

W. T. KRAUSCH & E. F. WEBER.  
 TRACK LAYING CAR.  
 APPLICATION FILED MAY 7, 1917.

1,243,188.

Patented Oct. 16, 1917.  
 2 SHEETS—SHEET 1.

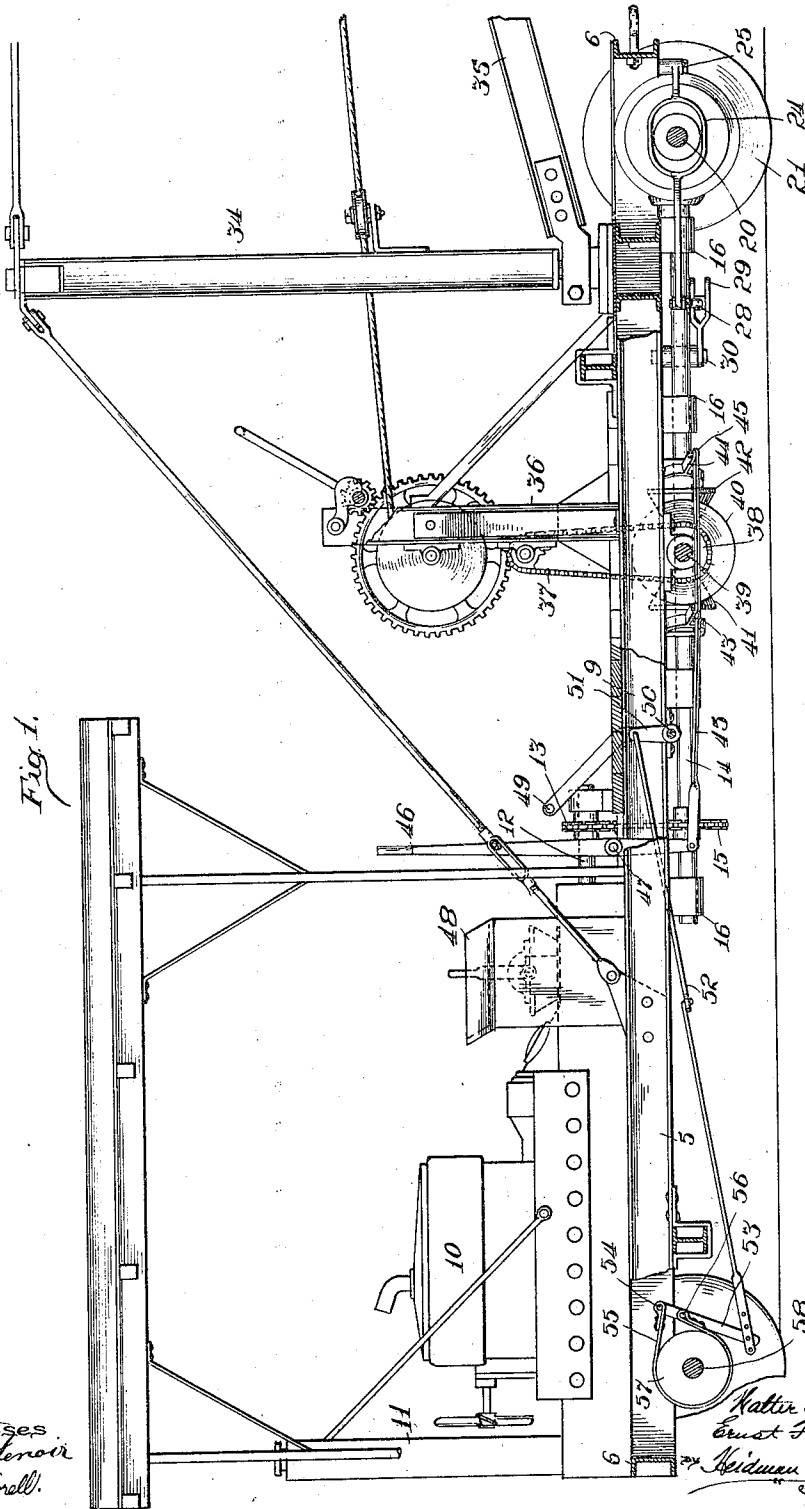


Fig. 1.

