

No. 654,670.

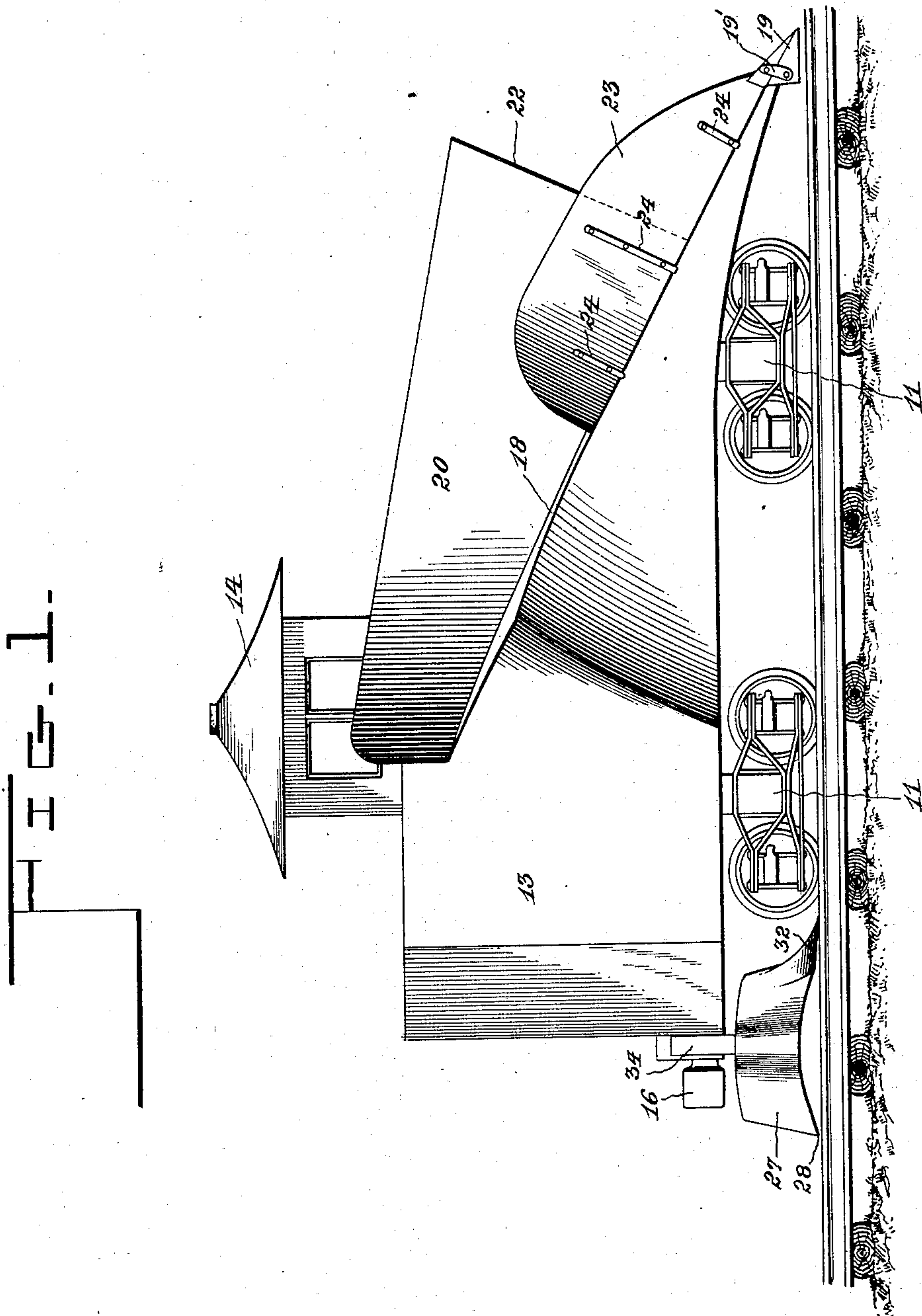
Patented July 31, 1900.

M. PERREAULT.
SNOW PLOW.

(Application filed Apr. 7, 1900.)

(No Model.)

