

(No Model.)

G. ROYAL.

RAILWAY TRACK CLEARER.

No. 287,583.

Patented Oct. 30, 1883.

Fig. 1.

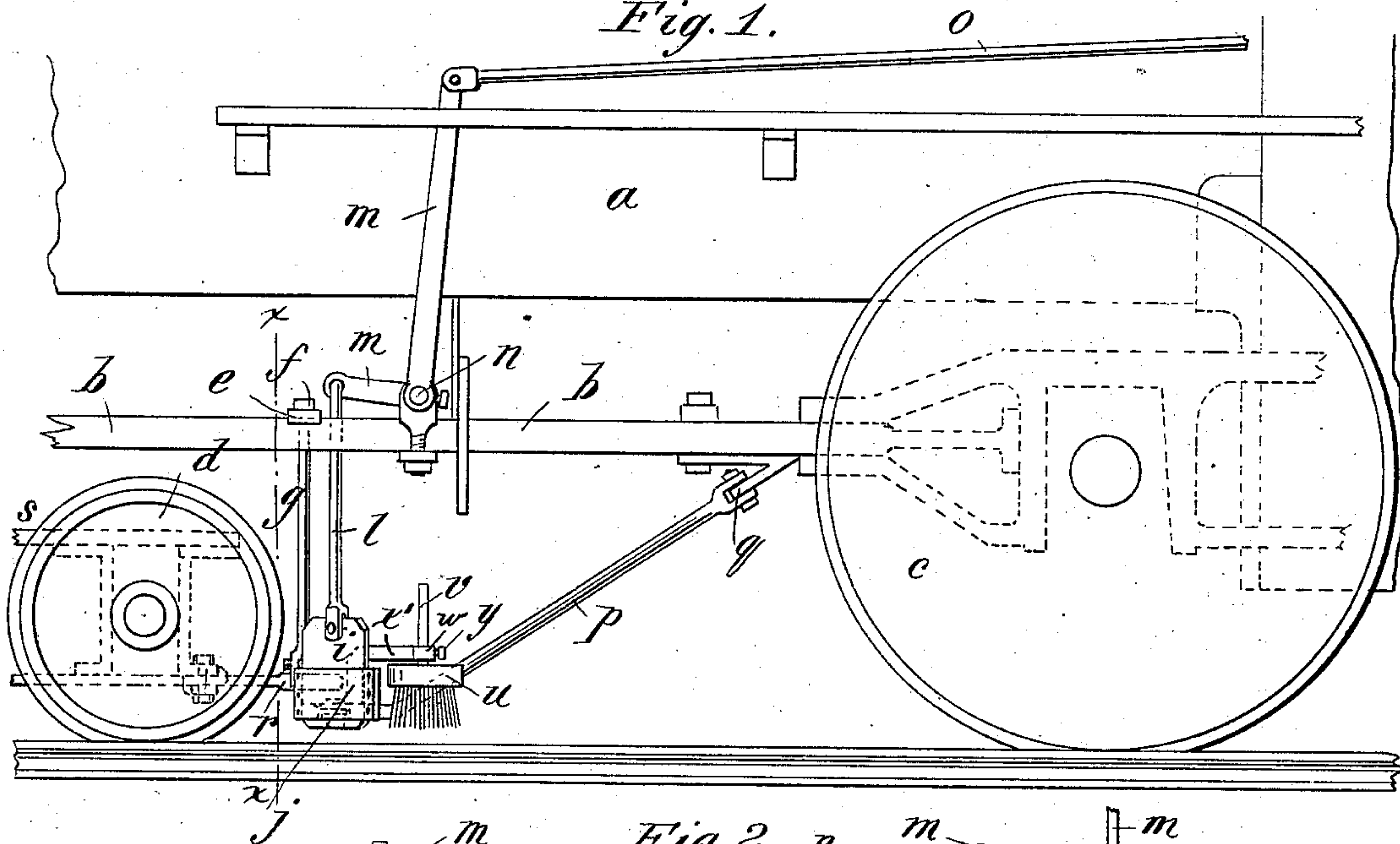


Fig. 2.

