

(No Model.)

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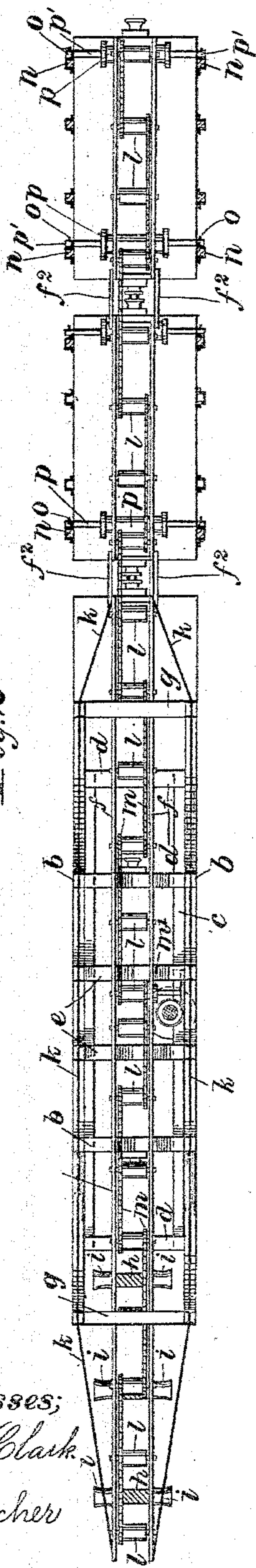
D. S. MOORE.

MACHINE FOR LAYING RAILWAY TRACKS.

No. 356,777.

Patented Feb. 1, 1887.

