

G. P. W. RAY.
TRACK-CLEARER.

No. 169,844.

Patented Nov. 9, 1875.

Fig. 1.

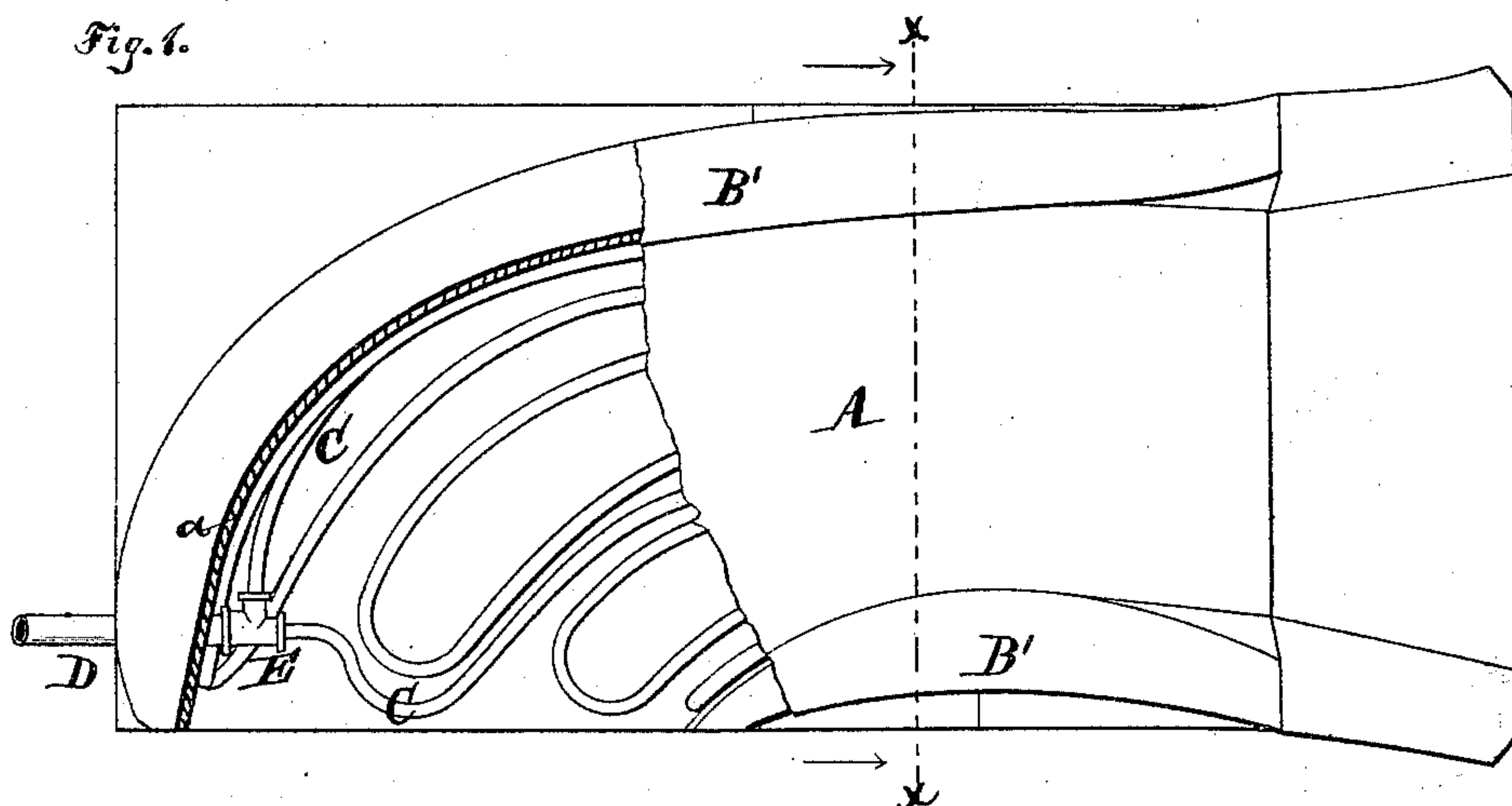


Fig. 2.

