No. 865,635. PATENTED SEPT. 10, 1907.

G. A. DUGGER.

RAILWAY TRACK LINER.

APPLICATION FILED JUNE 12, 1907.

3 SHEETS—SHEET 1.

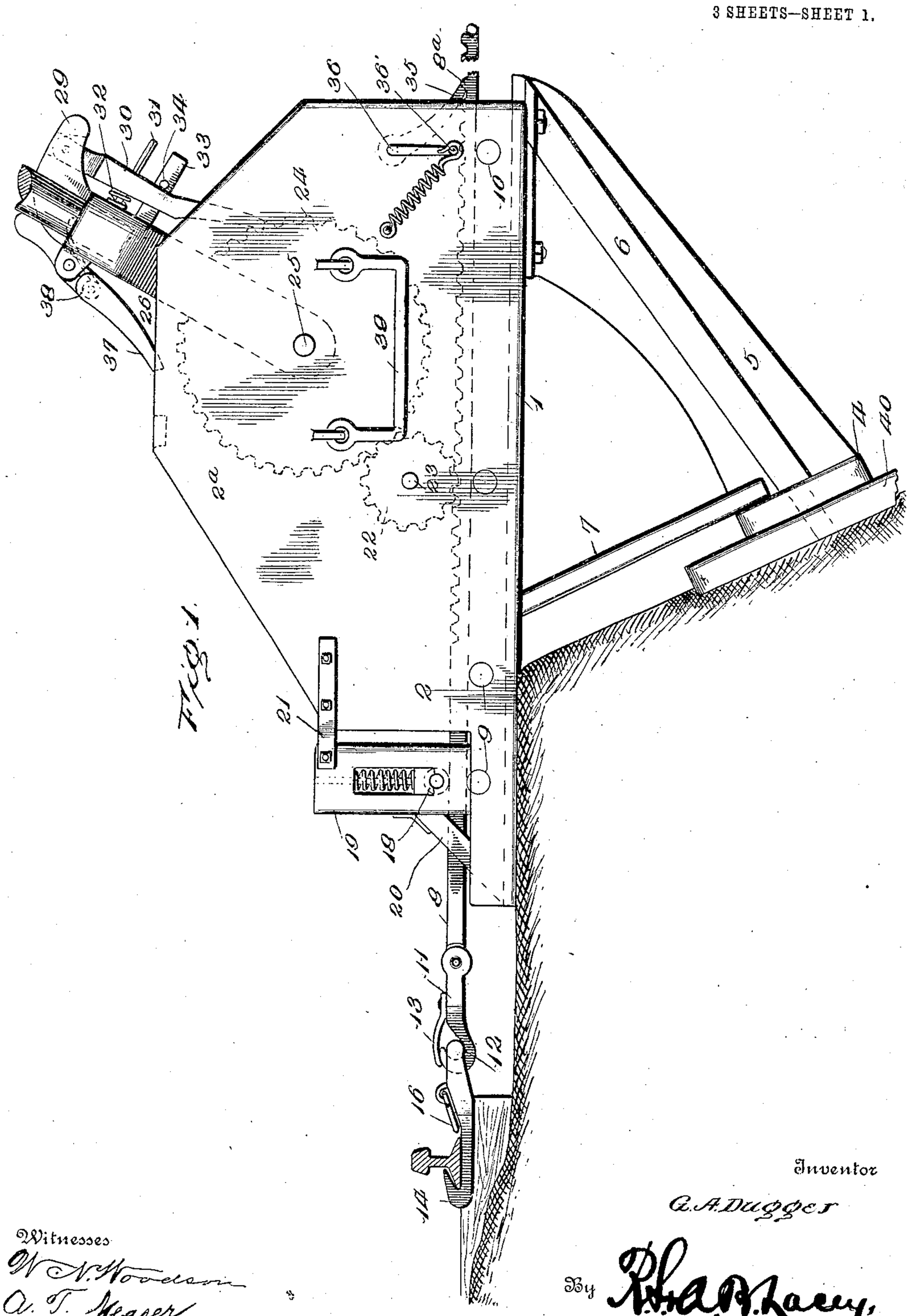

Fig. 1.

