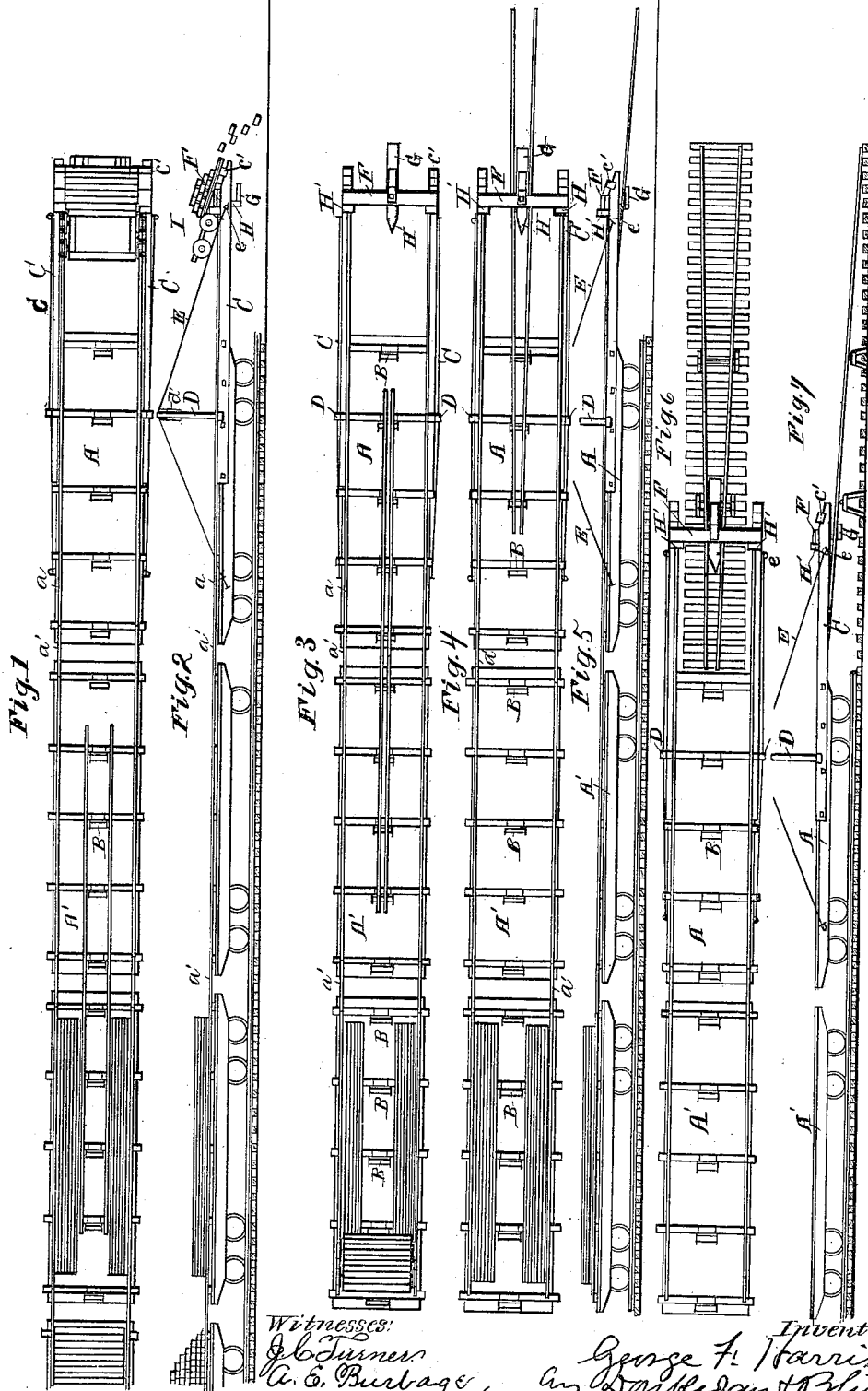


2 Sheets—Sheet 1.

LAYING RAILROAD TRACK.

Patented Apr. 17, 1888.



N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.)

2 Sheets—Sheet 2.

G. F. HARRIS.
LAYING RAILROAD TRACK.

No. 381,366.

Patented Apr. 17, 1888.

