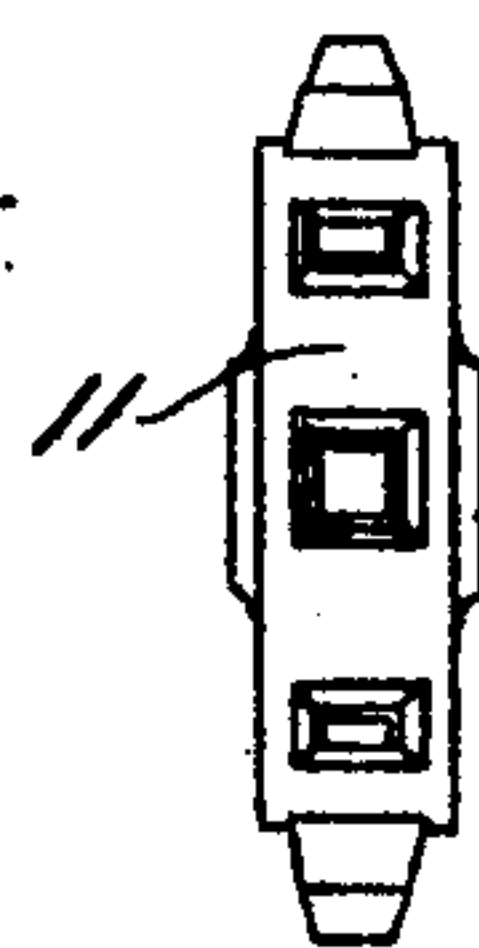
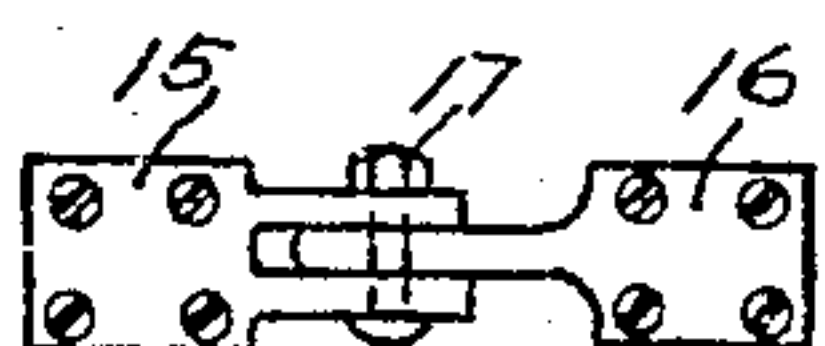
