in front of the links 19, are
125 stop-blocks 23, and in the same relative position to the links 20 are stop-blocks 24 24, which are so arranged relative to their respective links that the links are prevented from assum-
130 ing a vertical position, so that the movable

sills are free to fall by gravity from their upright position immediately they are released from the device hereinafter described for locking them in their elevated position.

5 The blocks 24 are longer than the blocks 23 and of a length enabling them to be used in supporting the two pairs of standards 25 25 and 26 26 of horses *e*, which are bolted, respectively, to the blocks 24 and the bars 18, as indicated and of the ordinary construction, except that their lower ends are connected, respectively, by runners 27 and 28 (see Fig. 2) on each side of the rails of the trackway *a* and which are of a length to span and rest upon at least two or more cross-ties 29 for the rails *a* and operate as runners supporting the forward end of the tie-loading car when being pushed backward toward the pile of ties during the loading operation of said car.

20 It will now be observed that so much of the loading-car as is comprised by the side sills and their horses are each, respectively, permanently secured one to the other, and each side of the loading-car thus formed is independently removable from the truck portion thereof, and in this connection it is proper to add that when so disconnected they may be loaded upon the truck portion, and thereby conducted to either upon the rail-car or the pioneer car, as may be desirable in making up a train of cars loaded with rails and ties or when cutting out one or more empty cars of a train. It is also, however, necessary to the passing of the truck portion of the loading-car between the rails on the rail flat-car that cross-sill 15 should be removable and also that it should be held against movement when in its operative position. To these ends the cross-sill 15 has secured to its under side a block 30, (indicated by dotted lines in Fig. 2,) which projects down between the side sills 3 3 of the truck and which prevents the sill 15 from end-wise movement, the lateral movement of the cross-sill 15 being prevented by confining it between the side bars 7 and blocks 16 and its upward movement (see Fig. 2) by latch-bars 31 31, pivoted on one side of the top of the sill 15 toward opposite ends thereof and which when swung on their pivots respectively engage keepers 32 32, secured in any suitable manner to the sills 7 7 and are held from disengagement with the keepers by pins 33 33, removably fitting corresponding holes in the sill 15, which said pins are upon the ends of chains 34, secured to the cross-sill 5 to prevent their loss when detached.

When the tie-loading car is receiving its load, the side sills 10 10 thereof are in the elevated position shown in Fig. 3, being maintained in that position by latches 35 35, pivoted at their upper ends to boxes 36 36, secured to the side bars 10 10, the lower ends of these latches terminating in bent U-shaped portions 37 37, (see Fig. 5,) adapted to embrace blocks 38 38, respectively, secured (see Fig. 3)

to the side sills 18, which said blocks 38 are provided with inclined shoulders which may consist of a piece of iron 39, beveled at one end and secured to the blocks 38, so as to form a stop preventing the accidental disengagement of the latch with the block—that is to say, preventing its slipping thereon when it is desirable to maintain the sills 10 10 in their elevated position for or when receiving a load of ties. In order to disengage this latch for delivering a load of ties upon the dumping-car, a bent tripping bar or rod 40 is pivoted upon the upper side of the sill 15 to suitable straps 41 and in such a position that when elevated above the position it occupies in Fig. 5, it will force the latch 35 away from the block 38 and its stop 39, and to this end there is pivoted to the rear side edge of the sill 14 by a pivot 42 (see Fig. 5) a bell-crank lever 43, connected by a link 44 with a lever 45, pivoted to the under side of the sill 14 (see Fig. 2) by a pivot 46, forward of which pivot it rests upon the cross-sill 6 and is bent at its forward and free end at an oblique angle, as indicated in Fig. 2, the lever 45 being of such a length that it may be swung upon its pivot when engaged by a plate 47, secured to the under side of the dumping-car, which lever is prevented from moving too far in the opposite direction by means of a pin or bolt 48 in the cross-sill 6. In other words, the pin 48 prevents the lever 45 from moving out of the path traversed by the plate 47.

Hinged to the cross-sill 6 and immediately over both rails of the track *a* by any ordinary form of hinge 49 are blocks 50, provided with inclined faces 51, preferably formed on a curve, which blocks perform two functions—namely, that of stopping the dumping-car at the proper point under the loading-car for the dumping-car to receive its load and automatically producing the initial forward movement of the dumping-car the moment it has received its load. That is to say, when the dumping-car is pushed backward under the ties on the loading-car and about the moment that plate 47 strikes the lever 45, which results in a delivery of the ties from the loading-car to the dumping-car, the wheels of the dumping-car engage and by the momentum of the dumping-car start up the inclines 51 of the blocks 50 and are stopped thereby at or before they have reached the top of the incline, the result being that with the added weight of the ties the dumping-car is given its initial forward movement automatically and by gravity which otherwise would require considerable effort on the part of the attendant whose duty it is to push the loaded dumping-car forward to its destination on the pioneer car whence it automatically delivers the ties to the road-bed.

