

A. & J. C. RANTS.
Improvement in Railroad Switches.
No. 132,600. Patented Oct. 29, 1872.

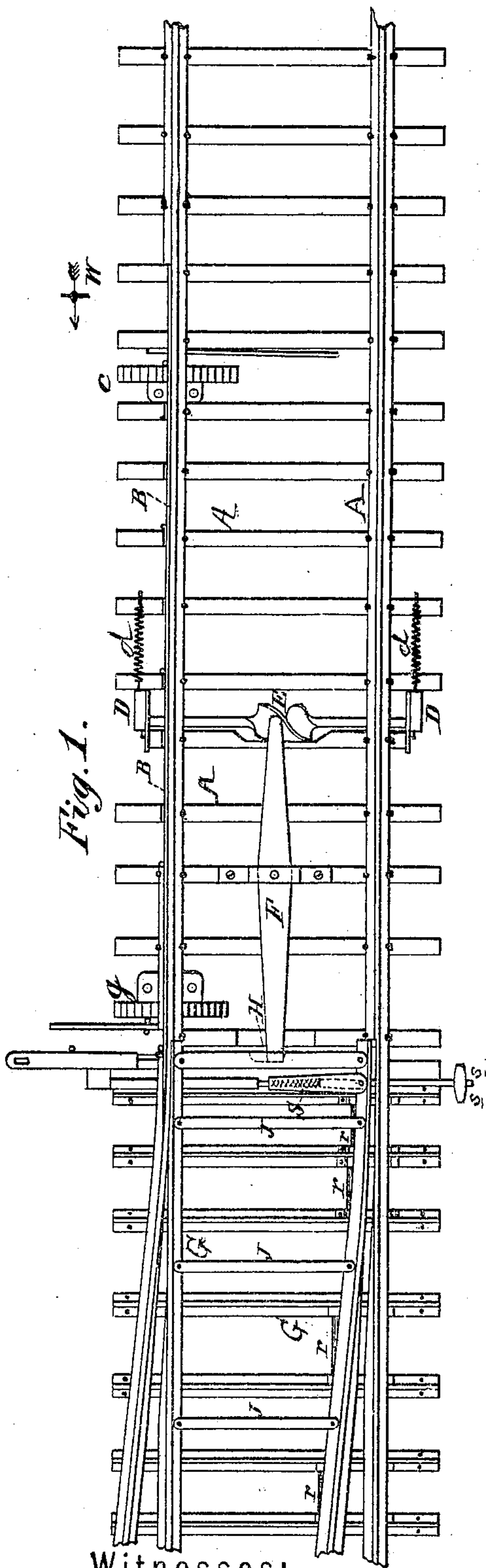


Fig. 1.

Witnesses:

W. J. Gardner,
H. W. Throckmorton.

Fig. 2.

