

E. L. ROCKWOOD.
LOCOMOTIVE POWER TRANSMITTER.
APPLICATION FILED JAN. 14, 1918.

1,275,754.

Patented Aug. 13, 1918.
3 SHEETS—SHEET 1.

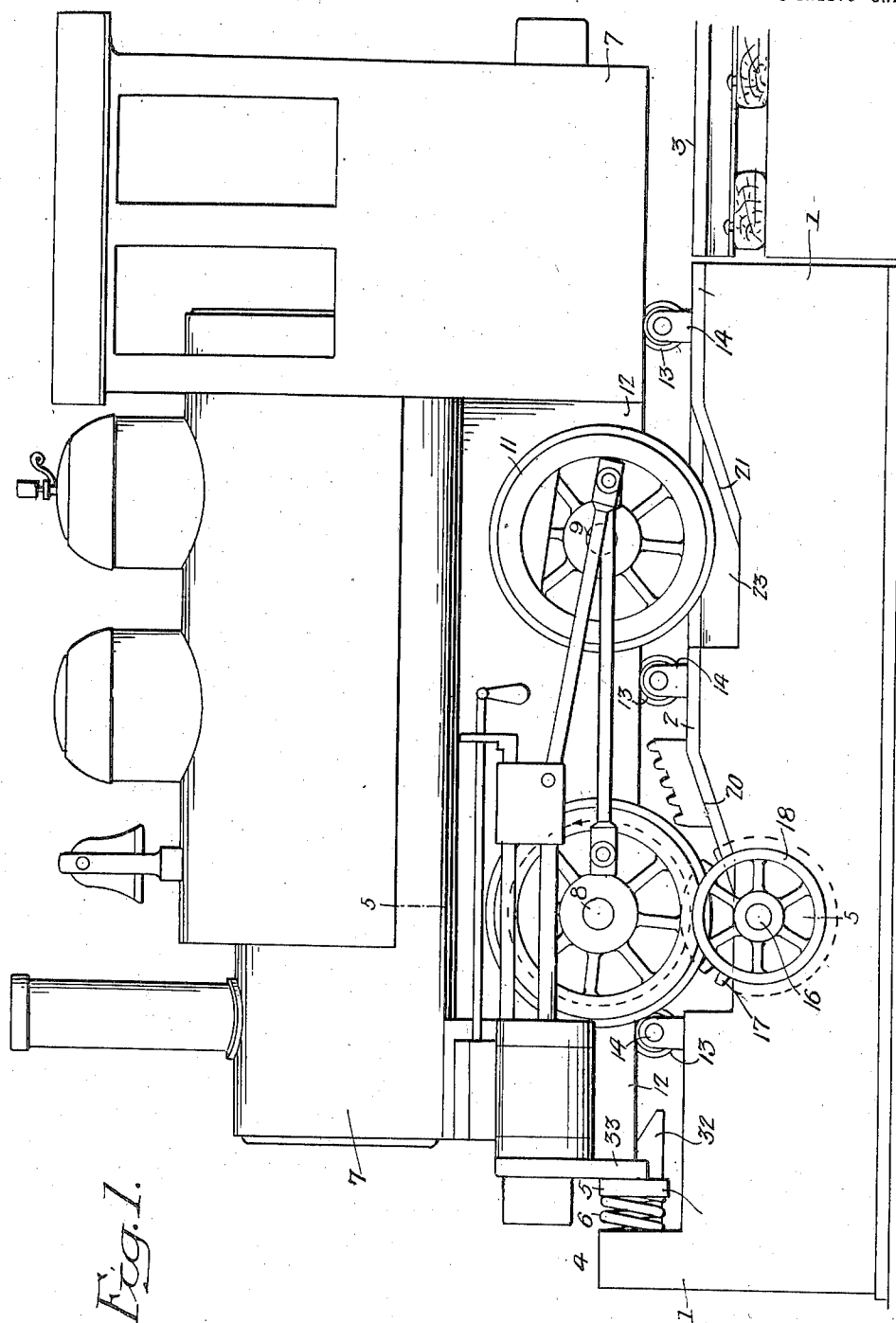


Fig. 1.

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by His Attorneys,
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3 SHEETS—SHEET 2.

Fig. 2.

