

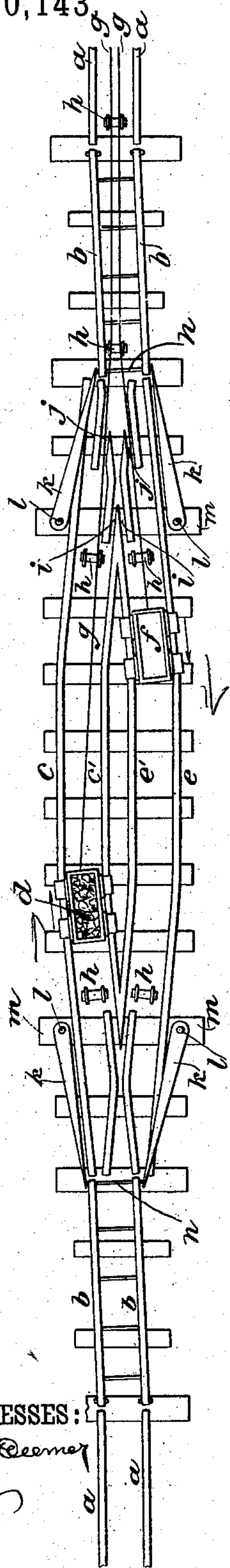
(No Model.)

J. G. THOMPSON.
MINE RAILROAD.

No. 290,143

Patented Dec. 11, 1883.

Fig. 1.



WITNESSES:

John McDeemer
C. Sedgwick

Fig. 2.

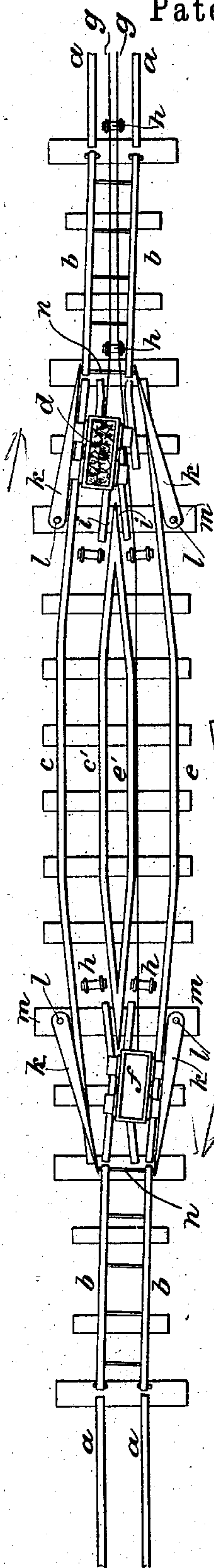
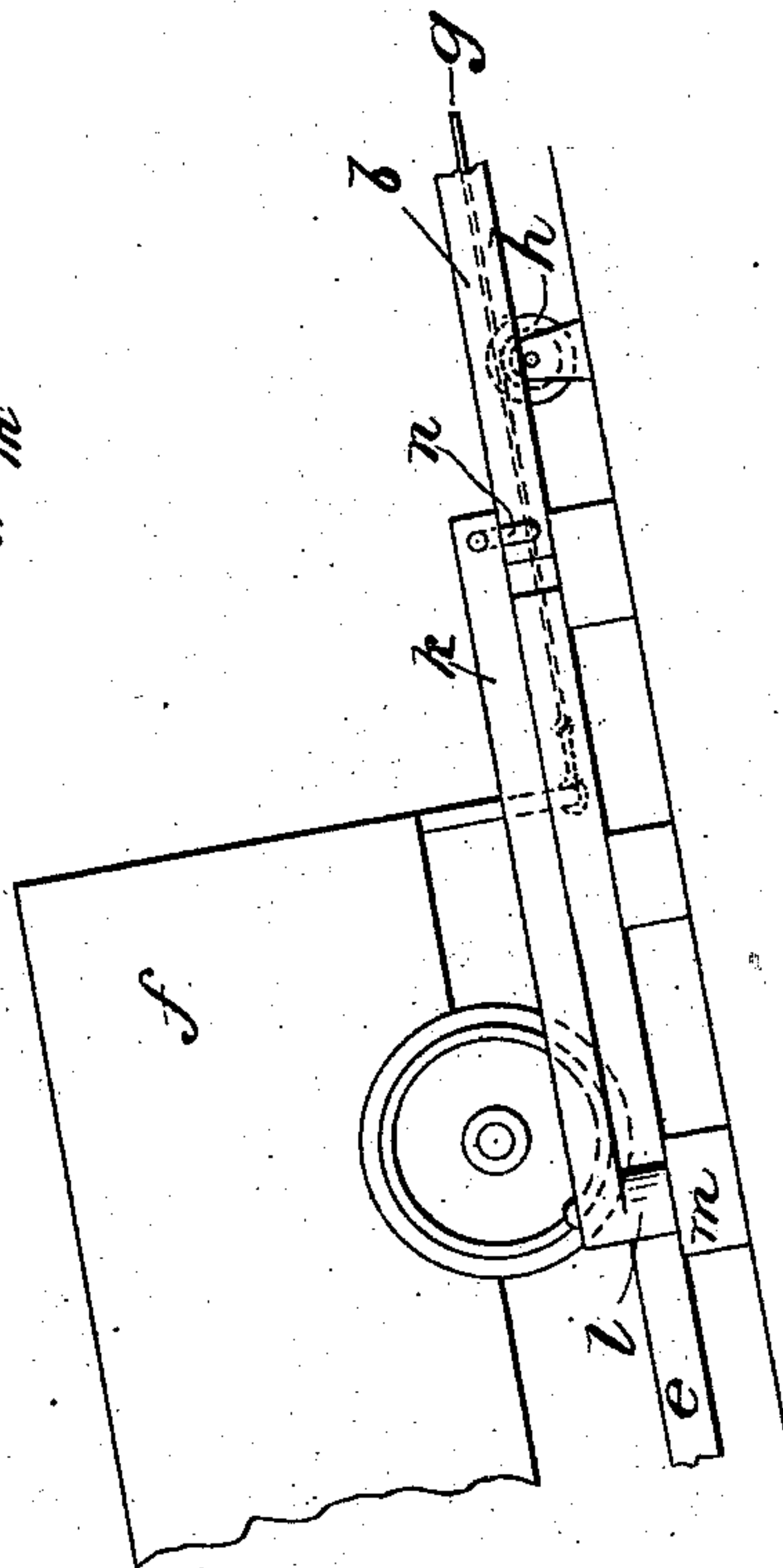


