

No. 881,600.

PATENTED MAR. 10, 1908.

J. P. MANSON.

COMBINED FENDER AND TRACK CLEANER.

APPLICATION FILED SEPT. 19, 1907.

2 SHEETS—SHEET 1.

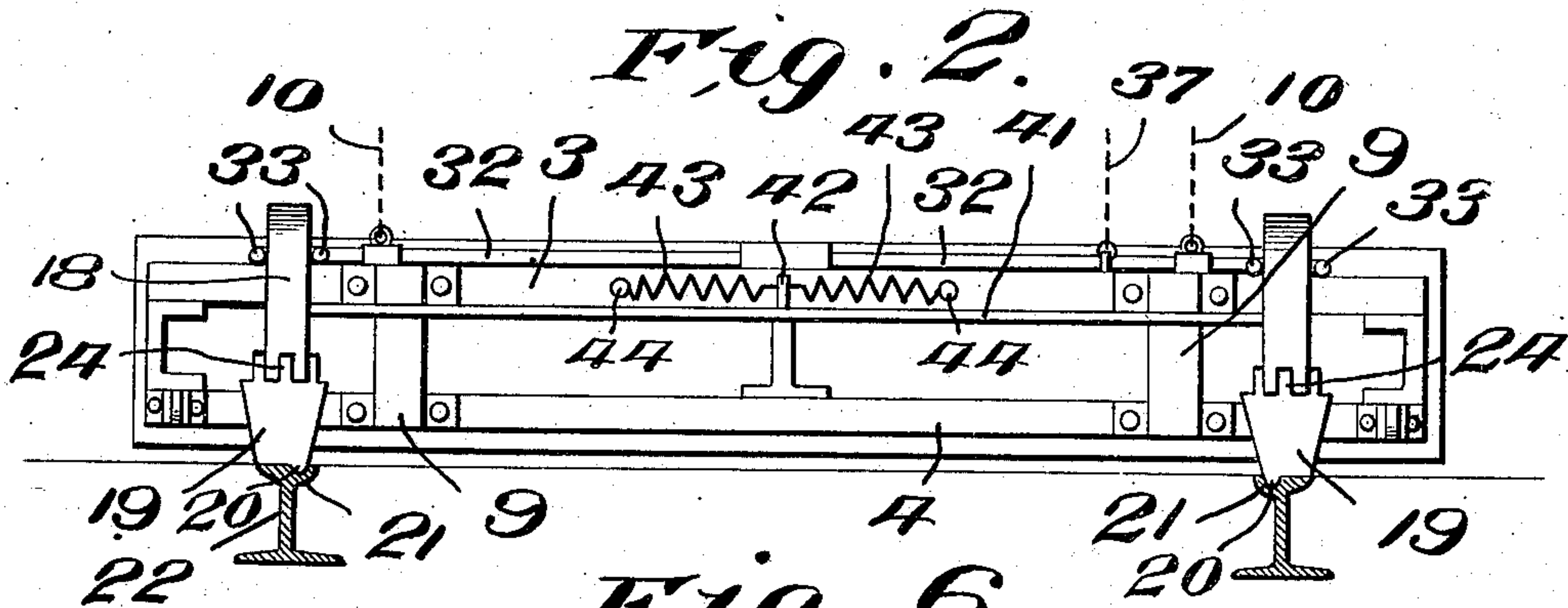
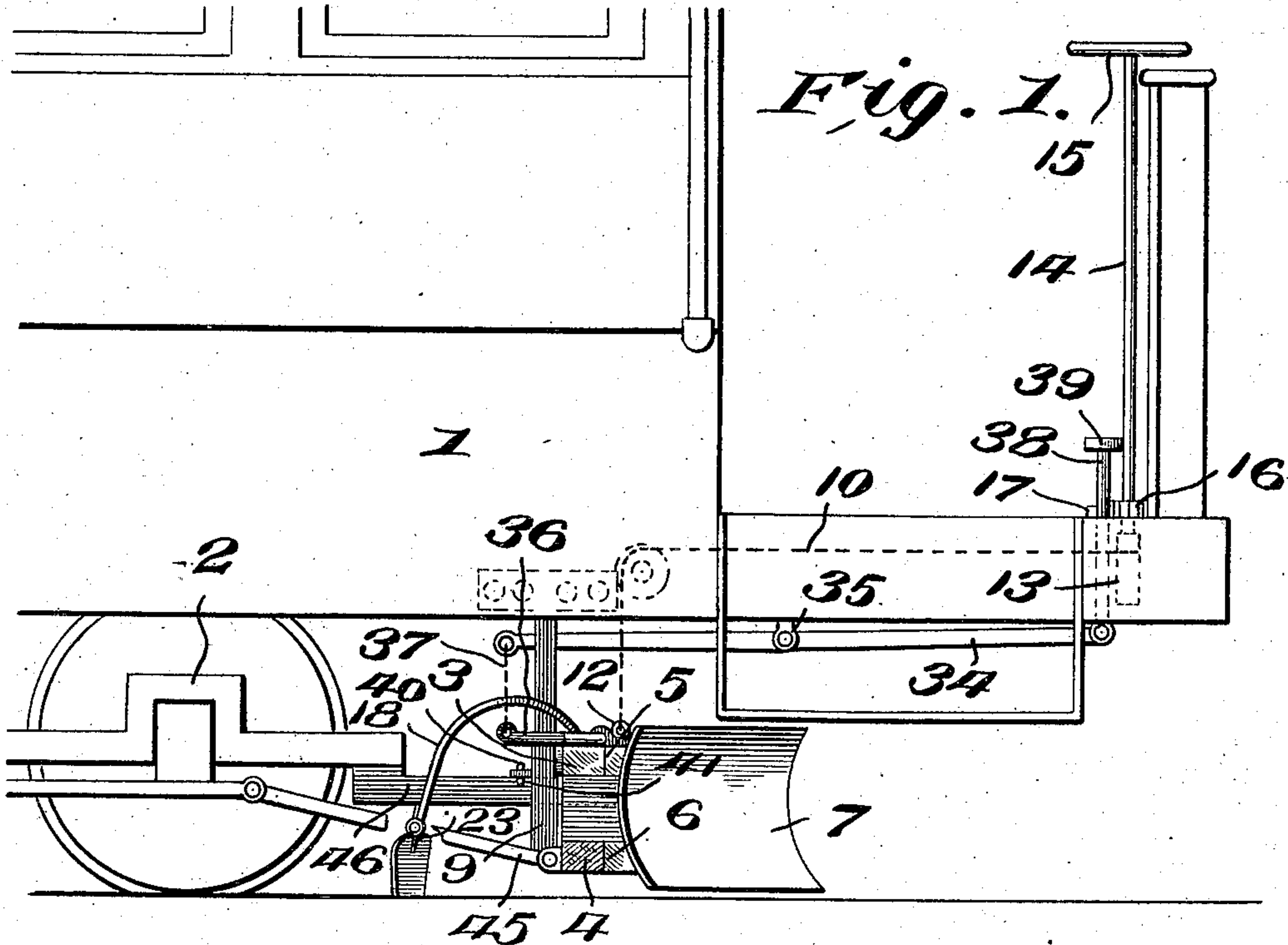
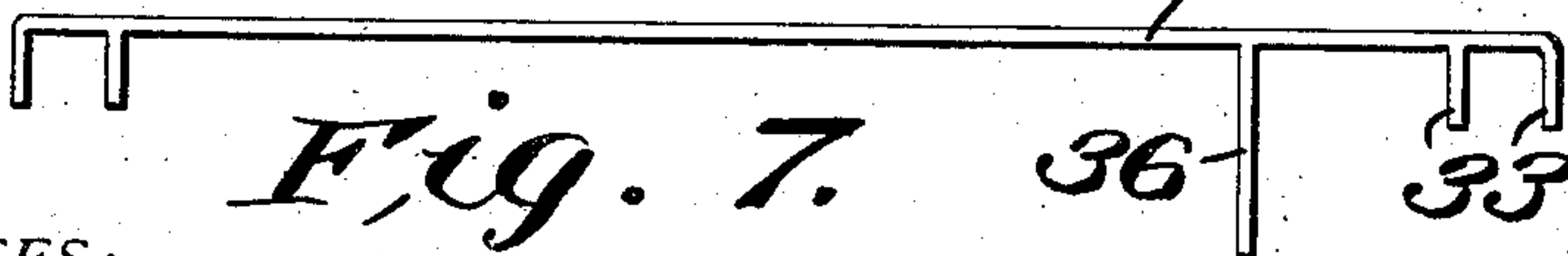
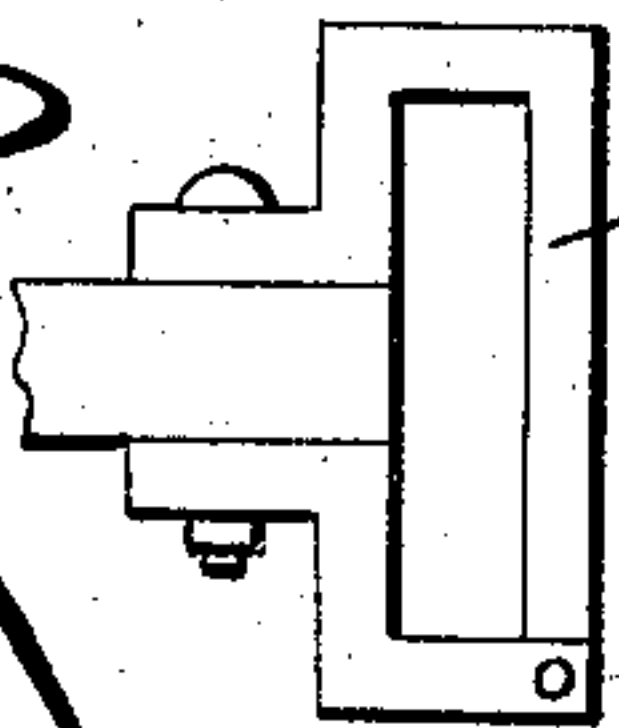