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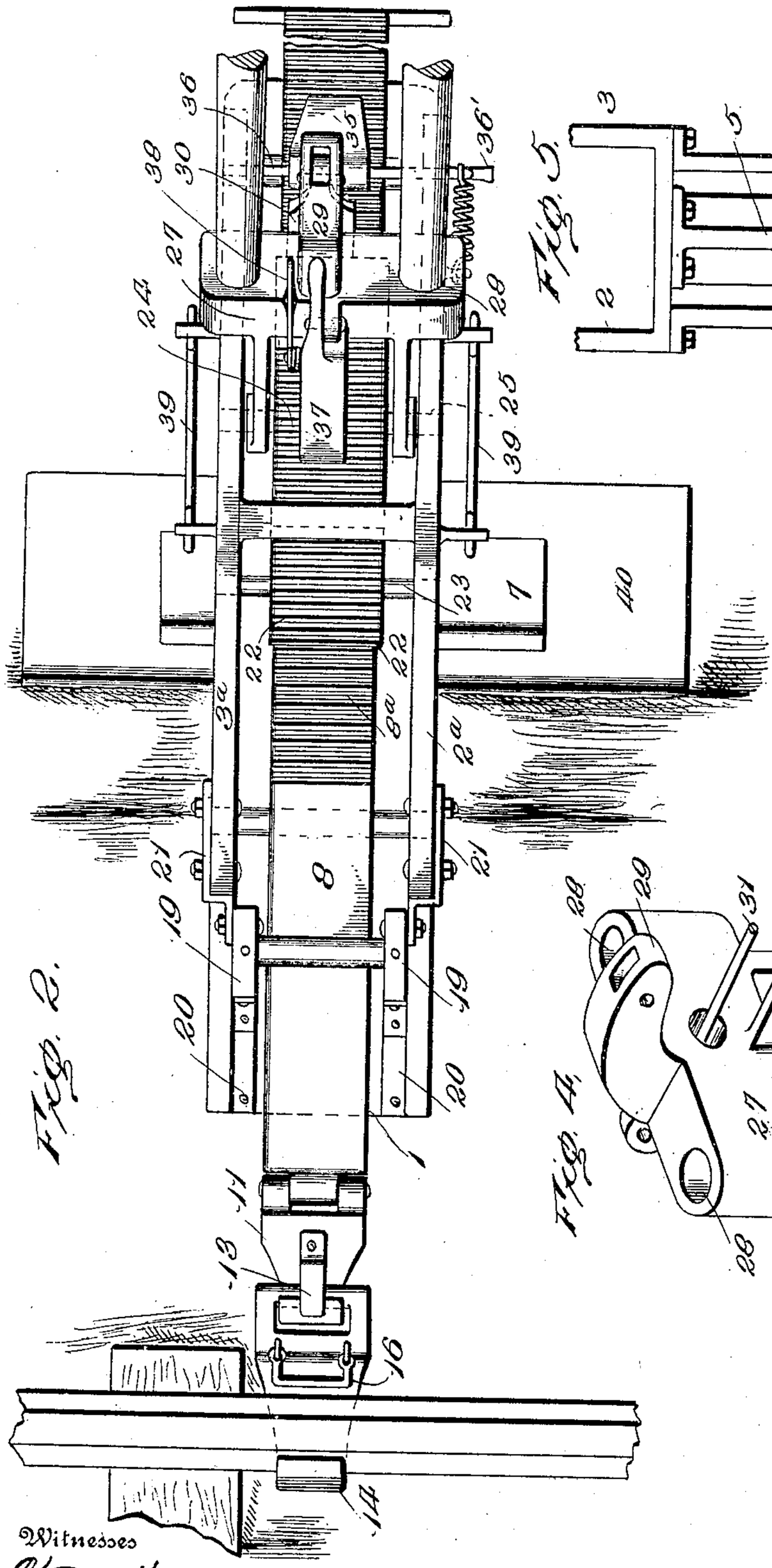

Fig. 2.