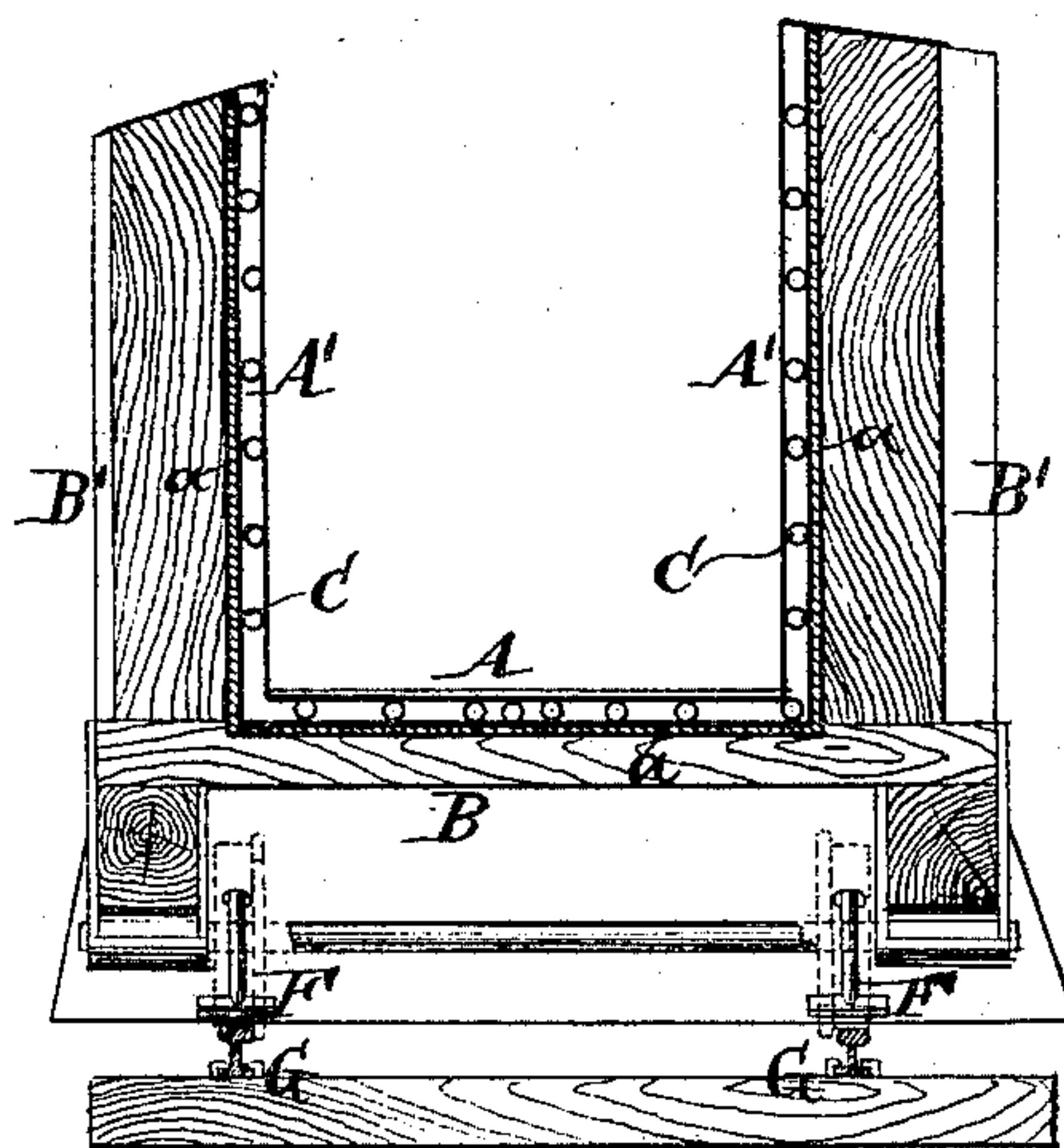