The blocks 50 are connected (see Fig. 2) by rod 51^x, which not only maintains them rigidly in their position, but provides a means for the engagement of a chain 52, secured at

one end to the sill 6 and provided at its free end with a hook, adapted to engage the rod 51^x and maintain the blocks 50 in an elevated position above the rails of the track *a* when the truck of the loading-car, having piled thereon its movable parts, is being run forward upon the trackway to and upon the pioneer car.

In the operation my loading-car is located closely up to the pile of ties and in such a position that the upper layers of ties may be pushed over upon it when the ties are piled from nine to fourteen high, as they usually are. The most of which ties, however, fall upon the incline, and by an attendant standing on each side of the loading-car are pushed up the incline to their proper position on the side bars 10 of the loading-car, which side bars at this time are in their elevated position. (Shown in Fig. 3.) The major portion of the ties are caused to fall upon the loading-car, usually by pulling out the second or third tie from the bottom of the ties; but in some instances this may be accomplished by the use of a crowbar, worked from the top of the pile of ties; but in any event it is only the two bottom layers of the ties that require any lifting on the loading-car for the reason that the distance between the rails of the trackway and the bottom of the incline on the loading-car is only about twelve to fourteen inches. After the desired number of ties have thus been placed upon the loading-car the dumping-car is then pushed backward under the same and receives its load and its initial forward movement, as before described. When the plate 47 on the dumping-cars strikes the bent end of the lever 45, the lever is moved laterally, with the result that the free arm of the bell-crank trigger is caused to rise and force the tripping-bar 40 upwardly, and which in turn forces the latch from engagement with the block 38 and the stop 39, with the result that the bars 10 immediately swing rearwardly on their links and at the same time downwardly in a plane parallel with the bars 18 until they are depressed below the side sills of the dumping-car, and the ties are thereby automatically delivered thereon. After the loading-car has discharged its ties upon the dumping-car and the latter moved away the attendant lifts the side bars to the position shown in Fig. 3, with the result that the latch 35 by its gravity again engages the block 38 and shoulder 39 and automatically locks the side bars in their elevated operative position to receive another load of ties. The weight of the tripping-bar 40 is such that as soon as the lever 45 is disengaged from the plate 47 on the dumping-car the tripping-bar 40 descends to its depressed position, carrying with it the bell-crank trigger 43, which in turn, through the link 44, thereby automatically returns the tripping-lever 45 to its position to be again operated by the plate 47 of the dumping-car.

The runners 27 28 at the forward end of the loading-car not only afford a stable support for the superstructure of the loading-car and the ties thereon, but by their friction on the cross-ties of the trackway *a* maintain the loading-car from endwise movement while in connection with the rearward wheel-truck of the loading-car, and they provide a convenient means for pushing the loading-car up to and maintaining it in a fixed position close up to the ties to be loaded and during the falling of the ties thereon and quicken the time and shorten the effort necessary to loading the car to a degree not practical when the loading-car is entirely supported by wheels running freely on the trackway *a*.

The detachability of the side-rail structure from the wheel-truck of the loading-car provides for a quick transfer with the least possible exertion of the loading-car to or past the rail-loaded car to the pioneer car and for which purpose and in a very few seconds the side bars of the loading-car are disconnected from the pins 17 17 of the sill 15 in a separated condition, and then after pulling the pins 33 and disconnecting the latches 31 on the sill 15 said sill is lifted to disconnect it from the side sills 3 3, when it, together with the side bars 10 and their horses, may be quickly loaded on the truck of the loading-car, longitudinally thereof, and quickly pushed upon or past the rail-loaded cars to the pioneer car, when as soon as the empty flat-cars are removed and loaded flat-cars substituted the loading-car may then be run along the trackway *a* up to the forward end of the ties piled on said cars and quickly put together in its operative position to receive a load of ties to be subsequently discharged upon the dumping-car, as before described.

