

J. W. COMINS.

Mechanisms for Operating Railway Track-Clearers.

No. 146,655.

Patented Jan. 20, 1874.

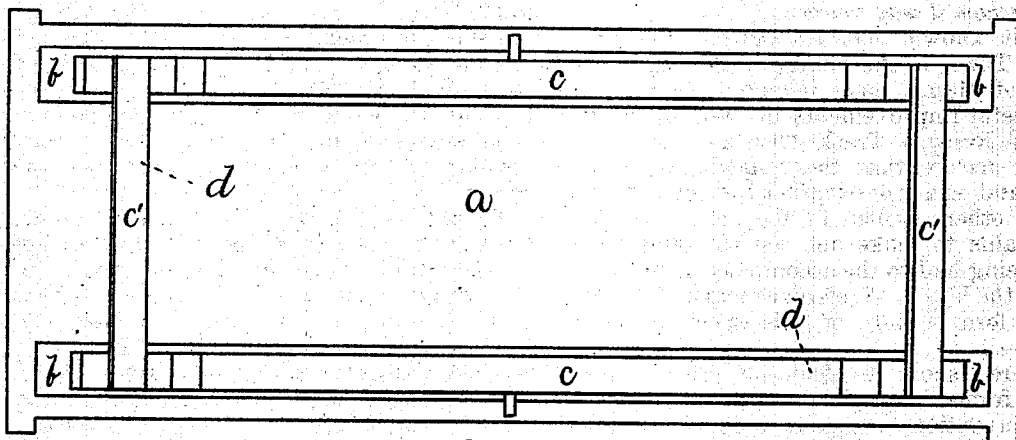


Figure 2 -

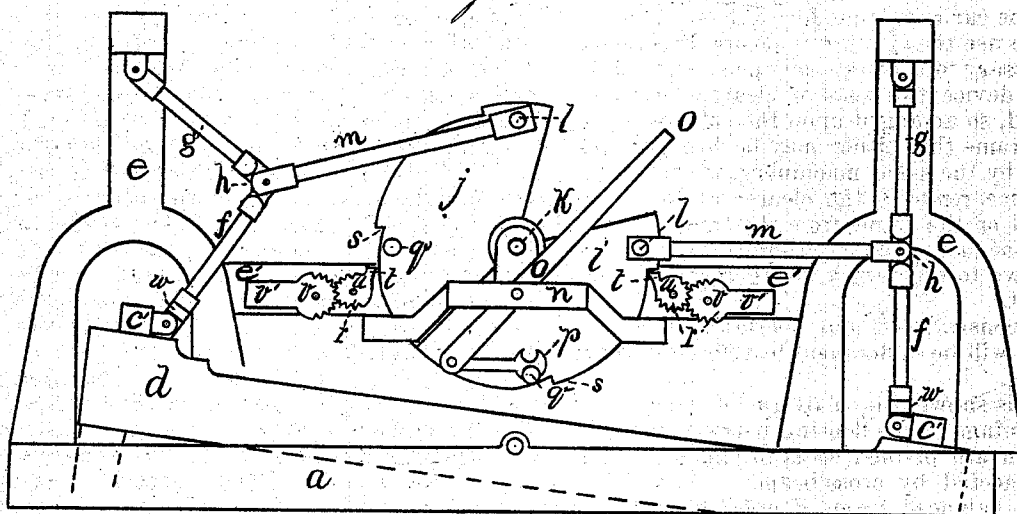


Figure 1.

Witness
 W. H. Brown
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 James H. Comins
 Per Wm. Franklin Parry, Atty

UNITED STATES PATENT OFFICE.

JAMES W. COMINS, OF OLD TOWN, MAINE.

IMPROVEMENT IN MECHANISMS FOR OPERATING RAILWAY-TRACK CLEARERS.

Specification forming part of Letters Patent No. **146,655**, dated January 20, 1874; application filed June 12, 1873.

To all whom it may concern:

Be it known that I, JAMES W. COMINS, of Old Town, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Devices for Operating Railway-Track Clearers; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 shows an elevation, Fig. 2 a plan, of the frame *d* and platform.

