(No Model.)

F. B. SMITH.

TRACK CLEARER.

No. 336,445. Patented Feb. 16, 1886.

Fig. 1.

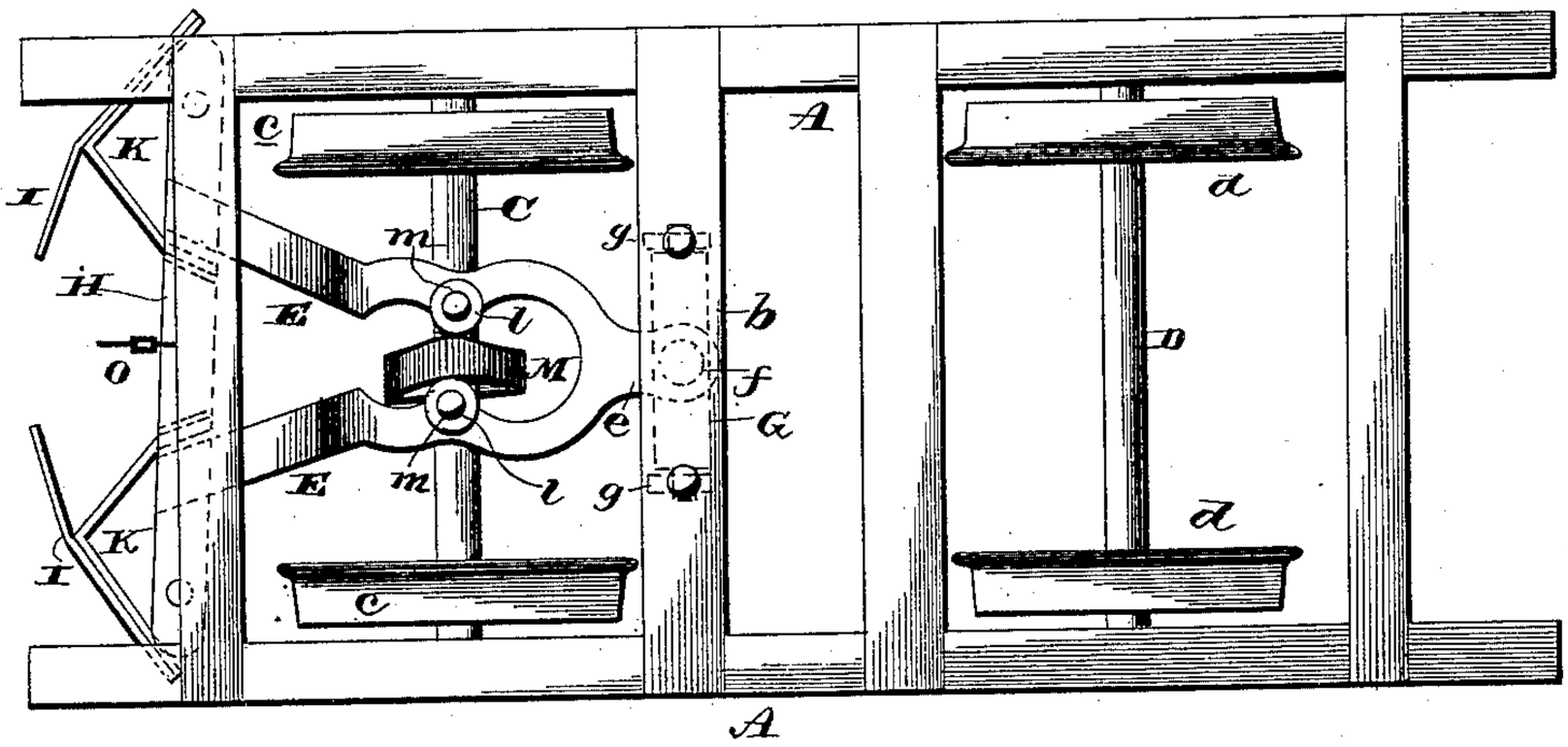


Fig. 2.