Fig. 6.



WITNESSES:

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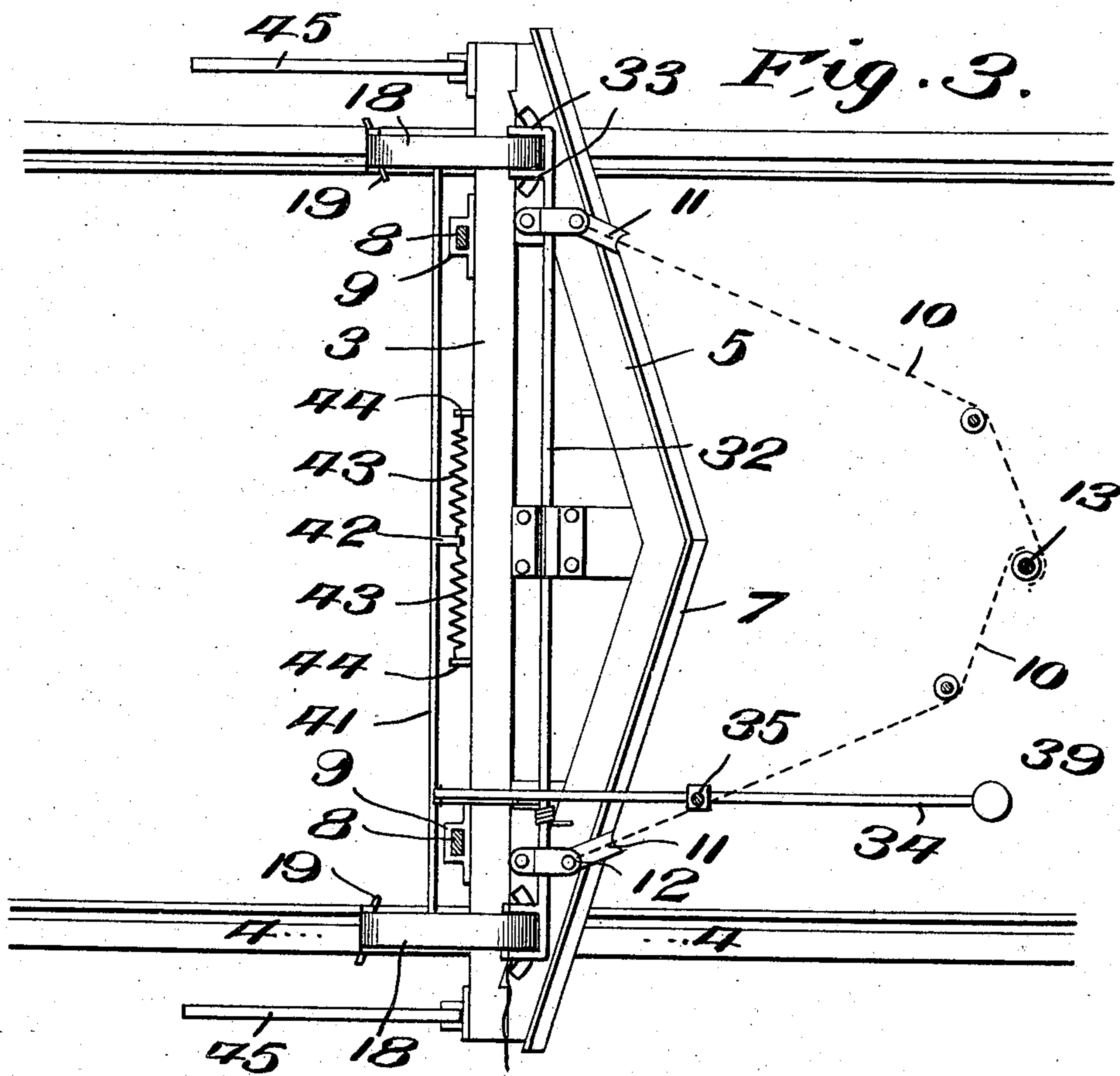
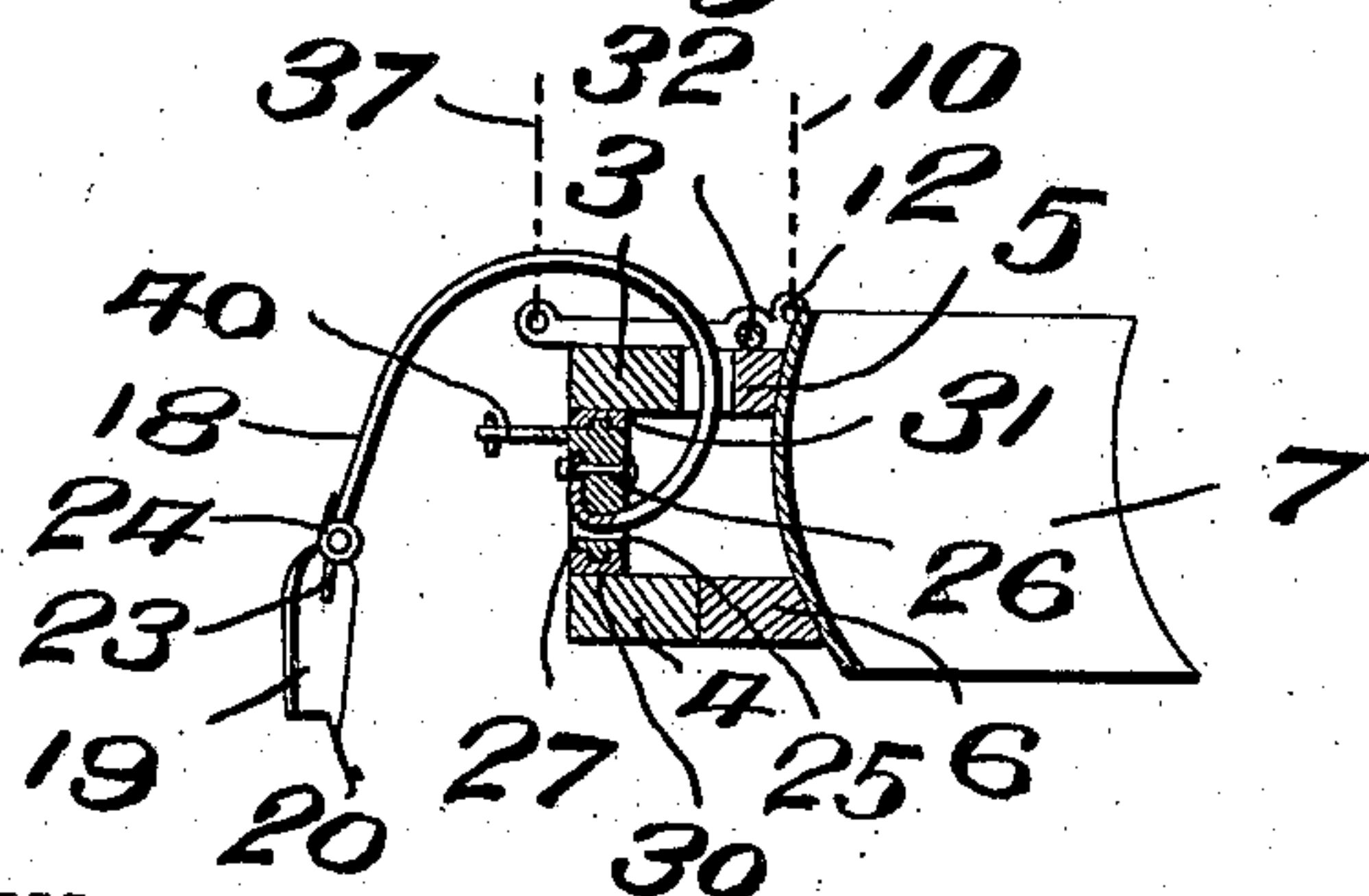