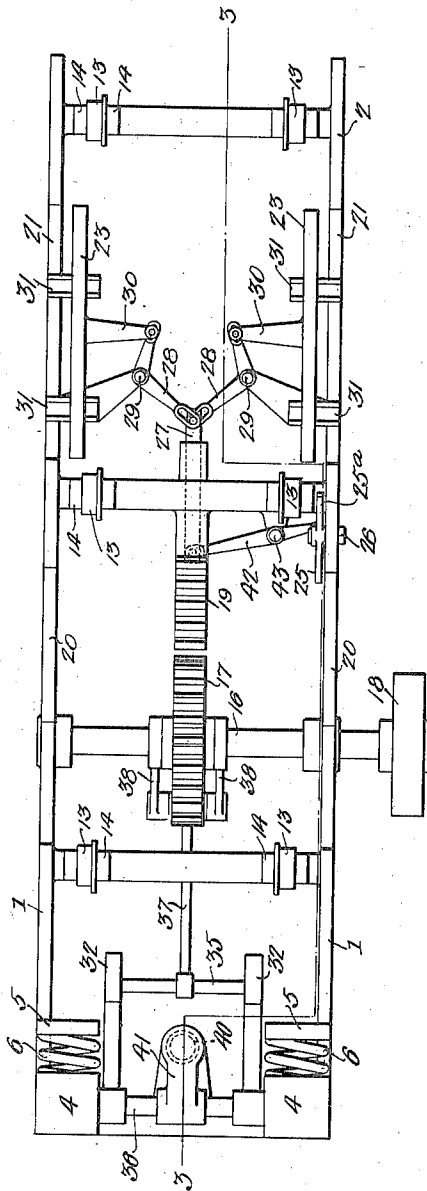
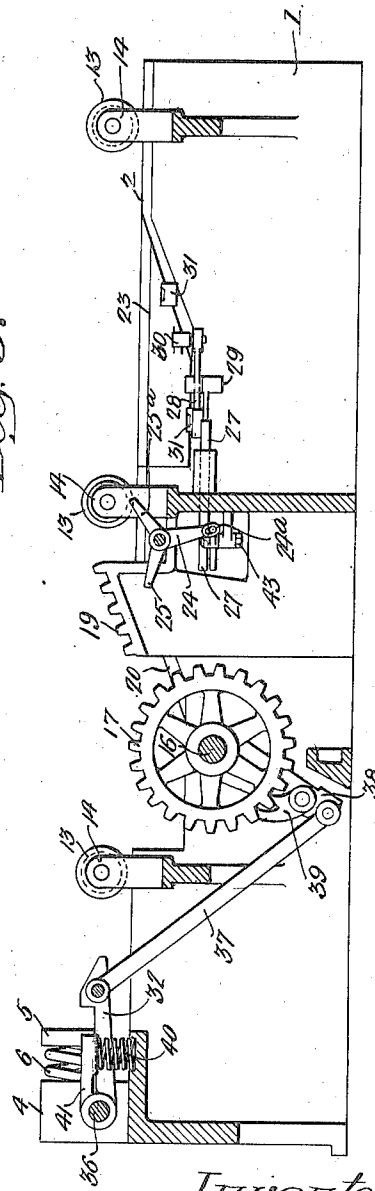