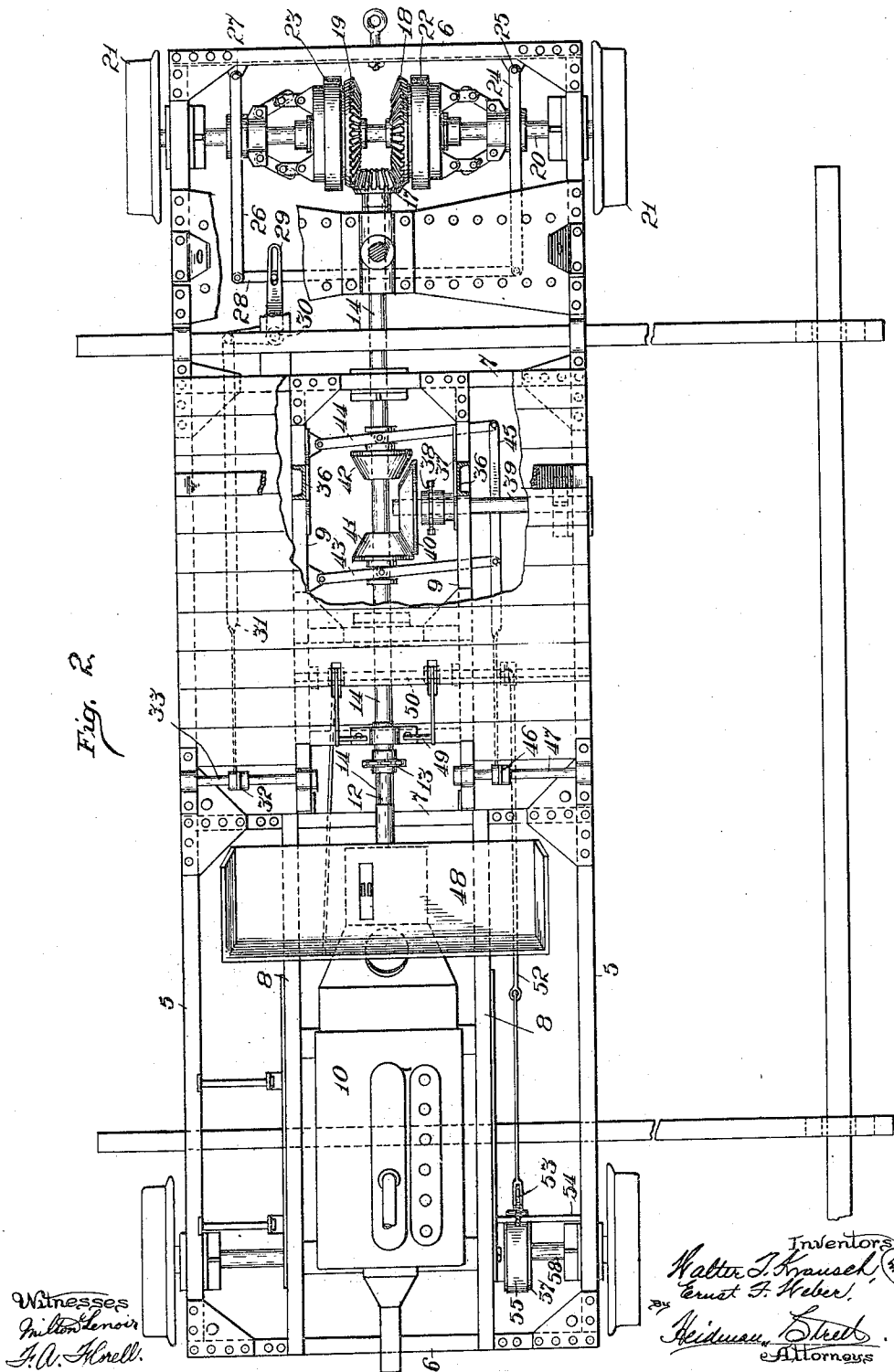
Witnesses  
 Milton de noir  
 J. W. Knoll.

