(No Model.)

L. WASHINGTON & W. H. ROBERTS.

APPLIANCE FOR MOVING RAILROAD SWITCHES.

No. 446,904. Patented Feb. 24, 1891.

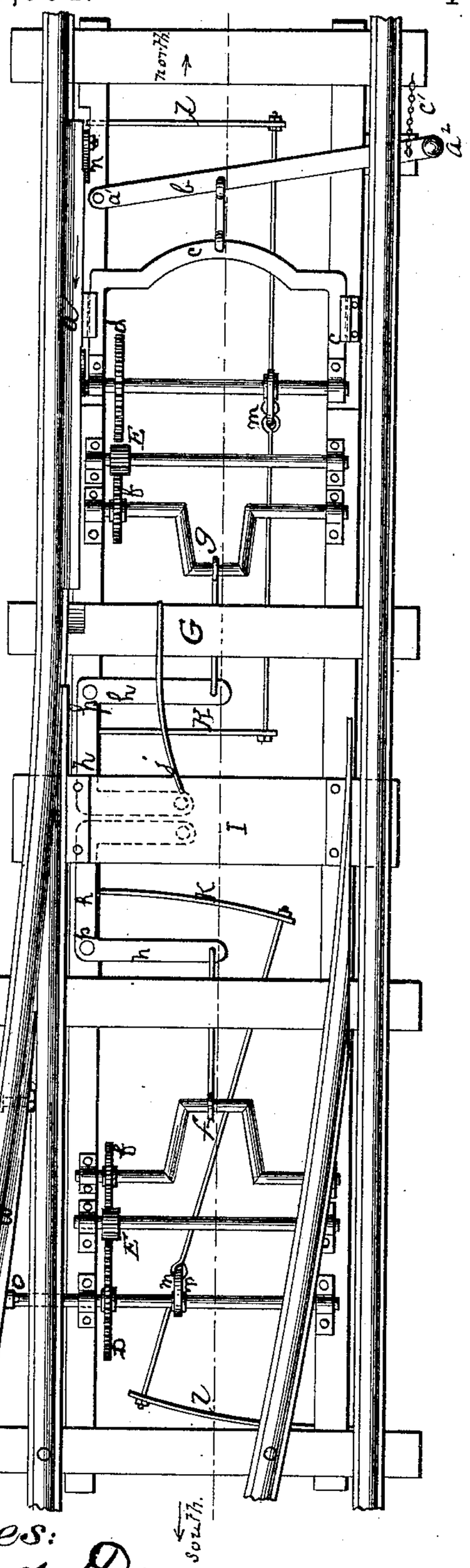

Fig. 1.

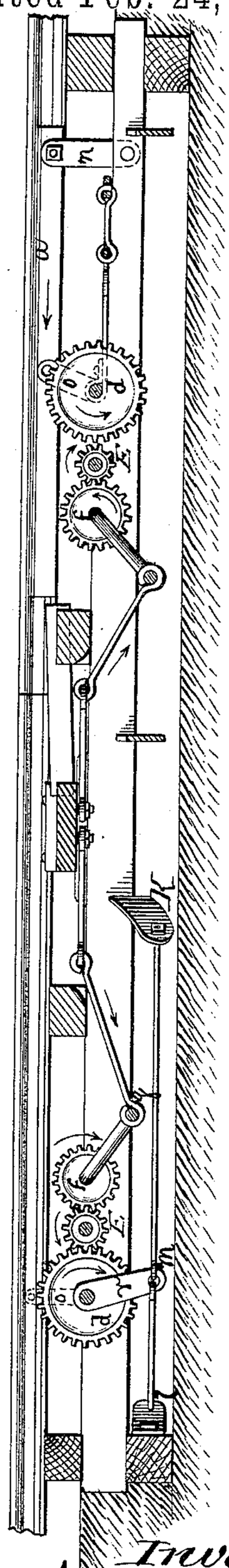

Fig. 2.