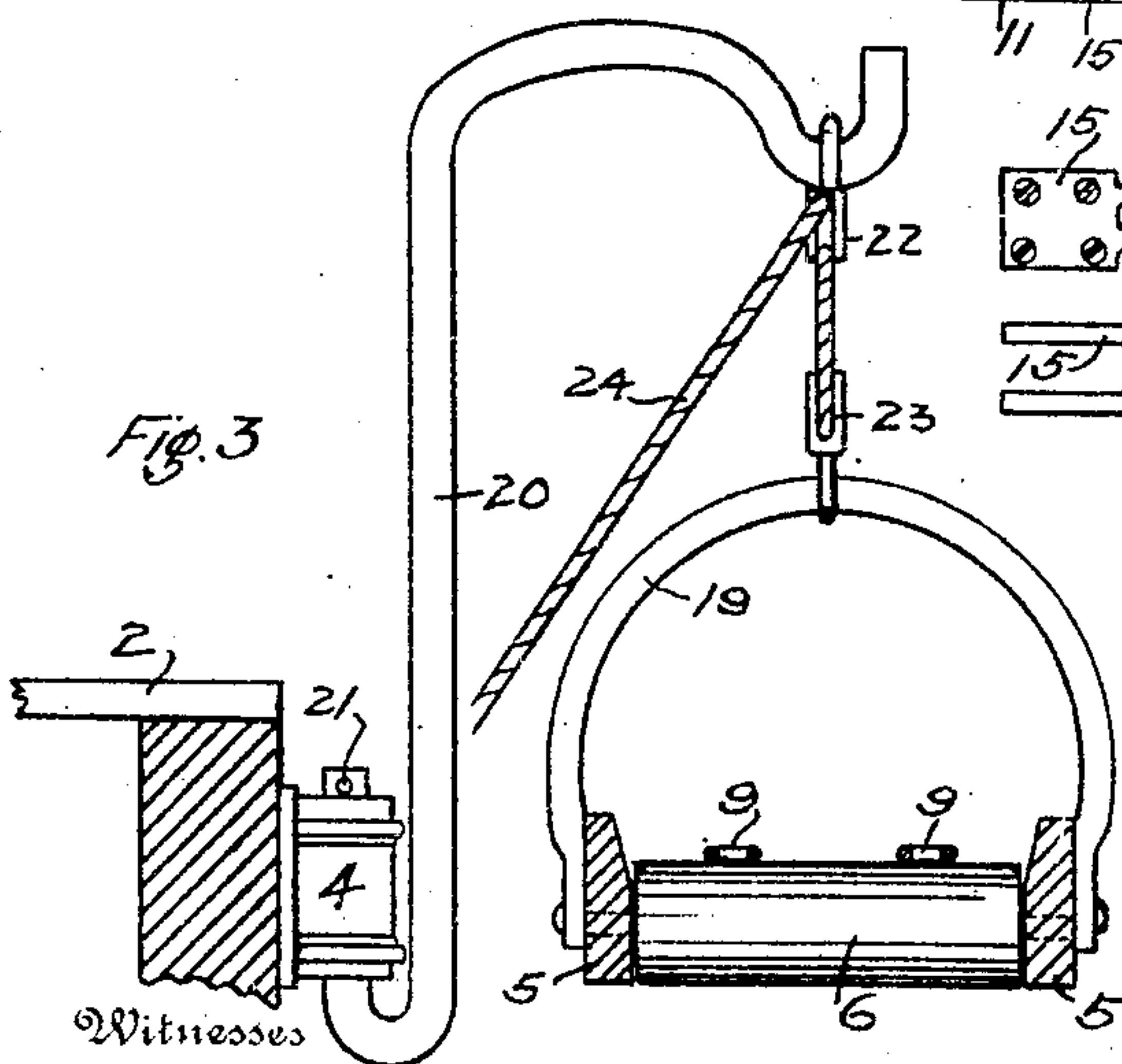
