(No Model.) 2 Sheets—Sheet 1.

A. NUTTING

RAILWAY TRACK JACK.

No. 467,706. Patented Jan. 26, 1892.

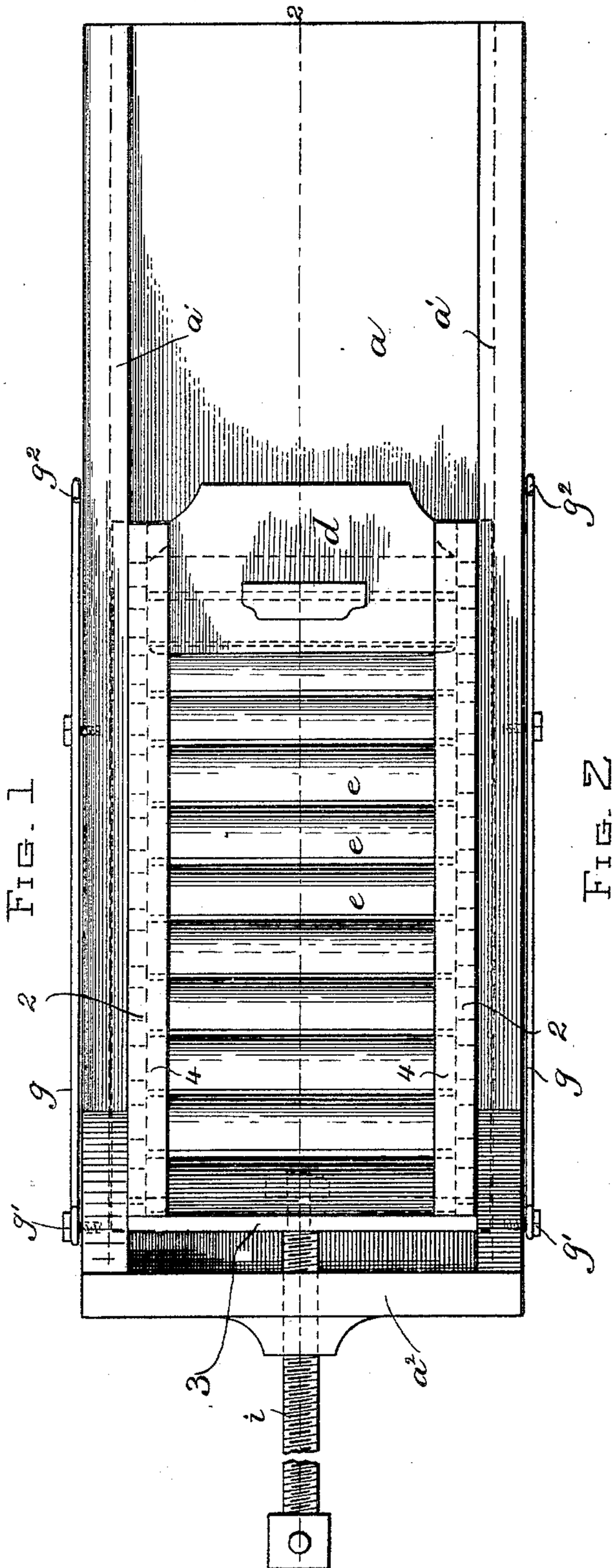

FIG. 1.