Fig. 2



Witnesses;  
S. L. Clark,  
H. Fischer

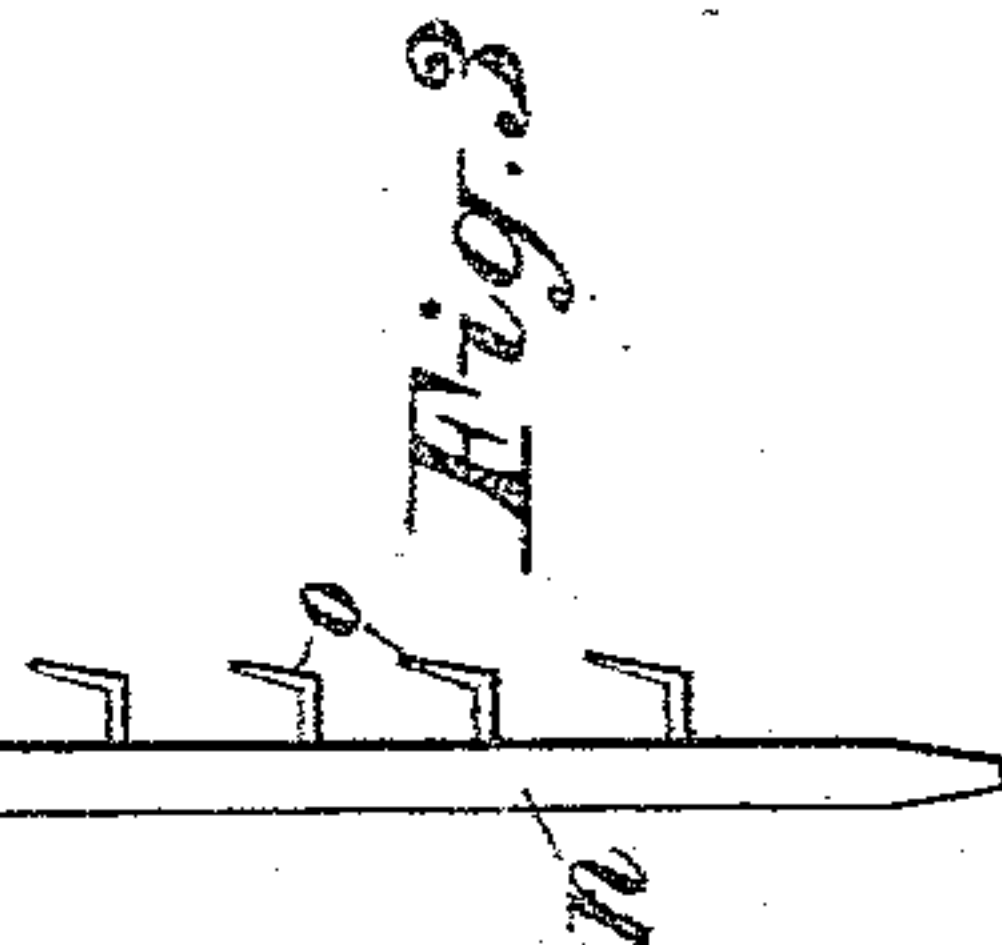
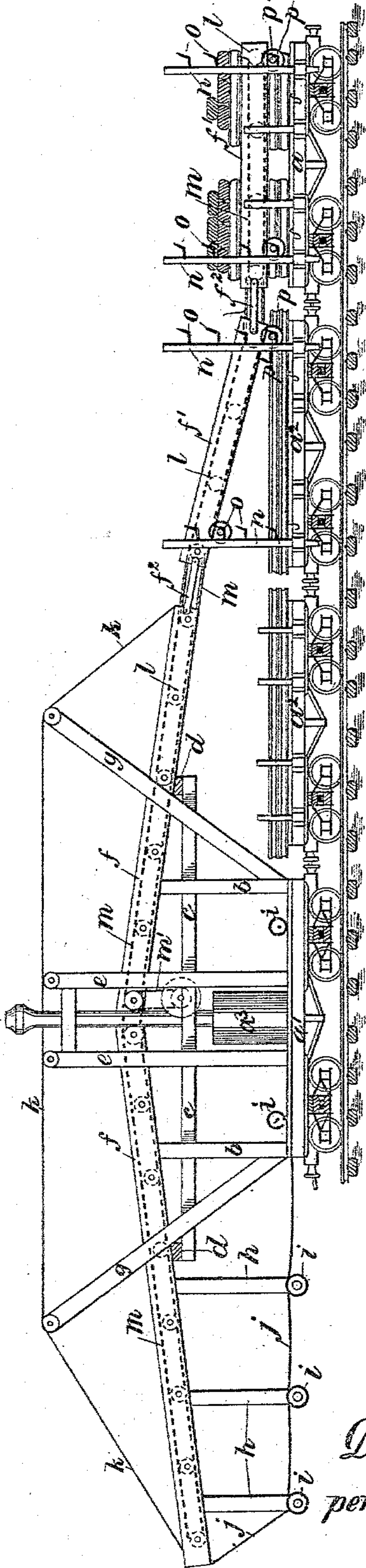


Fig. 3

Fig. 1



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