Inventors  
 Walter J. Krausch,  
 Ernst F. Weber,  
 by Heidman, Stead,  
 Attorneys

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 Ernst F. Weber.  
 By Heidman, Street  
 Attorneys

# UNITED STATES PATENT OFFICE.

WALTER T. KRAUSCH, OF LA GRANGE, AND ERNST F. WEBER, OF CHICAGO, ILLINOIS.

## TRACK-LAYING CAR.

1,243,188.

Specification of Letters Patent.

Patented Oct. 16, 1917.

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*To all whom it may concern:*

Be it known that we, WALTER T. KRAUSCH and ERNST F. WEBER, citizens of the United States, and residents of La Grange, in the county of Cook and State of Illinois, and of Chicago, in the county of Cook and State of Illinois, respectively, have invented certain new and useful Improvements in Track-Laying Cars, of which the following is a description, reference being had to the accompanying drawings, which form a part of our specification.

Our invention relates more particularly to a car adapted for handling and laying rails in position on the ties at a point in advance of the car, which is adapted to move or run on the rails previously laid thereby; the construction being adapted to pick up the loose or unlaied rails, which have been previously distributed along the road-bed, and quickly swing or move the same into proper position on the ties.

The invention contemplates a car or machine provided with motive power for propelling the car along the rails, and also provide power for the mechanism mounted on the car and whereby the rails are lifted and lowered into position; the construction being such that a single operator may control the application of power to the running gear of the car to propel the latter in the desired direction and at the desired speed and also to the mechanism carried by the car whereby the unlaied rails are manipulated.

This application relates to certain subject-matter disclosed in our previously filed application bearing Serial No. 103,239 and filed June 12, 1916, and is a divisional application taken from said application Serial No. 103,239; and the construction as well as its advantages will be more fully comprehended from the following detailed description of the drawings, wherein:—

Figure 1 is a partial side elevation and partial longitudinal sectional view of our improved car.

Fig. 2 is a top plan view thereof.

In the particular exemplification of the invention, as disclosed in the drawings, the car is composed of suitable side sills 5, 5 secured together by end sills 6, 6 and with intermediate sills 7, 7; the underframe also comprising the longitudinally disposed in-

termediate sills 8, 8 extending from one end sill 6 to one of the transverse sills 7, as well as the longitudinally disposed intermediate sills 9, 9 which extend intermediate of the transversely disposed sills 7, 7, see Fig. 2.

The intermediate longitudinal sills 8, 8 provide support for a suitable motor indicated at 10, which may be of a well known type of internal combustion motor, having a radiator 11, see Fig. 1. The motor operated shaft 12 is provided with a sprocket 13 which is adapted to transmit power to a shaft 14 by means of a sprocket chain which meshes with sprocket-wheel 15 secured on power or drive-shaft 14.

The shaft 14 is rotatably mounted in suitable hangers 16 secured to the car underframe, with the shaft 14 preferably mounted at the longitudinal center line of the car, as very clearly shown in Fig. 2. The power-shaft 14 extends toward the front end of the car and is there provided with a suitable gear preferably in the form of a miter-gear 17 which is adapted to mesh with the miter-gears 18 and 19, both of which are loosely mounted on the front journal 20 to which the front wheels 21, 21 are secured; the journal being, of course, secured to the car underframe by suitable hangers or journal-boxes.

The miter-gear 18 is controlled by suitable clutch mechanism 22, while the miter-gear 19 is controlled by a similar clutch mechanism 23. Both of the clutch mechanisms just referred to are slidably keyed on the front journal or axle 20 and are adapted to provide operative relation between the gears 18 and 19, respectively, and the journal. The clutch mechanisms may be of a well known type of construction, and therefore will require no specific description.