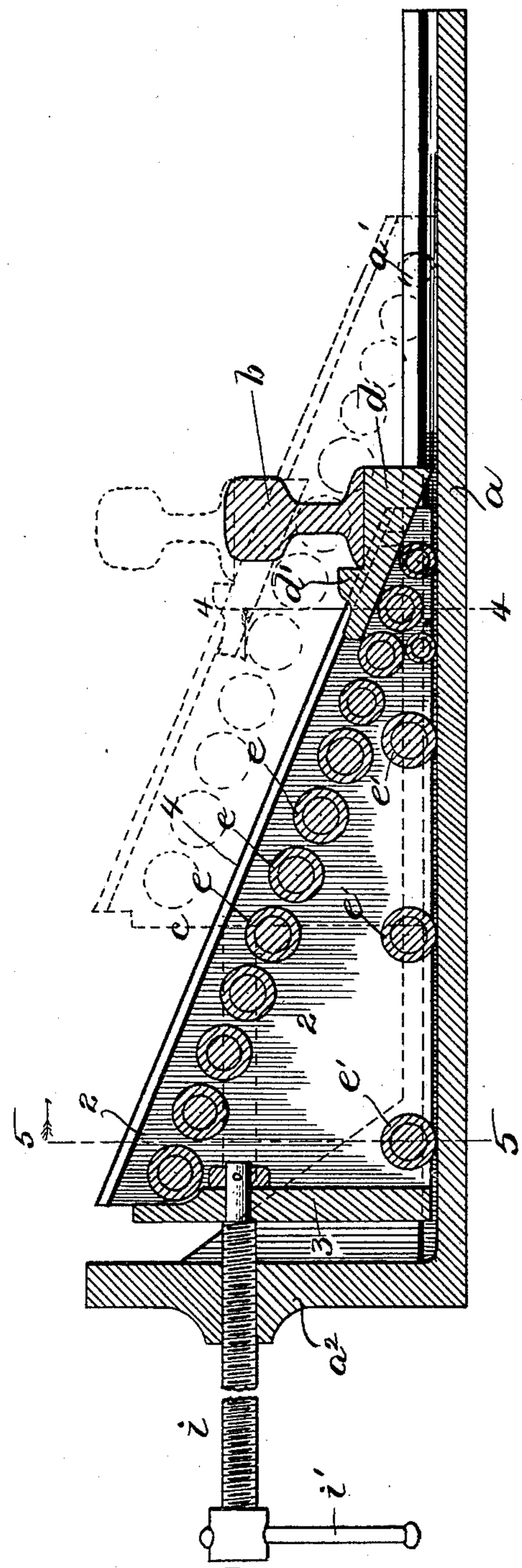

FIG. 2.

WITNESSES.

Josiah Quincy

Nathaniel G. Robinson

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Abel Nutting

(No Model.)

2 Sheets—Sheet 2.

A. NUTTING.

RAILWAY TRACK JACK.

No. 467,706.

Patented Jan. 26, 1892.