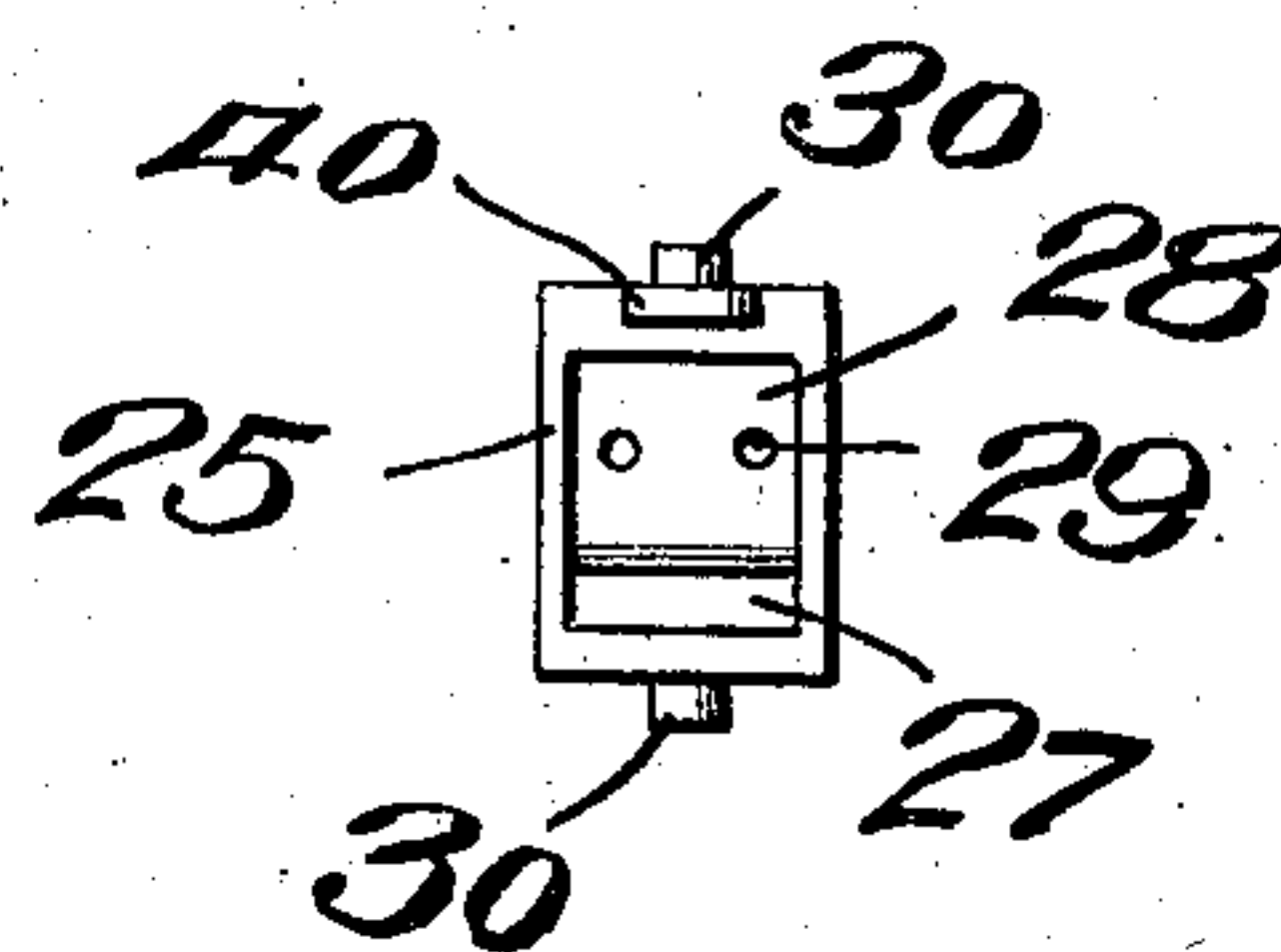
Fig. 4.