D. S. Moore,  
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Attorney.



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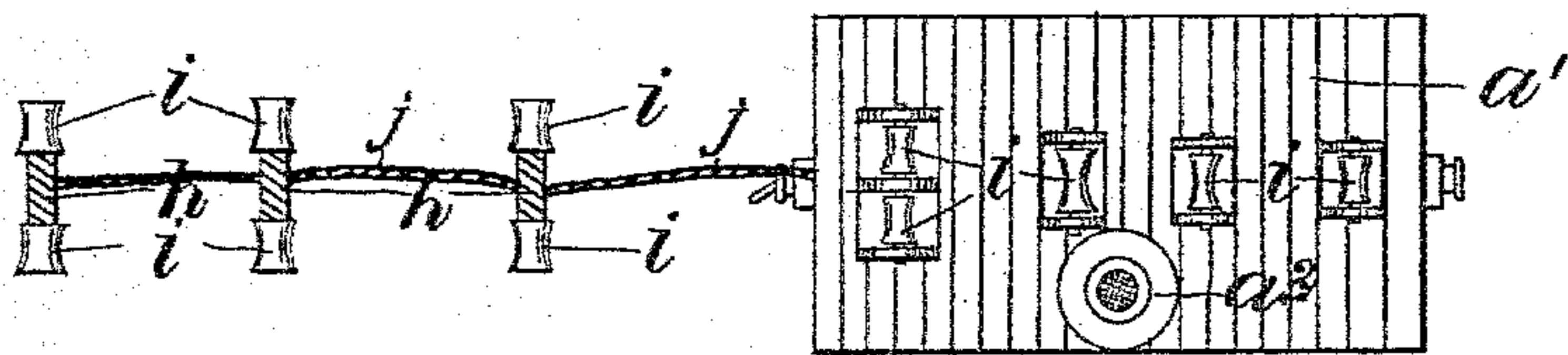