4 Sheets—Sheet 1.



Witnesses:
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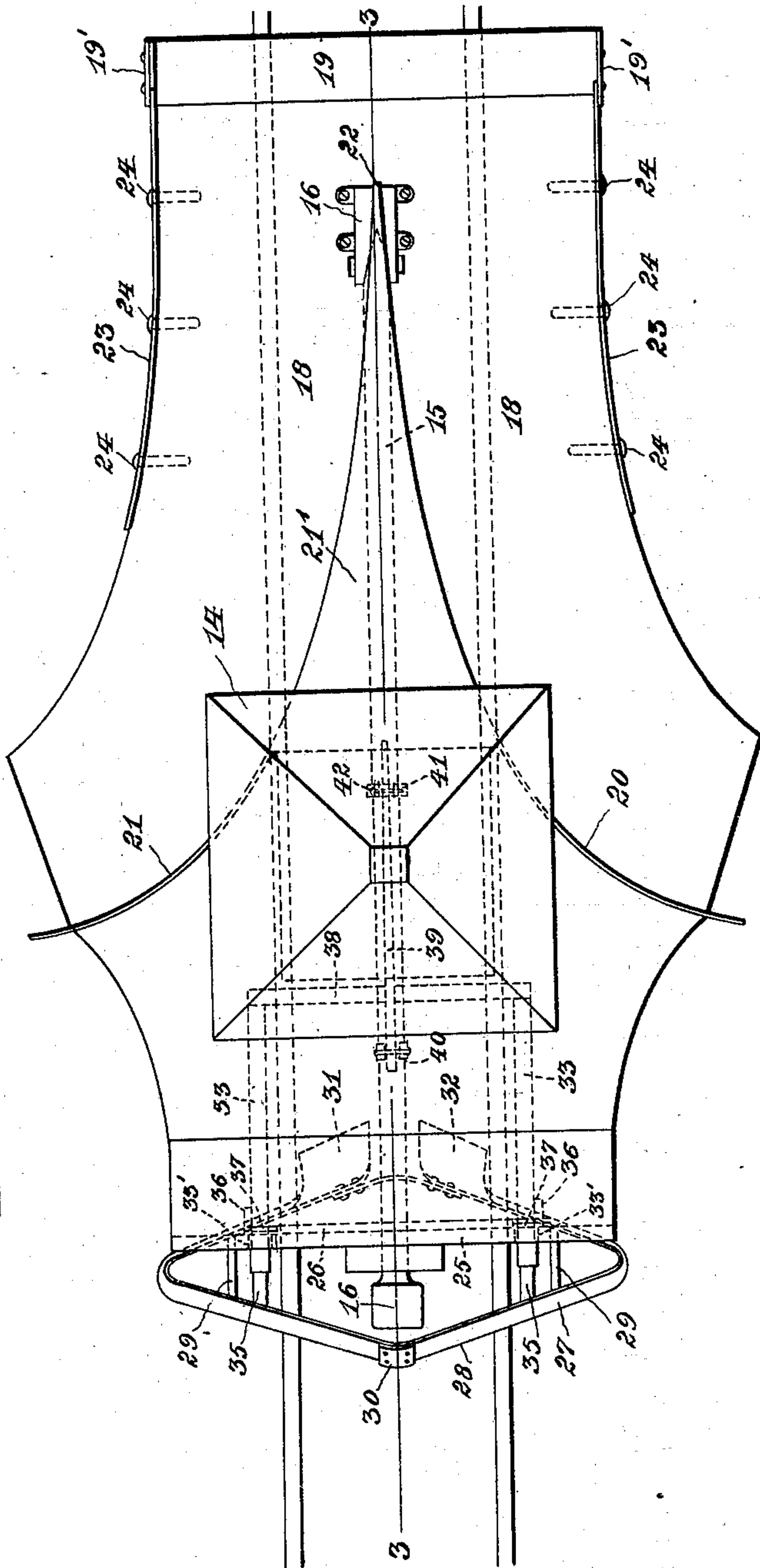
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FIG. 2.