WITNESSES:

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Fig. 5.



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UNITED STATES PATENT OFFICE.

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COMBINED FENDER AND TRACK-CLEANER.

No. 881,600.

Specification of Letters Patent.

Patented March 10, 1908.

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To all whom it may concern:

Be it known that I, JOSEPH P. MANSON, a citizen of the United States, residing at Hartland, in the county of Somerset and State of Maine, have invented certain new and useful Improvements in Combined Fenders and Track-Cleaners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in combined fenders and track cleaners, and more particularly to that class adapted to be used in connection with street cars, or the like, and my object is to provide means for cleaning snow, and the like, from the track way.

A further object is to provide means for lowering the cleaning device so that the same will serve as a fender.

A still further object is to provide means for releasing portions of the cleaning device, so that they will follow the track when the car is rounding a curve.

A still further object is to provide means for raising the cleaning devices a distance above the track-way.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings which are made a part of this application, Figure 1 is a side elevation of a portion of a steel railway coach showing my improved device secured thereto. Fig. 2 is a rear elevation of the cleaning device removed from the coach showing the track way in section. Fig. 3 is a top plan view thereof. Fig. 4 is a sectional view as seen on line 4—4, Fig. 3. Fig. 5 is an elevation of the frame employed for holding the track cleaners. Fig. 6 is a plan view of a locking device employed in connection with the cleaners, and, Fig. 7 is a detail plan view of a slightly modified form of means for securing the cleaner to the frame of the coach.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the body of a car or coach, which is constructed in the usual, or any preferred manner and is supported by the usual form of truck 2.

Extending horizontally below the body 1, are beams 3 and 4, to the forward edge of which are secured plates 5 and 6 respectively,

said plates being extended at an angle to the longitudinal plane of the beams, so that the central portion of the plates will be extended a distance from the beams at their central portion while the ends of the plates engage the ends of the beams, and secured to the forward edges of the plates 5 and 6 is a mold board 7, said mold board being concavo-convex in cross-section, and by securing the mold board to the plates, said mold board rests in a substantially V-shape, so that objects encountered by the mold board will be directed to one side of the track-way.