The clutch mechanism 22 is controlled by a lever 24 pivoted at 25 to the end sill of the car underframe so as to swing laterally; while the clutch mechanism 23 is controlled by a similar lever 26 pivoted at 27 to the end sill of the car underframe, see Fig. 2. The opposite ends of both levers 24 and 26 are pivotally secured to a connecting link 28, with which bell-crank lever 29 is operatively connected; the bell-crank lever 29 being shown having slot and pin connection with the connecting link 28; the slotted end of the bell-crank lever 29 being preferably bi-

furcated, as shown in Fig. 1, so as to straddle the connecting link 28. The bell-crank lever is pivotally mounted at 30 to the underframe, as shown in Fig. 1, and has one of its ends pivotally secured to a reach-rod 31, shown in dotted lines in Fig. 2, because it extends along beneath the floor of the car. The other end of the reach-rod 31 is pivotally secured to the lower end of a hand-lever 32 which is mounted on a stub-shaft or rod 33 mounted in suitable bearings on the side frame and one of the intermediate longitudinal sills 9, see Fig. 2.

With the construction just described, when hand-lever 32 is moved forwardly or to the right in Fig. 2, reach-rod 31 will be drawn to the left and rock bell-crank lever 29 in a direction which will induce connecting link 28 to move lever 24 toward the clutch mechanism 22 and force the latter into operative relation with miter-gear 18 and thus induce an operative connection between gear 18 and front journal or axle 20. During this movement, it is apparent that clutch mechanism 23 will be moved out of operative relation with miter-gear 19 through the action of lever 26, so that power will be transmitted from shaft 14 to the front journal or axle through the medium of miter-gear 18 and clutch mechanism 22, thus causing the car to move forwardly.

Movement of hand-lever 32 in the reverse direction or toward the left in Fig. 2 will force reach-rod 31 forwardly or to the right in Fig. 2, and cause bell-crank lever 29 to be oscillated in a direction which will move connecting link 28 in such transverse direction that lever 28 will be moved toward the power-shaft, while lever 24 will be moved in a direction away from the power-shaft. Such operation will induce lever 26 to move clutch mechanism 23 into operative relation with miter-gear 19, and cause power to be transmitted from shaft 14 through the medium of miter-gears 17 and 19 and clutch mechanism 23 to the front journal 20 and thereby force the car to travel in a direction opposite to that induced by the operative relation formed when clutch mechanism 22 has been actuated.

At suitable points, the car is shown provided with a post or mast 34, to which is secured a boom 35 (only a portion of the latter being shown in Fig. 1); while rearward of the mast is shown a windlass supported by posts 36. As the mast, boom and windlass, and their correlated mechanisms form the subject-matter of the application hereinbefore referred to, a detailed description of these portions will not be entered into. The windlass is adapted to be operated by power transmitted from power-shaft 14, through the medium of sprocket-chain 37 which extends about a sprocket-wheel 38 which is secured to a stub or coun-

ter-shaft 39 suitably mounted in the car-underframe so as to rotate. The rotatably mounted stub-shaft 39 is provided with a cone or friction wheel 40 which is adapted to have operative or frictional relation with the cone pulleys or friction wheels 41 and 42 which are slidably keyed on the power-shaft 14.

Pivotally mounted to the car underframe are a pair of levers 43 and 44; the one having operative or controlling relation with cone pulley or friction wheel 41, while the other is connected to cone pulley or friction-wheel 42. The free ends of the two levers 43 and 44 are, in turn, pivotally connected to a reach-rod 45 which has pivotal connection with the lower end of a suitable operating lever 46 mounted on stub-shaft 47, which is disposed in a direction transversely of the car and is shown mounted in a manner similar to stub-shaft 33 previously described; being preferably at a point substantially in alinement with the stub-shaft 33 so as to bring both operating levers 32 and 46 within reach of the operator while occupying the seat shown at 48, thus enabling the operator to control the operations of both car and mechanisms from a common point on the car.

Movement of hand-lever 46, rearwardly or toward the left in Fig. 2, will force reach-rod 45 toward the front end of the car and thereby bring cone-pulley or friction wheel 41 into frictional relation with the cone-pulley 40; while friction wheel or cone-pulley 42 will be moved out of operative engagement with the large cone-pulley 40. Movement of hand lever 46 in the opposite direction will draw the reach-rod 45 backwardly thereby moving cone-pulley 41 out of operative engagement with pulley 40 and cause cone-pulley 42 to have operative engagement with cone-pulley 40. With the mechanism just described, it is apparent that power will be transmitted from the power-shaft 14 to the windlass, cause the latter to be operated in the desired directions, namely in winding or unwinding directions.