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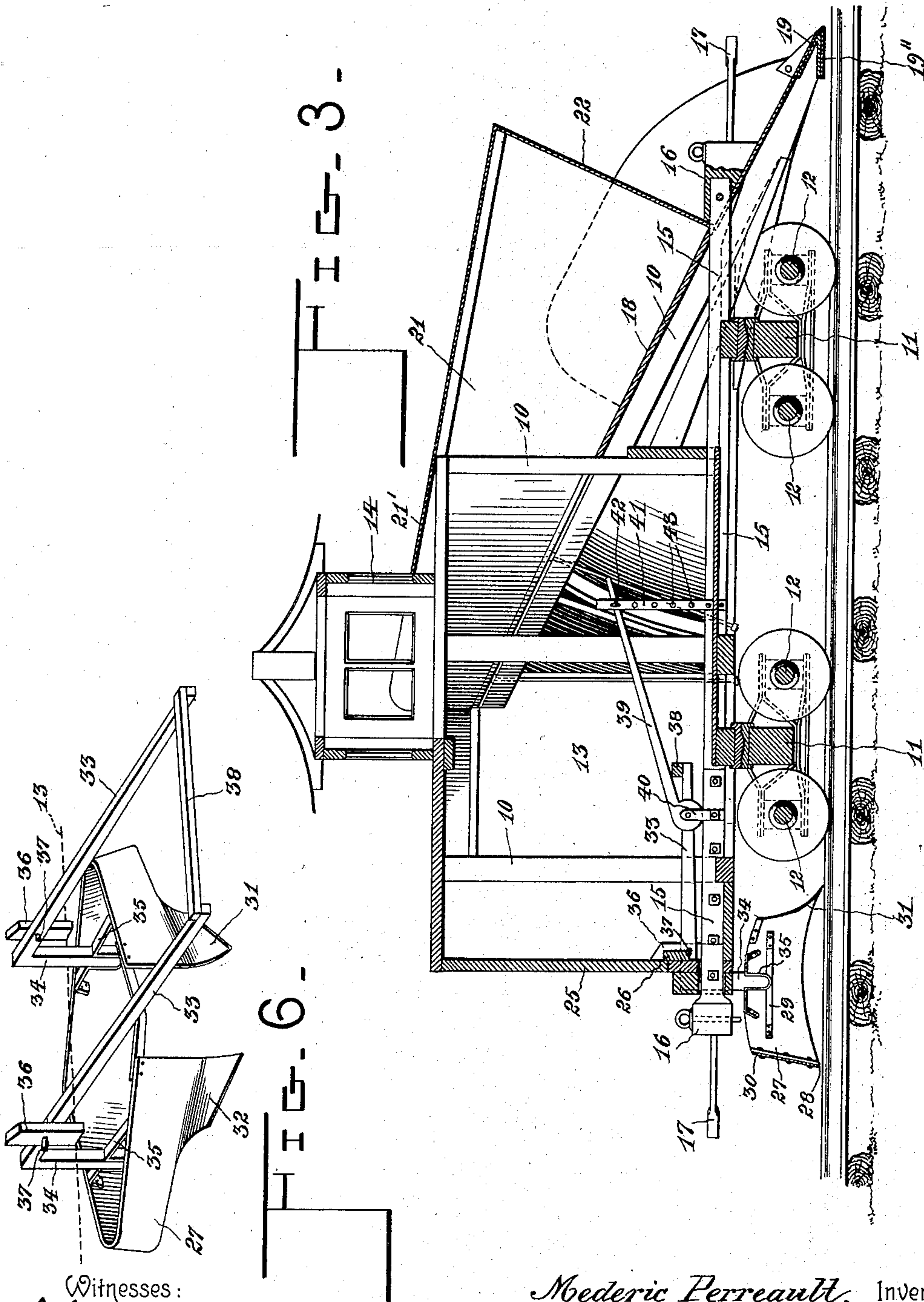
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4 Sheets—Sheet 3.