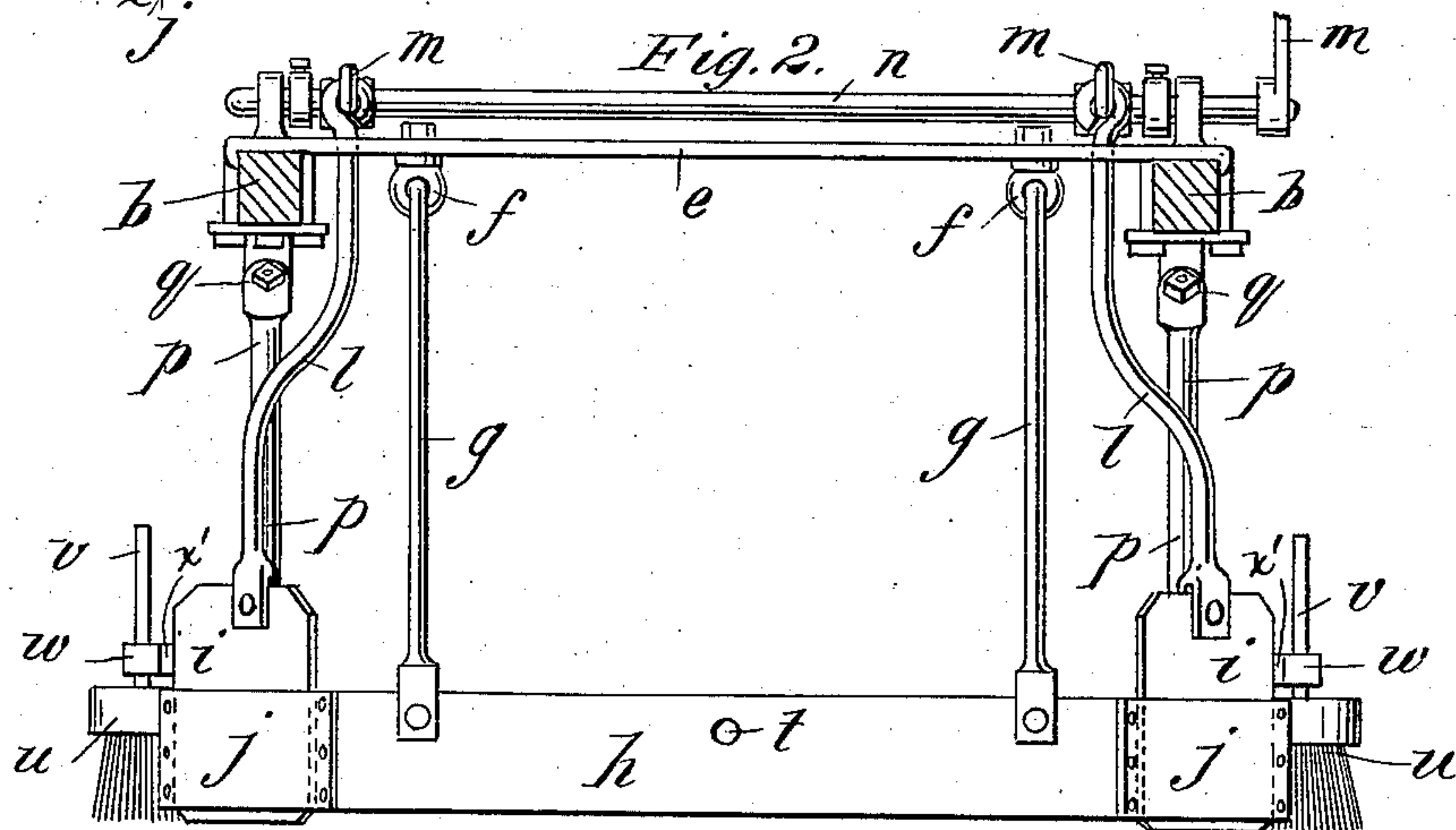
