J. H. PIELERT

TRACK-CLEARER.

No. 176,348. Patented April 18, 1876.

FIG. III

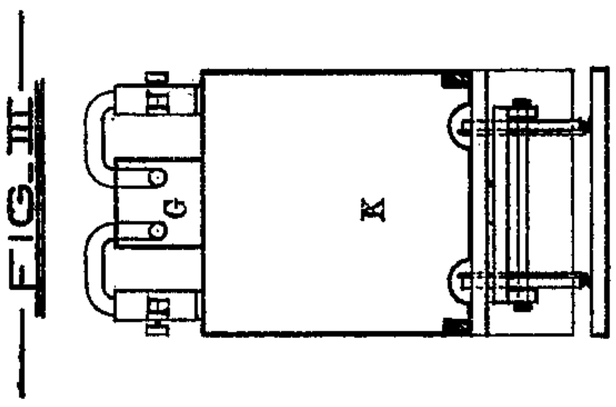


FIG. I

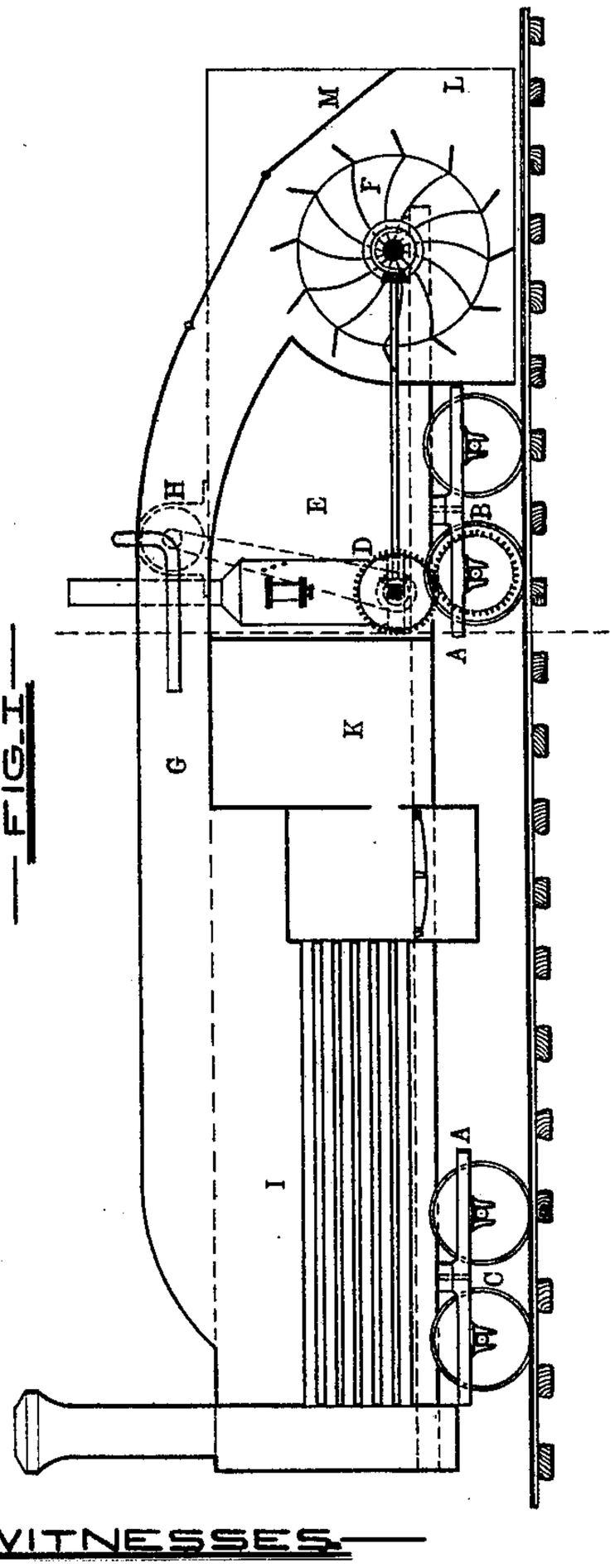
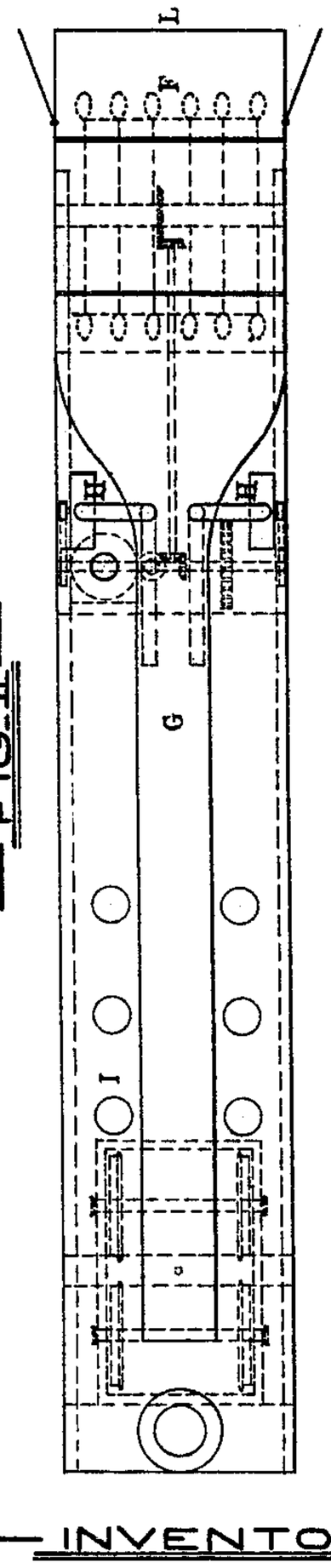


FIG. II



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN H. PIELERT, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN TRACK-CLEARERS.