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

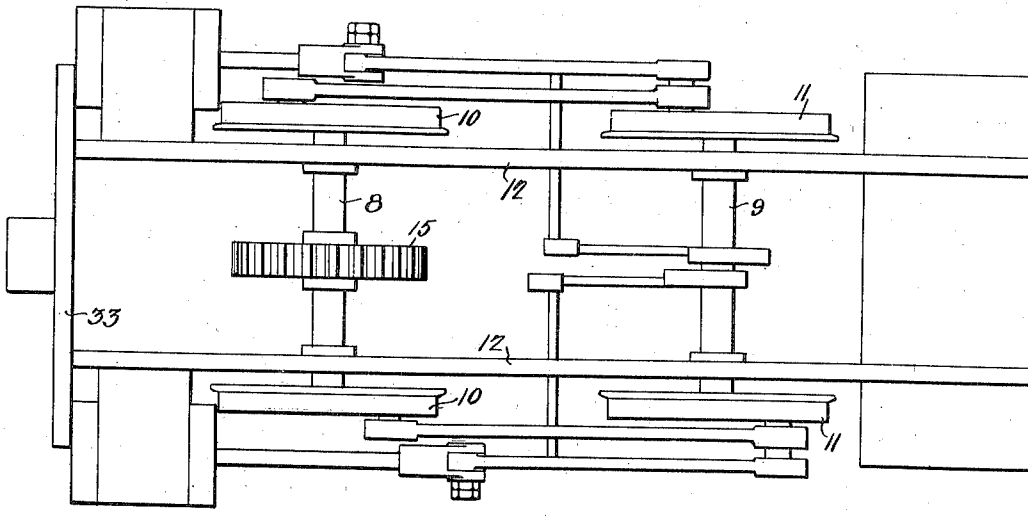
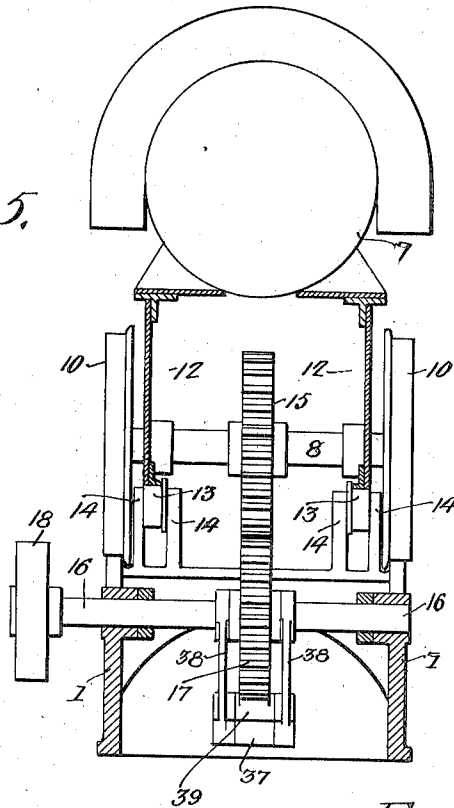


Fig. 5.



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UNITED STATES PATENT OFFICE.

ENRIQUE LESLIE ROCKWOOD, OF BOGOTÁ, COLOMBIA, ASSIGNOR TO JOHN P. S. HARRISON, OF NEW YORK, N. Y.

LOCOMOTIVE POWER-TRANSMITTER.

1,275,754.

Specification of Letters Patent.

Patented Aug. 13, 1918.

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To all whom it may concern:

Be it known that I, ENRIQUE L. ROCKWOOD, a citizen of the Republic of Colombia, South America, and a resident of Bogotá, in said Colombia, have invented certain Improvements in Locomotive Power-Transmitters, of which the following is a specification.

One object of my invention is to utilize a locomotive for transmitting power to machinery, while the locomotive is in a stationary position, so that the locomotive can be used not only for hauling purposes, but also as a substitute for the ordinary stationary engine.

A further object of the invention is to provide gearing between the axle of the locomotive and a driving shaft and to relieve the driving shaft of the weight of the locomotive.

A still further object of the invention is to provide means for supporting the frame of the locomotive independently of the driving mechanism.

The invention also relates to further details, which will be fully described hereinafter.

In the accompanying drawings:—

Figure 1, is a side view showing a locomotive mounted on my improved apparatus, the locomotive being in position to drive the shaft;

Fig. 2, is a plan view of the base, showing the location of the driving shaft and rails;

Fig. 3, is a longitudinal sectional view on the line 3—3, Fig. 2;

Fig. 4, is an inverted plan view showing the gear wheel on the driving shaft, the mechanism of the locomotive being shown in outline; and

Fig. 5, is a sectional view on the line 5—5, Fig. 1.

Referring to the drawings, 1 is a base, which may be made of metal, or of concrete, as desired. On this base are tracks 2, which align with tracks 3 of a railroad. At one end of the base is an abutment 4 and located on the abutment are two bumpers 5 having springs 6. 7 is a locomotive of any suitable type having axles 8 and 9 on which are the flanged wheels 10 and 11, respectively, which are adapted to travel on the tracks 2 and 3. These wheels are driven through the ordinary connecting rods from a cylinder, the present locomotive being a type of the

ordinary plantation, or contractor's, locomotive, which is comparatively small and is usually adapted to narrow gage tracks, but it will be understood that while I have described the motive power as steam, other motive power may be used without departing from the essential features of the invention.

The side frames 12 of the locomotive are flat on the under side and are adapted to rest upon flanged rollers 13, when the locomotive is in position to drive the stationary mechanism, Fig. 1. These rollers are mounted in bearings 14 of any suitable construction and form a part of the base 1. On the axle 8 of the locomotive is a gear wheel 15 through which power is transmitted from the locomotive to the stationary driven mechanism. This gear wheel is of such form that it can be used in connection with a rack or a railway, when it is desired to use the locomotive in hauling on inclines.