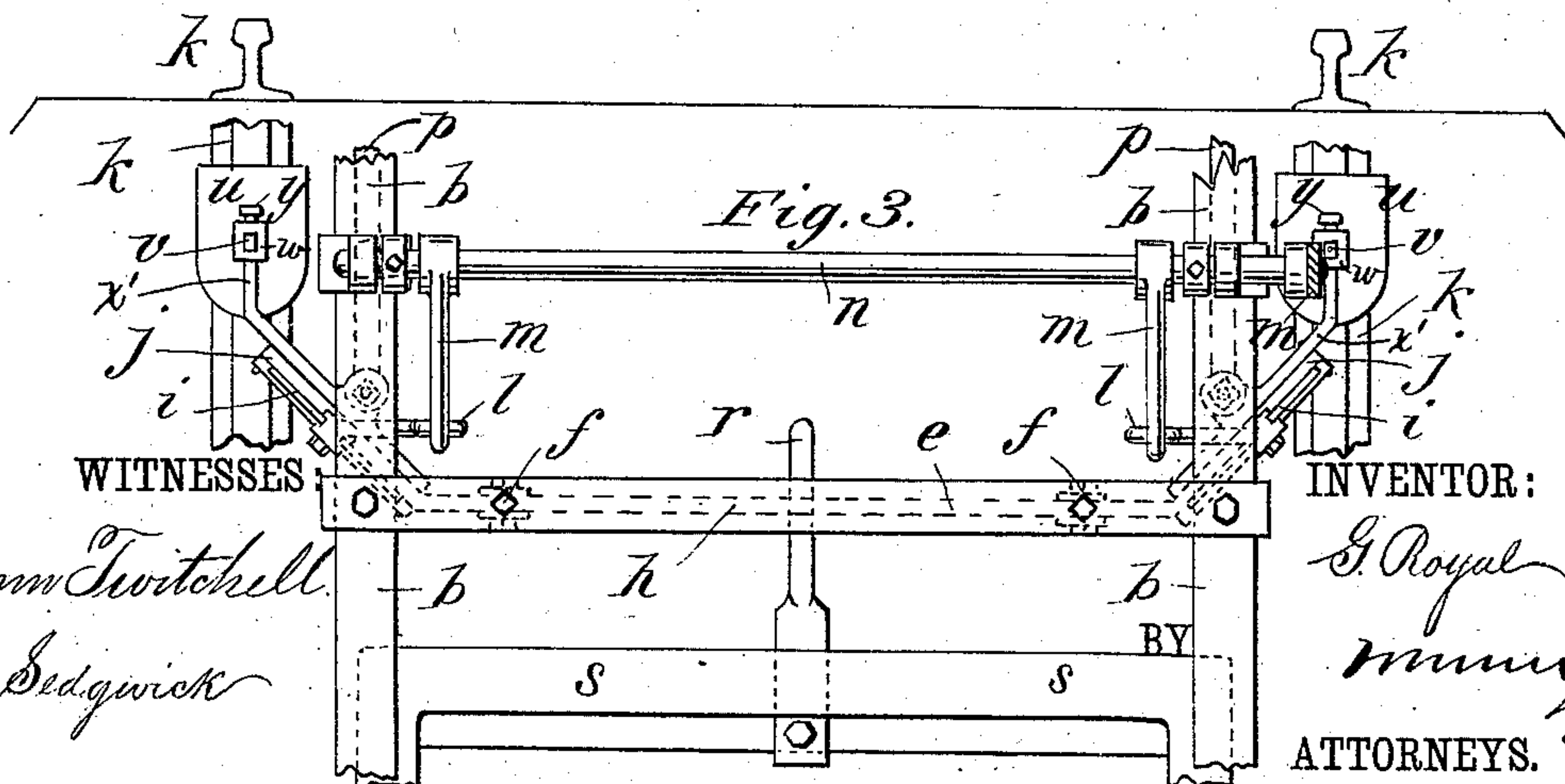