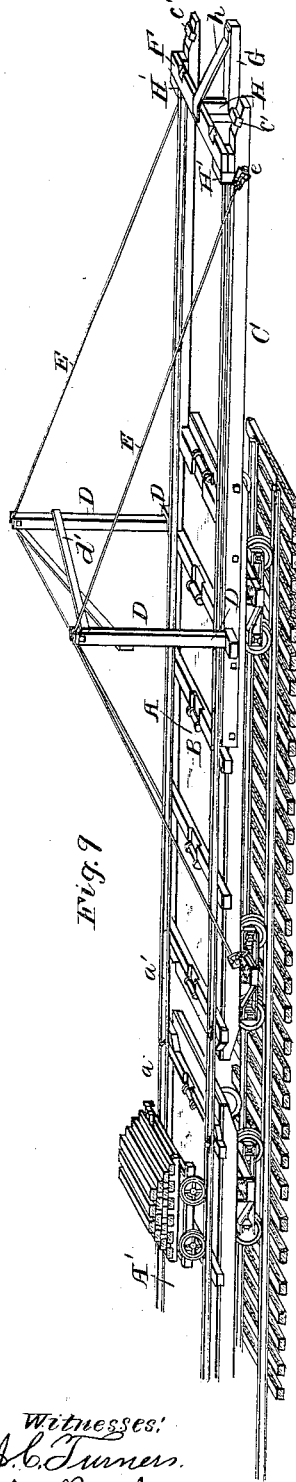


Fig. 9

Fig. 10

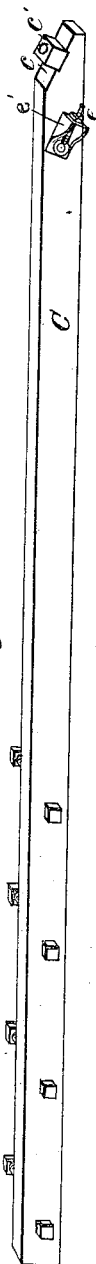


Fig. 8

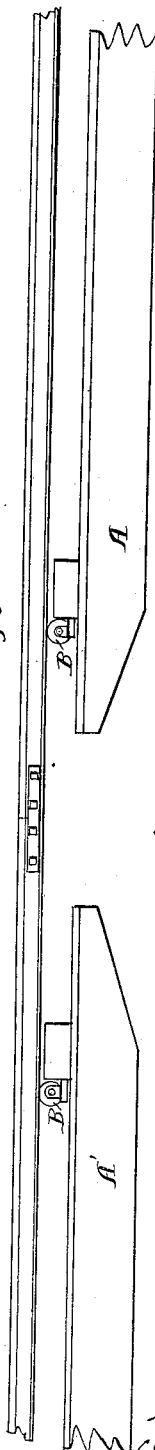
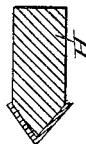


Fig. 11



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE F. HARRIS, OF NEW YORK, N. Y.

LAYING RAILROAD-TRACK.

SPECIFICATION forming part of Letters Patent No. 381,366, dated April 17, 1888.

Application filed September 17, 1887. Serial No. 249,989. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. HARRIS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Laying Railroad-Track, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in the method and apparatus for delivering at the forward end of a railroad construction-train the ties and the rails which are used in laying the track, these features of improvement pertaining more especially to devices of the general character illustrated in my previous Patent No. 340,042, dated April 13, 1886.

Figure 1 is a top plan view, and Fig. 2 a side view, showing the parts in the position occupied when the ties are being delivered to the ground and the rails are being secured together on the train. Figs. 3 and 4 are top plan views of the cars, illustrating successively two subsequent stages of the delivery of the rails. Fig. 5 is a side view of that shown in Fig. 4. Fig. 6 is a plan view; Fig. 7, a side view of the parts at the time the metal rails are ready to be put in final place on the road-bed. Fig. 8 is a partial side view on a larger scale, showing two of the rails secured together and in the position occupied as they are being carried forward. Fig. 9 is a perspective of the front portion of the construction-train. Fig. 10 shows detached one of the extension-beams. Fig. 11 is a detail section.

In the drawings the cars of the construction-train shown are represented by A A', the one at A being the forward car of the train, though it is in most respects similar in its general construction to the other cars. Of course it will be understood that the train can be as long as is desired, and so far as some of the features of the invention are concerned trains similar to those heretofore used of various kinds can be employed.

In the apparatus shown use is made of track-rails *a* upon the tops of the construction-cars, with detachable sections *a'* between the cars, and upon these track-rails a supplemental tie-carrying car can be employed, as is clearly illustrated in my said earlier patent. On the central longitudinal lines of the cars there are

placed anti-friction rollers B, over which the rails are adapted to be moved longitudinally in taking them to the front end of the frame. 55

In order to support the track material at points in front of the train while it is being lowered, I employ forward-projecting beams C, which are at their rear ends detachably secured to the car A, and are provided with 60 track-rails *a''*, coinciding with those at *a*. A truss-support for the front ends is formed by means of cables E, passing over uprights D. The latter are fastened in sockets D and are braced by cross-bars *d'*. At the front and rear 65 ends the cables are fastened by clamping-nuts *e*, held in fastening devices at *e'*, and by which the tension can be maintained on the cable-support to hold the beam C properly in position. 70

F indicates a cross-beam secured to the upper sides of the side beams, C. Adjacent to it are stops H', against which the wheels of the tie carrying car can strike, for the purposes set forth in the said earlier patent, and as part 75 of this car tips downward the front end of the beam C is beveled off, as shown at *c*, and provided with stop-piece *c'* to receive the blow of the car.