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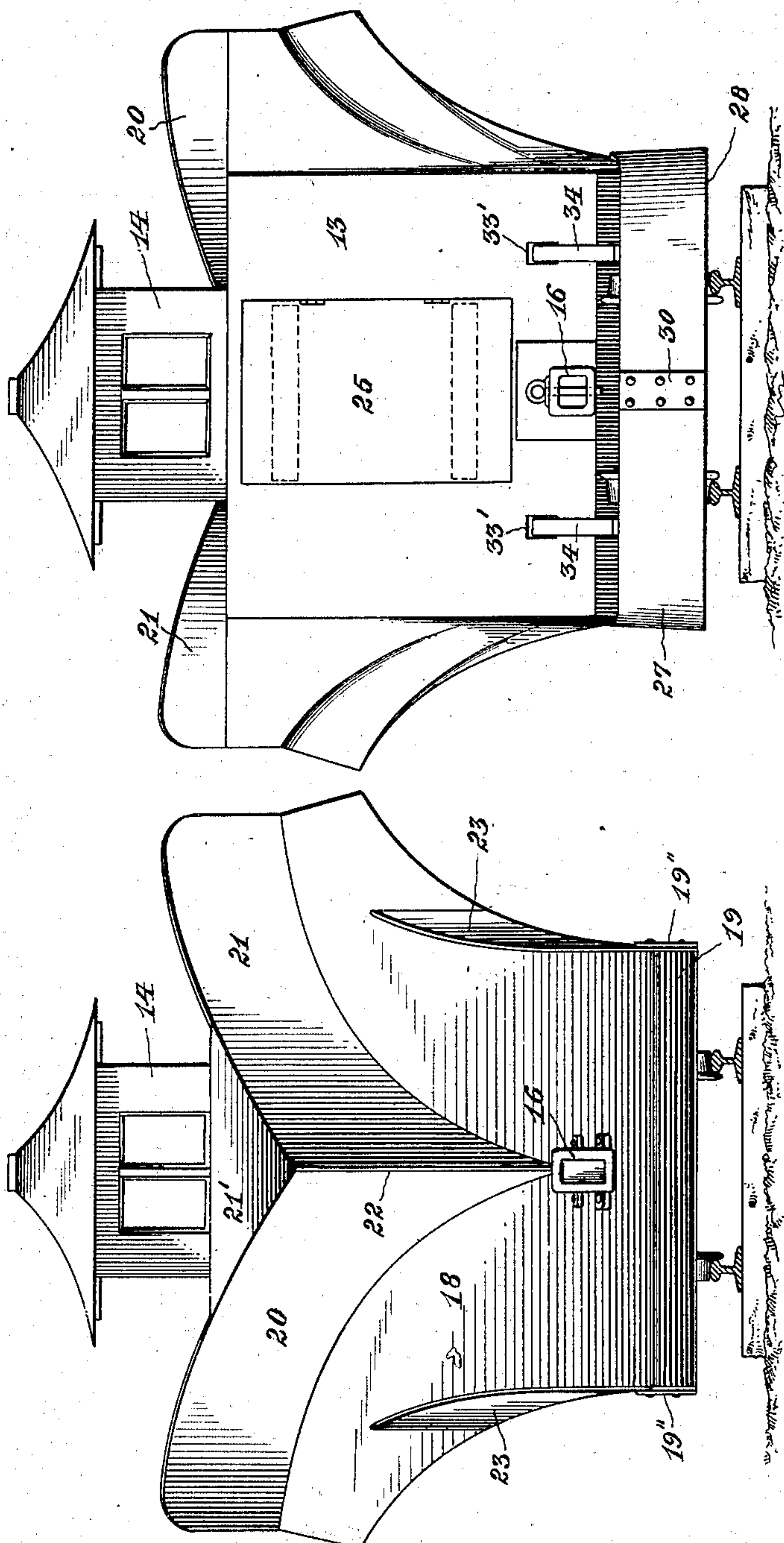
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4 Sheets—Sheet 4.

FIG-4.

FIG-5.



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UNITED STATES PATENT OFFICE.

MEDERIC PERREAULT, OF ST. THOMAS DE JOLIETTE, CANADA.

SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 654,670, dated July 31, 1900.

Application filed April 7, 1900. Serial No. 11,946. (No model.)

To all whom it may concern:

Be it known that I, MEDERIC PERREAULT, a subject of Her Majesty the Queen of Great Britain, residing at St. Thomas de Joliette, county of Joliette, Province of Quebec, Canada, have invented certain new and useful Improvements in Snow-Plows; and I do hereby declare that the following is 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 improvements in snow-plows for clearing heavy snows from railway-tracks; and one object in view is to provide a plow adapted to lift the snow from the track-rails, to divide the mass of snow in two parts, and to separately discharge the divided mass on opposite sides of the track.

A further object is to provide the plow with means for scraping the snow from the track-rails and from the inner faces of the rails themselves, so as to clear the way for the wheel-flanges, and with this scraper is associated means to lower and raise the scraper into and out of service.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty in the combinations of mechanisms and in the construction and arrangements of parts will be defined by the claims.