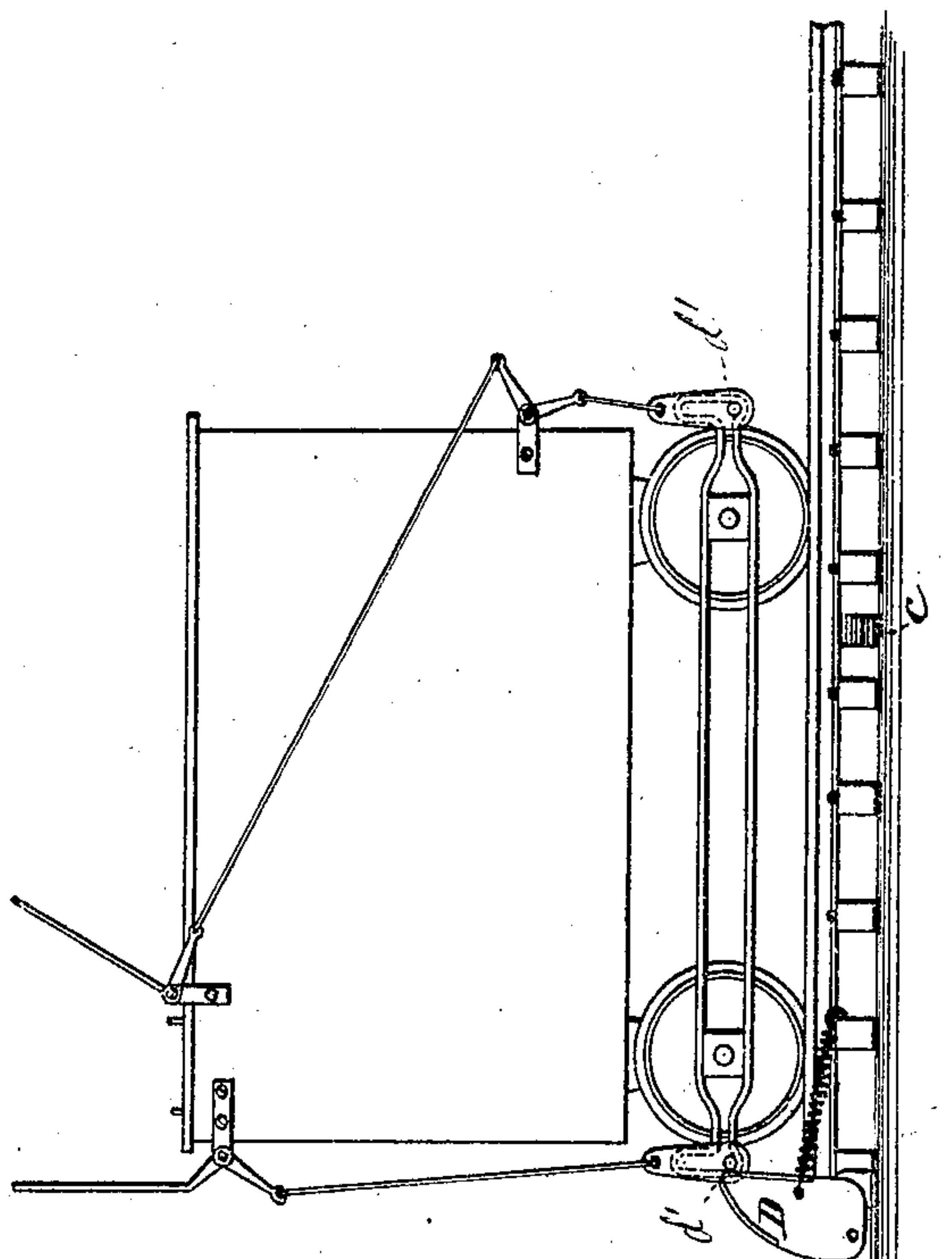
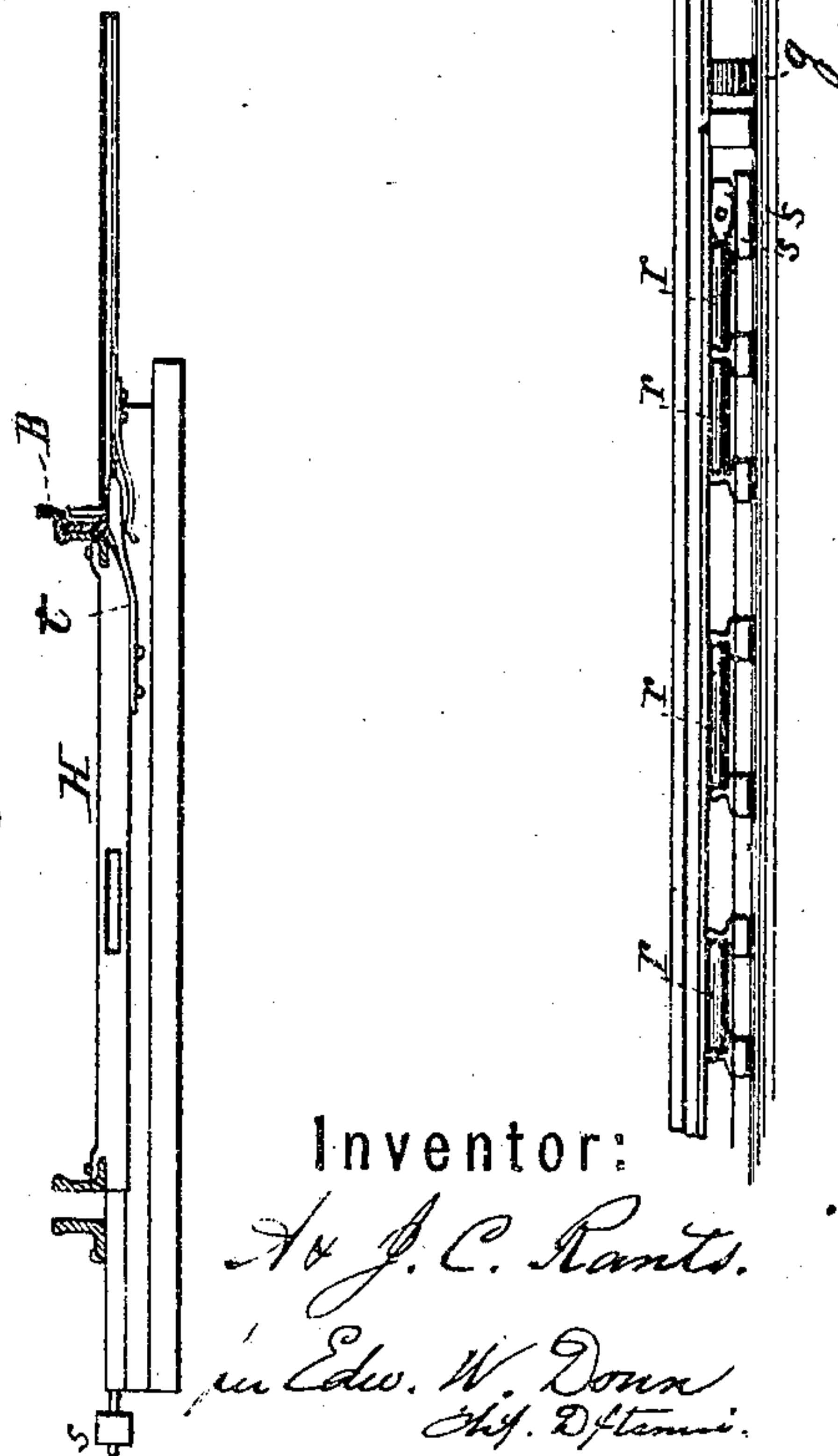


