

C. W. COLONY.
Flange-Plow and Ice-Cutter for Railway-Track.

No. 215,575.

Patented May 20, 1879.

Fig. 1.

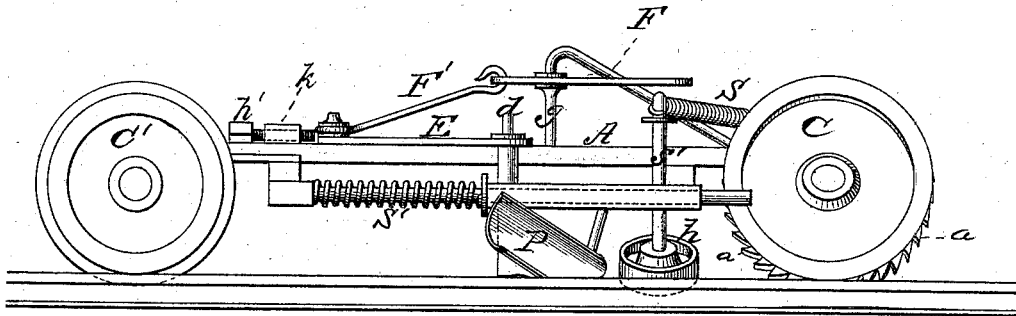
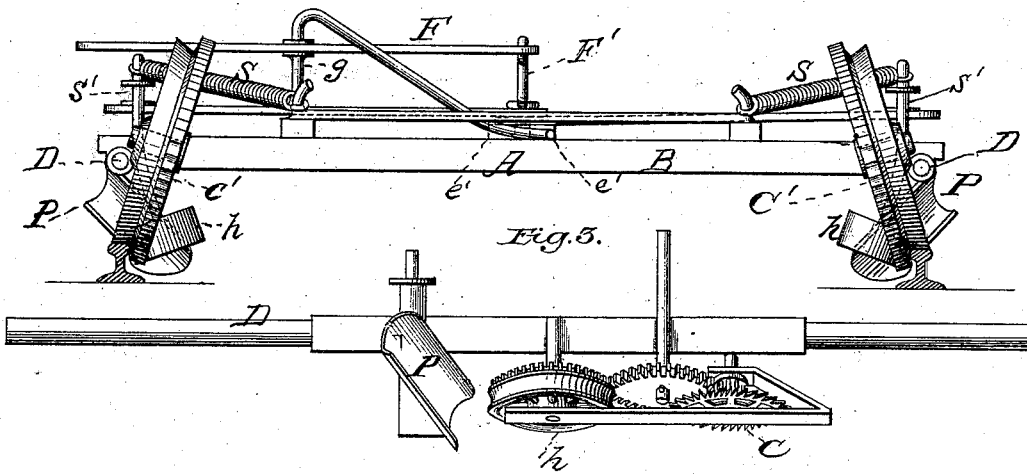


Fig. 2.



WITNESSES

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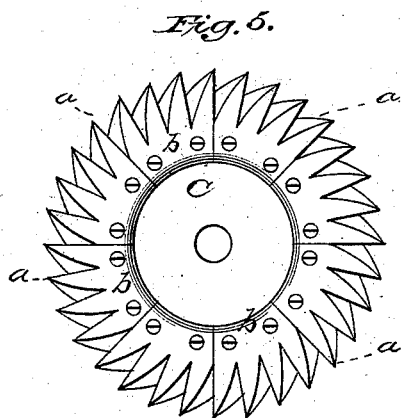
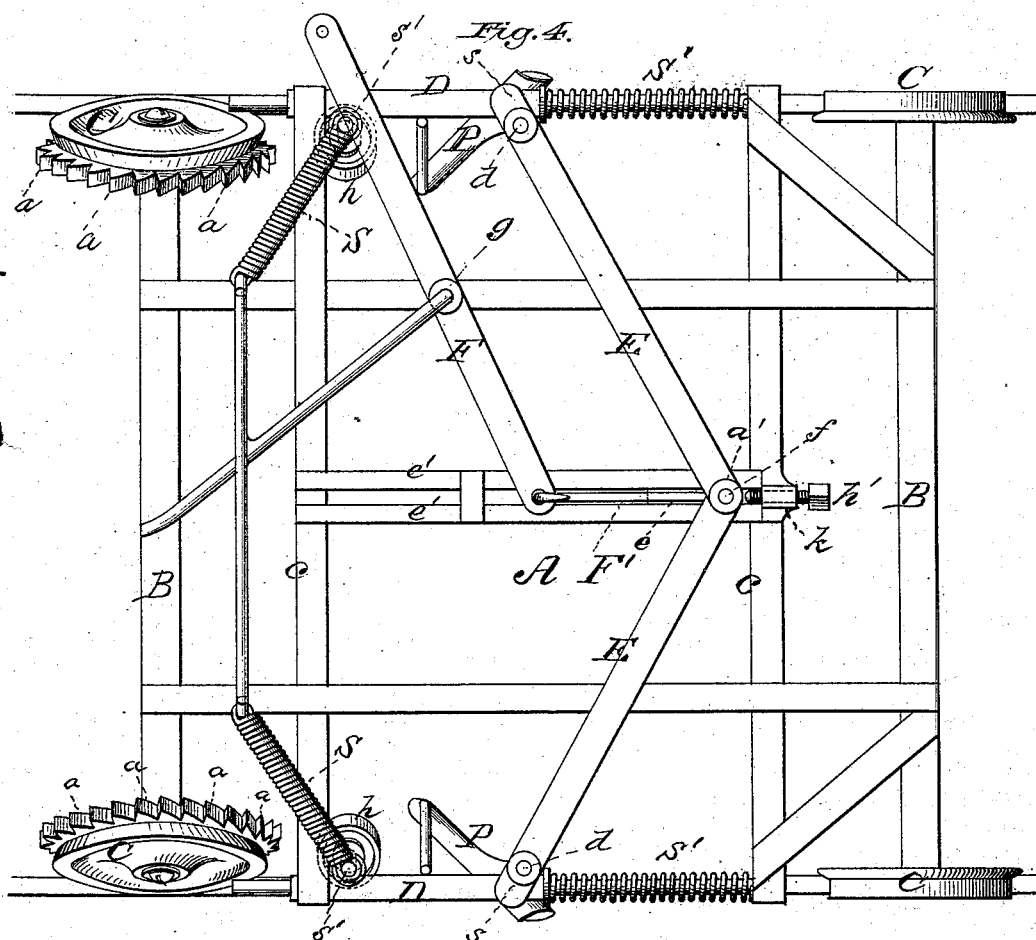
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UNITED STATES PATENT OFFICE.