In the drawings, Figure 1 is a side elevation of a snow-plow constructed in accordance with this invention. Fig. 2 is a plan view thereof. Fig. 3 is a vertical longitudinal sectional elevation taken in the plane of the dotted line 3 3 on Fig. 2. Fig. 4 is an elevation looking at the front end of the plow. Fig. 5 is a rear end elevation of the plow. Fig. 6 is a detail perspective view of the means for suspending and adjusting the rear scraper.

The same numerals of reference are used to indicate like parts in each of the several figures of the drawings.

The operating parts of the snow-plow of my invention are supported by a suitable frame 10, which is imposed upon the front and rear trucks 11, having the wheeled axles 12, the wheels of which are adapted to the rails of an ordinary track. This main frame supports the housing 13, upon which may be erected

the elevated cab 14, within which the attendant may be stationed for the purpose of keeping a lookout in either direction along the track; but this elevated cab may not be necessary. Hence it can be omitted, if desired.

A draft-beam 15 extends the full length of the main frame, and it is disposed above the trucks and in the middle of the housing. The front end of this draft-beam protrudes through the inclined deck, presently described, while the rear end of said draft-beam extends beyond the rear of the housing. Said protruding ends of the draft-beam are equipped with the draw-heads 16 16, adapted to receive the usual draw-links 17; but the style of coupling may be modified within the skill of the constructor.

One of the elements of my improved plow resides in the inclined deck 18, which is built upon the frame and housing of the structure so as to extend in an upward and rearward direction from a point close to the track substantially to the upper part of the housing 13, as more clearly shown by Figs. 1, 3, and 4. The lower front edge of this inclined deck is straight and of a length exceeding the width of the track, (see Fig. 4;) but the sides of the deck are curved outwardly, as shown by Figs. 2 and 4, whereby the upper side portions of the deck extend for considerable distances laterally of the track for the purpose of discharging the separate portions of the divided mass of snow well beyond both sides of the track. The lower straight edge of the deck is shod with a shoe 19, preferably constructed of metal in the angular form shown by Fig. 3. This shoe is applied firmly to the deck in any approved way—such, for example, as by the braces 19, as shown in Fig. 1—and this shoe is provided with a horizontal flange 19", that extends rearwardly beneath the front edge of the deck. (See Fig. 3.) The shoe is supported by the deck a short distance above the upper edge of the track-rails, and this deck and the shoe operate on the advancement of the plow to lift the mass of snow from the track, thus leaving a thin layer of snow over the track, which is subsequently removed by the operation of the scraper, the latter being carried at the rear end of my improved plow.

20 21 designate the curved deflectors, which

extend upwardly from the deck for suitable distances and are arranged in positions to diverge laterally with respect to each other, such divergence being toward the rear of the inclined deck. The deflectors, however, converge toward each other as they approach the lower front portion of the deck, and such convergence of the front portions of the deflectors causes them to meet in the plane of the longitudinal axis of the plow, so as to form a dividing-crest 22. (See Figs. 2 and 4.) The deflectors extend from the middle portion of the deck toward the opposite side edges thereof, and in the operation of the plow the crest 22 divides the mass of snow lodged on the lower front portion of the deck into two separate portions, which travel upwardly on the deck and are deflected laterally by the deflectors 20 21, so as to be discharged separately from opposite sides of the deck.

23 designates the side guards, which are fastened to the side edges of the inclined deck in positions to extend from the lower front edge of the deck to points opposite the curved deflectors. These guards are held firmly in place by suitable braces 24, and said guards prevent the snow from prematurely leaving the deck during the operation of lifting and dividing the mass of snow.

To prevent the snow from falling over the upper edges of the deflectors 20 21 and accumulating on the deck in rear of such deflectors, I employ the top plate 21', which is united to the upper edges of the deflectors, so as to extend from the dividing-crest 22 to a point near the roof of the housing or the front of the elevated cab.

Access to the interior of the cabin or housing is obtained at the rear through the door 25, which when closed is adapted to abut against a fixed batten 26. (See Fig. 3.)