While the dumping-car is no part of my present invention, except so far as it enables the dumping-car to be run bodily under the loading-car instead of under a trackway projecting forwardly therefrom and that the plate 47 on the dumping-car through the lever 45 trips the latch mechanism of the loading-car, it is proper to state at this point that the dumping-car consists of a fixed wheel-truck frame and a sliding frame, on which latter the ties are directly discharged by the loading-car, and that said frames are locked together by a latch consisting of a bar 52^x, pivoted to a cross-bar 53 of the dumping-car at 54 and adapted to engage with a keeper 55, bolted to a cross-bar 56 of the dumping-car, which lever 52^x is moved into and out of engagement with the keeper 55 by a lever 57, secured to and projecting at a right angle from the lever 52^x to a convenient position for manipulation from the side of the dumping-car.

The latch mechanism is locked up to the moment before the dumping-car is to discharge its load of ties upon the road-bed, when the lever 57 is pulled outwardly, thereby un-

locking it, so that when the forward wheels of the dumping-car strike a suitable stop at the end of the trackway *a* on the pioneer car the momentum will cause the sliding frame to move forward beyond its center of gravity, and thereby enable the car to tilt forward and downward on its front wheels, and thereby discharge the load of ties upon the road-bed and transversely thereof.

10 Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a railway-track-laying apparatus, a tie-loading car comprising in combination a tie-supporting body, horses secured to and supporting one end thereof, and a wheel-truck detachably connected with and supporting the other end of said body, substantially as and for the purpose described.

20 2. In a railway-track-laying apparatus, a tie-loading car comprising in combination a tie-supporting body, horses secured to and supporting one end thereof and provided with runners, and a wheel-truck detachably connected with and supporting the other end of said body, substantially as and for the purpose described.

3. In a railway-track-laying apparatus having a trackway, a tie-loading car comprising in combination a tie-supporting body, horses secured to and supporting one end thereof and provided with runners, resting and slidable on the ties of said trackway, and a wheel-truck detachably connected with and supporting the other end of said body and movable on said trackway, substantially as and for the purpose described.

4. In a railway-track-laying apparatus, a tie-loading car comprising in combination a car-body consisting of horizontal bars in pairs at each side of said car, disconnected horses secured to and supporting one end of each pair of said bars, and a wheel-truck detachably supporting the other end of both pairs of said bars, substantially as and for the purpose described.

5. In a railway-track-laying apparatus, a tie-loading car comprising in combination a car-body consisting of horizontal bars in pairs arranged one above the other at each side of said car, disconnected horses secured to and supporting one end of each pair of said bars, and a wheel-truck detachably supporting the other end of both pairs of said bars, substantially as and for the purpose described.

6. In a railway-track-laying apparatus, a tie-loading car comprising in combination a tie-supporting body, horses secured to and supporting one end thereof, a wheel-truck detachably connected with and supporting the other end of said body, and an inclined loading structure mounted upon and secured to the wheel-truck whereby ties may be moved up said incline upon the tie-supporting struc-

ture of the car-body, substantially as and for the purpose described.

7. In a railway-track-laying apparatus having a trackway, a tie-loading car comprising in combination a car body or frame composed of side bars hinged together in pairs in different horizontal planes and supported at one end from the trackway by horses and at the other end by a wheel-truck mounted on said trackway with which said side bars are separably and removably connected in pairs, and means for preventing the accidental depression of the upper side bars of each pair from a downward movement when in an elevated position, substantially as and for the purpose described.

8. In a railway-track-laying apparatus, a tie-loading car comprising in combination a tie-supporting body, horses secured to and supporting one end thereof, a wheel-truck at the other end of said body, a cross-sill detachably connected with the wheel-truck and with said car-body, substantially as and for the purpose described.

9. In a railway-track-laying apparatus, a tie-loading car, the sides of the frame or body of which are respectively composed of stationary and movable side bars linked together in combination with means for locking the movable side bars in an elevated position when loading ties thereon, and means for tripping said locking mechanism whereby the movable side bars will descend by gravity to a position delivering said ties upon another car receiving the same, substantially as and for the purpose described.

10. In a railway-track-laying apparatus, a tie-loading car, the frame or body of which is composed of stationary and movable side bars linked together in pairs at each side of said car, means automatically locking the movable side bars when lifted to an elevated position for loading the ties thereon, means for preventing said links assuming a vertical position, and means for tripping the mechanism locking the side bars in their elevated position, substantially as and for the purpose described.