CHARLES W. COLONY, OF SANDY CREEK, ASSIGNOR OF ONE-HALF HIS
RIGHT TO EDGAR A. KENYON, OF ADAMS, NEW YORK.

IMPROVEMENT IN FLANGE-PLOW AND ICE-CUTTER FOR RAILWAY-TRACKS.

Specification forming part of Letters Patent No. **215,575**, dated May 20, 1879; application filed
March 8, 1879.

To all whom it may concern:

Be it known that I, CHARLES W. COLONY, of Sandy Creek, in the county of Oswego and State of New York, have invented a new and valuable Improvement in Flange-Plow and Ice-Cutter for Railway-Tracks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved track-clearer. Fig. 2 is a front-end view thereof. Fig. 4 is a top view of the same. Fig. 5 is a detail view of the cutting-wheel; and Fig. 3 is a modification of the working parts of the clearer.

This invention has relation to improvements in means for clearing railroad-tracks of snow and ice; and the nature of the invention consists in certain novel combinations of the parts of the device, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a strong rectangular frame, affording bearings at each end to a shaft, B, upon which are applied in any suitable manner the front and rear transporting-wheels, C C'. Usually the latter wheels do not differ from ordinary car-wheels; but the former, instead of the plain flange usually employed, have chisel-like teeth *a*, which cut out the snow and ice from the inside of the rail, and form a groove at that point that receives the flanges of the wheels of the train and prevents the wheels from riding the track.

The toothed wheels are inclined, as shown in Figs. 2 and 4, the inclination being from the track inward. These toothed flanges may be cast with the wheels; but I prefer to make them separate and in parts or sections *b*, so if a tooth or section should be disabled by breakage it may be replaced without the loss of the wheel and its remaining intact sections.

D indicates an endwise movable rotating shaft, having its bearings at each side of frame A in its transverse beams *c*. These shafts serve as beams to the snow-plows P, their

standards *d* being secured thereto in any suitable manner, and the said standards extending up above the beams and engaging a slot in the outer ends of the manipulating-levers E. These extend inward to the middle portion of the frame, and are connected together at their inner ends by a hinge-joint, *a'*.

e indicates a slide plate, arranged after the manner of a sash between the guides *e'*, secured to the frame in any suitable manner, and arranged in the length of the same, as shown in Fig. 1. The hinge-pin of joint *a'* extends through the space between the guides *e'*, and is screwed into or otherwise secured to the slide.

F indicates a horizontally-vibrating lever, the power end of which is connected to the upper end of the hinge-pin *f* by means of a connecting-rod, F'. This lever has its fulcrum on the upright or post *g*, and when its power end is thrust back causes the beam-shafts to rotate in their bearings and the plows to be raised from the track.

h indicates roller-gages rotating upon the ends of the inclined shafts *s'*, rigidly and adjustably secured to the beam-shafts in front of the plows. These gages bear against the inside of the tread of the rail, preferably, in order to avoid packing the snow ahead of the plow, and are designed to raise the plow sufficiently to clear all ordinary obstructions, as the end of a rail at a joint and the like. Should they, however, strike an obstruction, the plows swing inward and yield rearwardly until it is cleared, when they return automatically to their places, because of the reaction of the springs S, secured at one end to the front of the frame and at the other to the top of the standards of the roller-gages, and of the springs S' on the beam-shafts, between the standard of the plow and the rear bearing of said shafts.

The inclination of the plows to the track is regulated by means of a set-screw, *h'*, arranged at the rear end of the guides in a screw-seat, *k*, and bearing against the levers E at their hinge-joint.

In Fig. 3 is illustrated another form of track-clearing device, wherein the cutting-wheel is clear of the track and derives motion

through suitable gearings from the gage-wheel. In this modification the plow is set to throw the snow between the rails.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for clearing snow and ice from railroad-tracks, the oblique transporting-wheels having their flanges serrated to cut out the ice or snow under the rail-heads, substantially as specified.

2. The combination, with the frame A, having ways *e'* and slide *e*, of the endwise movable and rotating shafts D, having plows P, and

gage-rollers *h* in front of said plows, the toggle-jointed levers E, a hinge-pin, *f*, extending through said levers and engaging the slide *e*, a connecting-rod, F', lever F, and springs S S', all arranged and operating substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES W. COLONY.

Witnesses:

M. M. EARL,

W. H. MCKEE.