Fig. 3.



INVENTOR:

J. G. Thompson
BY *Mum & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN G. THOMPSON, OF CUBA, ILLINOIS.

MINE-RAILROAD.

SPECIFICATION forming part of Letters Patent No. 290,147, dated December 11, 1883.

Application filed May 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. THOMPSON, of Cuba, in the county of Fulton and State of Illinois, have invented a new and Improved Mine-Railroad, of which the following is a full, clear, and exact description.

My invention consists of an improved contrivance in sloping roads for mines and the like, where one car ascends while another descends by a rope passing over a drum at the upper end, whereby a single track with a turn-out in the center, where the cars pass each other, may be made to serve equally as well as a double track, said turn-out being so contrived that the cars cross the rope without obstruction or detriment, and they automatically shift the switches of the turn-out as required for passing each other, all as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of portions of a single track with my improved turn-out contrivance, and showing the positions of the switches when the cars have just passed onto the turn-outs. Fig. 2 is a similar view, showing the positions of the cars when they have automatically shifted the switches for passing off from the turn-outs; and Fig. 3 is a detail in side elevation.

a represents the permanent rails of the single track; *b*, the switch-rails; *c* and *c'*, the turn-out for the ascending loaded car *d*; *e* and *e'*, the turn-out for the descending empty car *f*, the cars being connected, as usual, to the respective ends of a rope, *g*, which extends up from one car around a drum at the end of the road, and down to the other car, said rope working on carrier-rollers *h*, located at suitable intervals along the road. Besides making the usual partings, *i*, in the inside rails, *c'* *e'*, for the flanges of the wheels to cross at the switch, I also make other partings at *j* in said rails, in which the rope may run, for the wheels of the crossing trucks to pass over said rope where the two parts of the rope branch off at the upper end of the turn-outs, for following them, respectively, thus enabling the wheels of the ascending car to pass over the rope of the descending car.

For enabling the cars to automatically shift the switches for guiding them on and off of their respective turn-outs, I arrange a pair of switch-levers, *k*, near each end of the turn-outs, said levers being pivoted at *l*, just outside of the outer rails, to about the second or third tie *m*, back along the turn-outs from the joint between the switch-rails and the permanent rails, the free ends of the said levers being connected to the switch-bar *n*, said levers being arranged in a higher plane than the rails, with the pivoted ends wider apart than the rails, and the free ends converging to about the width from outside to outside of the switch-rails, so that as the cars approach the switch either way in passing from the turn-outs, the outside wheels will run against the inner edge of the lever *k*, lying obliquely across the outside rail, and push it off, which will cause it to shift the switch-rails over to the turn-out along which the car is passing, where said switch remains until the car descends and passes onto its turn-out, when the next ascending car will in like manner shift the switch back to the other turn-out. The same operation takes place at the lower end of the turn-out—that is to say, the car passing off from the turn-out sets the switch for itself, and the switch remains to that turn-out until the car arrives back on said turn-out. Then the other car, descending, shifts the switch back to its turn-out, where said switch remains until said car returns. Thus it will be seen that I save the expense of most of the second track always heretofore employed in this method of operating cars on steep grades in mines and elsewhere.

My improved railroad will be found especially serviceable, also, in running freight of stone, earth, and other matters downhill, for which uses an endless rope will be employed to wind around a drum at the top of the plane or slope, the descending full car by its gravity elevating the unloaded car, no engine or other auxiliary power being in this case required, and any approved brake contrivance being fitted to the drum for controlling the speed of the cars.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An inclined or sloping railroad for working cars in opposite directions at the

same time by a rope doubled around a drum at the upper end of the road, the said road consisting of a single track with a turn-out, at the center whereof the inside rails have openings *j*, over which the wheels of the cars cross the rope, said rope being arranged within the single track and branching into and along the turn-outs, substantially as described.

2. The combination of automatic switches

with an inclined single-track road in which the cars are operated in both directions at the same time by a rope which works around a drum at the upper end, said road having turn-outs at the center, substantially as described.

JOHN G. THOMPSON.

Witnesses:

P. S. GEORGE,

J. P. RANDALL.