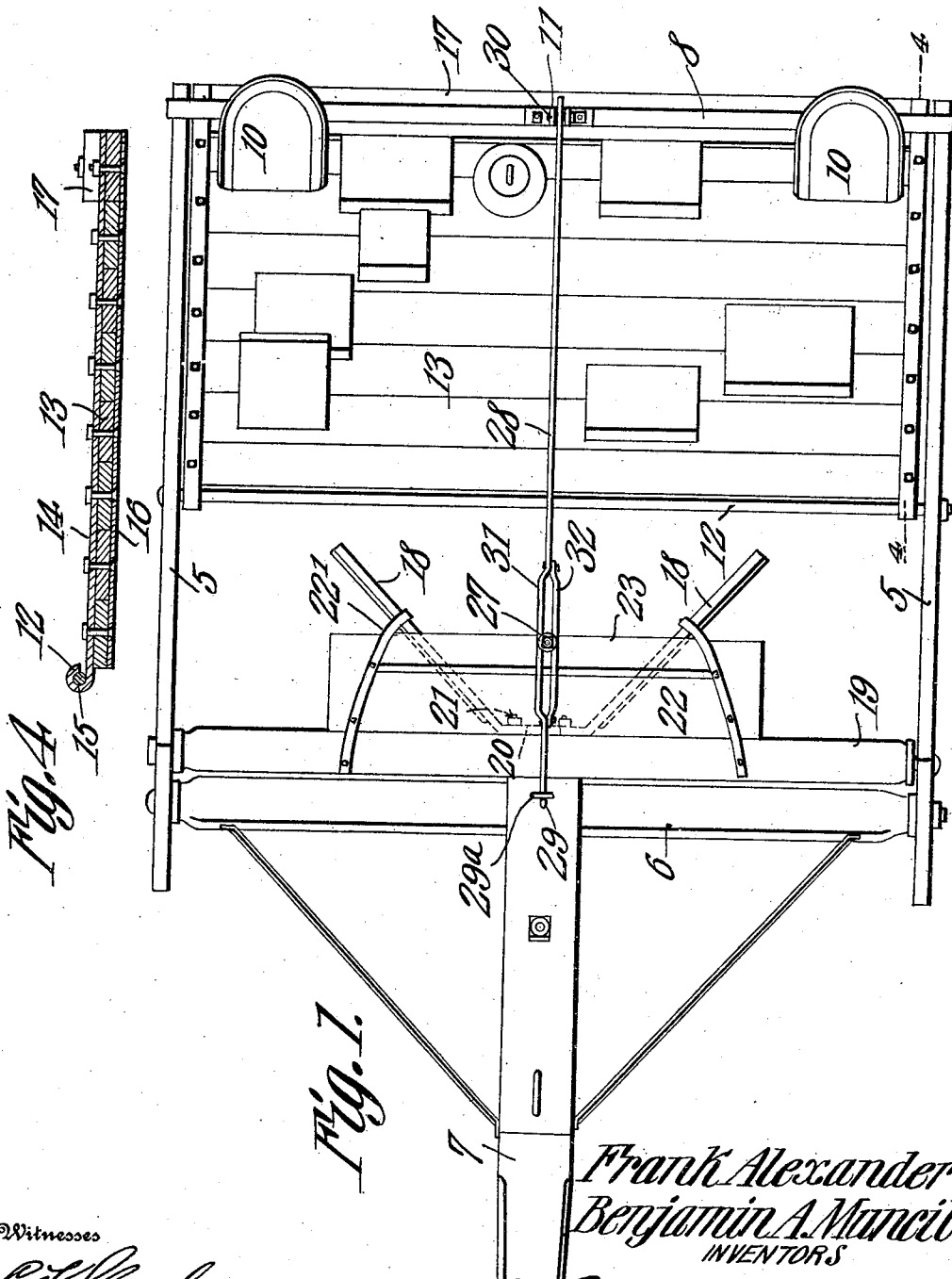


F. ALEXANDER & B. A. MUNCIL.
 SNOW ROAD MAKING MACHINE.
 APPLICATION FILED MAR. 11, 1909.

937,561.

Patented Oct. 19, 1909.

