

E. H. ANGAMAR.
Apparatus for Removing Snow and Ice from Railroads.

No. 229,936.

Patented July 13, 1880.

Fig. 1.

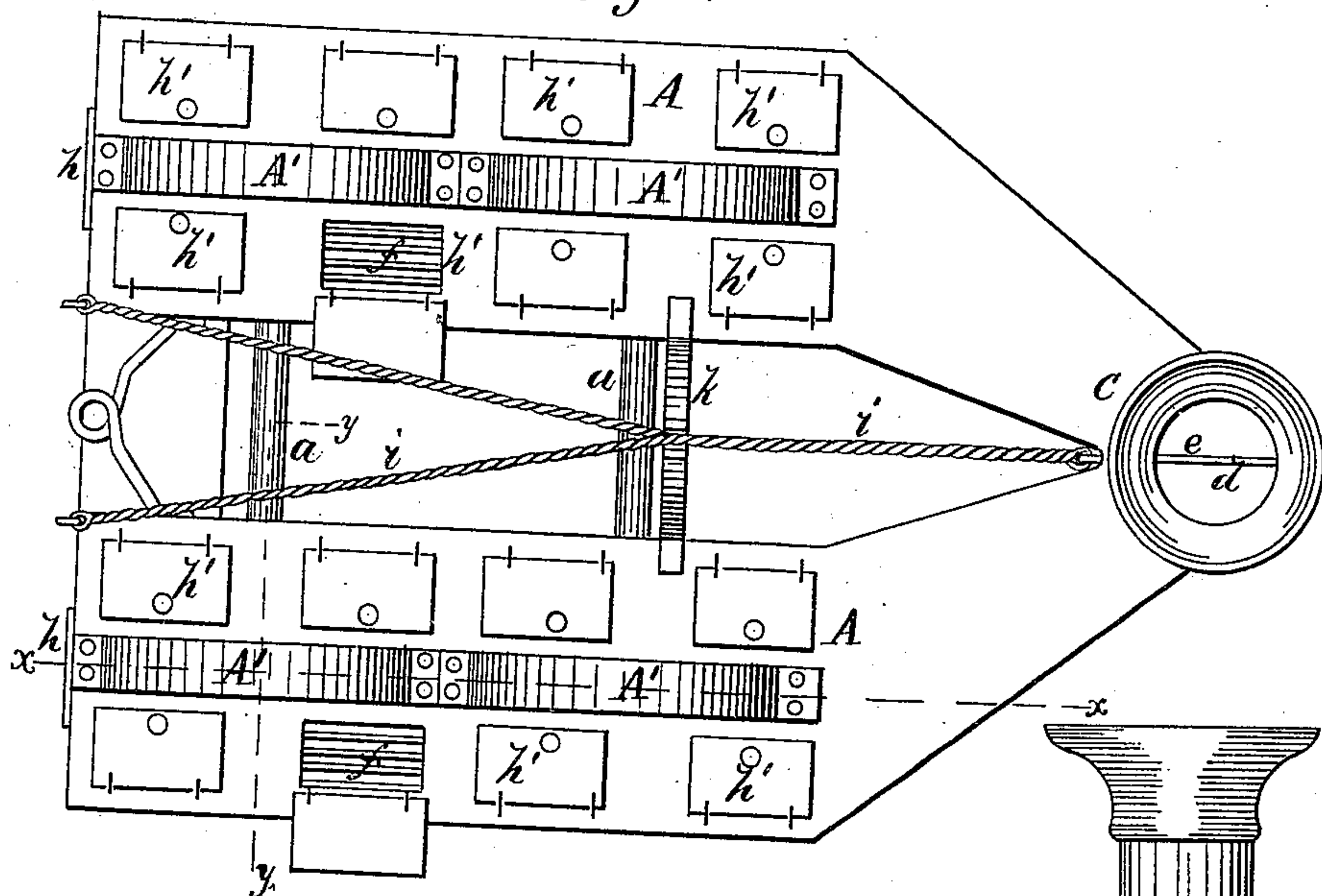


Fig. 2.

