

(No Model.)

J. POWERS.

MEANS OF CLEARING SLOTS OF WIRE ROPE RAILWAYS.

No. 255,191.

Patented Mar. 21, 1882.

FIG. 1.

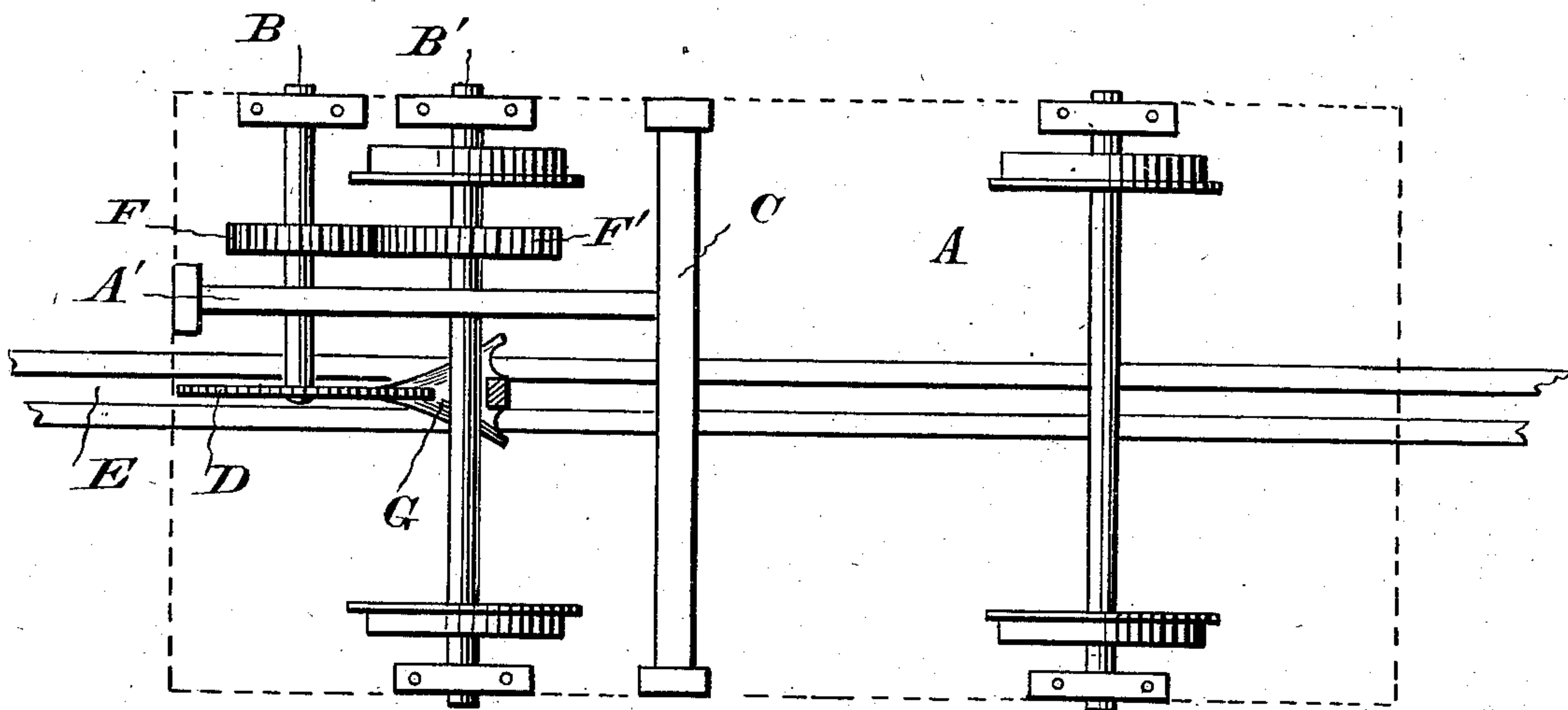
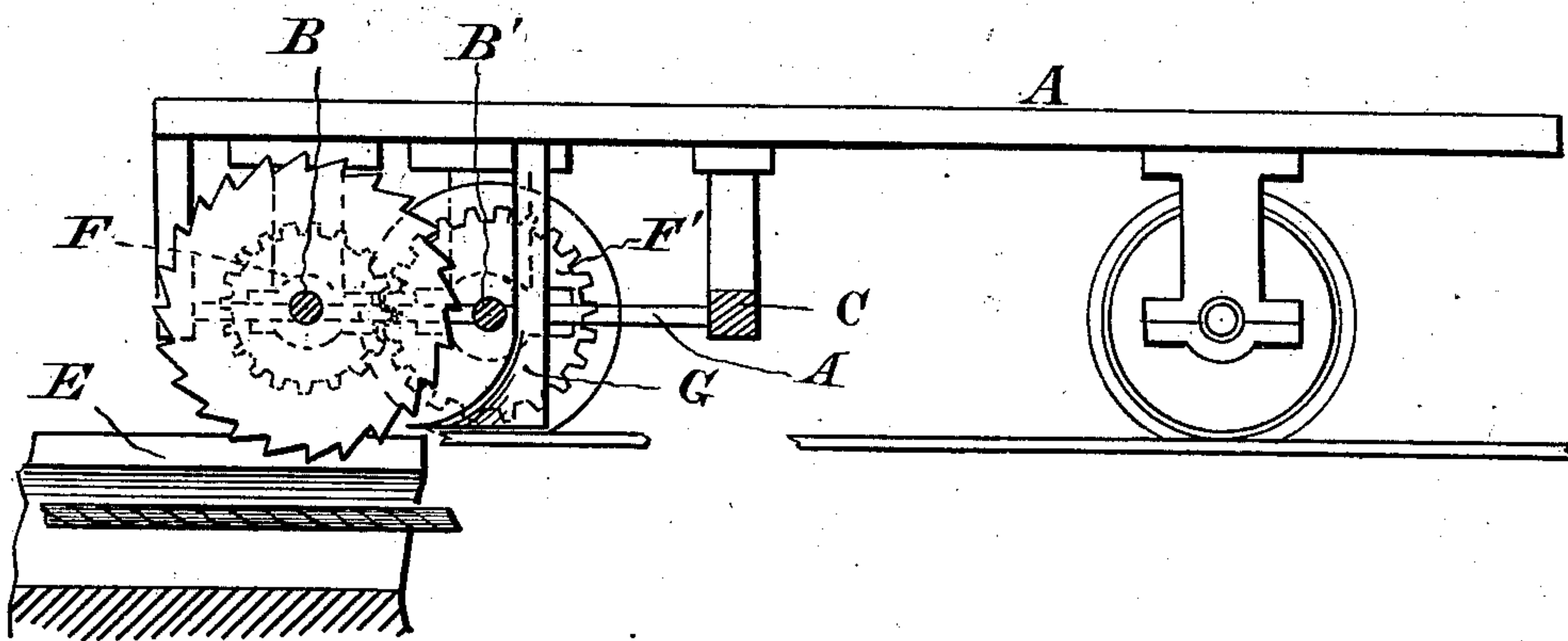


