

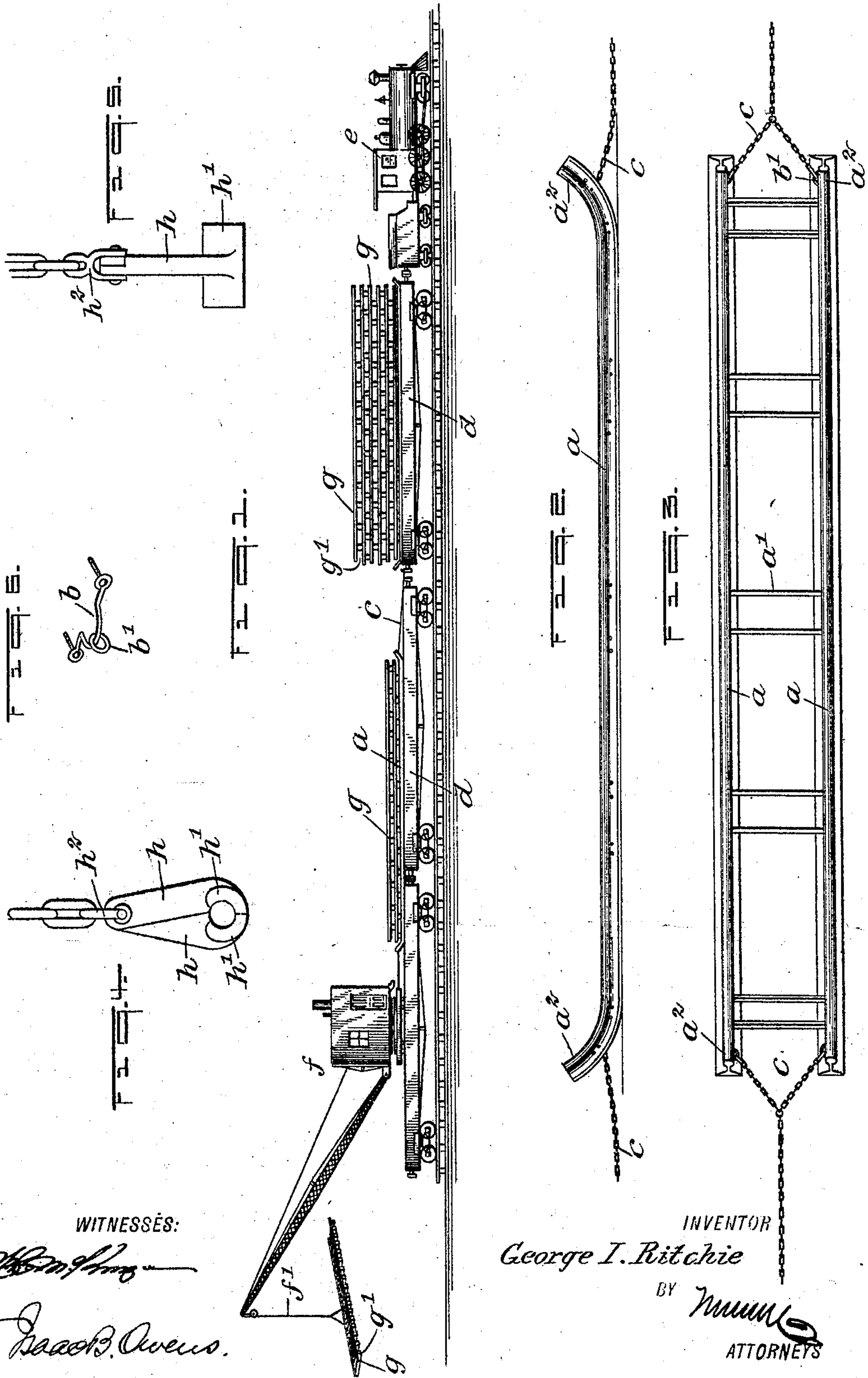
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PATENTED NOV. 28, 1905.

G. I. RITCHIE.

APPARATUS FOR LAYING AND TAKING UP RAILWAYS

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APPARATUS FOR LAYING AND TAKING UP RAILWAYS.

No. 805,881.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE IVES RITCHIE, a citizen of the United States, and a resident of Crossett, in the county of Ashley and State of Arkansas, have invented a new and Improved Apparatus for Laying and Taking Up Railways, of which the following is a full, clear, and exact description.