Specification forming part of Letters Patent No. **176,348**, dated April 18, 1876; application filed March 4, 1876.

To all whom it may concern:

Be it known that I, JOHN H. PIELERT, of the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Snow-Plows, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

This invention relates to a machine adapted to remove snow from railroad-tracks by the action of certain excavating apparatus fitted to the forward end thereof, the said apparatus being constructed in such manner as to operate in connection with other parts of the machine, to convey the snow thus removed or excavated to a melting-chamber, also forming a part of said machine, from which the snow is discharged in the form of water, as hereinafter fully described.

In the description of this machine which follows, due reference must be had to the accompanying drawing, forming a part of this specification, and in which—

Figure 1 is a longitudinal section of my improved machine; Fig. 2, a plan of the same, and Fig. 3 a cross-section on line *x y*.

Similar letters of reference indicate similar parts of the invention in all the views.

A is the frame-work of the machine, to which are secured the wheels B and C. The wheels B are connected by gearing to an engine, D, located in the engine-room E. The engine serves to propel the machine and operate the excavator F, before alluded to, and which excavator preferably consists in a wheel having buckets or paddles fitted to radial arms extending from a shaft or secured to rims at or near to the periphery of the wheel. The excavator is of such character as, when revolved, will conduct the snow driven therefrom by centrifugal force to a snow-funnel, G, from which it is delivered to the melting-chamber hereinafter described. In addition to centrifugal force, which causes the snow to traverse the snow-funnel toward the melting-chamber, I employ fans H, driven from the engine, which force air into the funnel from the outside thereof in a direction corresponding with that of the moving snow. The melting-chamber, which, in the drawing, is represented by I, consists of a boiler provided, in the usual manner, with heating-tubes and furnace, and is either open at the top or supplied with apertures sufficiently large to allow of the escape of steam generated from the melting snow. The melting-chamber and snow-funnel are constructed in such manner as to admit of the extensive distribution of the snow over the tubes and furnace, in order that the entire surface of the water which extends above the tubes and furnace can be utilized as a heater. Suitable overflow devices are used to prevent the superabundant accumulation of water in the heating-chamber. The fire-room, from which coal is fed to the furnace of the heating-chamber, is represented by K.

As it is necessary in cleaning railroad-tracks of snow that the cut through the same should be of greater width than the rolling-stock, portions of the sides of the snow-funnel, which is enlarged at the end, forming the casing of the excavator, are hinged and adapted to be distended considerably beyond the sides of the engine-room and frame of the machine, but which are drawn in when the machine is not in use, or being transferred from one place to another on the track. The feeding-aperture L at the forward end of the machine is adjustable in height by means of an apron, M, to suit the depth of snow and prevent the admission of air to the funnel to destroy the partial vacuum formed by the blast from the fans H.

It will be understood that the duty of the engine is not to force the snow from the track, as is done by means of the ordinary snow-plow, but to merely keep the feeding-aperture well up to the snow-bank, and to overcome the reactionary tendency of the excavator, or its recoil. In running the plow by means of the engine and wheels B on a clear track, the excavator is disconnected from the other machinery.

My invention, in addition to relieving locomotives of the duty of clearing railroad-tracks by means of the ordinary snow-plow—an operation in which numbers are yearly wrecked—offers a convenient method of assisting snow-bound trains, and providing the locomotives attached thereto with hot water for feeding their boilers.

Modifications of my invention may be made

to adapt it for use on street-railways, horses furnishing the motive power to operate the excavator, and by the attachment of brooms to sweep the track of snow left by the excavator it will be found an efficient device.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The excavator F, inclosed by the funnel G, combined with said funnel G and melting-chamber I, substantially as herein set forth.

2. In combination with the excavator F, snow-funnel G, and melting-chamber I, the fans H, adapted to force air into the snow-funnel in a direction corresponding with that of the moving snow therein, substantially as specified.

3. The snow-funnel G, adapted to be distended laterally at the forward end thereof, substantially as and for the purpose described.

4. In combination with the snow-funnel G, the apron M, hinged thereto, for the purpose of adjusting the vertical height of the feeding-aperture L to suit the depth of the snow to be removed, substantially as set forth.

In testimony whereof I have hereunto subscribed my name this 5th day of February, in the year of our Lord 1876.

JOHN H. PIELERT.

Witnesses:
WM. T. HOWARD,
GEORGE H. HOWARD.