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LURIA WASHINGTON AND WILLIAM H. ROBERTS, OF COAL CREEK, TENNESSEE.

APPLIANCE FOR MOVING RAILROAD-SWITCHES.

SPECIFICATION forming part of Letters Patent No. 446,904, dated February 24, 1891.

Application filed October 7, 1890. Serial No. 367,368. (No model.)

To all whom it may concern:

Be it known that we, LURIA WASHINGTON and WILLIAM H. ROBERTS, residing at Coal Creek, in the county of Anderson and State of Tennessee, have invented a new and useful Railroad-Switch-Moving Works, of which the following is a specification.

Our machine consists of cog-wheels and levers so adjusted that the weight of the engine or car will change the switch; and the objects of said machine are to so arrange the termini of side tracks by means of said machine that any car or train of cars may pass out upon the main track without adjusting the switch by hand, and that all trains going in opposite directions may pass with but one adjustment of said machinery. We attain these objects by the machine illustrated in the accompanying drawings, of which—

Figure 1 is a representation of two of said machines, the one upon the right being attached to the main track and the one upon the left to the side track; and Fig. 2, a vertical sectional view of the same.

Similar letters refer to similar parts in both machines and in both figures.

a is a guard-rail elevated one inch above the track.

b is a lever.

c is a movable frame, in which the axle of the cog-wheel *d* is set.

c' is a chain to secure the lever *b* in the position in which cogs *d* and *e* are disengaged.

d, *e*, and *f* are cog-wheels.

g is an elbow or crank to the axle of the cog-wheel *f*.

h h is a lever working at its elbow on the pivot *p*.

I is a movable bar, to which the inside rails or points of the track and side track are attached and also the levers *h h*.

j is a spring fixed to the movable cross-bar *i* and the stationary cross-bar or tie *g*.

k and *l* are springs connected with a crank attached to the cog-wheel *d* at *m*.

n and *o* are levers supporting the guard-rail *a*.

The illustration on the right shows the machine out of gear—that is, set for the main track. To put it in gear, move the lever *b* forward till at right angles to the rails. This, by means of the slide-frame *c c c*, to which said lever is attached, fits cog-wheel *d* into cog-wheel *e*. An approaching engine or car strikes the end of the railing *a*, which is rounded. The weight of said engine or car presses the railing downward and forward, which, through the crank or lever *o*, produces a rotary motion in the cog-wheel *d*, which is in turn communicated to cog-wheels *e* and *f*, said wheels moving in the directions indicated by the arrow-heads in Fig. 2. This motion forces the elbow *g* downward and backward, which draws the end of the lever *b* in the same direction, and by the revolution of said lever on the pivot *p* the cross-bar *i* is moved laterally and the rails set for the side track. This produces a tension in the springs *j* and *k* and *l*, and when the weight is removed said springs carry the rails again into position for the main track, the spring *j* pressing back the cross-bar *i* and the springs *k* and *l* elevating the guard-rail *a* by means of a reverse motion communicated to the machinery through the lever at *m*.

The machine attached to the main track, as illustrated upon the right, may be thrown in or out of gear at pleasure; but the machine attached to the side track, as illustrated in the left of the drawings, is always in gear. Consequently any train or car upon the side track can move out upon the main track without any hand adjustment of the switch, and this whether the machine for the main track be in gear or not.

Another advantage of the machine may be illustrated as follows: Suppose the right hand of the figure be north and the left hand south and a number of trains are to pass at this point. The machine to the main track is put in gear. Then all south-bound trains may move in upon the side track, all north-bound trains move by, and the south-bound trains back out upon the main track before it becomes necessary to throw the machine out of gear.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, with the rail *a*, connected with the axle of the cog-wheel *d* to operate the same, of the frame *c*, in which said axle is mounted, and the lever *b* to actuate said frame, substantially as set forth.

2. The combination of the switch-rails, their tie-bar I, the connecting-levers and gearing, the rail *a*, and the movable frame *c*, to engage or disengage said gearing, as and for the purposes set forth.

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