(No Model.) 2 Sheets—Sheet 1.

# C. S. DRAKE.

## ATTACHMENT FOR WIRE ROPE RAILWAYS.

No. 258,563. Patented May 30, 1882.

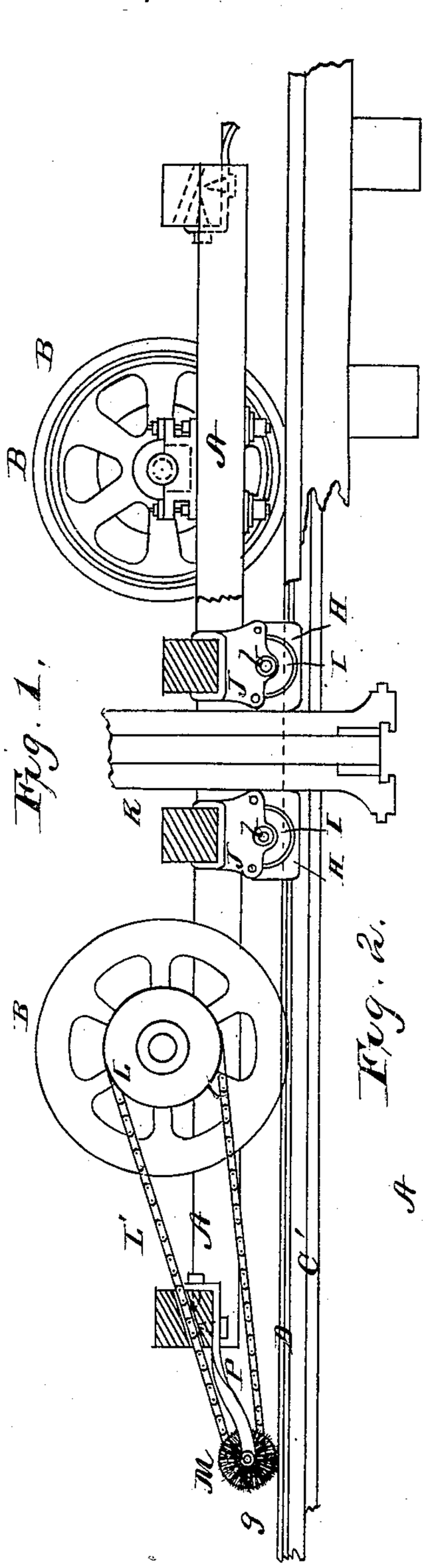


Fig. 1.