The floor of the car is shown provided with a suitable opening for the passage of a foot lever 49 which is secured to a suitable transversely extending rock-shaft 50 to which is secured a link 51 to the free end whereof is secured a reach-rod 52 which connects with a lever 53 pivotally secured at 54 to the car underframe, and at which point one end of band-brake 55 is secured; the other end of the band-brake being secured to the lever 53 at the point 56. The band-brake 55 encircles the hub of the car-wheel, or preferably a suitable brake-wheel 57 which is secured to the rear journal or axle 58. Proper movement of the foot lever will, therefore, cause the band-brake to be

clamped or brought into firm frictional or binding engagement with the brake-wheel 57, and prevent accidental movement of the car.

5 As is apparent from the construction shown and described, a single operator can control both the movement of the car, along the track, and also the operation of the windlass and rail-lifting mechanism, thus 10 obviating the employment of a number of operators, as has heretofore been the case; with the result that a great saving in labor is not only provided, but the laying of tracks accomplished in a materially less 15 period of time, so that the expense of construction is greatly reduced.

We have shown and described what we believe to be the simplest and best embodiment of our invention, but it will be understood that the invention may have expression in different mechanical form without, however, departing from the spirit of the invention.

What we claim is:—

25 1. A car of the class described, provided with motive power, a power-shaft journaled in the car underframe and extending lengthwise thereof, said shaft being controlled by said motive power, a pair of gears 30 loosely mounted on the car axle, a gear on the power-shaft arranged intermediate of said first mentioned gears and in constant mesh therewith, a pair of clutch mechanisms feathered on the car axle and adapted to 35 have operative relation with the gears loosely mounted on said axle whereby operative relation between the car axle and said gears is effected, means common to both clutch mechanisms whereby one is moved into operative 40 position while the other is moved out of operative position when said means are actuated, a counter-shaft mounted in the car underframe and disposed in a transverse direction, said counter-shaft being provided 45 with a friction pulley or wheel, a pair of friction wheels or pulleys feathered on the power-shaft and adapted to have operative relation with the friction wheel on said counter-shaft, and means whereby the selective friction wheel or pulley, mounted on 50 the power-shaft, is moved into operative re-

lation with the friction wheel or pulley on said counter-shaft.

2. A car of the class described, provided with motive power whereby said car is propelled and the mechanism thereon operated, 55 a power-shaft rotatably journaled in the car underframe and arranged to extend into proximity with the car axle, the axle being provided with a pair of gears loosely 60 mounted thereon while the power-shaft is provided with a gear arranged intermediate of said pair of gears and in constant mesh therewith, clutch mechanisms feathered on said axle and adapted to have operative re- 65 lation with the gears mounted on the axle whereby the selective gear is operatively connected with the axle and power transmitted thereto from the power-shaft in the desired direction, a counter-shaft for im- 70 parting power to the mechanism mounted on the car, power-transmitting means intermediate of the power-shaft and said counter-shaft, and means whereby selective portions of said last mentioned means are 75 affected and power transmitted to the counter-shaft in the desired direction.

3. A car of the class described, provided with motive power for propelling the car and transmitting power to the mechanism 80 mounted on the car, the car axle being provided with a pair of gears loosely mounted thereon, a power-shaft rotatably mounted in the car underframe and provided with a gear arranged intermediate of the gears on 85 the axle and in constant mesh therewith, a counter-shaft for transmitting power to the mechanism mounted on the car, power-transmitting means intermediate of the power-shaft and said counter-shaft, and 90 means operable from a common point on the car whereby selective portions of the gear on the axle and selective portions of the power-transmitting means intermediate of the power-shaft and the counter-shaft are 95 actuated and power transmitted in the desired direction.

WALTER T. KRAUSCH.  
ERNST F. WEBER.

Witnesses:

J. H. PETTIBONE,  
R. SAUNDERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."