My invention consists of a device for operating the flanges or track-clearers used on railroads. The flanges generally operate when the car is moving forward only, and, in order to use them in the opposite direction, it is necessary to turn the car upon a turn-table. In my device two sets of clearers or "feet" are used, so arranged upon the ends of a balanced frame that either may be brought into service by the same machinery, which, at the same time, removes the clearer at the opposite end of the frame from the track. I also avoid the use of heavy weights to keep the feet down to their work, using, instead, a toggle-joint.

The construction and operation of my invention will be understood by reference to the drawing.

At *a* is shown the platform of a car. *b b* are openings in the flooring between the sills, in which are pivoted, so as to balance, beams *c c*, connected by cross-beams *c' c'*, so as to form a balanced frame, *d*, upon the ends of which, extending downward through the floor, are the clearers or feet. These may be of any desired pattern, and of such a length, vertically, that when the frame *d* is horizontal, neither set of feet will touch the track. Above the floor of the car is erected a frame, *e*, supporting the mechanism for raising or lowering the ends of the frame *d*, to bring the clearers into action. To the cross-bars *c' c'*, midway, are pivoted levers *f f*, extending half-way up the frame *e*, where they are jointed to other levers, *g g*, pivoted to the top of said

frame, forming at either end toggle-joints *h h*, either one of which, when forced into a straight line, forces its end of the frame *d* downward, and brings the attached clearer into action. The joint *h*, being in a line with the strain, is capable of holding the foot down without assistance from weights or cumbersome machinery.

To operate the toggle-joints, and through them the frame *d*, I use the following devices: At the center of the beam *e'*, connecting the standards of the frame *e*, I place two sectors, turning on a common center, *k*. From pins *l l*, near the outer edges of these sectors, extend connecting-rods to the toggle-joints *h h*, (see *m m*,) so that either joint may be thrown out or in by revolving the sector to which it is connected. To a supplemental frame, *n*, is jointed a lever, *o*, having a reversible dog, *p*, pivoted to its lower end, which dog is so constructed as to hook over pins *q q* near the rim of the sectors, thereby connecting the lever *o* with either one of them at will. In the drawing, the end *d'* of the frame *d* is lowered, bringing its clearers into contact with the track. The toggle operating this end is vertical, and the lever and sector are shown in the proper position to effect this. The toggle at the other end of the frame is also shown in its appropriate position. In order to raise both ends of the frame *d*, the lever *o* is swung up, and the upper edge of the sector *i* meets that of the sector *j*, drawing inward the toggle-joint. When the sectors are in this position, and it is not desired to use the clearers, they are retained in place by weighted catches *r r*, engaging in notches *s s* in the circumference of the sectors. These catches consist of a dog, *t*, upon a gear, *u*, which meshes into a second gear, *v*, upon which is a weighted arm, *v'*. The effect of this is to prevent the dogs from jarring out of place by the motion of the car. In reversing the position of the frame, the dog *p* is reversed and attached to the pin *q'* upon the other sector *j*, disconnecting the sector *i*. The operation is then as before. As the frame *d* is balanced upon its center, but little power is required to move it in any direction.

To ease the motion of the scrapers and prevent jar, a spring of rubber or other material

may be inserted in the joint of the levers *f*, as at *w*.

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

1. In combination with two pairs of flanges, arranged to operate in opposite directions, the balanced frame *d*, whereby each pair of scrapers may be brought into operation alternately, as specified.

2. In combination with the balanced frame *d*, the levers *f f g g*, forming the toggle-joint *h*, and the frame *e*, as set forth.

3. In combination with toggle-joints *h*, the

rods *m m*, sectors *i j*, with their notches *s* and catches *r*, whereby the frame *d* is held in a horizontal position, as set forth.

4. The lever *o* and reversible dog *p*, in combination with either sector *i* or *j*, as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of June, 1873.

JAMES W. COMINS.

Witnesses:

WM. FRANKLIN SEAVEY,

WM. R. ANDERSON.