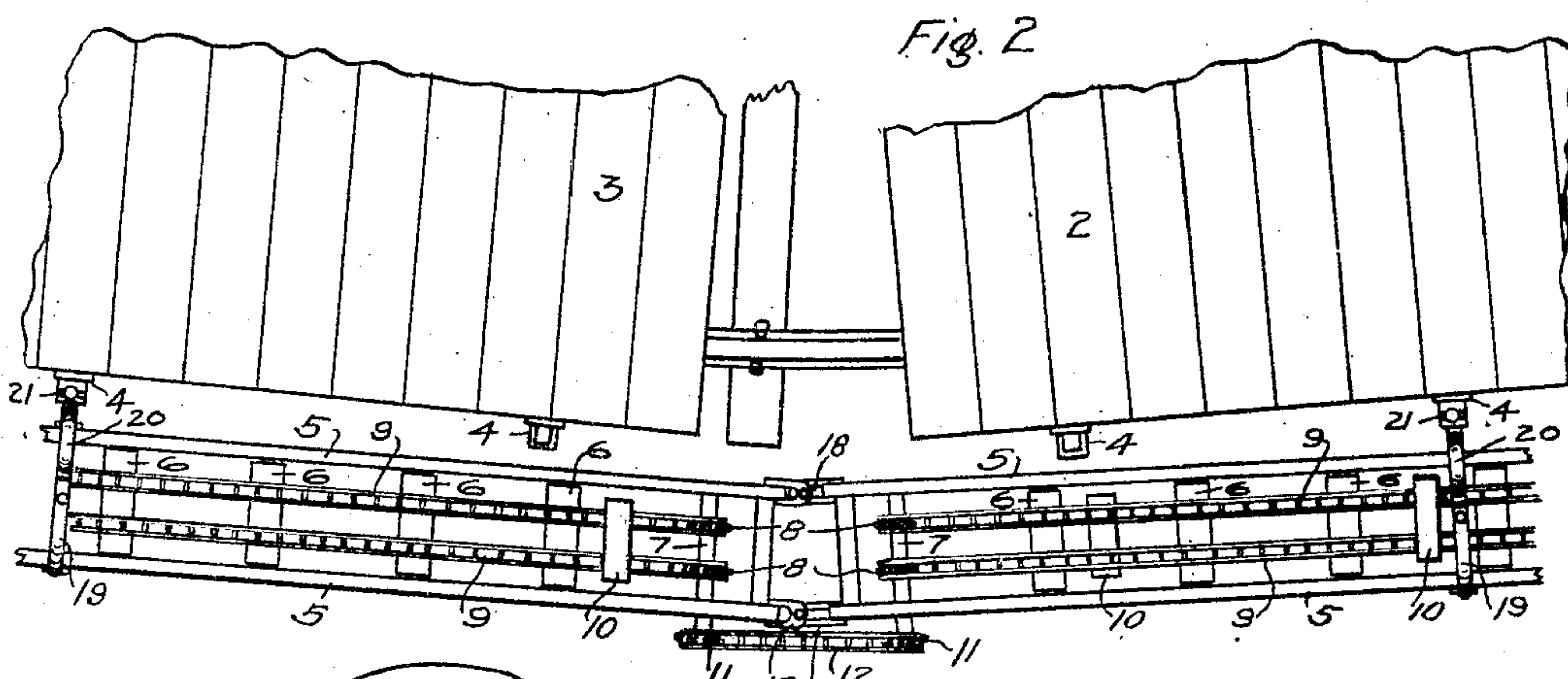
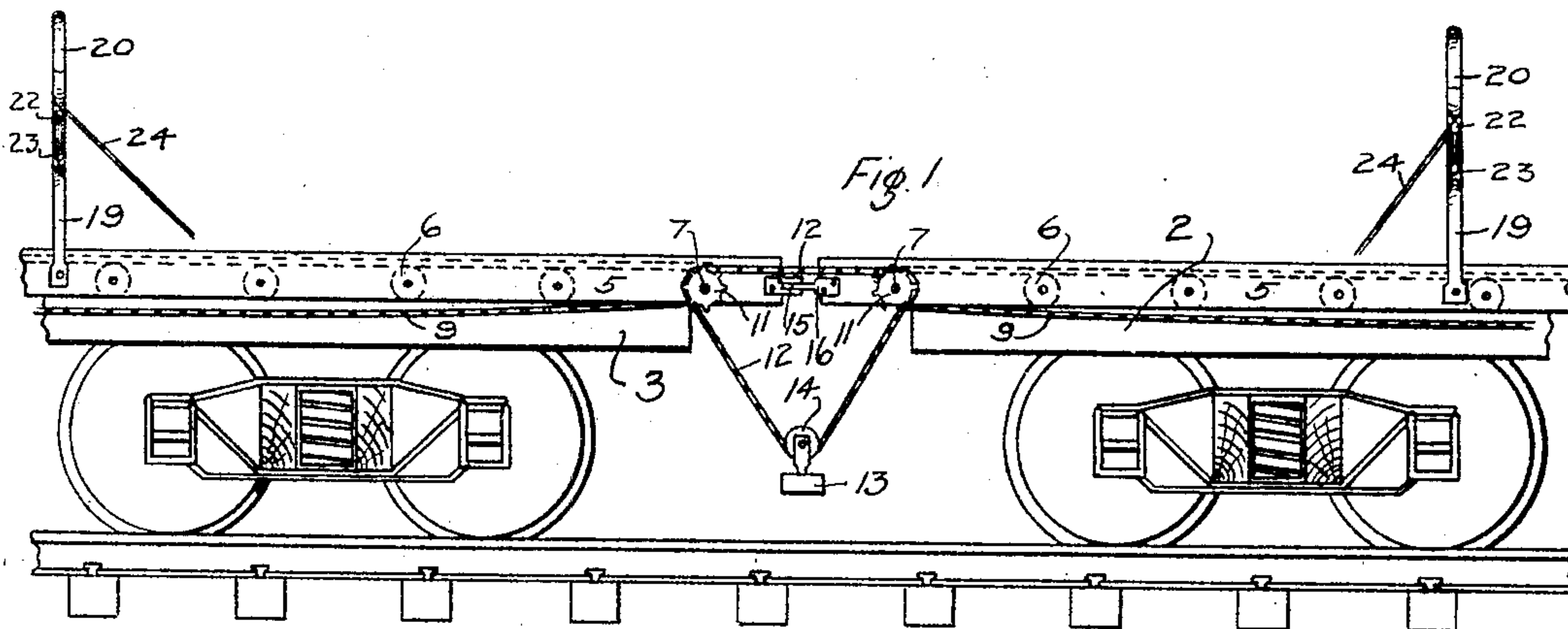