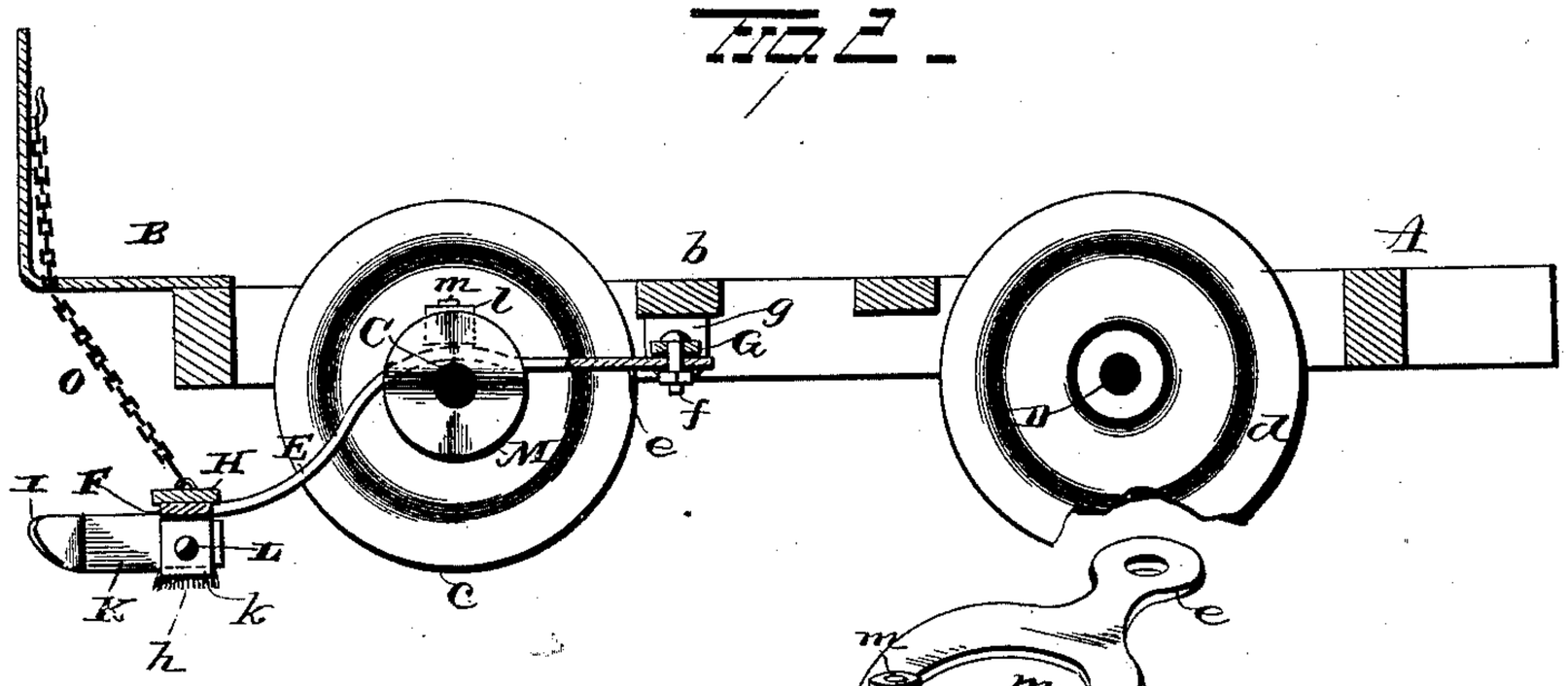
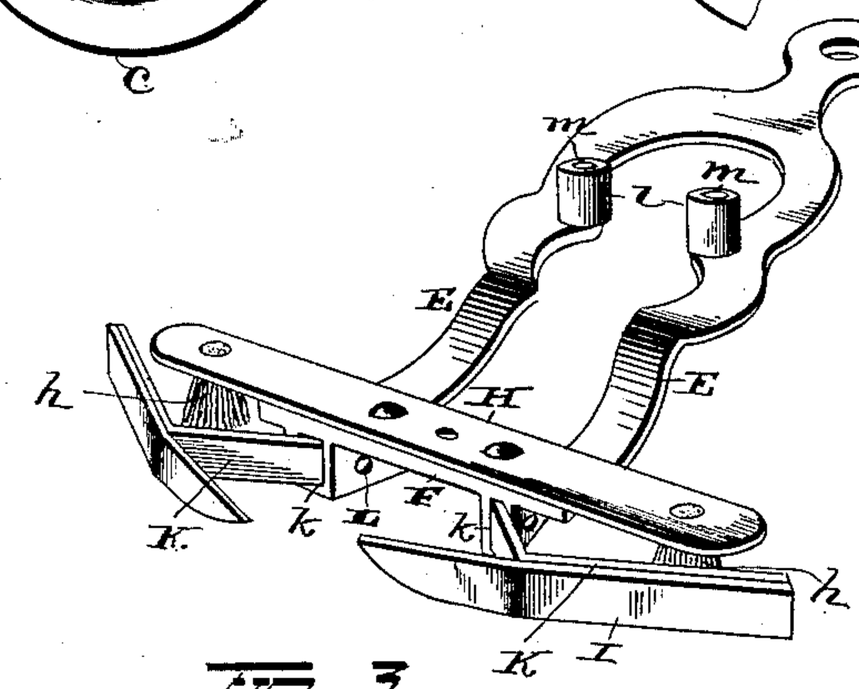


Fig. 3.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

FRANK B. SMITH, OF NORTH SPRINGFIELD, MISSOURI, ASSIGNOR OF ONE-HALF TO EDWIN B. LOVELAND, OF SAME PLACE.

TRACK-CLEARER.

SPECIFICATION forming part of Letters Patent No. 336,445, dated February 16, 1886.