FIG. 2

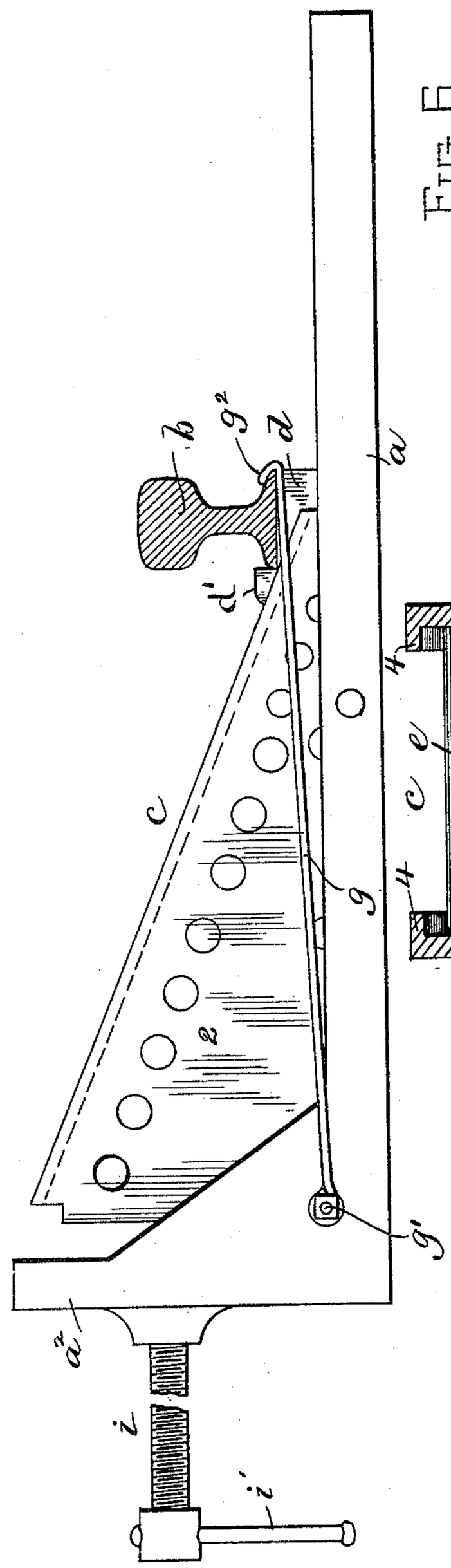

FIG. 5

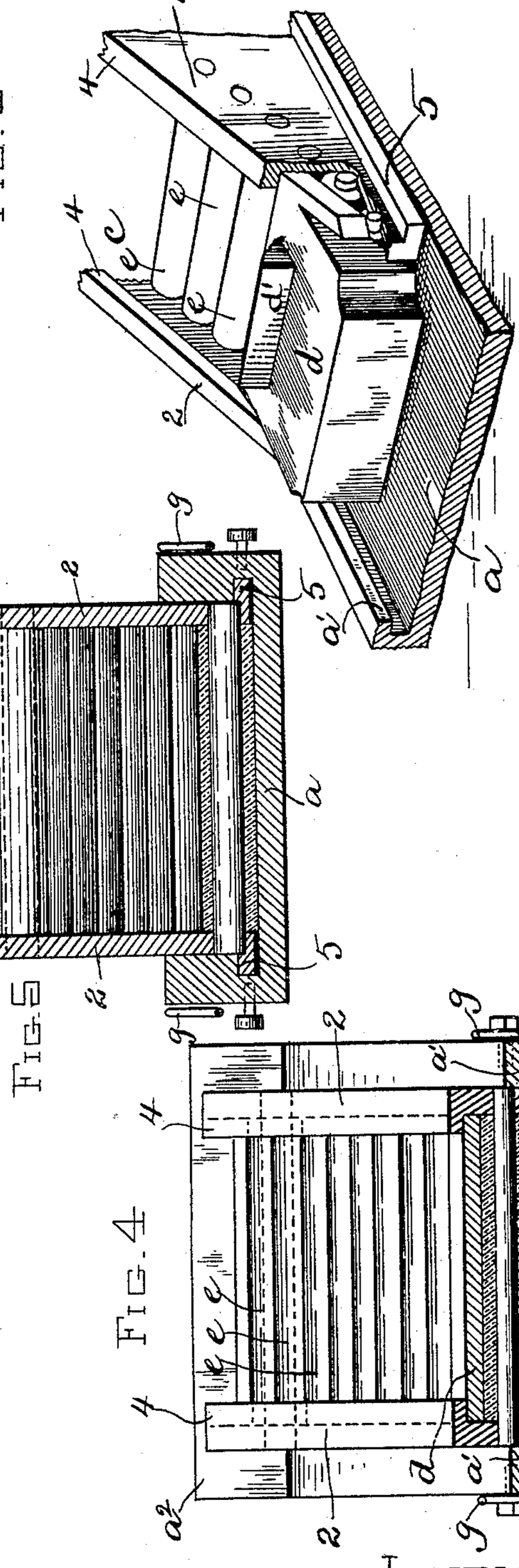

FIG. 4

WITNESSES.

Faith Dunn

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INVENTOR.

Abel Nutting

UNITED STATES PATENT OFFICE.

ABEL NUTTING, OF QUINCY, MASSACHUSETTS.

RAILWAY-TRACK JACK.

SPECIFICATION forming part of Letters Patent No. 467,706, dated January 26, 1892.

Application filed July 9, 1891. Serial No. 398,914. (No model.)

To all whom it may concern:

Be it known that I, ABEL NUTTING, of Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Railway-Track Jacks, of which the following is a specification.

This invention relates to jacks for the purpose of raising railway-rails and the sleepers to which they are attached for the purpose of evening the track. Such jacks are used by the section-gangs employed in maintaining railway-tracks in proper condition, and they are frequently in use on the track when a train is approaching. The jacks heretofore used have been of such construction that if one were left standing in the position it occupies when engaged with the track it would be a source of great danger to a train passing over the spot where the jack is located. A serious accident was caused at Quincy, Massachusetts, in 1890, by a track-jack which was left on the track by the workmen in their haste to avoid an approaching express-train, the jack causing the derailment of the train and much loss of life.

My invention has for its object to provide a jack, which, if left in engagement with the track, will not offer any obstruction to a train passing over the spot where the jack is located, so that no serious consequences can follow the careless leaving of the jack in its operative position.

To this end the invention consists in a jack comprising a flat base or track, a wedge adapted to move thereon, and a rail chair or carrier supported by said wedge and adapted to be raised by the endwise movement of the wedge upon the base, the form and arrangement of the parts being such that the jack, when in operative position, cannot come in contact with any part of a train passing over the track.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a top view of my improved jack. Fig. 2 represents a section on line 2 2, Fig. 1. Fig. 3 represents a side view. Fig. 4 represents a section on line 4 4, Fig. 2. Fig. 5 represents a section on line 5 5, Fig. 2. Fig. 6 represents a perspective view of portions of the bed and wedge and rail-chair.

