

(No Model.)

J. F. RIETHMAYER.

MACHINE FOR REMOVING ICE AND SNOW.

No. 316,181.

Patented Apr. 21, 1885.

Fig 1

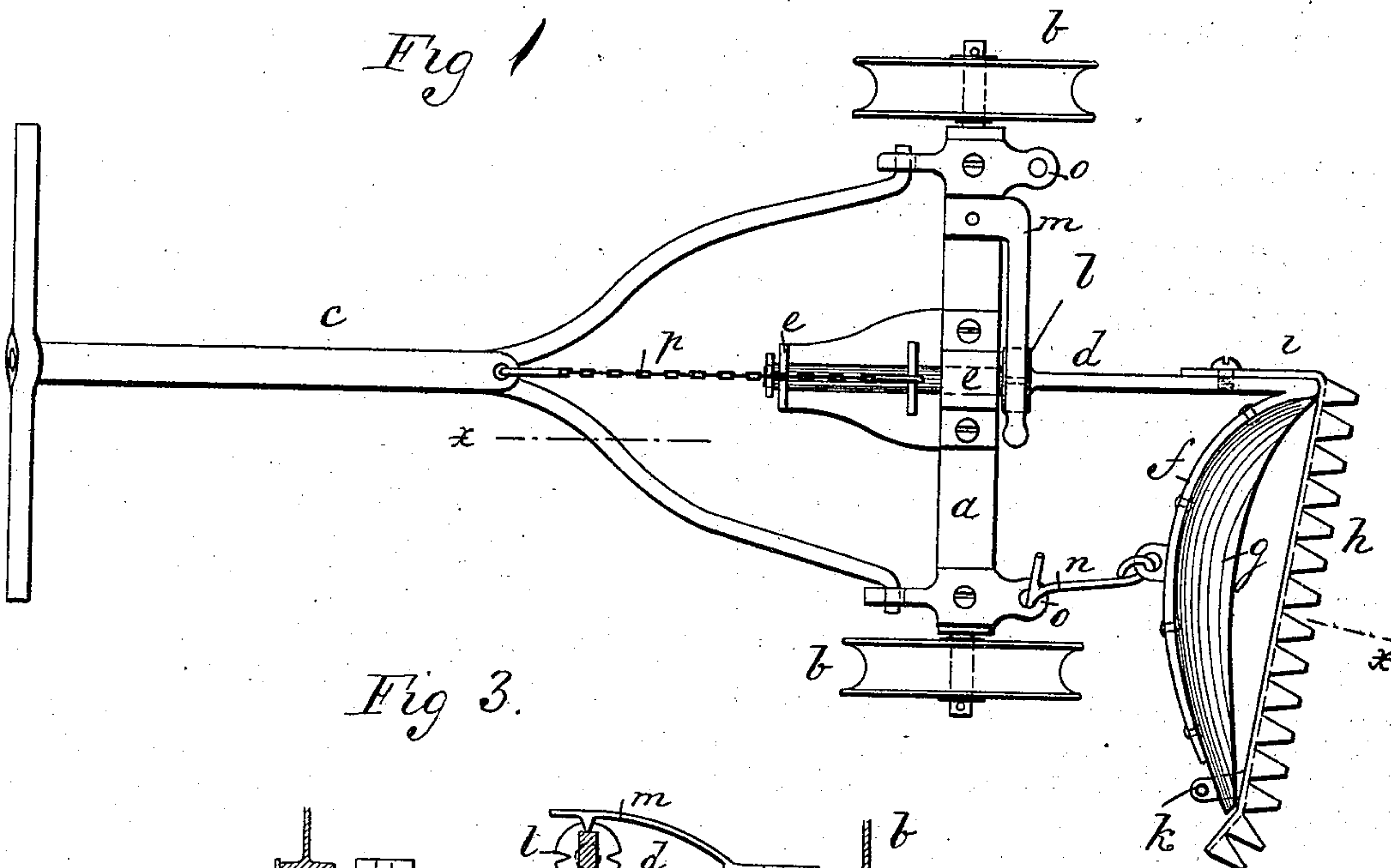


Fig 3.