2 SHEETS—SHEET 1.



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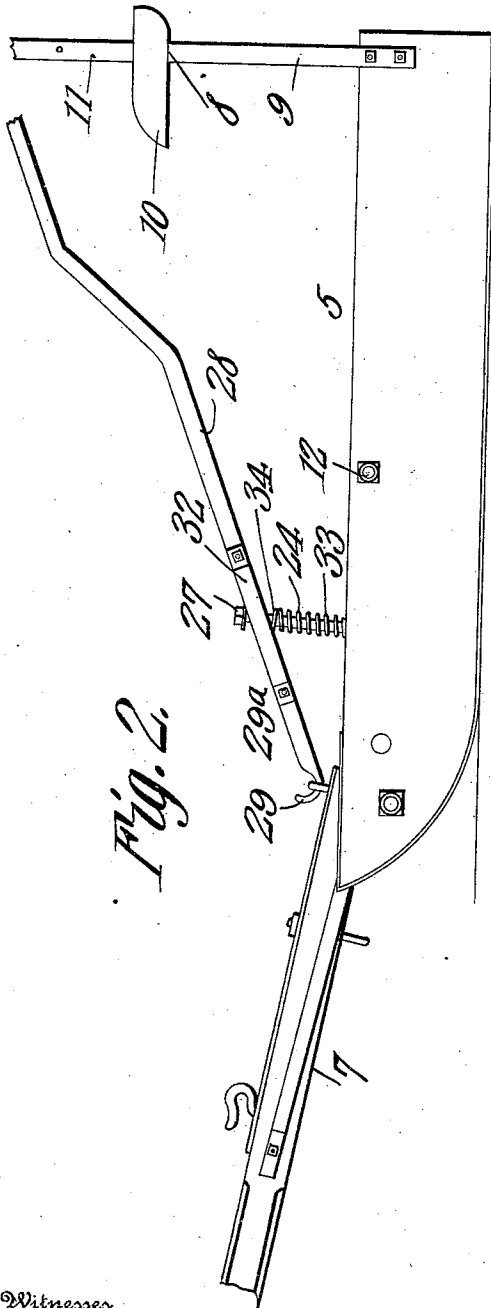


Fig. 2.

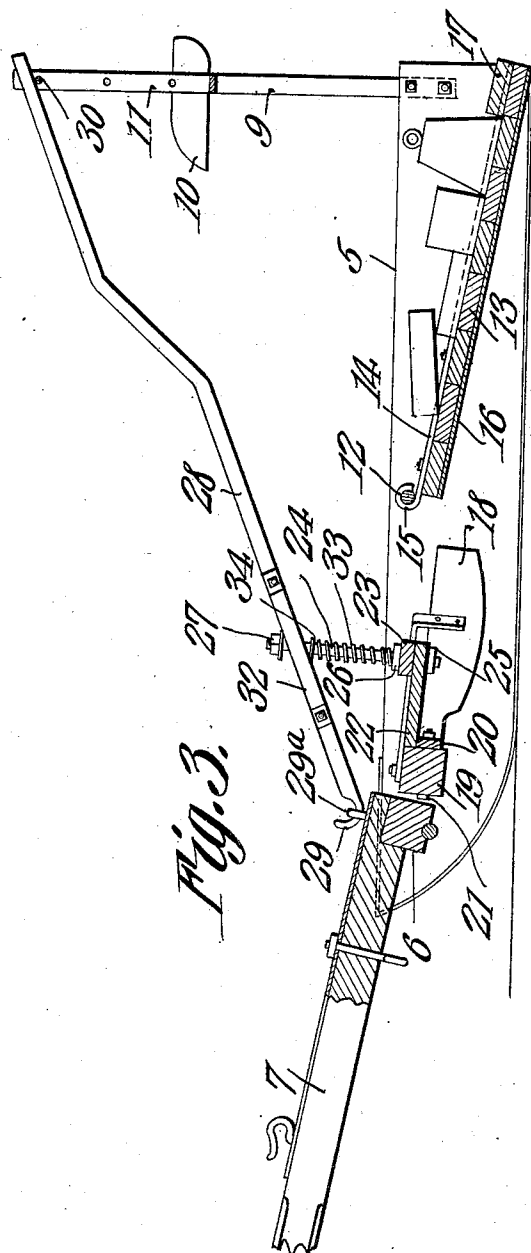


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK ALEXANDER AND BENJAMIN A. MUNCIL, OF PAUL SMITHS, NEW YORK.

SNOW-ROAD-MAKING MACHINE.

937,561.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed March 11, 1909. Serial No. 482,720.

To all whom it may concern:

Be it known that we, FRANK ALEXANDER and BENJAMIN A. MUNCIL, citizens of the United States, residing at Paul Smiths, in the county of Franklin and State of New York, have invented a new and useful Snow-Road-Making Machine, of which the following is a specification.

This invention relates to a machine which makes a road on snow by dragging a weighted platform over the same.

The object of the present invention is to provide a machine of this kind which can be operated in any depth of snow, and which can also be employed for packing snow on streets or roads to render the same passable for sleighs, teams and pedestrians.

Another object of the invention is to provide means for leveling off holes and hollows, and also to form a foot path on both sides of the road.

The invention also has for its object to provide a road-making machine of the kind stated, which is simple in structure, and easily operated.

With the foregoing objects in view, the invention consists in a novel construction and arrangement of parts to be hereinafter described and claimed, reference being had to the drawing hereto annexed in which—

Figure 1 is a plan view of the machine. Fig. 2 is a side elevation. Fig. 3 is a central longitudinal section. Fig. 4 is a section on the line 4—4 of Fig. 1.