Application filed December 5, 1885. Serial No. 184,831. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. SMITH, of North Springfield, in the county of Greene and State of Missouri, have invented certain new and useful Improvements in Track-Cleaners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in track-cleaners.

The object is to provide a simple and effective device for removing the snow, mud, or dirt from a railway-track, and to so construct the device that it may be readily attached to and operated by a horse or steam car, a locomotive, or by an independent truck.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of a truck with the track-cleaner attached thereto, the frame being partially broken away. Fig. 2 is a vertical longitudinal section through the center, and Fig. 3 is a detached view of the cleaner.

A represents a truck-frame. It may form a support for the body of a street-car, or may be one of the trucks of a steam railway car or locomotive, or it may form an independent carriage for the track-cleaner.

B represents a platform secured to one end of the frame A, which, in the present instance, will be considered the front end.

The front axle is represented by the letter C, and its wheels by the letter *c*.

D *d* represent the rear axle and wheels, respectively. The wheels *c* are locked to the axle C, and the ends of the axle are journaled in suitable boxes attached to the frame A. A skeleton frame, consisting, preferably, of the two side branches, E, the head *e*, and the front cross-bar, F, is pivotally secured, at its rear end, on a depending stud or bolt, *f*, the latter being set in a transverse rock-bar or plate, G. The rock-bar G is journaled in a pair of depending ears, *g*, attached to the under side of a cross-beam, *b*. A transverse bar, H, is secured to the front cross-bar, F, its ends projecting laterally beyond the sides E of the skeleton frame. In the ends of the bar H, at points directly over the rails to be cleaned, brushes *h* are removably secured. A pair of wings, I, curved at their forward ends runner-shaped, as shown, are secured to the front cross-bar, F, by bent standards K, the forward ends of the wings being inclined toward each other. The ends of the standards K fit in sockets *k*, secured to the cross-bar, and are removably secured therein by means of pins L or any other approved means. A disk, M, secured on the axle C and having cams on its sides, is adapted, when the wings and brushes rest on the rails, to fit loosely between a pair of anti-friction rollers, *l*, mounted on upright studs *m*, set in the branches E. Thus, as the axle rotates the cams on the disk M will engage first one of the branches E and then the other, thereby causing the forward end of the frame E *e* F to vibrate transversely. The rapidity with which it will vibrate depends on the number of cams on the disk M and the rate at which the axle rotates. Two cams on each side of the disk is found to be a suitable number for cars traveling at the ordinary rate of street-cars; but I do not wish to limit myself in this respect, as it may be found desirable to introduce more or less than two. The front end of the frame E *e* F may be elevated or lowered by means of a chain, rope, or rod, O, attached to the bar F and extending upwardly through the platform B. When elevated, the branches E are out of contact with the cam-disk M, and the wheels and axle C *c* are free to rotate without affecting the plow-wings and brushes.

The construction is as free from complicated mechanism as is possible. The wings or brushes may all, or any one or more, be removed in case of breakage or damage, or for any other purpose, and the cleaner may be fitted with slight expense to any railroad-carriage. The vibratory motion keeps the wings free, preventing the snow, mud, &c., from packing in front of them, and at the same time causes the brushes to sweep the rails thoroughly, throwing the obstructing material to the right and left of the rail.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing

from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the construction herein set forth; but,

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

1. In a track-cleaner, the combination, with a supporting-frame mounted on wheels, a frame pivotally attached to said supporting-frame, and devices for vibrating said latter frame, of wings and brushes secured to said vibrating frame, substantially as set forth.

2. In a track-cleaner, the combination, with a plow and brush frame secured to the truck-frame in vertically-rocking and laterally-vibrating adjustment, of a cam secured on the axle of the truck and adapted to vibrate the said frame, substantially as set forth.

3. In a track-cleaner, the combination, with a skeleton frame having a pair of plow-wings secured to its front end and hinged to the truck-frame at its rear end, of a cam-disk secured to the truck-axle and adapted to engage the branches of the skeleton frame, and thereby vibrate the frame transversely to the track, substantially as set forth.

4. In a track-cleaner, the combination, with a skeleton frame provided with a pair of anti-friction rollers suitably mounted thereon, the frame being secured at its rear end to the truck-frame in laterally-vibrating and vertically-swinging adjustment, and having plow-wings and brushes secured to its front end, of a cam secured to the axle and adapted to engage the anti-friction rollers and vibrate the frame, and means for elevating the frame, substantially as set forth.

5. In a track-cleaner, the combination, with a transversely-vibrating frame, of plow-wings and brushes removably secured thereto, substantially as set forth.

6. In a track-cleaner, the combination, with a cam-disk secured on the truck-axle and adapted to vibrate a plow-frame hinged to the truck-frame, of an operating rod or rope adapted to lift the front end of the plow-frame from the truck and simultaneously lift the same out of engagement with the cam-disk, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANK B. SMITH.

Witnesses:

J. F. G. BENTLEY,

B. F. HOBART.