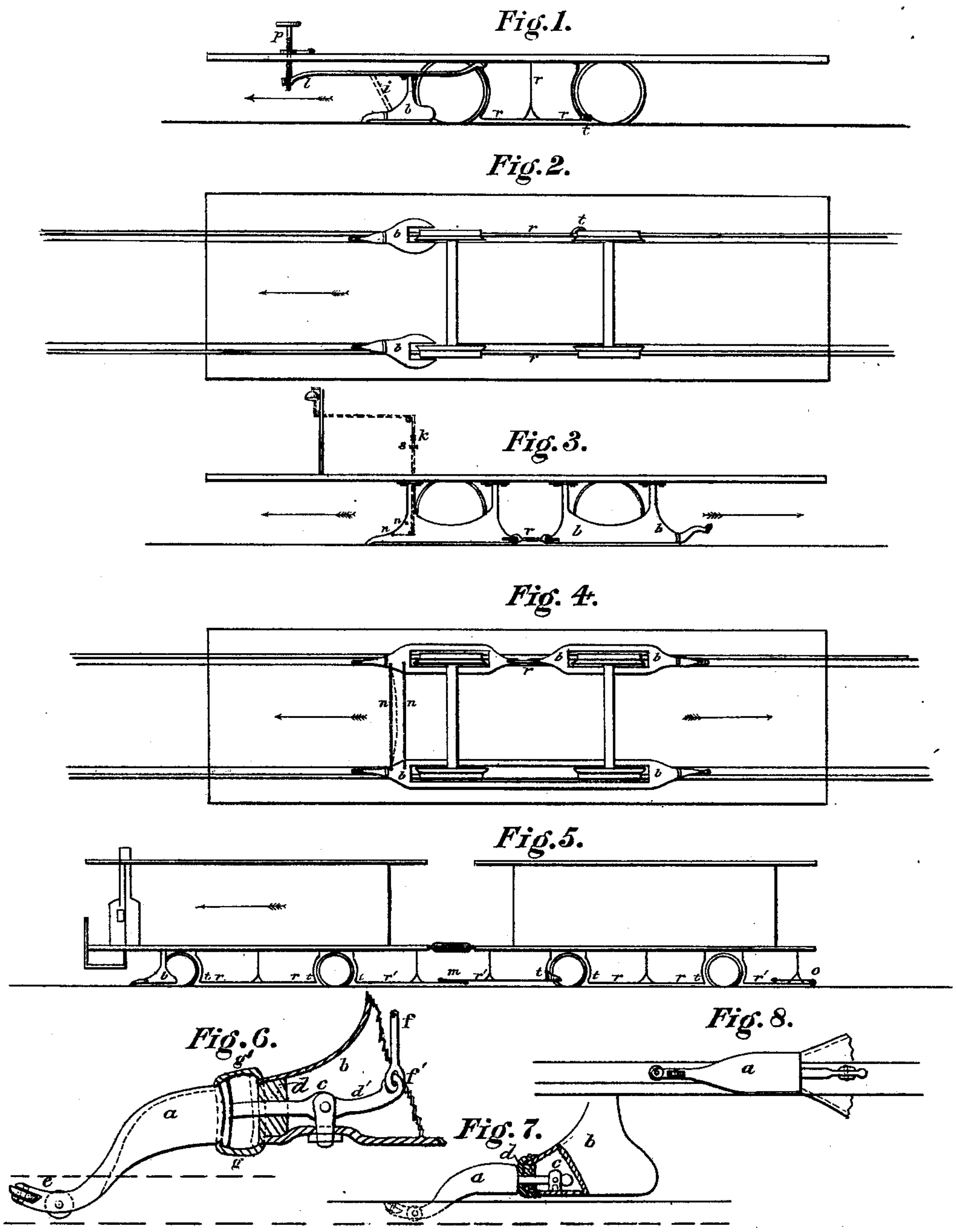
C. MAHON.

Track Clearer and Protector.

No. 220,082. Patented Sept. 30, 1879.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES MAHON, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN TRACK CLEARER AND PROTECTOR.

Specification forming part of Letters Patent No. **220,082**, dated September 30, 1879; application filed July 7, 1877.

To all whom it may concern:

Be it known that I, CHARLES MAHON, of the city of Washington, in the District of Columbia, have invented new and useful Improvements in Railroad-Track Clearers, which improvements are fully set forth in the following specification and accompanying drawings, in which—

Figures 1 and 2 show side and top views of the device as applied in front of and between the wheels of a dummy-engine or horse-car going in one direction, indicated by the arrow; Figs. 3 and 4, as applied for operation in either direction without reversing the car. Fig. 5 shows it as applied to an engine drawing one or more cars or a full train. Fig. 6 is a detail view, partly in section, of the mechanism of the forward tongue, shoe, or pick-up, with tilting mechanism to throw it above the track. Fig. 7 shows in detail the construction of the device when the plowshare is to be elevated by means of a lever, *l*, shown in Fig. 1. Fig. 8 is a plan view of the device shown in Fig. 7.