The invention relates to an apparatus for laying down and taking up railways which is adapted particularly for use in connection with temporary roads, such as those which are constructed in lumber districts. In this industry rail or tram ways are frequently laid through the forests, and when the supply of timber along the road is exhausted the road is taken up and relaid, these operations frequently recurring and involving considerable expense.

The object of my invention is to provide a practical means for doing this work in less time and with less expenditure than heretofore, and in attaining this end I provide a number of flat-cars over which a carriage is adapted to run from one to the other car. This carriage is preferably, though not necessarily, in the form of a sled, and it is designed to carry sections of the track, the sections consisting of two parallel rails permanently connected by sleepers or ties. The carriage or carriages are moved over the train in one direction by a locomotive which may also be employed for propelling the train and in the other direction by the drum of the hoisting-engine, which is employed in connection with a boom derrick or loader for picking up or laying down the track-sections. In this manner a train of flat-cars, each bearing a carriage loaded with track-sections, the train having at its front end a loader or derrick and at its rear end a locomotive pushing the train, may be run to the end of the laid track, and the track-sections on the train may be unloaded and joined to the laid track, the train advancing continually as the track is made and the loader hauling up the carriages as fast as the carriage ahead is emptied, or the loader may be made to pick up the track in sections, loading the sections onto the carriages, and the carriages may be drawn ahead along the train of flat-cars by the locomotive. After the train is loaded the locomotive may draw the same to deliver the track-sections to some other point and return the train to continue the operation of taking up the track. It will be seen that by this arrangement I am

enabled with great facility either to take up or lay down a railway, dispensing with all hand-labor excepting that necessary in bolting up or unbolting the fish-plates to connect or disconnect track-sections.

The invention resides in certain features which will be fully set forth hereinafter, and particularly pointed out in the claims.

Reference is had to the accompanying drawings, which illustrate as an example the preferred embodiment of my invention, in which drawings like characters of reference indicate like parts in the several views, in which—

Figure 1 is a side view showing a train of two flat-cars with the locomotive at one end and the loader or derrick at the other end and illustrating the loader or derrick at work. Fig. 2 is a side view of the preferred form of the carriage. Fig. 3 is a plan of the same. Fig. 4 is a detail view of a tongs which I prefer to employ for lifting the track-sections. Fig. 5 is a side view of the same, and Fig. 6 is a detail view showing a part of the carriage.

Preferably the carriage is in the form of a sled which is composed of two sections of railway-rails *a*, joined by tie-rods *a'* and having their ends *a''* turned up, so that the sled may be easily drawn in either direction. Fastened to the rails *a* by brackets *b* (see Fig. 6) are rings *b'*, and to these rings *b'* bridled chains *c* are connected. The chains *c* are joined one to each end of the sled and are adapted to couple or otherwise connect with them, so that the sled may be drawn in either direction.

In Fig. 1, *d* indicates the two flat-cars constituting the train there illustrated. *e* indicates the locomotive, and *f* the loader or derrick. The loader or derrick may be of any desired type excepting that it should be capable of picking up a section of track on the ground and swinging it around to an adjacent flat-car or of taking the two sections from the car and swinging them around to the ground. Preferably the flat-cars are provided with guides of any suitable sort for causing the sled or carriages to run true along the car and preventing the carriage from running off. These guides may, if desired, be common railway-rails spiked to the floors of the flat-cars.

As shown in Fig. 1, the track-sections are composed of rails *g*, joined permanently by ties *g'*, to which the rails are spiked in the usual manner. The sections of track thus formed are joined together to form a complete railway by the usual fish-plates. If de-

sired, "dutchmen" or short rail-sections may be set in between the contiguous ends of the rails *g* to insure the continuity of the road when completed. Figs. 4 and 5 illustrate the
 5 tongs which are intended particularly for use in connection with handling these railway-sections. These tongs are composed of two arms *h*, with half-circular grippers *h'*, adapted to engage the balls of the rails, the tongs
 10 being pivoted to a shackle *h²*, which in turn is joined to the derrick fall-rope *f'*.