Fig. 3.



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GEORGE ROYAL, OF DAVENPORT, IOWA.

RAILWAY-TRACK CLEARER.

SPECIFICATION forming part of Letters Patent No. 287,583, dated October 30, 1883.

Application filed April 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ROYAL, of Davenport, in the county of Scott and State of Iowa, have invented certain new and useful
5 Improvements in Railway-Track Clearers, of which the following is a full, clear, and exact description.

My invention relates to devices for clearing railway-tracks of accumulations of hard snow,
10 ice, or earth that may have packed against the inner or wheel-flange sides of the rails, the object of the present improvement being to provide a simpler and more effective arrangement of the parts of the clearer than is shown in pre-
15 vious United States Patents granted to me for improvements in this class of inventions, as follows: No. 198,468, dated December 25, 1877, No. 203,377, dated May 7, 1878, and No. 204,092, dated May 21, 1878, the present im-
20 provement providing for a free lateral movement of the vertically-adjustable clearer-knife frame, which is supported from hangers directly back of the rear pilot-wheels of an en-
25 gine, and connected by sway-bars, preferably with the engine-frame, and by a pin and socket with the truck-frame of the pilot-wheels, all as hereinafter fully described and claimed.

Reference is to be had to the accompanying
30 drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a locomotive in part with my improvement applied; Fig. 2, a cross-
35 sectional elevation on line *x x* of Fig. 1, and Fig. 3 a plan view.

a represents the locomotive-boiler, *b* its frame, *c* the forward drive-wheels, and *d* the rear wheels of the pilot or forward truck of
40 the engine, which parts may be of any approved construction.

To any suitable bar, *e*, fixed to the frame *b* transversely, I hang, by eyebolts *f* and connected bars or links *g*, the knife-carrying plate
45 or bar *h*, which has the knives or clearers proper, *i*, fitted to slide vertically in suitable ways or guides, *j*, formed in or on the ends of the plate *h* at a backward and outward incline from the front of said plate, and so that the
50 knives *i* may be lowered inside and below the head-surface of the rails *k*, as will appear from

Figs. 2 and 3. The knives or clearers *i* are connected by rods or bars *l* to the cranked arms *m* of a rock-shaft, *n*, journaled on frame
b, and the rod *o* with any suitable lever or
55 other contrivance within the cab of the engine, to be operated easily therefrom, and simultaneously raising or lowering the knives *i* at both sides of the track at will when cross-
ing tracks, frogs, or switches. Sway-bars *p* 60 (here shown as pivoted to the engine-frame at *q*) permit free lateral play of the lower ends of the bars, where they have like pivotal connection with the plate *h* or its guides *j* just back of and about at the center of the knives or
65 clearers *i*. These sway-bars *p* and their pivotal connections at both ends are of a substantial character to resist the thrust of the clearer-knives *i* when at work. A guide pin or bar,
70 *r*, firmly fixed to the engine truck-frame *s*, enters a hole, *t*, in the center of the knife-holding plate *h*, which compels the plate, with its knives *i*, to always closely follow the wheels of the pilot and guide the knives or clearers *i*
75 properly against the material to be removed from the inside of the rails, the pivotal connections of the bars *p* with the frame *b* and plate *h* permitting a free lateral swinging of the body of the engine while rounding curves
80 in either direction, while firmly supporting the clearers *i* without lateral strains or friction when the cutters are at work, and also allows the cutters to be set to the full width of the
85 gage of the track to work closely to the inside of the rails. By setting the knife-guides and knives *j i* at the outward and backward inclination shown, they are less liable to catch
on joints or fish-plates of the track or rails *k* in moving rapidly forward than if set directly
90 at right angles with the rails and in line with the main central portion of plate *h*, and this inclined position of the knives gives them increased strength, and tends also to throw the
snow, ice, or other obstructing matters away from the rails, and the backward incline of the
95 knives permits them to glance or slide off when meeting bad joints of the rails or loose fish-plates or bolts, thereby avoiding serious injury to the clearing-knives and their con-
100 nections.

I arrange suitable brushes, *u*, to be vertically adjustable by their handles *v* in eyes or

sockets *w* of arms *x'*, which are fixed suitably to the plate *h*, set-screws *y* being provided to fix the brushes to the arms *x'* at the desired height for perfectly cleaning the rails for the driving-wheels.

It is evident that the plate *h*, with the cutters or knives *i*, and brushes *u* can be attached to or suspended from the truck-frame *s*; but the above-described construction is preferred.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the plate *h*, carrying vertically-movable knife-clearers *i*, and suspended near the wheels *d*, of the sway-bars *p*, pivoted to plate *h*, and the guide-pin *r*, fixed to the truck of wheels *d*, and entering an aperture of plate *h*, substantially as shown and described.

2. The combination, with the plate *h*, carrying vertically-movable knife-clearers *i*, and

suspended near the wheels *d*, of the pivoted sway-bars *p*, the guide-pin *r*, and the connections *l m n o* from the clearers *i* to the engine-cab, substantially as shown and described.

3. The combination, with the clearer-plate *h*, having its ends inclined backward toward the inside of the rails, and provided with ways *j*, of the vertically-sliding clearer-knives *i* at like inclination to the rails, substantially as shown and described.

4. The combination, with the clearer-plate *h*, having its ends inclined backward toward the inside of the rails, and provided with ways *j*, of the vertically-sliding clearer-knives *i*, at like inclination to the rails, and brushes *u*, substantially as shown and described.

GEO. ROYAL.

Witnesses:

PATRICK O. BRYAN,

GEORGE W. SHOEMAKER.