To clear the track from the snow which may remain on the rails after the shoe traverses the same, I employ the scraper shown by Figs. 1, 2, 3, 5, and 6. This scraper is a frame 27, which, as shown by Fig. 2, is approximately diamond-shaped, arranged with its major axis across the track, the length of this scraper-frame greatly exceeding the width of the track. Said frame is constructed, preferably, of metal, and it is reinforced by the internal braces 29, located near the ends thereof. It is to be observed that the front of the scraper-frame consists of inclined parts, which meet at an angle between the rails, and similarly the rear of the scraper-frame has the inclined parts meeting between the rails. The rear of the scraper-frame is adapted in one position of adjustment of said frame to have the lower edge 28 rest upon or contact with the upper edge of the track-rails for the purpose of scraping the snow therefrom, and this angular rear part of the scraper-frame is strengthened by the rear reinforcement 30. The front of the scraper-frame carries the curved shovels 31 32, which are arranged in reversed positions to each other and

are adapted, respectively, to travel in close relation to the inner edges of the opposite track-rails for the purpose of clearing snow away from said edges of the track-rails and make a clear passage-way for the flanges on the car-wheels. These shovels are suitably fashioned to fit close to the track-rails, and they are also curved to discharge the snow in opposite directions over said rails and to the outside of the track. The scraper-frame is suspended by the hanger-bars 33, which pass through the slots or openings 33', provided in the rear wall of the cabin or housing. The hanger-bars have the depending arms 34 made fast with the rear protruding ends thereof, and said arms are fastened by the straps 35 to the sides of the scraper-frame. (See Figs. 3 and 6.) Suitable blocks or other supports 36 are made fast in the rear part of the housing 13, close to the slots 33', and the hanger-bars 33 are pivoted at 37 to these blocks, the front ends of said hanger-bars being joined by the cross-bar 38. 39 is an operating-lever arranged to span and bear upon the cross-bar 38, the head end of said lever being fulcrumed to a short block 40, which is fastened in the housing between the hanger-bars 33 and the rear of the cross-bar 38. The free end of this lever works in a slotted post 41, which is fixed in the housing, and this post is engaged by a pin 42, adapted to be placed in either of a series of apertures 43 in said post. The lever may be elevated or depressed and held in its adjusted position by the pin, which is shiftable into either of the apertures of the post. The depression of the lever bears down upon the cross-bar 38, so as to turn the hanger-bars 33 on their pivots and throw the arms 34 in a rearward direction, whereby the rear edge 28 of the scraper-frame is lifted away from the track-rails and the shovels 31 32 are lowered into operative position to the rails of the track. The elevation of this lever 39 permits the cross-bar 38 of the hanger-bars to rise, and the weight of the frame assists in moving the arms 34 toward the front, whereby the shovels are raised out of position and the rear edge 28 of the scraper-frame is lowered to rest upon the track, and thereby adapt the scraper-frame to remove the snow from the rails.

While I have herein shown a preferred form of carrying my invention into effect, yet I do not desire to limit myself to such preferred details of construction, but claim the right to use any and all modifications thereof which will serve to carry into effect the objects to be attained by this invention in so far as such modifications and changes may fall within the spirit and scope of my said invention.

I claim—

1. In a snow-plow, the combination with a wheeled frame, of an approximately diamond-shaped scraper-frame arranged for its major axis to lie across the wheeled frame and having the entire rear section thereof adapted to serve as a scraping edge 28, the oppositely-

inclined shovels carried by the inclined front members or parts of the scraper-frame, and means for suspending and tilting the scraper-frame to bring the rear edge 28 or the shovels into position for service, for the purpose described, substantially as set forth.

2. In a snow-plow, the combination of a scraper-frame having a scraper edge 28 at the rear thereof, the shovels 31, 32, attached to the oppositely-inclined members at the front of the scraper-frame and arranged to face in opposite directions and to travel close to the inner sides of the rails of a railway-track, means for suspending the frame on an axis between the shovels and the scraping edge, and means for tilting the scraper-frame, substantially as described.

3. In a snow-plow, the combination with a wheeled frame, of the pivoted hanger-bars

having the depending arms and connected by a cross-bar, a scraper-frame provided at the rear with the scraper edge and at the front with the shovels and attached to the arms to be suspended thereby at a point between the scraper edge and the shovels, a lever fulcrumed independently of the hanger-bars and arranged to engage with the cross-bar thereof, and means for locking the lever in either of several adjusted positions, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

MEDERIC ^{his} × PERREAULT.
mark

Witnesses:

J. ANTONIO BEAUDONI,
ARTHUR MARION.