11. In a railway-track-laying apparatus, a tie-loading car, the frame or body of which is composed of stationary side bars and movable side bars linked together in pairs, means for locking the movable side bars in their elevated position for receiving a load of ties, means for tripping said locking mechanism and for lowering said side bars, and means automatically locking the movable bars when lifted to their elevated position, and for automatically returning the tripping mechanism to its normal position for again tripping said side bars, substantially as and for the purpose described.

12. In a railway-track-laying apparatus, a tie-loading car, the combination of a wheel-truck, a cross-sill removably mounted thereon and detachably connected with the car-body, the opposing sides of which car-body are com-

posed of linked side bars disconnected in pairs and supported at the other end by horses secured thereto, substantially as and for the purpose described.

5 13. In a railway-track-laying apparatus, a tie-loading car, a wheel-truck, a transverse sill supported thereon, a car-body one end of which is supported by and detachable from said sill and composed of side bars linked together in pairs and means for supporting the
10 other end of said side bars in combination with a latch, a tripping mechanism therefor, the several parts of which are respectively secured to one of each pair of said bars, to the
15 removable sill, to the sill fixed on said truck, whereby the disconnection of the sides of the tie-loading car from the removable sill, and this in turn from the truck, serves without further manipulation to separate the several
20 parts of the locking and tripping mechanism without other manipulation of the same, and to likewise connect them when again joining the several parts of the car together, substantially as and for the purpose described.

25 14. In a railway-track-laying apparatus, a tie-loading car composed of fixed and movable side bars linked together in differing horizontal planes and in pairs in combination with a vibrating latch pivoted to one of the movable
30 side bars adapted to engage and lock upon the opposing fixed side bar whereby when elevating the unlocked movable side bar to its elevated position the latch will by gravity swing toward and automatically lock itself upon the
35 fixed side bar and remain locked until positively moved from engagement with said side bar, substantially as and for the purpose described.

40 15. In a railway-track-laying apparatus, a tie-loading car composed of fixed and movable side bars linked together in differing horizontal planes and in pairs, with the movable bar above the fixed bar, a latch for locking the movable bar in its elevated position, said side
45 bars being supported at one end by horses and at the other end by a wheel-truck, between which and directly supporting said side bars is a transverse sill detachably connected with said truck and said bars in combination with
50 a weighted gravitating tripping-bar pivoted to said sill, a bell-crank trigger pivoted to a cross-bar fixed on said truck and adapted to engage said tripping-bar, and a pivoted lever connected with said bell-crank trigger and
55 adapted to actuate said trigger, and with it the trip-bar and latch, whereby the tripping-bar, trigger and lever are automatically returned to their normal position after tripping the latch, and may be separated in disman-

60 tling the several detachable parts of the tie-loading car and again put together on assembling said several parts without any detachment from their supports or individual manipulation, substantially as and for the purpose described. 65

16. In a railway-track-laying apparatus, having a trackway, a tie-loading car adapted to discharge its load of ties upon a receiving-car run beneath said ties in combination with a block or blocks provided with inclined faces
70 and so arranged as to stop the backward movement of the receiving-car and automatically produce the initial forward movement thereof at the moment it receives said ties, substantially as and for the purpose described. 75

17. In a railway-track-laying apparatus having a trackway, a tie-loading car provided with depressible side rails locked in an elevated position when loaded with ties and under which
80 a receiving-car may be run, means for locking said side rails in their elevated position, means whereby said locking mechanism is tripped, means upon the receiving-car automatically actuating said tripping mechanism in combination with an inclined block, stopping the
85 receiving-car during and until it has received the ties from the tie-loading car and automatically producing the initial forward movement of the receiving-car away from the tie-loading car, substantially as and for the purpose described. 90

18. In a railway-track-laying apparatus, a tie-loading car, a tie-receiving car adapted to be run beneath and receive ties from the tie-loading car in combination with blocks connected together resting upon both rails of said
95 trackway and hinged to the tie-loading car, means for maintaining said blocks in an elevated position above the trackway when not in use, said blocks being provided with inclined
100 faces both stopping the rearward movement of the receiving-car and automatically producing the initial forward movement thereof, substantially as and for the purpose described.

19. In a railway-track-laying apparatus, a tie-loading car, provided with means bodily delivering ties to a dumping-car, ties piled thereon, in combination with a dumping-car, provided with means automatically actuating the tie-loading car to make said delivery, and
105 means by which the dumping-car subsequently automatically discharges said ties upon the road-bed of a railroad, substantially as and for the purpose described. 110

GEORGE F. H. HICKS.

Witnesses:

E. SHASBERGER,
JNO. G. ELLIOT.