No. 805,623.

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N. BENNETT.
TRACK LAYING MACHINE.
APPLICATION FILED JUNE 30, 1905.

2 SHEETS—SHEET 1.



Inventor

Nelson Bennett

Witnesses

George H. Berry
M. A. Van House.

By

P. J. Elliott

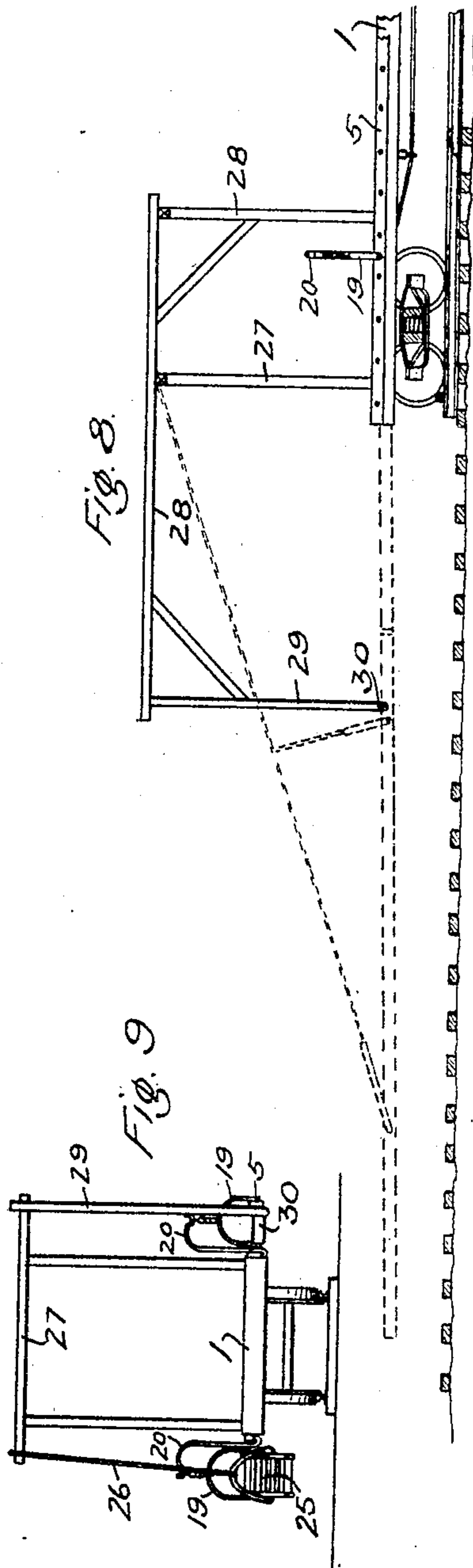
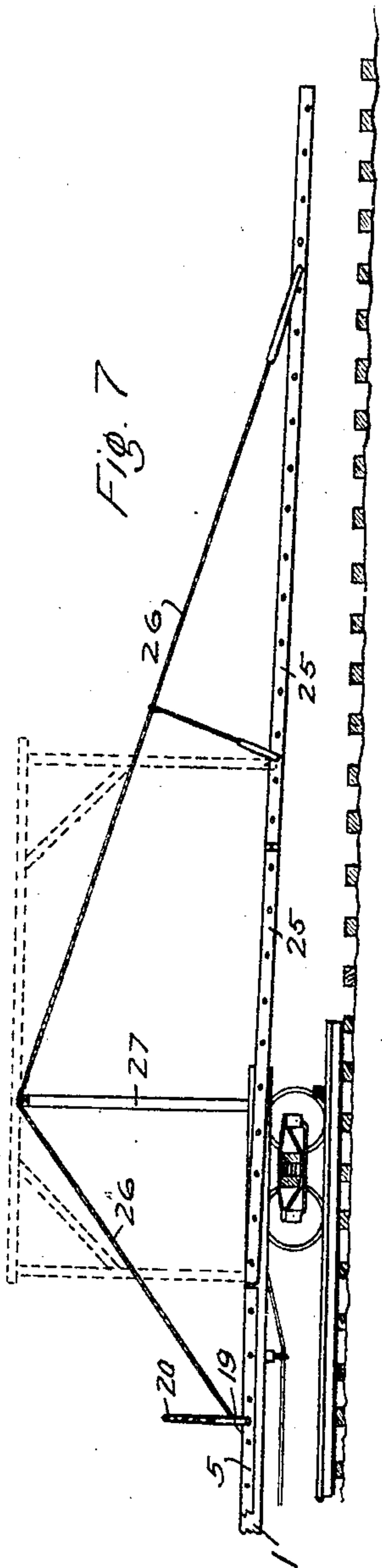
Attorney

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2 SHEETS—SHEET 2.