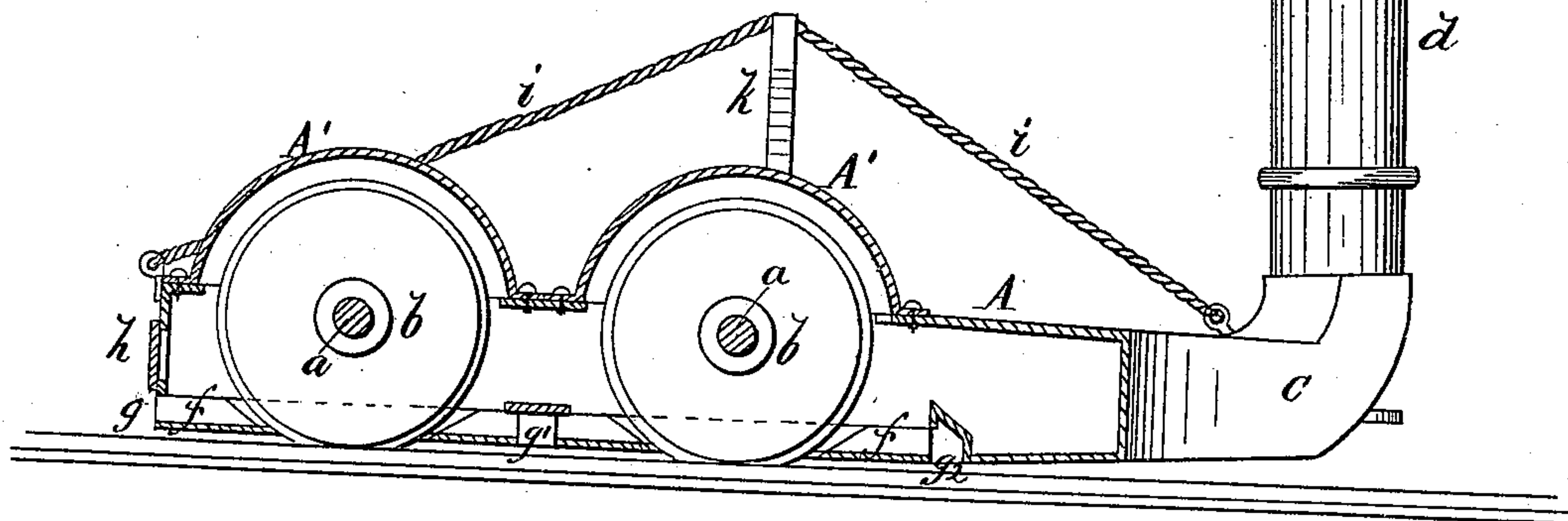
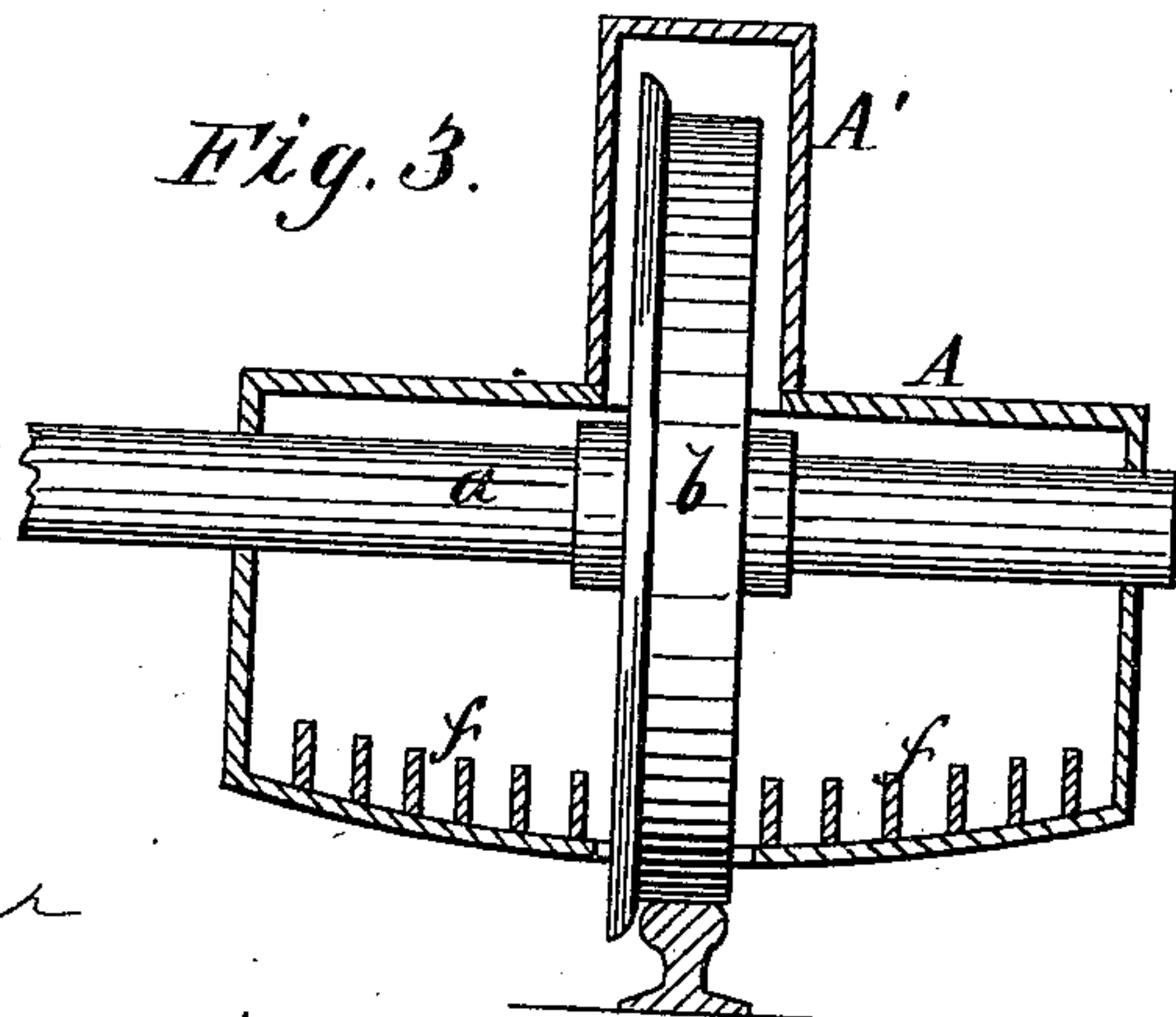