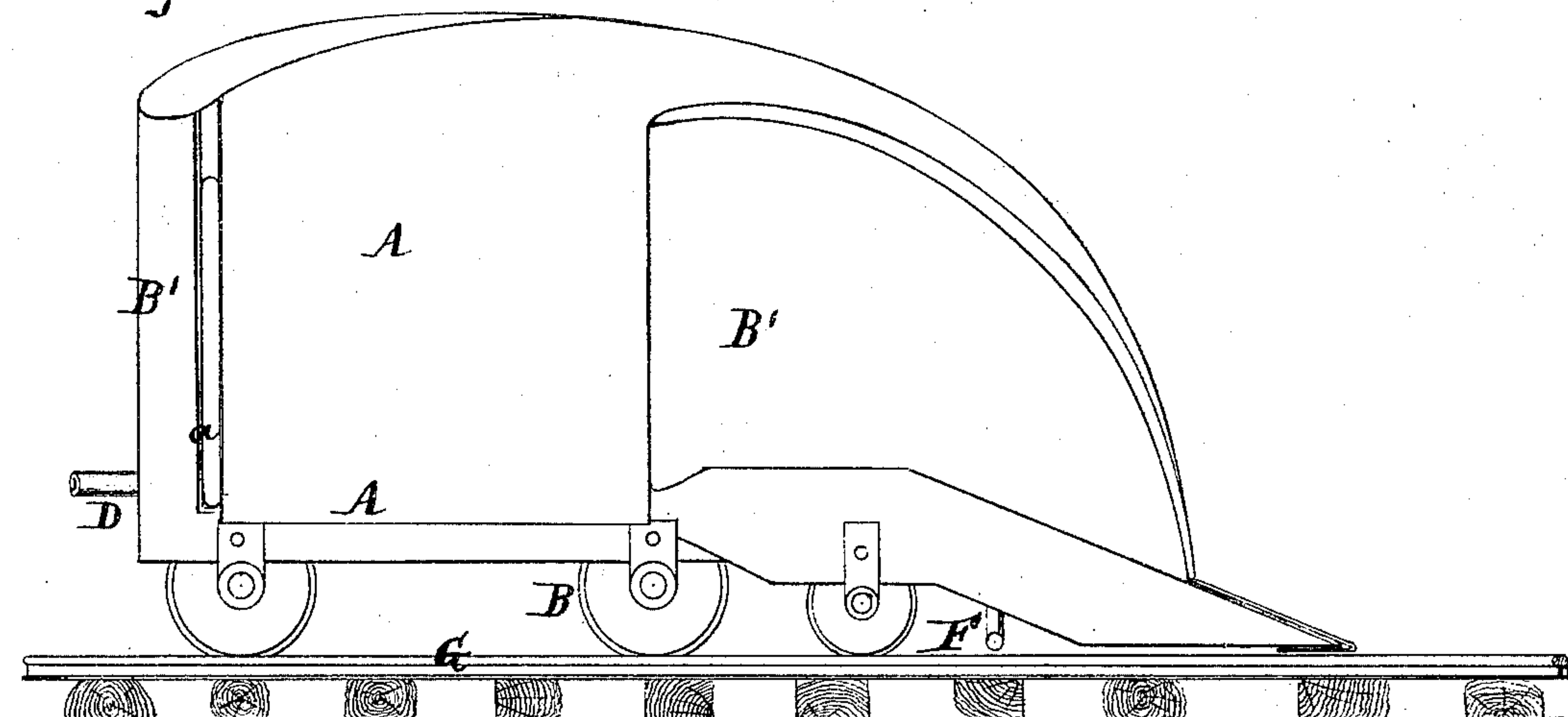