The object of my invention is to furnish a device by which to clear the tracks of railroads and prevent the wheels of the rolling-stock from running over such obstacles as usually get thereon, such as snow, pieces of wood, rocks, or pebbles, or any person or animal fallen thereon, and is of such a nature as to be applicable, with certain modifications, to all classes of rolling-stock; and consists of an inexpensive apparatus, as shown in the drawings, and hereinafter described.

In the drawings, *a* is a tongue or shoe in front of the plowshare *b*. The latter surrounding in part only one wheel, as in Figs. 1 and 2, or in whole each wheel, as in Figs. 3 and 4, is a guard to them above the rails. To this plowshare the tongue *a* is attached by a compound joint, *c*, made flexible by springs. These springs may be arranged as at *d*, Figs. 6 and 7, or in connection with the lever *f'*, to give the tongue a spring movement in a vertical or lateral direction. Said tongue is hollowed out and tapering down to the point *e*, which may be provided with friction-rollers, either horizontal, vertical, or at an angle. Said tongue is also provided with tilting mechanism connected with lever *f'* back of the joint *c* for raising the point *e* above the rail when desired.

The lever *l*, fulcrumed at its rear end and carrying the plow and tongue, is another method of raising the point *e*, the tongue and plowshare being raised together.

If the spring be applied to the rear end of lever *f'*, a piece of rubber tubing, *g g*, fitting tightly over the adjacent thickened ends of the tongue and share, or an india-rubber plug, *d*, Fig. 7, may be employed to keep out mud and water, and the latter may be secured into the mouth of the plowshare *b*, with a hole in it to receive the stem of the lever *f'*. This tubing or plug acts the part of a spring, as well as to keep out mud and water. The particular shape of this tongue, the curvature of its point and distance from the wheel, and its elastic vibratory quality have much to do in making it automatic in clearing the rails and keeping the groove when curving or crossing other tracks.

i, Fig. 1, is an elastic or other band, with its flat edge foremost to cleave the snow, and is a protection against violent concussion.

The drag-cords *n n*, Figs. 3 and 4, of tarred rope, will prevent a person from getting under a car truck or axle or machinery of a dummy-engine, the forward one taking the position of the dotted line, Fig. 4, and acting as a better drag after having rung or struck the alarm-bell, the staple *s* limiting the play of the rope by arresting the knot *k*, Fig. 3.

Rods *r*, suspended between the wheels of a car, Figs. 1 and 5, over each rail, and in like manner between the rear and front wheels of adjacent cars throughout a whole train, may be employed to prevent objects from falling on the rails, and thus form a continuous pick-up.

The lapping ends at *m*, Fig. 5, are egg-shaped, to avoid abutting, and may be shortened, as at *o*, by means of a hinge-spring joint.

By the use of small shares curving to the wheel at each of the angles of the rods, as at *t t*, Figs. 1, 2, and 5, the clearage of snow from the rails would be effectual.

I hereby reserve the combination and arrangement of the suspended rods *r r* with the small shares *t t*, or with the lapping ends, or both, as the subject of a new application, al-

though I have described and shown them in combination with the clearer devised for the forward wheels.

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

1. A tongue or shoe, *a*, provided with friction-rollers, a share, *b*, and a spring-joint, in combination with a car or cars, substantially as and for the purpose specified.

2. A tongue or shoe, *a*, provided with friction-rollers, a spring-joint, and adjusting devices, arranged on a car substantially as described.

3. The combination of a shoe, *a*, jointed to a share, *b*, with said share and suspended rods *r r*, arranged on a car as shown and specified.

4. The combination of a shoe, *a*, constructed as described, arranged with reference to the forward wheels, with a share, *b*, suspended rods *r r*, and small shares *t t*, arranged with reference to the after wheels, as shown and specified.

5. The combination of a shoe, *a*, constructed as described, with a share, *b*, and drag or alarm ropes *n n*, arranged on a car as shown and specified.

6. The combination of a shoe, *a*, constructed as described, with a share, *b*, rods *r r*, small shares *t t*, with lapping rods *r' r'*, arranged on a car or cars, substantially as specified.

7. The combination of a shoe, *a*, constructed as described, with a share, *b*, and buffer-strap *i*, arranged on a car or cars as shown and specified.

8. The combination of the shoe *a* with the plug and spring *d*, the rubber tubing *g*, and the share *b*, constructed and arranged as shown, and for the purpose described.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

CHARLES MAHON.

Witnesses:

GEO. F. GRAHAM,

JAMES C. PILLING.