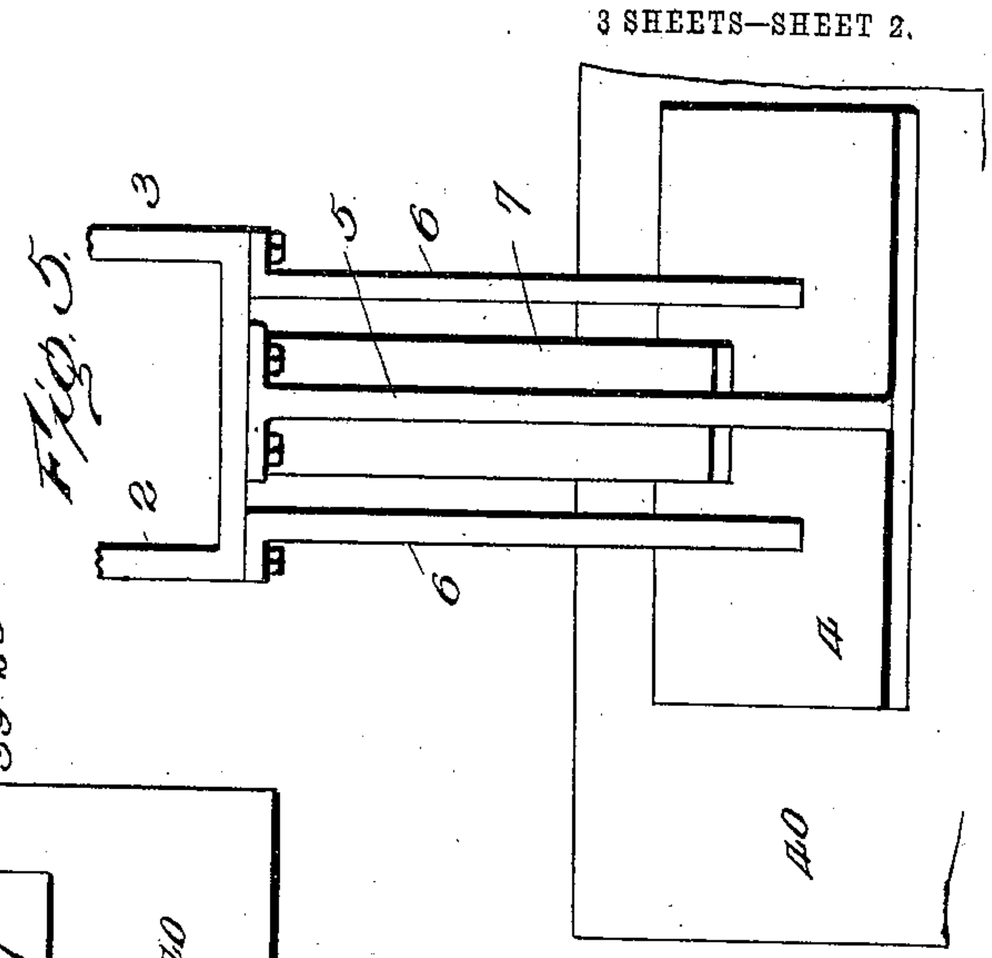

Fig. 3.

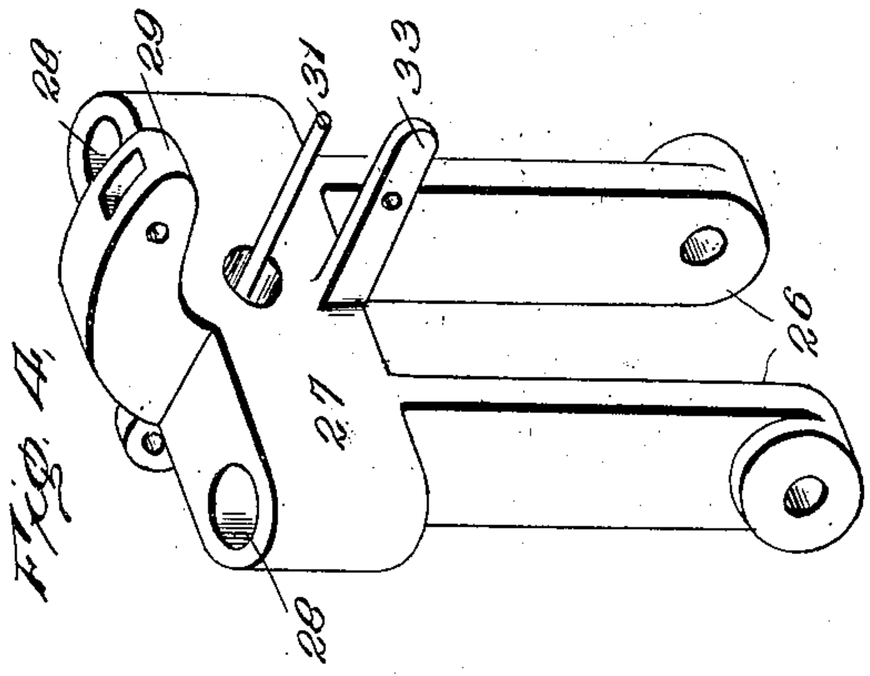

Fig. 4.