On the shaft 16, having its bearings mounted in the base 1, is a gear wheel 17, which is arranged to mesh with the gear wheel 15 on the axle 8, and on this shaft is a pulley 18 to receive a driving belt. In a line with the gear wheel 17 is a fixed rack 19 mounted on the base 1, and this rack is arranged at an incline, as shown, corresponding to the inclines 20 and 21, forming continuations of the rails 2, so that as the locomotive moves into position that the gear wheel 15 will mesh with the gear wheel 17, the driving wheels 10 travel on the inclined rails 20 and the driving wheels 11 travel on the inclined rails 21. The gear wheel 15 on the locomotive first engages the teeth of the rack 19 and the momentum will carry the gear wheel over the gap between the end of the rail and the gear wheel 17, and when the gear wheel 15 is above the gear wheel 17 its teeth are in mesh with the teeth of the gear wheel 17. As the driving wheels of the locomotive travel down the inclined rails 20 and 21, the frame 12 of the locomotive gradually seats itself on the rollers 13, so that from the time the gear wheel 15 leaves the rack 19 until it is in engagement with the gear wheel 17, the locomotive is supported entirely by the rollers 13, so that the weight of the locomotive is carried entirely by the base and not by the shaft.

In order to allow the wheels 10 to pass over the gap 22, I provide laterally movable rail sections 23 and lever mechanism auto-

matically actuated by the locomotive after
 the forward wheels 10 have passed over the
 rails 23, to draw the short rails 23 out of
 line with the wheels 11 of the axle 9, so that
 5 these latter wheels will travel down the in-
 clined rails 21. In the present instance I
 have shown a lever 24 having projections
 25, 25^a in position to be engaged by a part
 of the locomotive, and this lever is pivoted
 10 at 26 and has a slotted arm 24^a; one arm
 of a lever 42 extends into the slot and this
 lever is pivoted to a bearing on the frame
 at 43. The lever 42 is connected to a bar
 27, which engages two slotted levers 28 piv-
 15 oted at 29 on the frame, and one arm on
 each of these levers 28 engages a bar 30
 projecting from the rail sections 23, which
 are adapted to guides 31, so that prior to
 20 the location of the locomotive on the base
 the rails 23 are in alinement with the rails
 2 and the locomotive can be moved into posi-
 tion, the wheels 10 of the locomotive pass-
 ing over the rails 2 and the sectional rails
 23 and, when they reach a given point be-
 25 yond these rails, the mechanism is operated
 to draw the sectional rails 23 out of aline-
 ment with the rails 2 so that the rear wheels
 11 of the locomotive travel down the in-
 cline 20 at the same time that the front
 30 wheels 10 are traveling down the incline 21,
 and when they reach a given point the gear
 wheel 15 on the axle of the locomotive
 meshes with the teeth of the rack 19 and
 as the gear wheel rotates the body of the
 35 locomotive settles on the rollers 13 and the
 momentum carries the locomotive forward
 until it strikes the bumpers 5.

The front plate 33 passes the two latch
 locks 32 which engage the plate, as shown
 40 in Fig. 1, preventing the locomotive mov-
 ing backward, the bumper taking the shock
 and the bumper and the latch holding the
 locomotive rigidly in place with the axle 8
 directly above the shaft 16. When the loco-
 45 motive is in this position, the shaft 16 can
 be driven through the gearing at any speed
 desired by operating the control lever in the
 cab of the locomotive.

In moving the locomotive from the base
 50 when it is to be used for the purpose of
 transportation, I can detach the latch by
 hand and can push back the locomotive
 so that the gear wheel on the axle will move
 out of mesh with the gear wheel on the shaft
 55 and into gear with the inclined rack. Then,
 as power is applied, the locomotive can be
 backed off the base and onto the track, but
 I prefer to provide an automatic latch, as
 shown in the drawings, consisting of two
 60 hooks 32 connected together by a rod 35, the
 hooks being mounted on a shaft 36 having
 its bearings in the abutment 4, and I con-
 nect the latch by a rod 37 to arms 38 hung
 on the shaft 16, and carried by the arms
 65 is a pivoted spring pawl 39, which engages

the gear wheel 17. A spring 40 of suitable
 construction bears against an arm 41 on the
 shaft 36 and tends to force the latch 32 into
 engaging position, so that, when the loco-
 motive is moved forward, the front plate 33
 70 depresses the latch and the latch springs
 back of it and, as the wheels of the loco-
 motive move in the direction of the arrow,
 Fig. 1, the gear wheel 17 on the axle 16
 moves free of the latch, but as soon as the
 75 axle of the locomotive is reversed for the
 purpose of backing the locomotive off the
 base the engagement of the pawl with the
 gear wheel moves the arm 38 and depresses
 the latch so as to release the front plate
 80 33 of the locomotive, when it is free to be
 backed by power.