Extending downwardly from the body 1 are standards 8, which enter sockets, 9 carried by the inner edges of the beams 3 and 4, said standards, when entered in the sockets, preventing the guard from moving out of a vertical position, and, at the same time, allowing the beams and mold board to freely move vertically.

The beams 3 and 4 and parts carried thereby are supported by means of cables, or chains 10, which extend over sheaves 11 carried by the body 1 and are secured at their lower ends to eyes 12 on the plate 5, while the opposite end of the cables are secured to a drum 13 carried at the lower end of a winding shaft 14, said shaft extending upwardly from the platform of the body, and having an operating wheel 15 at its upper end, and with this construction it will be seen that when it is desired to raise or lower the mold board, the shaft 15 is correspondingly operated, said shaft being held against casual rotation in one direction by the usual form of ratchet and pawl 16 and 17 respectively. If the car should suddenly come upon any object on the track, it would only be necessary for the motorman to press his foot on the dog to release it when it falls instantly into operative position.

The mold board 7 is to be employed for removing snow, or the like, from the track-way, thus preventing cars from becoming stalled and also for preventing objects from passing below the car and under the trucks, and it will be readily seen that when the mold board is in its lowest position, an object on the track-way will be cast to one side when encountered by the mold board.

In cities where the streets are paved, the rails of the track-ways are provided in their upper surfaces with a channel, in which the flanges of the wheels travel, and in order to clean these channels of snow, dirt, or the like,

I secure between the beams 3 and 4, spring arms 18, to the free ends of which are secured shovels 19, said shovels having on their lower edges fingers 20, which are adapted to enter the channels 21 in the rails 22, and remove any sediment, or the like, contained therein, the shovels being set at an angle to the longitudinal plane of the rails, so that the sediment will be deposited to one side of the rails, and as the channels in the rails are located at one edge thereof, the fingers 20 are likewise located at one edge of the shovels, while the remaining portion of the edge of the shovels rest upon the track rails.

The shovels 19 are pivotally secured to the free end of the spring arms 18 and are normally held in their operative position by means of a spring 23, one end of which engages the forward face of the spring arms, while the opposite end thereof engages the forward face of the shovels, the rearward movement of the shovels being limited by means of a stop 24, which extends upwardly from the shovels, and engages the rear faces of the spring arms, and by this construction it will be seen that when the coach is moving rearwardly, the shovels will yield forwardly and pass over any objects encountered thereby.

The spring arms 18 are partially coiled and the opposite ends from that carrying the shovels 19 are fixed to a head 25, by means of bolts 26, the end of the spring arms being entered through slots 27 in the lower end of the heads 25, and are seated in a cavity 28, the bolts 26 being passed through the end of the spring arms and through bores 29 in the wall of the head.

The upper and lower ends of the heads 25 are provided with trunnions 30, which are adapted to be seated in bearings 31, said bearings and head being located between the beams 3 and 4 and adjacent each end thereof, the object in pivotally mounting the head, being to allow the arms 18 to swing laterally so that when the coach is passing around a curve, the shovels will follow the curvature of the track way, while the beams 3 and 4 and parts carried thereby will be moved out of alinement with the curvature of the track, as said parts are fixed to the body of the coach.

The spring arms 18 are normally held rigid with the beams 3 and 4 through the medium of a locking rod 32, which is rotatably mounted above the plates 5, and in front of the springs 18, each end of the rod being provided with a pair of extensions 33, which are adapted to extend to each side of and engage the spring arms 18 and prevent the head 25 from swinging on its trunnions. When, however, a curvature in the track is encountered, the rod 32 is partially rotated through the medium of a lever 34, which is pivotally secured to the lower surface of the body as shown at 35 and has one of its ends secured to an arm

36 carried by the rod 32 by means of a chain 37, while at the opposite end thereof is pivotally secured a pin 38, which extends upwardly through the platform of the body and is provided at its upper end with a head 39, so that when it is desired to release the spring arms 18 and permit the head 25 to swing, the operator depresses the lever 34 by placing weight on the upper end of the pin 38, thereby rocking the lever on its pivot point and raising the extensions 33 out of engagement with the spring arms 18.