Fig. 6

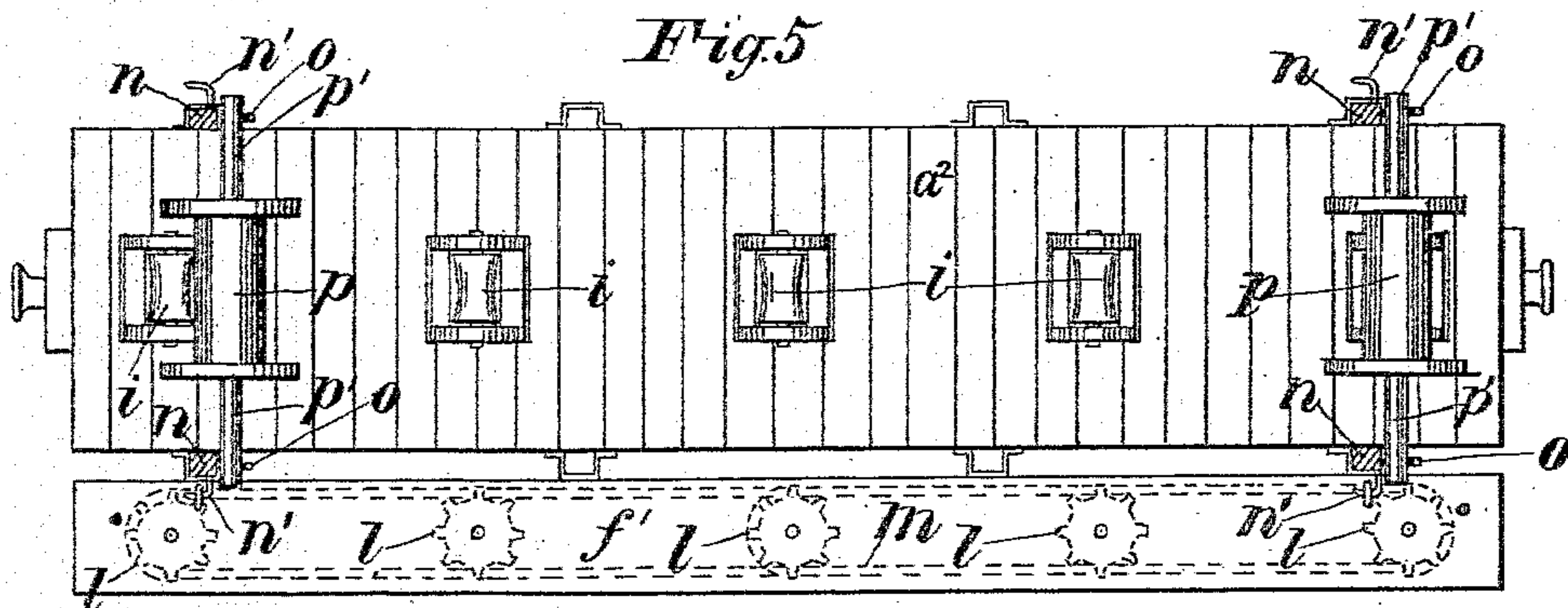


Fig. 5

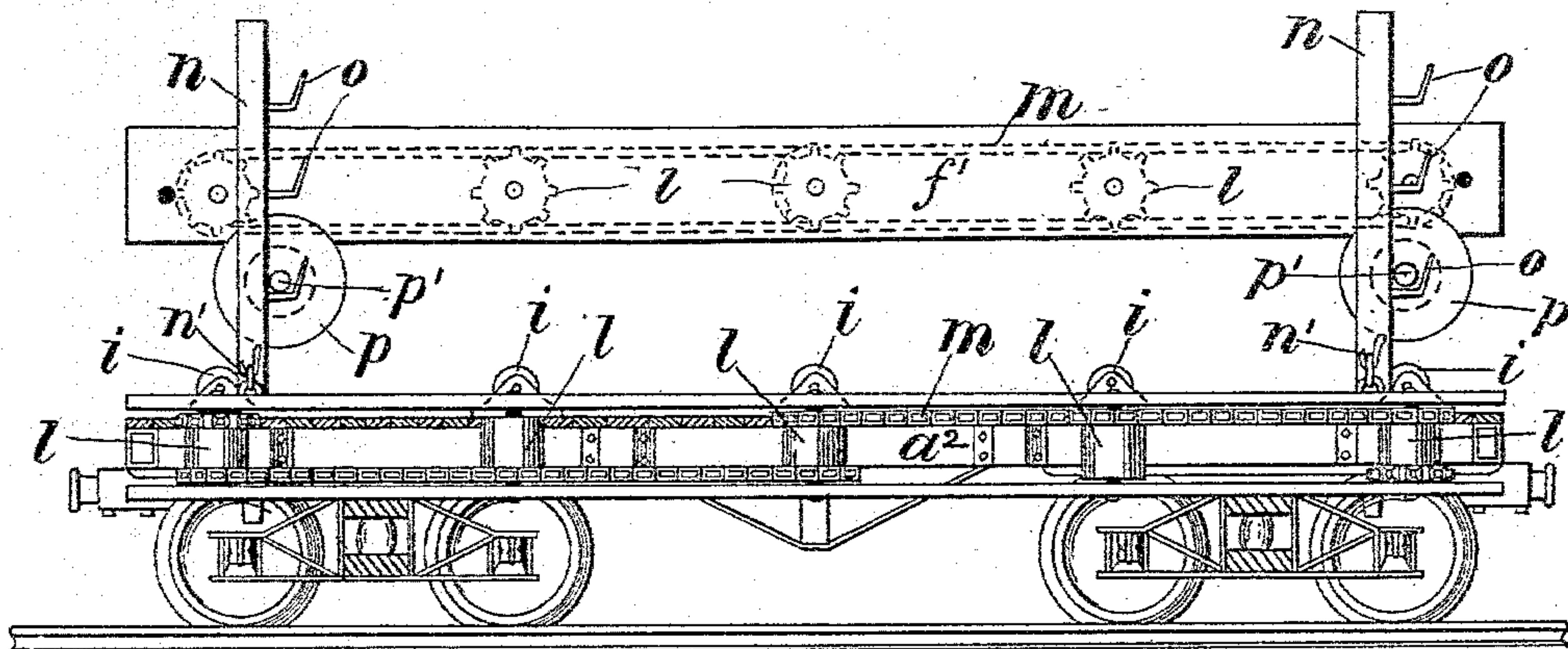


Fig. 4

Witnesses;  
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# UNITED STATES PATENT OFFICE.

DAILY S. MOORE, OF CHICAGO, ILLINOIS.

## MACHINE FOR LAYING RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 356,777, dated February 1, 1887.

Application filed June 21, 1886. Serial No. 205,746. (No model.)