The machine is in the form of a sled, the runners of which are indicated at 5. Extending between said runners, at the front end thereof, and mounted therein so as to be free to rock, is a cross-bar 6 to which the draft pole or tongue 7 is connected. The draft animals are connected to this pole or tongue in the ordinary manner.

The runners 5 are connected at their rear ends by a cross-bar 8 having downturned ends 9 which are bolted or otherwise suitably fastened to the runners on the outside thereof. By these downturned ends the cross-bar is spaced a suitable distance above the top of the runners, and said cross-bar carries seats 10 for the operators, said seats being secured to the cross-bar adjacent to the ends thereof. At the middle of the cross-bar is mounted a pair of uprights 11 which are spaced apart, and which are for a purpose to be presently described.

Extending between the runners 5 about

midway between the ends thereof, and secured thereto in any suitable manner, is a rod 12 which carries a platform 13. To the top of the platform, adjacent to the side edges thereof, are secured metal strips 14 which are bent at one end into eyes 15 through which the rod 12 passes, whereby the platform is hingedly connected to and supported by the said rod. The bottom of this platform is covered with a metal sheathing 16. Extending across the top of the platform at the free end thereof is a strip 17.

In front of the platform 13 is located a scraper comprising a pair of rearwardly diverging scraper-blades 18 secured to a cross-bar 19 extending between and mounted in the runners, said cross-bar being so mounted as to be free to rock. The scraper-blades are connected at their front ends by a shank 20 by means of which they are secured to the cross-bar 19, bolts 21 being passed through said parts and secured by nuts screwed thereon. The scraper-blades are slightly forwardly inclined in the direction of their lower ends, and their lower edges are also curved.

Extending rearwardly from the cross-bar 19 is a guard plate 22 which covers the front end of the scraper-blades, and which serves to prevent the snow from being thrown on the platform 13. To the scraper-blades are secured straps 22' which extend over the top of the guard plate, and are secured on top of the cross-bar 19. On top of the guard plate, adjacent to the rear edge thereof, and extending between the straps 22', is a strip 23 which serves as a brace.

Passing through openings in the guard plate 22 and the strip 23, is a stem 24, which is screw-threaded to receive nuts 25 and 26, the first-mentioned nut being screwed on the stem to engage the bottom of the guard plate 22, and the last mentioned nut being screwed on the stem to engage the top of the strip 23, whereby said stem is securely held in place. The stem rises from the strip 23 a suitable distance, and its upper end is also screw-threaded to receive the nut 27.

At 28 is indicated a lever having at one end a hook 29 which engages an eye 29^a on the butt end of the tongue 7. The other end of the lever enters between the uprights 11, and is held by a bolt 30 passing transversely therethrough. Intermediate its ends, the lever is formed with an off-set 31, and secured to the lever adjacent to the ends of

said off-set portion is a strip 32. The off-set 31 and strip 32 form a slot in which the stem 24 is received. The upper edge of the lever is engaged by the nut 27, and between the 5 lower edge of the lever and the nut 26 a spring 33 is coiled around the stem, a washer 34 being interposed between one end of the spring and the lever.

In the operation of the machine, the platform 13 is loaded with some heavy material 10 such as pig iron, stone, or lead, whichever is most convenient in the locality where the machine is in use. The platform is pitched 15 at an angle which throws all the weight on a small surface at the rear end thereof, and when said platform is dragged over the surface of the snow, the latter is packed 20 hard enough to form a road or path. The strip 17 prevents the weights from rolling off the platform. The scraper-blades 18 clean the track where the horses and sleighs 25 travel, and throw the snow on the outside of each track, thus making a shoulder to prevent sleighs from skuing and the horses 25 from slumping, and a hard foot path is also formed on both sides of the track. The runners act as guides to keep the machine 30 straight. The scraper blades are adjusted by means of the lever 28. When the track 30 is high the lever is pressed downwardly which lowers the scrapers so that they will cut down the track to make shoulders to the road. By providing the spring 33 and its 35 associate parts, the scraper blades are permitted to yield if a solid or rigid obstruction is encountered.

The machine herein described is simple

in construction and can be easily operated, and by its use snow roads can be easily made, and it may also be employed for packing snow in streets or on roads, the scraper blades 18 being elevated to inoperative position when the machine is used for the latter purpose.

What is claimed is:

1. A snow road making machine comprising sled runners, a slotted lever carried thereby, scrapers, a rocking support for said scrapers carried by the runners, a stem rising from the support, and passing through the slot of the lever, a spring coiled around the stem between the support and the lever, and a weighted platform carried by the runners behind the scrapers, and in contact with the surface of the snow.

2. A snow road making machine comprising sled runners, a lever carried thereby, scrapers, a rocking support for said scrapers carried by the runners, a stem rising from the support and loosely connected to the 6 lever, a spring coiled around the stem between the support and the lever, and a weighted platform carried by the runners behind the scrapers, and in contact with the surface of the snow.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

FRANK ALEXANDER.
BENJAMIN A. MUNCIL.

Witnesses:

WILLIAM A. WALTON,
WILLIAM HERRON.