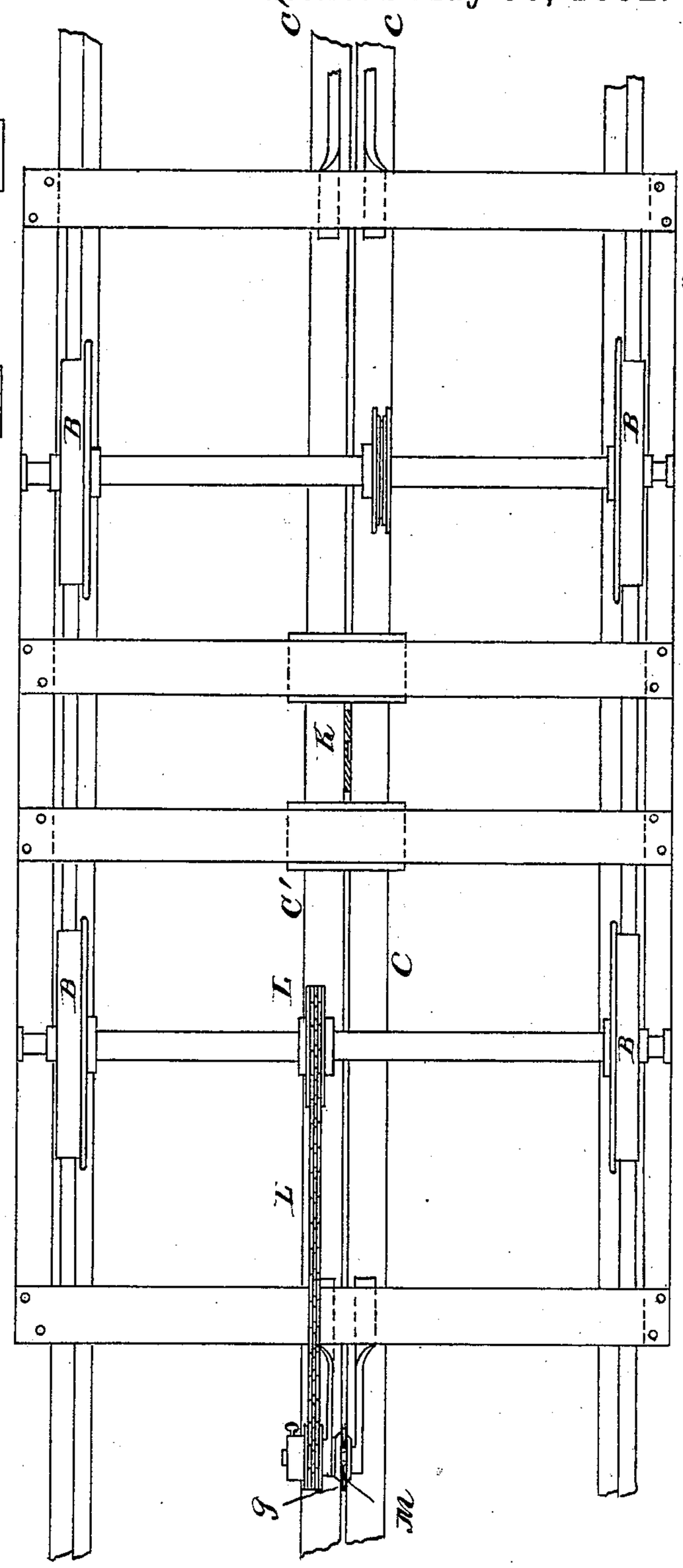


Fig. 2.

Witnesses,
Edwin L. Yewell
J. J. McCarthy.

Inventor,
C. S. Drake,
by C. M. Alexander
his Attorney.

(No Model.) 2 Sheets—Sheet 2.

# C. S. DRAKE.

## ATTACHMENT FOR WIRE ROPE RAILWAYS.

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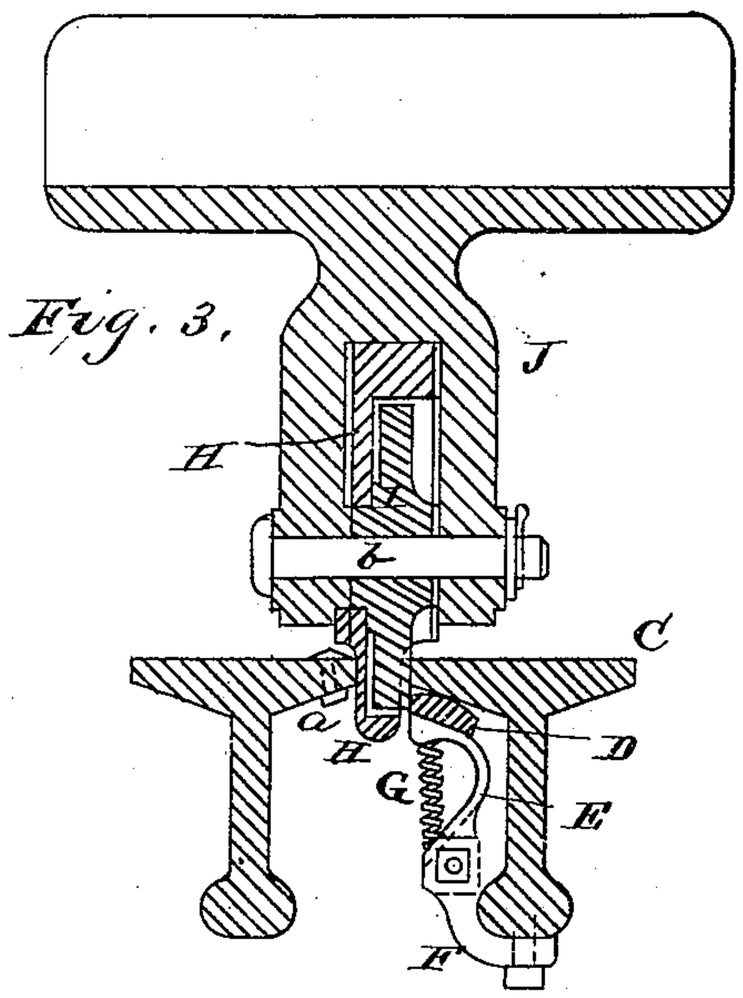


Fig. 3.