Fig. 3.



Witnesses.

Otto Hufeland
Chas. Hahlers.

Inventor.

George P. W. Ray
by Vansantons & Hauff
his attys.

UNITED STATES PATENT OFFICE.

GEORGE P. W. RAY, OF COLLEGE POINT, NEW YORK.

IMPROVEMENT IN TRACK-CLEARERS.

Specification forming part of Letters Patent No. **169,844**, dated November 9, 1875; application filed August 28, 1875.

To all whom it may concern:

Be it known that I, GEORGE P. W. RAY, of College Point, in the county of Queens and State of New York, have invented a new and useful Improvement in Snow-Plows, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan view of my improvement, partly in section. Fig. 2 is a cross-section thereof in the plane of the line *x x*, Fig. 1. Fig. 3 is a side elevation of the same.

Similar letters indicate corresponding parts.

My invention relates to certain improvements in snow-plows, and particularly those used on railways for clearing the tracks. The novel feature of my plow consists in the combination of an inclined and outwardly-curved scoop, a supporting-truck, and of heating-coils, which are interposed between the scoop and the truck, in such a manner that when the whole is propelled over a railroad-track the scoop takes up at the front end any snow that may have fallen or drifted on the track, while, when the heating-coils are supplied with steam or any other heating agent, the scoop partakes of such heat, and the snow is partially molten, and thereby its bulk is reduced, and its discharge from the scoop is facilitated.

My invention consists also in the arrangement of exhaust-nozzles below the truck, carrying the inclined and outwardly-curved scoop, one over each of the rails of the railway, for the purpose of keeping the rails clear of snow, the said nozzles being combined with the heating-coils, which, to this end, are divided into two sets, but are supplied with steam through a single pipe.

In the drawing, the letter A designates the scoop of my plow, the surface of which is inclined, and which has an outward curve, as shown. This scoop is preferably made of metal, sheet-iron being preferred, and it is mounted on a truck, B, or any other form of wheel-vehicle, in any suitable manner. The scoop A, as well as the truck B, has side walls A' B', between which, as also between the bottom of the scoop and the platform of the truck, are interposed heating-coils, which, in the present example, are made in two divisions, C C, each of which covers one of the sides and a portion of the bottom of the apparatus. By thus heating the sides, as well as the bottom of the scoop A, the greatest possible heating-surface is obtained. The divisions C C of the heating-coil are fed from a common pipe, D, through the medium of a T-joint, E. The object of the two divisions is, to permit of arranging a corresponding number of nozzles, F F, below the truck B, these nozzles being placed in line with the railway-rails G G, and forming the exhaust of the coils.

The coils may be heated by means of steam, hot air, or from any other source; and in case my plow is used on a steam-railway, the coils may be supplied with steam directly from the locomotive.

It is evident that when steam exhausts from the nozzles F F, and is imparted on the rails G G, the rails are thereby kept clear of snow.

The direction of the inclination of the scoop A is toward the front of the plow, and thus when the whole is propelled over a railway-track the scoop catches up at the front end any snow that may be found on the track. If a large quantity of snow is taken up, as is the case when the plow is propelled in deep snow, that portion of the snow which comes in contact with the heated sides and bottom of the scoop melts, and thereby the bulk of the snow in the scoop is reduced, and the clogging up of said scoop is avoided. By the pressure brought to bear on this unmolten snow by that continuously taken up at the front end of the scoop A it is caused to discharge at the rear end of the scoop, which, having an outward curve, deposits the snow alongside, and clear of, the railway-track.

It will be readily understood that by my plow the snow is taken up and discharged with the greatest possible facility, while the plow is not liable to choke up by the snow.

The sides and the platform of the truck are protected by a lining, *a*, of sheet metal, and an additional lining of felt or other suitable material, between the sheet metal and the wood, whereby the radiation or waste of heat is avoided.

What I claim as new, and desire to secure by Letters Patent, is—

In a snow-plow, the combination of an in-

clined curved scoop, the mouth of which sets closely to, and extends at right angles across, the track, the rear opening to one side, said scoop being constructed with double walls, and an interposed steam-coil traversing the space between said walls, and being mounted upon a truck, B, substantially as and for the purposes herein described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 20th day of August, 1875.

GEO. P. W. RAY. [L. S.]

Witnesses:

FREDERICK VON KOPPENFELS,
CONR. V. BUSSE.