Witnesses

George H. Berry
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UNITED STATES PATENT OFFICE.

NELSON BENNETT, OF TACOMA, WASHINGTON.

TRACK-LAYING MACHINE.

No. 805,623.

Specification of Letters Patent.

Patented Nov. 28, 1905.

Application filed June 30, 1905. Serial No. 267,831.

To all whom it may concern:

Be it known that I, NELSON BENNETT, a citizen of the United States of America, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Track-Laying Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to track-laying machines, and especially to the mechanism for supplying ties and rails ahead of the construction-train, and has for its objects to support the conveyer in such manner as to allow it to
15 more readily adapt itself to the curvature of the train, to provide a flexible automatically-adjusted transmitting mechanism whereby the conveyer on one car is driven by the one on the car next preceding, to enable the conveyer on any car to be quickly disconnected
20 from the other cars, to facilitate the rapid erection and dismounting of the conveyers on the cars, and to improve the devices for delivering the rails ahead of the train and for
25 delivering the ties ahead of the rails. I attain these objects by the devices illustrated in the accompanying drawings, in which—

Figure 1 shows a side view of the adjacent ends of two cars, showing the flexible transmitting mechanism and portions of the conveyers thereon. Fig. 2 is a plan thereof. Fig. 3 is an enlarged sectional view showing the conveyer and the mechanism for supporting it on the car. Figs. 4 and 5 are respectively side view and plan of the coupling-links connecting adjacent conveyers. Fig. 6
35 is an end view of the transmitting sprocket-wheel, showing the specially-shaped teeth thereon. Fig. 7 is a view from the right-hand side of the forward end of the track-laying train, showing the tie-delivery chute in full lines and the rail-delivery support in dotted lines. Fig. 8 is a similar view from the left side, showing the rail-delivery support in full
40 lines and the tie-delivery chute in dotted lines; and Fig. 9 is a front view of the forward car.

Similar numerals of reference refer to similar parts throughout the several views.

In the drawings, 1 represents the forward
50 car of the track-laying train, on which is mounted the machinery by means of which the conveyers on each side of the train are operated. Cars 2 and 3 are any two adjacent cars in the train. The cars of the train are of the
55 ordinary flat-car type, having stake-pockets 4 secured at intervals to each side. Each car

is provided with a conveyer for each side, said conveyer being supported from the stake-pockets 4, as hereinafter described.

The conveyers consist of a pair of bars or
60 trams 5, separated from each other by the series of rollers 6, journaled in the bars 5. The bars 5 may be secured together at intervals. The rollers on the ends of a conveyer are substituted by the shaft 7, having the two
65 sprocket-wheels 8 mounted thereon. The two endless sprocket-chains 9 pass around these wheels 8 and over and under the rollers 6. The chains 9 may be fastened together at intervals of about eight feet by the bars 10,
70 which are adapted to keep the ties being conveyed from slipping back on the chain, thus spacing them accurately and enabling the work crew to perform their work with great steadiness and uniformity.

The shafts 7 pass through the outer tram 5 and have the sprocket-wheels 11 secured thereto outside of the tram. This sprocket-wheel 11 has specially-shaped teeth, as shown in Fig. 6, so that the chain passing over may
80 do so at considerable angle without climbing over the teeth. The adjacent wheels 11 on adjacent conveyers are connected together by the transmitting sprocket-chain 12. This chain is considerably longer than is needed
85 to connect the wheels 11 under normal circumstances, and its lower part hangs down, having a weight 13 supported from the idle wheel 14, which engages the chain. Thus the upper part of the chain is always taut, and
90 the amount of slack in the lower side will depend on the distance between the wheels 11. The power is transmitted from the forward wheel 11 to the rear wheel 11 along the upper part of the chain 12.