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3 SHEETS—SHEET 3.

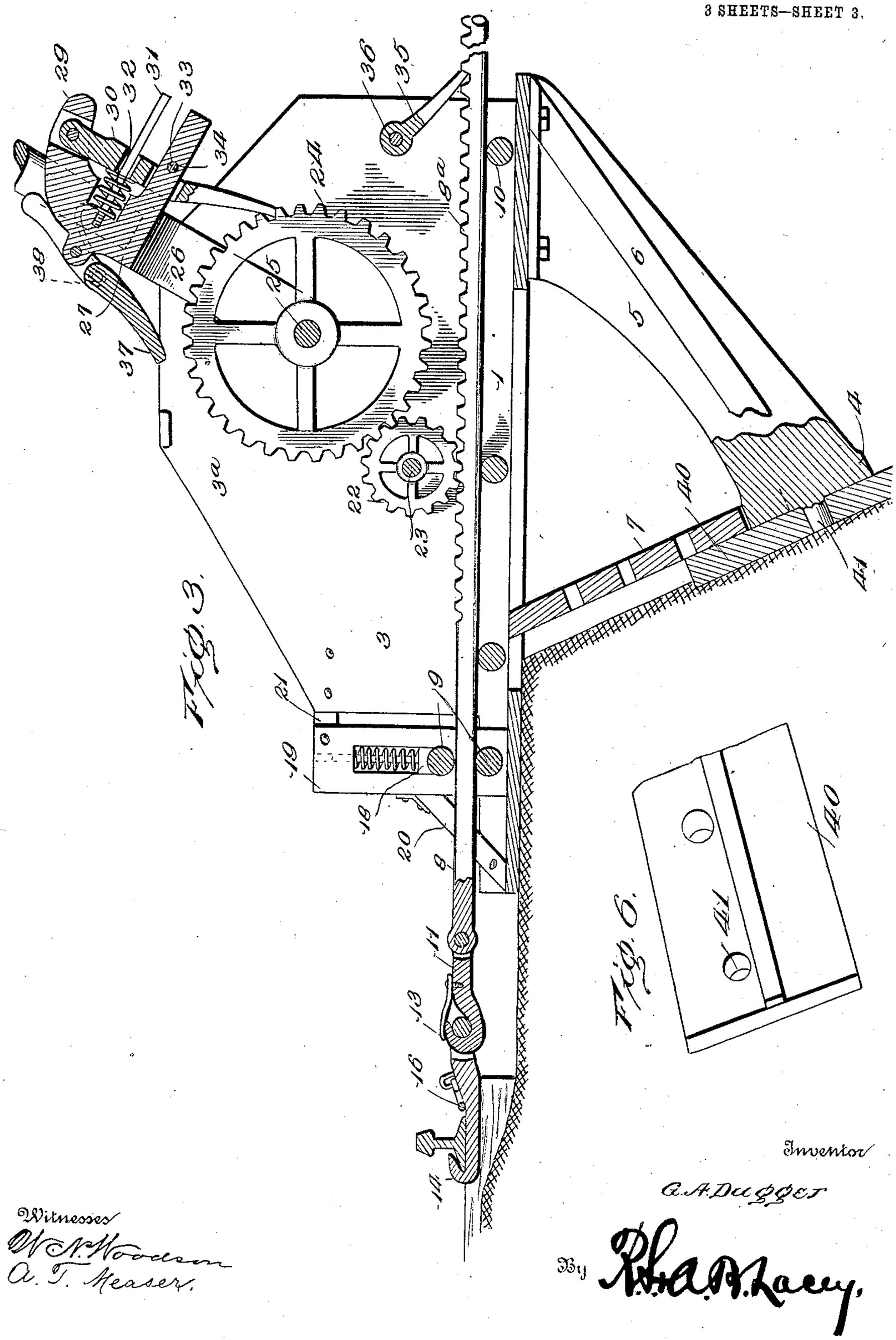

Fig. 3.