H represents a short post extending down 80 from the cross-beam F. It is supported by means of a bar, G, and a hanger, *h*, secured to the bar G and to the beam F. The post or bracket H is rounded or beveled at its rear edge, as shown in section in Fig. 11, and I 85 preferably provide the beveled or rounded part with a covering of metal to prevent it from wearing. This post is utilized as a divider to separate the rails or pairs of rails as they are passed forward and off from the front 90 end of the construction-car.

In front of the car there are arranged trestles, two or more, preferably, as is fully shown and described in my said earlier patent.

In Figs. 1 to 7 I have illustrated some of 95 the steps followed in removing the metal rails from the train and placing them on the road-bed or on the ties fixed for them on the ground. The first step is to secure two rails together end to end by bolting them to a fish-plate or 100 other joining device—that is, putting them into the position relative to each other in which they lie when they are in their final place upon the ties on the ground. This may

be effected while the ties are being carried forward and delivered to the ground, as shown in Figs. 1 and 2, a car being shown at I running on the track *a a'* for this purpose; or the rails need not be joined, as shown in Fig. 1, until after the car I has been returned to its rearmost position. Then two more rails are fastened together in a similar way and the last two are placed by the side of the former pair. Then the four rails (joined in couples longitudinally, as described) are pushed forward on the central rollers, or on a small car used on top of the train for the purpose, (see Fig. 3,) till they reach the forward end of the front car. The front ends are gradually lowered till they strike against the divider H, which separates them, one pair going to the right and the other to the left of it. (See Fig. 4.) They are pushed forward while resting on the rollers of the trestles until the front ends of the front rails reach the desired point, (sixty feet in front, see Figs. 6 and 7,) when the rails are delivered in pairs and are then deposited by the operatives in the places where they are to be spiked. In this way I am enabled to lay the track very rapidly, for by fastening the rails together endwise before they leave the cars I avoid very much of the handling which is required when they are taken off singly and save the time which is consumed thereby. In fact, I virtually lay two sections of track where heretofore but one was laid, with the same number of movements.

The features other than this part of the invention (to wit, that pertaining to the fastening of the rails together) can be modified without departing from the essential features thereof. The rails can be taken forward in ways other than that described—that is to say, they need not be taken along the center of the cars, but may be moved nearer to one or the other of the sides. So, too, the ties can be carried forward in other ways.

I am aware of the fact that heretofore track has been constructed in the following way, namely: Sections of the track *e* are initially made at the station, each section comprising the cross-ties and the rails parallel to each other all spiked and fastened. Then these sections are loaded on the construction-train and the train carried to the place where the track is to be laid, and then, by means of a steam-derrick, the sections are, one after another, swung around and lowered to place on the graded bed; but the purpose here is to avoid the use of the expensive engine and derrick mechanism necessary for the earlier mode of working. While on the one hand I somewhat increase the weight of the metal at any one time, I nevertheless decrease the amount of la-

bor necessary to do the work very materially, considered as a whole, and so arrange the steps of transporting, joining the rails, and laying the track, and handling the materials that the whole operation can be accomplished much more rapidly and very much cheaper than when the rails are removed singly.

I have hereinbefore described more particularly how my improved method can be followed in laying two sections of track at one time; but of course it will be understood that the same principle of operation can be followed if three or more of the rails are secured together before leaving the construction-train, and, although this special mention is made of two rails as being secured together endwise, I do not limit myself thereto, as I regard the fastening of three or more in a similar way as coming within the scope of my invention.

What I claim is—

1. The herein-described improvement in the method of transporting by and delivering from a construction-train of cars the loose metal rails, it consisting in primarily placing said rails in piles on said cars, then securing said rails together end to end while on the cars and pushing or transporting them endwise forward relatively to the cars, supporting them on anti-friction devices in front of the train till they are opposite the positions they are to occupy, and finally carrying them (while still joined) laterally and placing them in position on the ground or road-bed, whereby the rails on one side of two adjacent track-sections can be removed and laid together, substantially as set forth.

2. The herein-described improvement in the method of transporting and delivering from a construction-train of cars the metal rails, it consisting in primarily placing said rails in piles on said cars, then securing the rails together end to end to form pairs, placing two of such pairs side by side on the train, advancing the two pairs simultaneously, afterward separating the one pair from the other at a point in front of the train, carrying the pairs in opposite directions laterally, and laying them in final position on the ties, whereby all of the rails of two track-sections can be delivered and laid substantially simultaneously, as set forth.

3. The combination, with the car of a construction-train, of the divider H or guide, arranged, substantially as set forth, to separate laterally two advancing rails, as described.

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

GEORGE F. HARRIS.

Witnesses:

J. B. VAN DYKE,
W. T. CANADA.