The same letters and numerals of reference indicate the same parts in all the figures.

In the drawings, *a* represents the flat base or track, which is a stout plate of metal of such thickness that it can be readily inserted under a railway-track rail *h*.

c represents the wedge, which is adapted to slide upon the base or track *a*, its upper side being inclined, as shown in Figs. 2 and 3.

d represents the rail-chair, which rests on the inclined side of the wedge and is adapted to move vertically, so that when the wedge is moved from the position shown in full lines to that shown in dotted lines in Fig. 2 the chair will be raised from the base and will raise the rail resting upon it. The wedge is preferably provided with an inclined series of anti-friction rollers *e e e*, which successively support the chair *d* when the wedge is moved forward. The wedge is also preferably provided with anti-friction rollers *e′ e′* at its lower side, arranged to bear on the base *a*, said rollers *e* and *e′* reducing to the minimum the friction attending the movement of the wedge under the chair.

The rollers *e e′* are journaled in bearings formed in two wedge-shaped side pieces 2 2, which, with a cross-piece 3 connecting said side pieces, constitute the frame of the wedge. Said side pieces are provided with flanges 4 4, projecting inwardly along their inclined edges, said flanges projecting over the ends of the chair *d* and preventing the latter from being removed from the wedge.

g g represent rods pivoted at *g′* to the base *a* and provided at their swinging ends with hooks g^2, formed to engage one of the flanges of the rail to prevent the rail and chair from being pushed or moved horizontally by the forward movement of the wedge, the chair having a shoulder *d′*, which bears against the opposite flange of the rail, as shown in Fig. 3.

The base *a* is provided with horizontal guides *a′ a′* at its edges, which engage outwardly-projecting ears or lips 5 5 on the side pieces of the wedge and prevent the wedge from being raised from the base. The wedge may be forced forward to raise the chair and rail by any suitable means. I have here shown a screw *i*, engaged with a threaded orifice in a flange a^2, formed on one end of the

base *a*, said screw being engaged at its inner end with the cross-piece 3 of the wedge-frame. The outer end of the screw is provided with a handle *i'*.

The manner of using the improved jack is as follows: The base *a* is thrust under the rail to be lifted until the shoulder *d'* of the chair *d* bears on one of the flanges of the rail, the main portion of the chair being under the rail. The hooks g^2 g^2 are then engaged with the other flange of the rail and the wedge is forced forward until the rail is raised to the desired height. After the rail and the ties attached thereto have been suitably adjusted and supported in the adjusted position the wedge is moved back and the base is withdrawn from under the rail.

It will be seen that when the device is in use it constitutes a firm support for the rail without occupying such position as would cause a train passing over the track to strike it, so that if the jack be left in engagement with the rail, while a train is passing over the latter, no damage can be caused.

My invention is not limited to the details of construction here shown and described, and the same may be variously modified without departing from the spirit of the invention.

I am the first, so far as I am aware, to combine a wedge, a base serving as a guide or track for the wedge, and a rail-holding chair adapted to be raised by the wedge. Hence I desire to cover this combination as broadly as possible within legal bounds.

I claim—

1. A track-lifting jack comprising in its construction a wedge, a base constituting a guide or track for the wedge, a rail-supporting chair formed to bear on the upper surface of the wedge, and means for moving the wedge, as set forth.

2. The combination of a base or track, a wedge adapted to move thereon and provided with an inclined series of anti-friction rollers, a rail-supporting chair arranged to bear on said rollers, and means for moving the wedge, as set forth.

3. The combination, with a base or track, of a wedge having rollers on its lower side bearing on said base, the upper side of said wedge being inclined, and a rail-supporting chair bearing on the inclined side of the wedge, as set forth.

4. The combination of the base or track, the rail-engaging hooks connected therewith, the wedge, and the rail-supporting chair mounted on the wedge, as set forth.

5. The wedge composed of the frame comprising the side pieces and connecting end pieces, the inclined series of rollers *e*, and the bottom rollers *e'*, journaled in said frame, combined with the base or track having guides engaged with said frame, the rail-chair engaged at its ends with inclined flanges in the side pieces, and means for moving the wedge, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of July, A. D. 1891.

ABEL NUTTING.

Witnesses:
NATHANIEL G. ROBINSON,
WALTER G. WELSH.