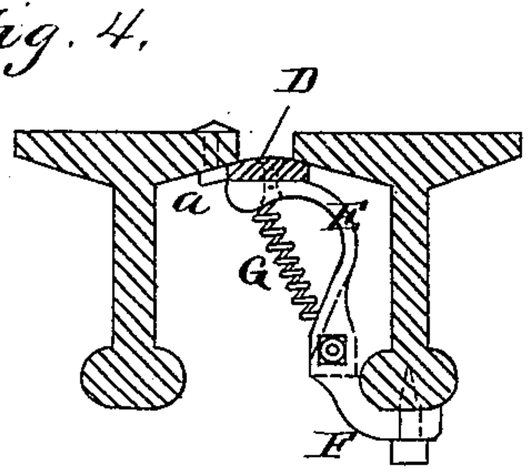


Fig. 4.

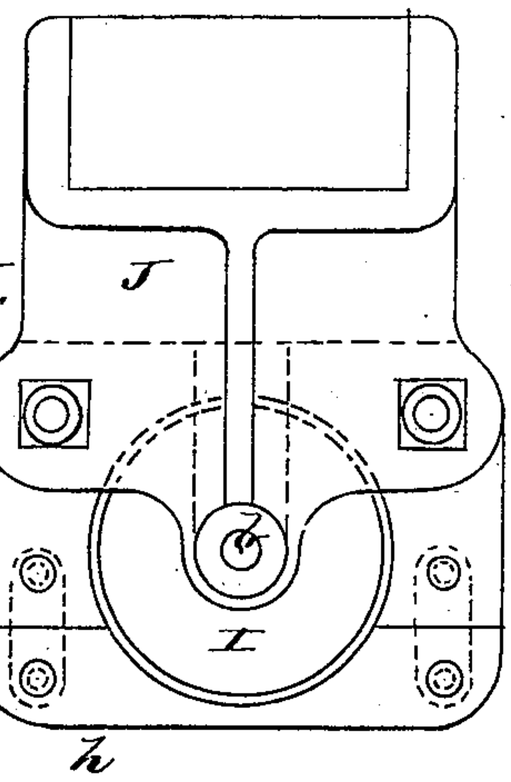


Fig. 5.

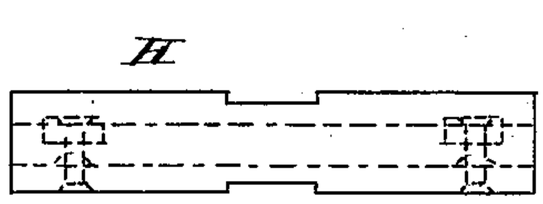

Fig. 6.

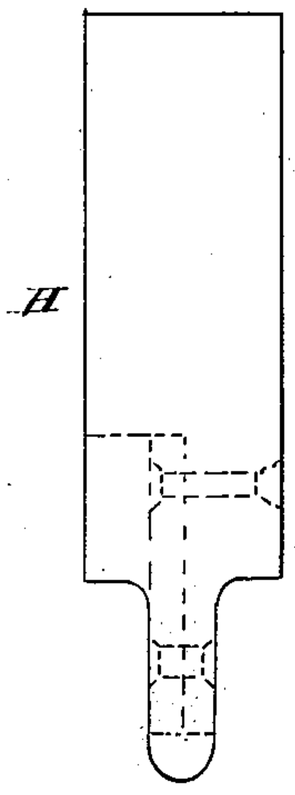


Fig. 7.

Witnesses,
Edwin L. Yewell
J. J. McCarthy.

Inventor,
C. S. Drake,
by C. M. Alexander.
his Attorney.

# UNITED STATES PATENT OFFICE.

CHARLES S. DRAKE, OF SAN FRANCISCO, CALIFORNIA.

## ATTACHMENT FOR WIRE-ROPE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 258,563, dated May 30, 1882.

Application filed October 24, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES S. DRAKE, of San Francisco, in the county of San Francisco, and in the State of California, have invented certain new and useful Improvements in Attachments for Wire-Rope Railways; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to what is denominated a "wire-cable railway;" and it consists in certain novel means, hereinafter described, for closing the slot between the guide-rails, for preventing the tube or channel which is beneath the roadway from filling with surface-dirt, snow, &c.