Fig. 6.

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UNITED STATES PATENT OFFICE.

GEORGE A. DUGGER, OF FREDERICK, ILLINOIS, ASSIGNOR OF ONE-HALF TO ROBERT L. BERRY, OF FREDERICK, ILLINOIS.

RAILWAY-TRACK LINER.

No. 865,635. Specification of Letters Patent. Patented Sept. 10, 1907.

Application filed June 12, 1907. Serial No. 378,626.

To all whom it may concern:

Be it known that I, GEORGE A. DUGGER, a citizen of the United States, residing at Frederick, in the county of Schuyler and State of Illinois, have invented certain new and useful Improvements in Railway-Track Liners, of which the following is a specification.

This invention contemplates certain new and useful improvements in devices for lining railroad tracks, and the invention has for its object an improved construction of device or apparatus for this purpose, which will be durable and efficient in operation and which will effect economies in that by the use of the device, the services of several laborers may be dispensed with in the operation of moving the track laterally in order to properly line it.

With this and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of my improved track lining apparatus; Fig. 2 is a top plan view thereof; Fig. 3 is a longitudinal sectional view; Fig. 4 is a detail perspective view of the actuating levers; Fig. 5 is a detail end view of the main and auxiliary brace plates; and, Fig. 6 is a detail view of a supplemental brace plate hereinafter referred to.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The framework of my improved track lining device comprises a base plate 1 and side bars 2 and 3 that are preferably cast or otherwise constructed as an integral structure, the said side bars being formed with cheek pieces or upward extensions 2^a and 3^a adapted to form bearings for several of the revoluble elements hereinafter specified.

4 designates a brace plate which extends obliquely to the base plate 1, as shown, and which is adapted to extend along the shoulder of an embankment or "dump" with the framework resting level on the ground. This brace plate is rigidly connected to the framework by means of a main or intermediate post 5 and two side posts 6 that are connected to the rear end of the base plate 1 and by a connecting bar 7 which extends at right angles to the posts and is connected to the intermediate post at one end and to the base plate 1 at its other end, as clearly illustrated in the drawings.

A draw bar 8 is adapted to move longitudinally in the framework between the side bars 2 and 3, said draw bar being formed on its upper surface with a rack 8^a. The draw bar 8 is supported preferably by antifriction rollers 9 and 10 journaled between the side bars 2 and 3 at the front and rear of the framework. The draw bar 8 is provided at its front end with a pivoted shackle 11. This shackle is formed with a socket 12 designed to be closed or covered by a pivoted latch 13. The socket 12 is designed for the reception of the hook 14, the hook being formed with a slotted rear end 15 for this purpose. The hook 14 is preferably provided with a bail 16 by which it may be carried from place to place.

In the practical operation, after the framework has been set level along side of the track with the brace plate engaging the shoulder of the embankment or "dump," the hook 14 is secured in the shackle 11, and the ballast is shoveled out from underneath the rail and the hook engaged with the base flange of the rail, the draw bar being then worked backwardly in the framework to draw the track towards the latter. A roller preferably extends across the front end of the draw bar and bears against the same, said roller being mounted to turn in spring pressed boxings 18 mounted in standards 19 at the front of the framework. These standards are held rigid by means of braces 20 and straps 21 as shown.

In order to actuate the draw bar, a pinion 22 engages with the rack 8^a of the draw bar. This pinion 22 is mounted fast on the shaft 23 journaled in the cheek pieces or extensions 2^a and 3^a of the side bars, and a ratchet 24 meshes with the pinion to turn the same. This ratchet 24 is mounted loose on the transversely extending shaft 25 journaled in the cheek pieces 2^a and 3^a as shown.

Two levers 26 are pivotally mounted at their lower ends on the shaft 25, the ends of said levers being connected for simultaneous movement by means of a cross bar 27. This cross bar 27 is formed with sockets 28 adapted to receive hand rods, so that the levers may be worked back and forth.

The cross bar 27 is provided with a bracket 29, and a pawl 30 is suspended from one end of the said bracket. This pawl is adapted to engage the ratchet wheel 24 while the levers are worked back and forth, so as to effect the rotation of the ratchet 24 and the consequent rotation of the pinion 22, so as to work the draw bar backwardly into the framework and move the track.