I claim:—

1. The combination of a base; a shaft
 mounted on the base and having a power
 85 transmitting wheel thereon; supporting
 means on the base adapted to support a loco-
 motive independently of the driving mecha-
 nism; a locomotive; and a power transmit-
 ting wheel on the locomotive arranged to im-
 90 part movement to the transmitting wheel on
 the base.

2. The combination of a base having rails
 thereon; a transverse shaft mounted in the
 base; a gear wheel on the shaft; means sup-
 95 porting a locomotive independently of the
 rails; and a locomotive having a gear wheel
 arranged to mesh with the gear wheel on the
 shaft when the locomotive is supported on
 the base with the driving wheels free. 100

3. The combination of a base having re-
 cesses therein; rails at each side; inclined
 rails mounted in the recesses; a shaft having
 a gear wheel; an inclined fixed rack on a
 longitudinal line with the gear wheel; a lo-
 105 comotive having two sets of wheels adapted
 to the rails and having a gear wheel ar-
 ranged to mesh first with the rack and then
 with the gear wheel on the shaft; movable
 rails adapted to close one of the recesses on
 110 each side so as to allow the forward set of
 wheels of the locomotive to pass over the
 first recesses, the rails being moved out of
 line to allow the second set of wheels to enter
 the recesses; and means for supporting the
 115 frame with the gear wheel of the loco-
 motive meshing with the gear wheel of the
 shaft.

4. The combination in a locomotive power
 transmitter, of a base; a transverse shaft
 120 mounted in the base with a gear wheel on
 the said shaft, said base having two recesses
 at each side adapted to receive the two driv-
 ing wheels of the locomotive; rollers on the
 base upon which the frame of the loco-
 125 motive rests when the driving wheels are in the
 recesses; a gear wheel on the front axle of
 the locomotive arranged to mesh with the
 gear wheel on the shaft when the locomotive
 is in position on the base; movable rails for 130

closing the rear recesses of the frame to allow the front wheels of the locomotive to pass over; means for automatically drawing said rails out of line with the permanent rails to allow the rear wheels to enter the recesses; and means for holding the locomotive in position on the base.

5 5. The combination of a base; a shaft thereon, a gear wheel on the shaft; a locomotive having an axle; a gear wheel on the axle arranged to mesh with the gear wheel on the base when the locomotive is in position on the base; a bumper and a latch for holding the locomotive in position; automatic means for releasing the latch when the locomotive is reversed; and a fixed rack on the base with which the gear wheel on the locomotive engages as it moves into and out of position on the base.

20 6. The combination of a base; a shaft mounted in the base and having a gear wheel thereon; a locomotive adapted to be mounted on the base; a gear wheel on the locomotive driven from the power mechanism of the locomotive and arranged to mesh with the gear wheel on the shaft mounted on the base; a latch for engaging the locomotive to hold it in position; an arm; a rod connecting the arm with the latch; and a pawl on the arm engaging the gear wheel on the shaft of

the base so that, when the locomotive is reversed, the pawl will engage the teeth of the wheel and withdraw the latch.

7. The combination in a locomotive power transmitter, of a base; a transverse shaft 35 mounted in the base with a gear wheel on the said shaft, said base having two recesses at each side adapted to receive the two driving wheels of the locomotive; rollers on the base upon which the frame of the locomotive rests when the driving wheels are in the recesses; a gear wheel on the front axle of the locomotive arranged to mesh with the gear wheel on the shaft when the locomotive is in position on the base; movable rails for closing the rear recesses of the frame to allow the front wheels of the locomotive to pass over; a trip lever arranged to be actuated by one of the front wheels of the locomotive; a lever engaging said trip lever; a 50 rod connected to the last mentioned lever; and two bell crank levers connected to the rod and to the rails so that, when the locomotive is moving forward into position, the front wheels will move the short rails laterally out of position and, when the engine is reversed, the front wheels will throw the rails into position. 55

In witness whereof I affix my signature.
ENRIQUE LESLIE ROCKWOOD.