The invention also consists in the arrangement, at opposite edges of the shank which bears the cable-grippers, of rotary opening-wheels, so constructed and provided with guards that a single closing-strip can be practically used for closing said slot.

The invention finally consists in the employment of rotating brushes in combination with the closing-plate for said slot, whereby the space between the rails and the closed plate can be swept clear of dirt, &c., preceding the operation of the openers, as will be hereinafter explained.

In the annexed drawings, Figure 1 is a vertical section taken longitudinally through the bed of a car having my improvements applied. Fig. 2 is a plan view. Fig. 3 is a cross-section through the bracket, its wheel and guard for opening the slot, and the strip and its spring-supports for closing the slot between the rail-guides. Fig. 4 is a cross-section of the rail-guides, showing the slot closed and the parts for closing it. Fig. 5 is a side view of a bracket, its wheel, and guard. Fig. 6 is a plan of the wheel-guard. Fig. 7 is an end view of the wheel-guard.

Similar letters of reference indicate corresponding parts in the several figures.

A indicates the bed of a railway car or dummy, and B the wheels thereof, which parts are mounted on rails, and may be constructed in the usual well-known manner.

Between the rails for the car-wheels are two guide-rails, C C′, which are preferably inverted T-rails, and which are laid down and supported so as to leave a narrow slot between them, as shown in Figs. 2, 3, and 4.

D designates a strip of metal, preferably steel, having a convex top and adapted to close the slot referred to. This strip D is rigidly secured to bow-springs E, arranged at suitable distances apart and secured to brackets F, bolted to the bottoms of the rail C. In addition to the bow-springs E, I employ auxiliary springs G. The closing-strip D is thus allowed to be moved laterally from beneath the said slot, as will be hereinafter explained, and when left free the strip will be returned back to position by means of the springs described. When the closing-strip is in the position shown in Fig. 4 it abuts against stops *a*, fixed to the flange of the guide-rail opposite to the rail to which the strip D is attached.

The closing-strip D is moved aside by means of guards H H, provided with wheels I I and adapted to run in the slot between the guard-rails. The wheels are let into the guards flush with one surface thereof, and they turn freely on pins *b*, which pass through the brackets J, as shown in Fig. 3. The guard of each bracket is applied in the vertical slot thereof, and constructed with a removable bottom section, *h*, which allows the removal of the wheel I when its pin *b* is detached. One side of the wheel I of each guard bears against the closing-strip D, and the guard itself bears against the rails C C′.

The brackets J are secured rigidly to transverse beams of the car-bed on opposite sides, or at the front and rear of the vertical shank K, which is suitably secured to the car, and which extends down through the slot between the guard-rails, as shown in Fig. 1. This shank K is not intended to impinge against the guide-rails C C′, and hence I need not employ anti-friction rollers on this shank, as described in my applications marked "Case A" and "Case B."

L designates a pulley; L′, an endless chain; *g*, a driven pulley, and M a brush-wheel. The pulley L is applied fast on the axle of two of the car-wheels and gives rapid rotation to the brush-wheel M, which has its bearing on a bracket, P, fixed rigidly to the car-bed. This brush-wheel M receives rapid rotation when the car is in motion, and it is arranged so as to sweep

the dirt, &c., from the space formed by the closing-strip D and the two adjacent edges of the guide-rails C C′ before the said strip is moved aside to open the slot. The drawings Figs. 1 and 2 show but one brush-wheel arranged at one end of the car; but it is obvious that a similar wheel may be arranged at the opposite end of the car. Thus the track will be kept clear for the openers whichever direction the car may be moved.

What I claim as new is—

1. The combination, with the shank which is attached to the car, of opening-wheels and guards and a closing-strip, substantially as described.

2. The combination of the bracket J, the wheel, the guard, and a closing-strip applied to the slot or space between the guide-rails, substantially as described.

3. The combination of one or more rotary brushes, the guard or guide rails, the closing-strip for the groove between the rails, and means for opening and closing said strip, substantially as described.

4. In combination with the inverted T-rails, the closing-strip D, convex on top, the bow-spring E, the bracket F, and the supplemental spring G, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 17th day of September, 1881.

CHARLES S. DRAKE.

Witnesses:
SAML. S. MURFEY,
S. MUNRO.