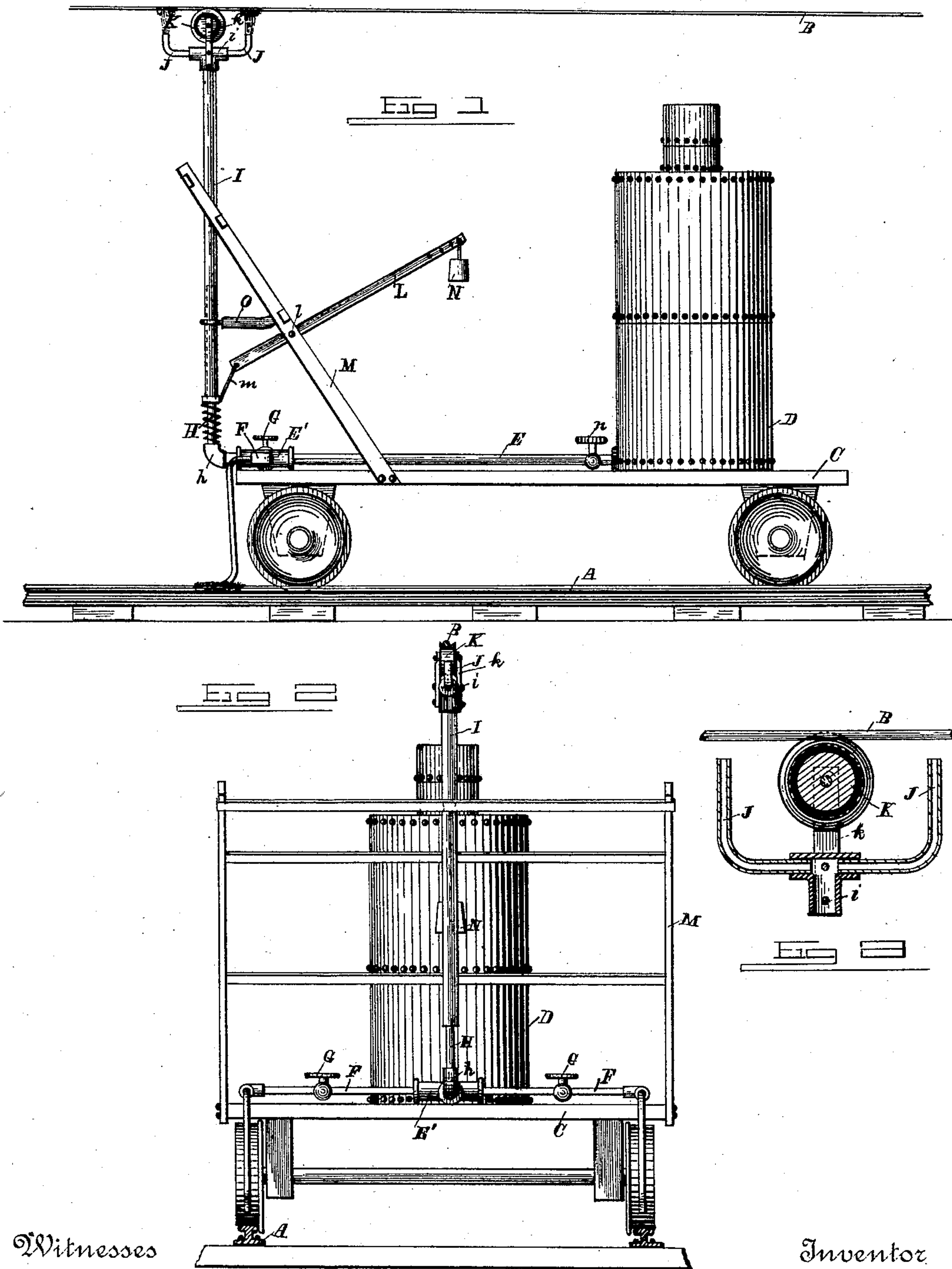


(No Model.)

J. BAUER.  
WIRE AND TRACK CLEANER.

No. 429,990.

Patented June 10, 1890.



Witnesses

C. W. Seville.

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# UNITED STATES PATENT OFFICE.

JOHN BAUER, OF OTTUMWA, IOWA.

## WIRE AND TRACK CLEANER.

SPECIFICATION forming part of Letters Patent No. 429,990, dated June 10, 1890.