Fig. 3.



Inventor:

A. & J. C. Rants.

per Edw. W. Donn
Chf. D^y Tenn.

UNITED STATES PATENT OFFICE.

ABRAHAM RANTS AND JOHN C. RANTS, OF FORT RECOVERY, OHIO.

IMPROVEMENT IN RAILROAD SWITCHES.

Specification forming part of Letters Patent No. **132,600**, dated October 29, 1872.

To all whom it may concern:

Be it known that we, A. and J. C. RANTS, of Fort Recovery, Mercer county, Ohio, have invented certain Improvements in Railroad Switches, of which the following is a specification:

Our invention has for its object a railroad switch so constructed that it may be changed by a person while on board the cars or engine and while the same is in motion. It consists in certain details of construction, which will first be described and afterward pointed out in the claim.

Figure 1 is a plan of a portion of a railroad track and switch with our invention applied. Fig. 2 is a vertical longitudinal section of the same with a car standing thereon. Fig. 3 is a transverse section through head-block, which supports the ends of the movable bars, and shows the locking-spring *t*.

B is a rail supported by springs, which is pressed down by the weight of the train or some part of it, the sleepers being recessed to allow the descent of the rail. When the switch is shifted for the train to pass from it to the main line spring-catch *t* bears against the flange of rail B, thereby locking the switch-rails in position until the train has passed bar B. The switch-rails G G are supported on metallic rollers, which rollers (marked *r r* in the drawing) are supported on metal rails of narrow bearing-surface, all of which is to lessen friction when the switch-rails are moved to guide the passing train. Cam-levers D D, with tension-springs *d d* attached, project upward so as to come in contact with rods *d' d'* placed for the purpose on the end of a car or engine, and which rods are so placed as to strike the cam-levers D D or pass above, as hereafter described. The rod connecting cam-levers D D is widened and twisted near the middle thereof, so as to operate as a cam when the rod *d* comes against the cam-levers D D,

which are carried over in the arc of a circle by the passing train, and at the same time communicate motion to the cam E, and thence to lever F, which, being pivoted near its center and inserted into head-block H, the switch is caused to move laterally on its rollers *r r*. When the train has passed the spring *g* raises the rail B, and thereby frees the switch from the spring *t*, by which it has been locked in proper register for shifting the train. It is now left free for the spring S, assisted by tension-springs *d d*, to throw it back into its normal condition, or in readiness for the next train to pass on the main track if the rod *d'* is left in its raised position. The resisting power of the spring S is increased or diminished by screw *s*. A mortise or other equivalent device in head-block H enables one to move the switch by means of a hand-lever, which may be carried on the train, and thus put the switch under perfect control of the engineer or conductor. The spring S and lever F may each be protected by a box or covering.

Having thus fully described our invention, what we consider new, and desire to secure by Letters Patent, is—

1. The combination of cam-rod E with cam-levers D D, lever F, and head-block H, substantially as and for the purpose described.

2. The combination of the rollers *r r*, resting on metallic rails, with narrow bearing-surface switch-rails G G and spring S, as and for the purpose described.

3. The combination of the head-block H, bar B with locking device as described, lever F, cam E, cam-levers D D, and tension-springs *d d*, substantially as shown and described.

ABRAHAM RANTS.

JOHN CHRISTIAN RANTS.

Witnesses:

JOHN S. FOX,
ISAAC HANNA.