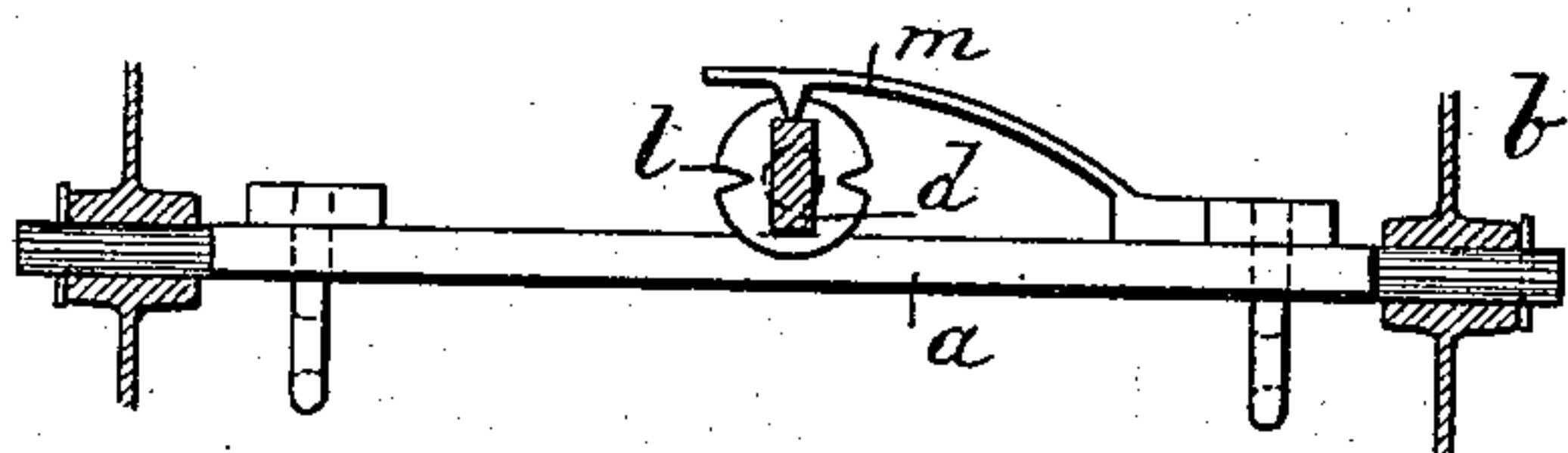
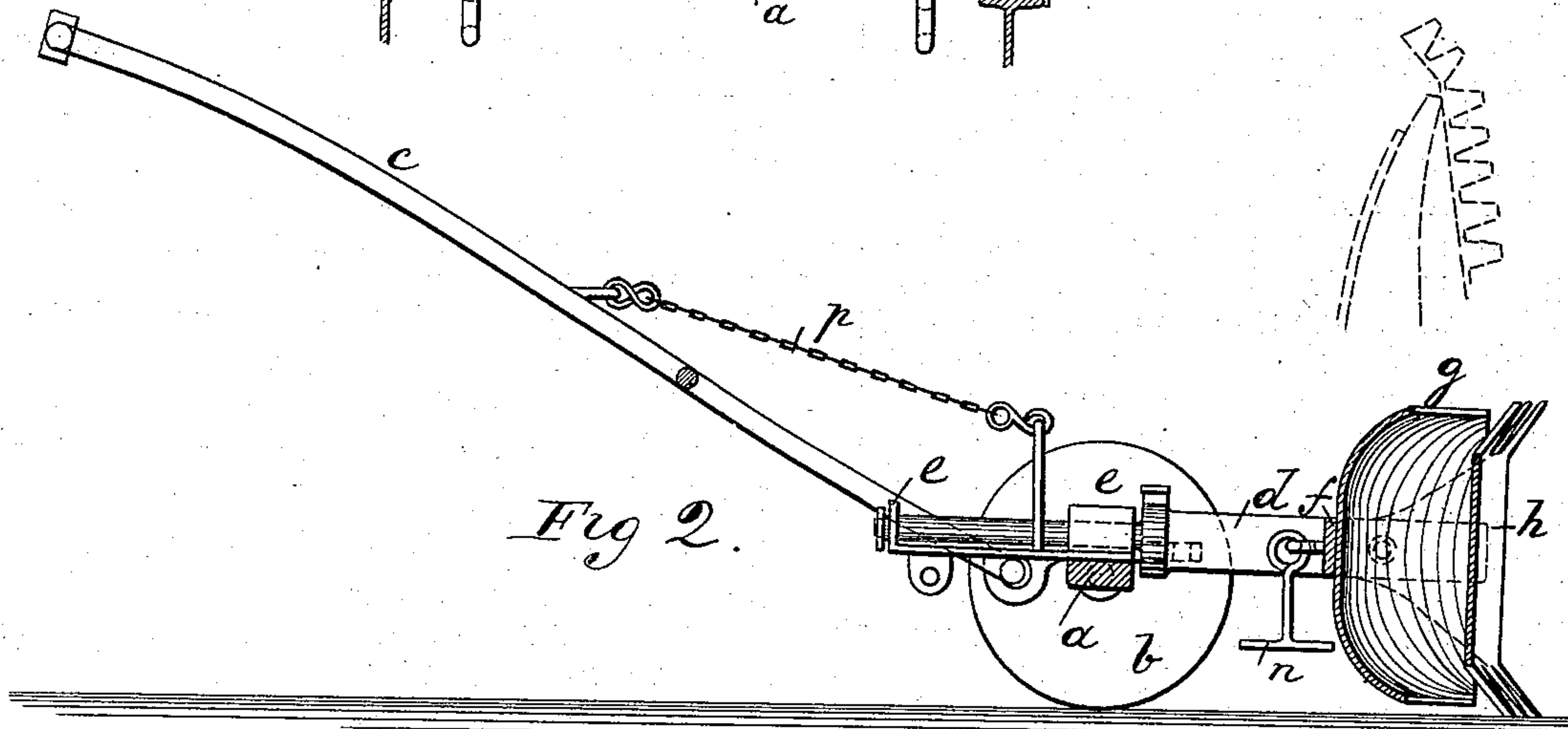