Application filed March 27, 1890. Serial No. 345,520. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BAUER, of Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful  
5 Improvements in Track-Cleaners; 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,  
10 which form part of this specification, in which—

Figure 1 is a side elevation of my improved apparatus for removing ice and snow from electric-railway tracks and wires. Fig. 2 is  
15 an end view thereof. Fig. 3 is a sectional view of the overhead-wire-cleaning devices.

This invention is an improvement in track-cleaners, and is especially designed for removing ice and snow from the overhead wires  
20 of electric railways and from the track-rails thereof; and to this end it consists in novel devices for melting the ice or snow on the wires by means of jets of steam, and for automatically guiding and raising or lowering the  
25 jets of steam, and in certain other novel details of construction and combination, as will be hereinafter clearly described.

In the drawings, A designates the tracks of an electric railway, and B the overhead wire  
30 or conductor by which the current is transmitted from the generating-plant to the motors.

C designates a car of any convenient construction, upon which is mounted a steam-  
35 generating furnace D, and E is a steam-pipe leading from the steam-space of the boiler to the front of the car, where it is connected to a four-way nipple E.

F F are pipes projecting laterally from the  
40 nipple and leading to the front corners of the car, thence down to a point within a short distance of the track-rails A, and so arranged that when steam is admitted therethrough it will be jetted directly upon the rails in front  
45 of the car as the latter is moved forward, thereby melting ice and snow on the rails and clearing the same. These pipes are provided with stop-cocks G G, by which steam can be cut off.

50 H designates a pipe connected to nipple E by a joint h, and rising vertically about in

the central line of the car-track or below the conductor-wire B.

I designates another joint of pipe, the lower end of which telescopes with pipe H, so that  
55 the two make an extensible steam-conductor, which can be lengthened or shortened. On the upper end of pipe I is a T  $\frac{1}{2}$ , to the ends of which are connected curved joints J J, which project upward beneath the wire B. 60

K designates a trolley-roller mounted in bearings in arms k, attached to the upper end of pipe I, so as to hold the trolley between joints J. The trolley runs against and below wire B and guides the joints J, so that the steam  
65 escaping therefrom is jetted against wire B in front and in rear of the trolley. This trolley may be made of or may be covered with a non-conducting material, as gutta-percha. In order to hold the trolley against the wire and  
70 automatically lengthen the conductor to suit inequalities of height of the wire, a lever L, pivoted or fulcrumed at l upon a portion of an upright frame M, attached to the car, may be employed. One end of this lever is connected  
75 by a loose connection m with the lower end of pipe I, and on its other end is secured an adjustable weight N, as shown. Springs might be substituted for the weight, or a heli-  
80 cal spring might be placed on the lower portion of pipe H and bear against the lower end of pipe I, as indicated. The admission of steam to the conductor is controlled by a cock n. The conductor is upheld by a loop O, at-  
85 tached to frame M, the pipe I playing freely therethrough.

The operation of the machine is obvious from the foregoing.

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

1. In a machine for clearing snow or ice from overhead wires, the combination of a steam-generator with an extensible steam-conductor communicating therewith and  
95 adapted to jet the steam against the wire, substantially as described.

2. The combination of a steam-generator with an extensible steam-conducting pipe, a trolley, and steam-jets attached to the upper  
100 end thereof, substantially as specified.

3. The combination of a steam-conductor

consisting of a pair of telescoping steam-pipes, the devices for sustaining them in about a vertical position, the steam-jet on the upper end of the upper pipe, with the devices for  
5 automatically lengthening the conductor, and a steam-generator, substantially as described.

4. The combination of the steam-generator and a steam-conductor communicating therewith, formed of telescoping pipes, with the de-  
10 vices for automatically lengthening said conductor, the sustaining devices therefor, and a guide-trolley and the steam-jet pipes attached to the upper end thereof, substantially as and for the purpose described.

15 5. In a track-cleaning device for electric railways, the combination of the supporting-car, the steam-generator thereon, and the

steam-pipe for jetting steam upon the track-rails, with the steam-conductor consisting of a pair of telescoping steam-pipes communi- 20 cating with the generator and upheld in about a vertical position, the trolley on the upper end of the higher pipe and the steam-jet joints connected therewith, and the sustaining-frame and devices for automatically length- 25 ening the conductor, all constructed and arranged to operate as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN BAUER.

Witnesses:

PETER WINTER, Jr.,  
C. M. WOOLWORTH.