FIG. 2.



WITNESSES.

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MEANS OF CLEARING SLOTS OF WIRE-ROPE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 255,191, dated March 21, 1882.

Application filed August 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN POWERS, a citizen of the United States, and residing at San Francisco, in the county of San Francisco and State of California, have invented a certain new and useful Means of Removing Obstructions in the Slots or Grooves of Cable-Railways, of which the following is a specification.

10 The object of my invention is to provide an improved means of removing obstructions in the slots or grooves of cable-railways—such as snow and ice—so that the vertical bar which carries the rope or cable griper may pass along
15 the groove or slot without obstruction. I accomplish this object by the mechanism illustrated in the accompanying drawings, in which—

20 Figure 1 is a plan view, showing my device in position and the slot of the cable-tunnel. The dotted lines represent the dummy-frame. Fig. 2 is a sectional side elevation of my device and a portion of the cable-tunnel.

25 Similar letters of reference are used to designate like parts throughout theseveral views.

A represents the dummy, which carries the usual rope-griper for taking up and holding the rope or cable which passes along the tunnel or tube, and, by which the cars are propelled.

30 To the frame-work of the forward end of the dummy or car I connect a supplemental axle, B, having its bearings in the side of the main frame and cross-bar A', which latter bar is supported by the front end bar and a cross-bar or support, C, which extends across the dummy-frame, so that a sufficient support to the axle B is had. This axle, however, may extend across the entire frame and have its bearings or journals in the sides thereof.

40 To the end of the axle B, I connect a circular toothed wheel, D, so that the teeth thereof will rotate in the said slot or groove E when power is connected to the dummy and cause the teeth to engage the ice or snow along the
45 slot. The wheel is operated by a spur-gearing, F F', upon the shaft or axle B and main or driving axle B', which causes the saw to operate in a reverse manner to that of the tread

of the driving-wheels of the car—that is to say, the points of the teeth are upward and engage the ice or snow along the slot, striking it from below and throwing it upward and forward, and break it in a regular and progressive manner, throwing it outwardly at either or both sides of the slot and keeping
55 the slot cleared from all obstructions, so that the vertical griper-bar may at all times be made to operate in the slot or groove and not be delayed in winter-storms of snow, sleet, and ice. 60

In order to carry off and keep the broken particles of ice and snow from entering the slot after the toothed cutter has performed its office, I employ a plow or inclined dash-board, G, which follows in close order the cutter or
65 ice-breaking wheel.

This plow may also be made to serve the purpose of a track-clearer in snow-storms.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, 70 is—

1. In combination with a car or dummy of a cable or wire-rope railway, the toothed or bladed wheel operating in the slot or groove in said railway upon a spindle, shaft, or mandrel, and connected in any suitable manner
75 with the driving or propelling gear of said dummy or car, arranged and operating substantially in the manner as herein set forth and specified. 80

2. The combination and arrangement of a spindle or shaft having a toothed wheel or cutting and breaking edge upon its inner end, adapted to rotate or move in the slot of a cable-railway, with the driving-axle of a car or
85 dummy, to which it is geared, and operating in a reverse manner from that of the tread of the wheels of said dummy or car, for the purpose substantially as specified.

In testimony that I claim the foregoing I
90 have hereunto set my hand and seal this 3d day of August, 1881.

JOHN POWERS. [L. S.]

Witnesses:

C. W. M. SMITH,
CHAS. E. KELLY.