*To all whom it may concern:*

Be it known that I, DAILY S. MOORE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Laying Railway-Tracks, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a longitudinal side elevation of my improved railway-track-laying machine, showing the cars loaded and all the parts in position ready to begin work. Fig. 2 shows Fig. 1 in plan view, but without any load. Fig. 3 is a side view of one of the stakes *n*. Fig. 4 is an enlarged side view of a flat-car having a carrier, *f'*, hung upon its side and another one mounted on the stakes *n*, showing in its two views of the carrier the details of its construction. Fig. 5 is a plan view of the same parts with all the parts in place, as shown in Fig. 4, but having the carrier *f'* on the stakes removed. Fig. 6 shows a plan view of the main or machinery car *a'*, with all the frame-work above the floor removed, only showing the engine, and in its front the hangers *h* cut off above the rollers *i*.

Like letters refer to like parts.

The object of my invention is to improve the construction of machinery for laying railway-tracks for which Letters Patent were granted to me February 12, 1878, and January 31, 1882.

Some of the defects in my former constructions were, among other things, that the means by which the ties were brought to their places were not positive, as they moved by gravity, and this decreased or increased according to the ascent or descent of a grade, and would accordingly be slow or fast, or at times fail utterly, but by the present means no such difficulties occur; and in the next place formerly but one pair of rails could be laid at a time, while with the present device two pair of rails can be placed in position at the same time with much less labor, and in every way, with an equal number of hands, a great deal more work can be accomplished than with any other former device. To attain said ends I construct my apparatus as follows, namely:

I make up a train of flat-cars, *a a' a'*, which are pushed along by a locomotive at its rear end. Upon the front flat-car, *a'*, I build a frame-work, *b c d e f g*, of which the part *f* overhangs toward the rear the entire length of the car behind it, and at the front projects beyond the end of the car as far as circumstances will permit—about thirty to fifty feet. The frame-work *f* consists of planks set upon edge far enough apart to pass any tie between them. The planks are held together either by the shafts of the rollers *l* or in any other desired way, and rest upon the cross-bars *d*, to which they may be fastened, and their ends are supported by a wire rope, *k*.

The rollers *l* are connected by chain belts *m* upon alternate ends, where they are provided with spurs to work into the links of the chain belts. In Figs. 4 and 5 the belts *m* connect three rollers in a series, the middle one being driven by the tangent belt working into the spurs of the roller.

The belt *m* may connect only two rollers, *l*, in series, or it may embrace all the rollers of a car in the carrier *f* or *f'*.

The side plank, rollers, and belts just described form a carrier or carriers or conveyers for carrying ties. To the rear end of the carrier *f* is attached a carrier, *f'*, by means of a connecting-bar, *f<sup>2</sup>*, and a chain belt, *m*, connecting the two end rollers of the carriers *f* *f'*. The carriers *f'* are carried on side stakes, *n*, which are provided with hooks or pins *o*, in which rest cross-bars *p'*, carrying flanged rollers *p*, upon which rest the conveyers *f'*. Said conveyers are kept up as far as possible above the cars *a'* nearest the front, and loaded only with rails, so as to be out of the way of the workmen, while the same conveyers are kept down as low to the floor of the flat-cars as possible to prevent high lifting of the ties into the conveyers.

In the drawings only one car is shown loaded with ties and two with iron; but in practice about three flat-cars are loaded with ties to one with rails, and in this proportion as long a train is made up as the engine can manage.

The object of the connecting-bars *f<sup>2</sup>* is to keep the connecting-belts between the conveyers taut, and the object of the rollers *p* is to permit longitudinal motion to the conveyers as



the cars come together or separate. A belt,  $m'$ , from an engine,  $a^3$ , communicates motion to one of the series of rollers  $l$ , and thus sets all the said rollers in motion of the entire series of conveyers  $f$  and  $f'$  in such a manner as to carry ties forward so as to be discharged from the front end of the conveyer.