95 The corresponding trams 5 of the adjacent conveyers are secured together loosely by the sliding links 15 and 16, which are illustrated in detail in Figs. 4 and 5. The links 15 and 16 are each secured to the end of their trams
100 and are formed so that the end of the link 16 engages between the lips of the link 15, the bolt 17 passing through the lips and the opening 18 of the link 16, thus allowing free angular motion within moderate limits of the
105 joint and also allowing a small longitudinal movement thereof.

The conveyers are provided with two bails 19, located at points about one-quarter of the length of the conveyer away from the ends
110 thereof. A crane or davit 20, formed of iron and bent substantially as shown in Fig.

3, is inserted in one of the stake-pockets 4 from below, being held therein by the pin 21. The blocks 22 and 23, with suitable rope 24 passing through them, are secured, respectively, to the crane 20 and the bail 19, the end of the rope being secured in any convenient manner. In this manner I am able to raise the conveyers from the ground with ease, and, further, by supporting it flexibly it adapts itself better to the curvature of the track than if it were rigidly secured to the cars.

In Figs. 7, 8, and 9 is illustrated the forward end of the train. This car 1 has conveyers on each side, but the right-hand one is slightly shorter than the car and is connected to the chute 25, which is provided with rollers similar to the rollers 6 of the conveyer, but has no sprocket-chain. The chute 25 is inclined and extends out from the front end of the car about forty feet, being suitably supported by suspension-rope 26, leading from the tower 27, constructed on the end of the car 1. The conveyer on the left-hand side of the car is for the rails. This conveyer reaches to the end of the car only. In Fig. 8 is seen an overhanging framework 28, constructed in connection with the tower 27 and extending about fifteen feet from the end of the car. This frame has a depending leg 29 at its outer end, to the lower end of which is secured the roller 30. The frame 28 is in line with the outer part of the conveyer and the roller 30 extends inward therefrom, being slightly lower than the rollers 6 of the conveyer. The roller 30 is supported only on the outside by the leg 29. When a rail is carried by the conveyer so that its end projects beyond the car, it is caught by the roller 30 before it tips from the conveyer, and it is run on this roller 30 until its full length has left the conveyer. Then it is lifted down therefrom toward the center of the track and laid on the ties, which have been laid in place after having been delivered by the chute 25.

My invention has many advantages over those now in common use, among which may be mentioned the following: The conveyers being flexibly hung readily adapt themselves to the curvature of the track. They are readily adjustable vertically. They do not interfere with the loading of the flat-cars at all. The tie-chute at the end of the train can be braced to either side, so as to deliver the ties on the grade when a sharp curve is being built. The rails are supported until they are entirely free of the car, thus saving much labor in unloading them. Any car may be disconnected from the others by simply remov-

ing the bolts 17 and lifting the chain 12 from the wheels 11. The conveyer may be quickly unshipped by lowering the ropes 24 until it reaches the ground, and the car may be returned to its normal uses by simply removing the pins 21 and taking the davits out of the stake-pockets 4.

Having described my invention, what I claim is—

1. In a track-laying machine, the combination of a series of separate conveyers supported on separate cars, and flexible means whereby the power of a forward conveyer is transmitted to a rearward conveyer irrespective of changes of angle and of distance therebetween.

2. In a track-laying machine, the combination of a series of separate conveyers flexibly supported on separate cars, and means whereby the power of a forward conveyer is transmitted to a rearward conveyer irrespective of changes of angle and of distance therebetween.

3. In a track-laying machine, the combination of a series of separate conveyers, means for flexibly supporting said conveyers on cars, means for flexibly connecting adjacent ends of conveyers, and means whereby the power of a forward conveyer is transmitted to a rearward conveyer irrespective of changes of angle and of distance therebetween.

4. In a track-laying machine, the combination with a series of cars, of pairs of cranes secured thereto, and separate conveyers flexibly supported from said cranes.

5. In a track-laying machine, the combination with a series of cars, of pairs of cranes secured thereto, of separate conveyers flexibly supported from said cranes, and flexible means joining adjacent ends of said separate conveyers.

6. In a track-laying machine the combination with a flat-car having stake-pockets on the sides thereof, cranes removably secured in said stake-pockets and projecting out from the car, and a conveyer flexibly hung from said cranes away from the side of said car.

7. In a track-laying machine, a rail-delivery roller supported at its outer end from a framework secured to and extending ahead of the forward car.

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

NELSON BENNETT.

Witnesses:

C. A. CAVENDER,
H. T. HANSEN.