In practicing my invention, assuming that it is desired to lay a new track, a train should be made up composed of the derrick or loader
 15 *f*, a number of flat-cars, and a locomotive, the derrick being at the front end of the train and the locomotive at the rear end. Each flat-car is loaded with a carriage on which is superimposed a number of flat-cars, as illustrated in Fig. 1. The train should then be ad-
 20 vanced to the end of the track, and the track-sections on the car nearest the derrick should be successively unloaded onto the ground, the track hands joining the sections together by
 25 fish-plates as fast as they are unloaded. When all of the track-sections have been removed from one of the carriages, this carriage should be lifted aside by the derrick and a cable attached to the bridle-chain *c* of the nearest ad-
 30 jacent carriage and led to the drum on the derrick or loader *f*. Upon operating this drum the carriage will be drawn adjacent to the derrick, so that this second carriage may be unloaded as before. After this has been
 35 done the third carriage is drawn up to the derrick, and so on until the entire train is unloaded. The derrick may then pick up the empty carriages, return to the point of supply, where the train may be again loaded with
 40 track-sections, after which the above-described operation may be repeated. In picking up a track the fish-plates should be unbolted and the derrick should land the carriage directly adjacent to it, as Fig. 1 shows.
 45 After this carriage is loaded a cable should be connected to the bridle-chain thereof and the locomotive uncoupled from the train and connected with the cable. Upon going ahead with the locomotive the loaded carriage may
 50 be drawn onto the flat-car directly adjacent to the locomotive. After this has been repeated the derrick should load onto the adjacent flat-car a second carriage, and this carriage should be loaded with additional track-
 55 sections, whereby the locomotive again operates to advance the second loaded carriage, and so on until the entire train is loaded, the train being then drawn away by the locomotive and the track-sections deposited at the desired
 60 point, whereupon the train may return and continue its work. In connection with the desired number of carriages the carriages when unloaded must be themselves unloaded from the flat-cars and deposited at the side
 65 of the road, and then in picking up the track

the derrick may collect the previously-unloaded carriages from alongside of the track and load them onto the train as fast as they are needed to receive the track-sections.

Having thus described the preferred form 70 of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a train of flat-cars, a locomotive at one end thereof, a loader at the other end thereof, and a carriage movable 75 along the train of flat-cars.

2. The combination of a train of flat-cars, a loader at one end thereof, a locomotive at the other end, a carriage movable along the flat-cars, and means for connecting the carriage 80 with either the loader or locomotive, whereby to move the carriage in one or the other direction over the train of flat-cars.

3. The combination of a train of cars, a carriage movable along the same, a loader at one 85 end of the train, and a locomotive at the other end of the train.

4. The combination of a train of cars, a carriage movable along the same, a locomotive at one end of the train, a loader at the other end, 90 and means for connecting the carriage with either the locomotive or the loader, for the purpose specified.

5. The combination of a train of cars, a carriage movable over the same, a loader at one 95 end of the train of cars, means for connecting the carriage with said loader to move the carriage toward the loader, and means at the other end of the train of cars adapted to move the carriage in the other direction. 100

6. The combination of a train of cars, a carriage movable over the same from one to the other car, and a means at each end of the train for drawing the carriage toward one or the 105 other end.

7. The combination of a train of cars, a carriage movable over the same from one car to the other, a loader at one end of the train, and means for moving the carriage over the train toward and from the loader. 110

8. The combination of a train of cars, a carriage movable over the same, a loader at one end of the train, said loader being capable of loading track-sections onto or unloading track-sections from the carriage, and also being 115 capable of drawing the carriage toward the loader, and a means at the other end of the train for drawing the carriage away from the loader.

9. The combination of a train of cars, a carriage movable over the same, a loader at one 120 end of the train, said loader being capable of loading track-sections onto or unloading track-sections from the carriage, and also being capable of drawing the carriage toward 125 the loader, and a means at the other end of the train for drawing the carriage away from the loader, said means comprising a locomotive also capable of hauling the train.

10. The combination of a train of cars, a 130

carriage movable over the same, means for moving the carriage back and forth along the train, said carriage being formed of sled-rails, and means for rigidly connecting the
5 rails together.

11. The combination of a train of cars, a sled movable along the train from one part to the other, a loader at one end of the train, and means for moving the sled over the train
10 in either direction.

12. The combination of a train of cars, guiding means extending longitudinally thereon,

a carriage movable over the train from one car to the other and held by said guiding means, a loader at one end of the train, and
15 means for moving the carriage on the train.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE IVES RITCHIE.

Witnesses:

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R. R. CARMICAL.