Under that part of the conveyer projecting beyond the front of the car  $a'$  are hung hangers  $h$ , to which are attached, on each side, rollers  $i$ , about on a level with the floor of the car, or preferably on a level with the rollers  $i$  on the car  $a'$ , and all the cars  $a^2$  are provided with rollers  $i$ , as shown in Figs. 4 and 5. When placed on the cars, said rollers may be set in a movable base, so that the rollers may be placed at pleasure. The hangers  $h$  are connected and braced by a connecting-rope,  $J$ .

On the car  $a'$  the rollers  $i$  are made longer, and finally separated into two parts, so as to facilitate the running of the rail to the right and left hand sides of the hangers  $h$ .

The process of laying railway-track by my improved machinery after a train has been loaded and placed on end of track is substantially as follows, namely:

The carriers  $f f'$  are set in motion and ties thrown upon them and carried to the front and dropped upon the grade, where they are distributed. At the same time two pair of rails are spliced together and run forward on the rollers  $i$ , one pair on each side of the hangers  $h$ , until beyond the end of the car, when they are dropped, slipped into place, spliced, and spiked to the ties, while at the same time ties are coming forward in a continuous stream and distributed forward from the end of the carrier. When said two pair of rails are fastened sufficiently, the train is advanced to the front end of the last set of rails laid and ties are again distributed backward and forward, another set of rails is thrown out and fastened, and the process repeated as before. It will be observed that by this means the ties may be brought to the front as rapidly as possible and without in any way interfering with the men or machinery furnishing the iron, and that the load and the force to work it may be so adjusted as to balance each other, and to thus practically lay down a railway-track in a literally continuous stream.

The carriers, which are on the cars carrying

rails, are placed high enough to give room for the workmen handling the rails, and are called "overhead carriers." They are connected to the carriers receiving ties by one or more inclined sections, as shown in Fig. 1.

What I claim is—

1. In combination with a car,  $a'$ , provided with carrier  $f$ , a series of carriers,  $f'$ , provided with rollers actuated by chain belts, said carriers resting on rollers  $p$ , and mechanism to actuate and cars to carry said parts, substantially as specified.

2. In combination with a series of cars,  $a a' a^2$ , and carrier  $f$  on the car  $a'$ , a series of carriers,  $f'$ , on the cars  $a^2$ , carried on adjustable rollers  $p$ , belts connecting the rollers of said carriers in series of two or more, and mechanism to actuate said belts and rollers of said carriers, substantially as specified.

3. In combination with the longitudinally and vertically adjustable carriers  $f'$ , the carriers  $f$ , all provided with rollers and connecting-belts, flat-cars, and actuating mechanism, substantially as specified.

4. In combination with a series of flat-cars,  $a a' a^2$ , provided with carriers  $f$  and  $f'$ , the hangers  $h$ , provided with rollers  $i$ , substantially as specified.

5. In combination with a series of flat-cars,  $a a' a^2$ , provided with carriers  $f$  and  $f'$ , the movable rollers  $i$  on the car  $a'$ , and the hangers  $h$ , provided with rollers  $i$ , substantially as specified.

6. In combination with a series of flat-cars,  $a a' a^2$ , provided with rollers  $p$ , stakes  $n$ , and hooks  $o$ , a series of carriers,  $f f'$ , provided with rollers  $l$ , having spurs and chain belts to actuate the same, substantially as specified.

7. In combination with a series of flat-cars, a series of carriers,  $f f'$ , having rollers and chain belts, and connecting-bars  $f^2$  and rollers  $p$ , substantially as specified.

8. In combination with a car,  $a'$ , having carriers  $f$ , the hangers  $h$ , provided with braces  $j$  and rollers  $i$ , substantially as specified.

9. In combination with a car,  $a'$ , having carriers  $f$ , the rope  $k$ , and hangers  $h$ , provided with braces  $j$  and rollers  $i$ , substantially as specified.

DAILY S. MOORE.

Witnesses:

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WM. ZIMMERMAN.