Fig 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB F. RIETHMAYER, OF LANSDALE, PENNSYLVANIA.

MACHINE FOR REMOVING ICE AND SNOW.

SPECIFICATION forming part of Letters Patent No. 316,181, dated April 21, 1885.

Application filed October 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, JACOB F. RIETHMAYER, of Lansdale, in the county of Montgomery and State of Pennsylvania, have invented a new and Improved Machine for Removing Snow and Ice, of which the following is a full, clear, and exact description.

The object of my invention is to furnish a machine adapted to be moved by hand for removing snow and ice from sidewalks, pavements, &c.

To that end my invention consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved machine. Fig. 2 is a sectional side view on the line *x x*, Fig. 1. Fig. 3 is a detail view.

The shaft carrying the plow is to be mounted upon a suitable support—either a truck or a sled. In the case shown the support consists of an axle, *a*, carrying rollers or wheels *b*, and to the axle *a* is attached a handle, *c*. *d* is a shaft fitted in a horizontal position in bearings *e e* upon the axle or support, and extending forward a suitable distance in front of the machine. The forward end of this shaft is formed with a backwardly-curved arm, *f*, to which is rigidly attached a plow, *g*, so that the arm serves to brace the plow and hold it extended at one side of the shaft. The shape or form of the plow is such as to throw the snow from the center of the machine to one side. The construction shown is a curved plate having its upper and its lower edges curved forward, so as to be operative for gathering the snow if turned with either edge upward when turned with the shaft at either side of the machine.

h is a scraper consisting of a plate formed with teeth upon the top and bottom edges, and attached in front of the plow by means of an arm, *i*, that is secured to the shaft *d*, and a lug, *k*, that passes through the outer end of the plow, so that it can be readily put on or taken off of the machine. The shaft *d* is fitted to rotate in its bearings, and upon it is a ratchet-disk, *l*, taking against the outer

bearing, *e*, so that it serves to prevent end-wise movement of the shaft. The ratchet-disk is engaged by a spring, *m*, which projects from the axle so as to hold the shaft, and with it the plow, in position for operation at either the right or the left hand side, and also to hold the plow when raised up vertically out of action.

Upon the back of the plow is hung a hook, *n*, that is engaged with one of the lugs *o* on the axle, for retaining the plow in either position to which it may be moved.

The handle *c* is hinged, and a flexible connection, *p*, connects it with the axle or support *a*, so that the handle is retained at a suitable height for convenient operation, and so that when the handle is sufficiently pressed down the snow will be lifted from the ground. Any desired form of handle may be used, and it may be attached to any part of the supporting truck or sled.

The machine is to be operated by being pushed along with the plow set at either side, according to the direction in which the snow is to be thrown off. The scraper when attached acts by its teeth to break or loosen up any ice or hardened snow. For removing snow alone the scraper is not required, and may be removed.

The advantages of this machine are that the snow can be removed in successive swaths until the walk is entirely cleaned, and the plow being reversible, this may be readily done without throwing snow back upon the portion already cleared.

I do not limit myself in respect to the supports for the shaft and plow, as these parts may be mounted upon a wheeled truck; or, in place of wheels, the axle may be fitted with runners, or the shaft can be fitted upon an ordinary sled.

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

1. In a machine for removing ice and snow, the combination of the shaft *d*, plow *g*, and the scraper *h*, substantially as described.

2. The combination of the rock-shaft *d* and the double plow *g* with the axle *a*, rollers *b*, and handle *c*, substantially as described.

3. The combination, in a snow-plow, of the reversible shaft *d*, the double plow *g*, the

ratchet *l*, the spring *m*, and the supporting-axle *a*, substantially as shown and described.

4. In a snow-plow, the detachable scraper *h*, combined with the plow *g* and the support-
5 ing-shaft *d*, as and for the purpose set forth.

5. The scraper *h*, formed with teeth at opposite sides, combined with the reversible plow *g*, substantially as shown and described.

6. The shaft *d*, formed with arm *f*, forming a brace and support for the plow, as specified.

JACOB F. RIETHMAYER.

Witnesses:

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JOHN RUTT.