Fig. 3.



WITNESSES:

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EUGENE H. ANGAMAR, OF NEW ORLEANS, LOUISIANA.

APPARATUS FOR REMOVING SNOW AND ICE FROM RAILROADS.

SPECIFICATION forming part of Letters Patent No. 229,936, dated July 13, 1880.

Application filed December 13, 1879.

To all whom it may concern:

Be it known that I, EUGENE H. ANGAMAR, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and
5 useful Improvement in Apparatus for Removing Snow and Ice from Railroads, Streets, &c., of which the following is a specification.

My improvements relate to apparatus for removing snow and ice from railroads and
10 streets by heat; and the invention consists in a double furnace mounted on wheels, the wheels being incased within the fire-boxes of the furnace, so that when used the whole apparatus will become highly heated and the
15 snow and ice melted by radiation of heat and contact with the heated surfaces.

The construction and operation will be more particularly explained with reference to the accompanying drawings, wherein—

20 Figure 1 is a plan view of the apparatus. Fig. 2 is a vertical longitudinal section on line $x x$ of Fig. 1. Fig. 3 is a vertical transverse section of the box or casing on line $y y$.

Similar letters of reference indicate corresponding parts.

25 The furnace consists of the two oblong rectangular fire-boxes $A A$, that are supported on axles $a a$ and wheels $b b b b$. The two boxes unite at the forward end into a single flue, c , from which rises a stack, d . At the base of stack
30 d , in the flue c , is a vertical partition-plate, e , that acts to equalize the draft between the two fire-chambers. This construction gives a pointed or inclined forward part to the apparatus, similar to a snow-plow.

35 The fire-boxes A are fitted with grate-bars f , that rest on the bottom of the boxes. The air for draft is supplied by a front opening, g , and the openings $g' g^2$ in the bottom of
40 boxes A . At the back end of each box A is an opening and door, h , for supplying fuel, and along the top of the boxes A are openings and doors h' , for supplying fuel and giving access to the inside.

The wheels b are partially inclosed by the
45 boxes A , and at the upper part preferably by the attached wheel-boxes A' , and the lower part of each wheel projects through a suitable opening in box A , so as to rest on the rails or ground. The wheels as shown are for run-
50 ning on rails, but may be of form adapted for streets.

To support the forward part of the apparatus I make use of a wire rope, i , which is connected at one end near the stack d and at the
55 other end to the rear of the boxes A , and is supported intermediately by a standard, k , that rises from the boxes A .

In operating the apparatus, fire is to be kindled in the fire-boxes, and the whole apparatus, including the wheels, will become heated.
60 It is to be moved forward by hand, drawn by horses, or pushed by a locomotive, and the heated surfaces, by contact with the snow and by radiation of heat, will clear the road. Upon
65 railroads the heated wheels will meet the ice on the rails, and as the fire-boxes set close to the ground, the work will be done thoroughly with economy of heat.

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

1. The apparatus for removing snow and ice from railroads and streets, consisting of the two oblong fire-boxes A , united at the forward end by a flue, c , and supported upon the
75 axles a and wheels b , that are inclosed in the fire-spaces, substantially as described and shown.

2. In apparatus for removing snow and ice
80 from railroads, the fire-boxes A , formed with closed bottoms, having draft-openings $g g' g^2$, and fitted with grate-bars f , substantially as shown and described.

E. H. ANGAMAR.

Witnesses:

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C. SEDGWICK.