Each of the heads 25 is provided with a controlling arm 40 between which is disposed a bar 41 thereby causing said heads to swing in unison. The bar 41 is also employed for returning the heads 25 to their initial positions, so that the extensions 33 will readily engage the spring arms 18 when the car is traveling on a straight track, and in order to automatically operate the bar 41, I secure to opposite sides of a stem 42, fixed to the central portion of the bar 41, springs 43, the opposite ends of said springs being secured to stems 44 carried by the beam 3, and it will be readily seen that by placing the springs at opposite sides of the stem 42, and securing the opposite ends thereof to the beam 3, tension will be exerted on one of said springs when the heads 25 are rotated, and as soon as the coach passes the curve and reaches the straight portion of the track, the spring having tension directed thereon will immediately swing the heads until the extensions 33 on the rod 32 will engage the spring arms carried by said head.

In addition to bracing the parts carrying the mold board, with the standards 8 to hold the same against rearward movement, I provide links 45, which are pivotally secured at one end to the ends of the beam 4, while the opposite ends thereof are pivotally secured to portions of the truck 2, and in order to relieve the cables 10 of the weight of the beams, and parts carried thereby, when the same is in its lowered position, I secure to parts of the truck 2, supports 46, the free ends of which extend between the beams 3 and 4, so that when said beams are lowered, the beam 3 will rest upon the supports thus being carried along at a uniform height, regardless of the oscillation of the car.

In some instances, where an extremely long body is employed, it is preferable to secure the cleaner to the forward trucks of the coach, instead of to the bottom of the coach, and, in this instance, the standards 8 are dispensed with and a clevis 47 employed in connection with the sockets 9, said clevis being formed in two sections and hinged together so that the same may be readily disposed through the sockets 9 and the clevises are secured in any preferred manner to the forward edge of the truck, this form of device being shown in Fig. 7 of the drawing.

It will now be seen that I have provided a very efficient and economical means for cleaning the track-way so the cars will not become stalled in bad snow storms and also for preventing objects from passing beneath the car, and it will further be seen that I have provided means for readily and quickly operating the parts of the device, whereby the same will be maintained under the control of the operator at all times.

What I claim is:

1. The combination of a car body having depending standards thereon; of beams, sockets on said beams adapted to receive said standards, a mold board carried by said beams and means to raise and lower said beams and mold board.

2. The combination with a car body; of beams below said car body a mold board carried by said beams, means to slidably secure said beams to the car body, supporting cables for said beams, means to operate said cables, whereby the beams will be raised or lowered, and additional means to limit the downward movement of said beams.

3. The combination with a pair of beams, a mold board carried by said beams and means to secure said beams to a car body; of spring arms, heads for said arms, means to rotatably mount said heads between said beams and means at the free end of said spring arms to engage and clean track rails.

4. The herein described track cleaner, comprising the combination with a pair of beams and means to mount the same upon a car body; of a spring arm at each end of said beam, a head rotatably mounted between said beams to which one end of said arms are

fixed, a shovel yieldingly secured to the opposite ends of said spring arms, a finger on said shovel and means to normally hold said heads against rotation.

5. The herein described track cleaner, comprising the combination with a pair of beams, and means to secure said beams to a car body; of a head at each end of said beams, means to pivotally mount said heads between said beams, spring arms having one of their ends fixed to said heads, a shovel at the opposite end of said spring arms, a finger on said shovel and at one edge thereof, a rod adapted to normally hold said heads against rotation and means to normally return said heads to their initial position.

6. The herein described track cleaner, comprising the combination with beams and means to secure said beams to a car body; of spring arms pivotally secured to said beams, a rod rotatably mounted on said beams, extensions on said rod adapted to engage said spring arms and hold the same against rotation, means carried by the car body to partially rotate said rod, whereby the extensions will be moved out of engagement with the spring arms and allow said spring arms to pivot and means to return said spring arms to their initial position when the car is traveling on a straight track.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH P. MANSON.

Witnesses:

R. WESTON WEBB,
WILLIAM B. BROWN.