A pin 31 extends outwardly from the cross bar 27 and extends through the pawl 30, and a spring 32 encircles said pin and bears outwardly against the pawl with tension to swing the pawl out of engagement with the ratchet, so as to hold the pawl inoperative whenever

desired. To hold the pawl in an operative position, a keeper 33 is secured to the cross bar and projects through the pawl, said keeper being in the form of a strap or plate formed with an orifice through which a key 34 is intended to be thrust to hold the pawl in proper position for engagement with the ratchet, against the tension of the spring 32.

35 designates a detent pawl designed for engagement with the rack 8[a], and said detent pawl is mounted on a shaft 36 journaled in the rear ends of the side bars 2 and 3 and provided with a crank handle 36′ by which the pawl may be turned out of engagement with the rack when it is desired to work the draw bar forwardly in the framework.

37 designates a reversing pawl adapted to work the draw bar forwardly and said reversing pawl is provided with a catch 38 by which it may be normally held in an inoperative position.

In the event that the side or shoulder of the embankment or "dump" is soft, I provide a supplemental brace plate 40 which is adapted to form an extended bearing for the brace plate 4 and which is preferably applied thereto in a detachable manner as by the sockets 41 formed in the supplemental brace plate that receive the pins projecting from the main brace plate 4.

39 designates handles that are secured to the opposite side bars 2 and 3, so that the entire apparatus may be carried from one point to another.

Having thus described the invention, what is claimed as new is:

1. An apparatus of the character described, comprising a framework adapted to rest level adjacent a railway track, a brace plate secured to the framework and extending below the same at an inclination thereto and adapted to bear against the shoulder of an embankment or "dump", a draw bar mounted to move longitudinally in the framework, a grapple or hook connected to the front end of the draw bar and designed for engagement with a track rail, and means for working the draw bar backwardly in the framework.

2. An apparatus of the character described, comprising a framework, a brace plate secured to the framework and extending below the same and disposed at an inclination to the bottom of the framework for the purpose specified, a draw bar mounted to move longitudinally in the framework and provided at its front end with a shackle, a hook detachably connected to said shackle and designed for engagement with the track rail, and means for working the draw bar backwardly and forwardly in the framework.

3. An apparatus of the character described, comprising a framework consisting of a base plate and spaced side bars, rollers journaled in the side bars at the front and rear thereof, a draw bar mounted on said rollers and movable longitudinally in the framework, said draw bar being provided with a rack, a hook designed for engagement with the front end of the draw bar and adapted to engage a track rail, a spring pressed roller extending over the draw bar, a detent pawl adapted to engage the rack and hold the draw bar at different points of retraction within the framework, means for releasing said detent pawl, and means for working the draw bar backwardly and forwardly in the framework.

4. An apparatus of the character described, comprising a framework consisting of a base plate and spaced side bars, rollers journaled in said side bars, a draw bar mounted to move longitudinally in the framework of said rollers, a hook connected to the front end of the draw bar and designed for engagement with a track rail, said draw bar being provided with a rack, a pinion journaled in said side bars of the framework and meshing with said rack, a ratchet meshing with said pinion, a shaft upon which said ratchet is loosely mounted, said shaft being mounted in the said bars, a pawl designed to engage the ratchet, levers loosely mounted on the shaft of the ratchet, a cross bar connecting said levers together and forming a support for the pawl, said cross bar being provided with sockets and hand rods accommodated in said sockets, as and for the purpose set forth.

5. An apparatus of the character described, comprising a framework consisting of a base plate, spaced side bars, a draw bar mounted to move longitudinally in the framework and provided with a ratchet surface, a hook connected to said draw bar and adapted for engagement with a track rail, a pinion journaled in the side bars and meshing with the rack of said draw bar, a ratchet wheel meshing with said pinion, a shaft on which said ratchet wheel is loosely mounted, said shaft being secured to the side bars, levers pivotally mounted on said shaft, a cross bar connecting the ends of said levers together, a pivoted pawl carried by said cross bar and spring pressed away from the ratchet, and means for holding the pawl against the tension of the spring, in operative relation to the ratchet.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. DUGGER. [L. S.]

Witnesses:
FRANK RAYBORN,
THOMAS RAYBORN.