

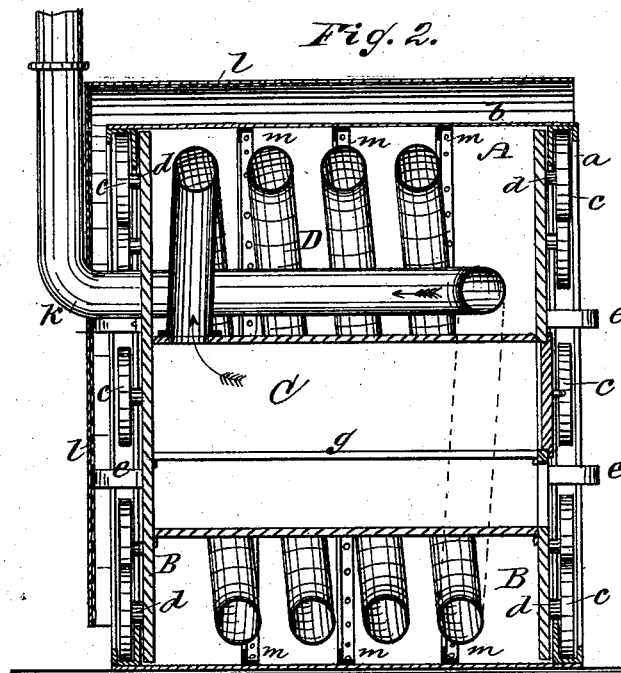
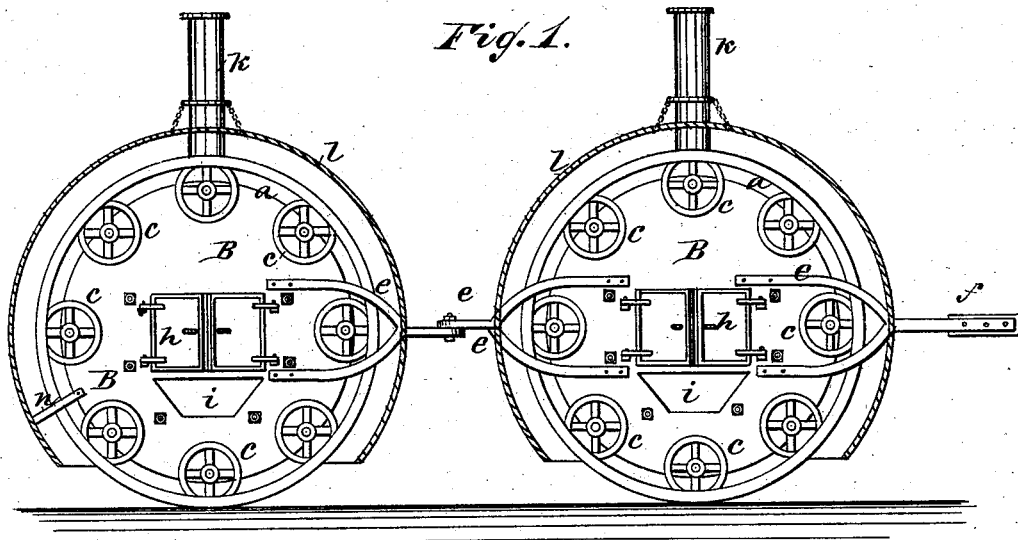
(No Model.)

F. D. RIKER.

APPARATUS FOR MELTING SNOW.

No. 261,484.

Patented July 18, 1882.



WITNESSES:

*Phel. Foster*  
*R. Sedgwick*

INVENTOR:

*F. D. Riker*  
BY *Mum H*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

FRANCIS D. RIKER, OF BROOKLYN, NEW YORK.

## APPARATUS FOR MELTING SNOW.

SPECIFICATION forming part of Letters Patent No. 261,484, dated July 18, 1882.

Application filed April 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS D. RIKER, of Brooklyn, Kings county, New York, have invented a new and useful Improvement in Apparatus for Melting Snow, of which the following is a full, clear, and exact description.

The object of my invention is to furnish a simple and efficient apparatus for removing snow from sidewalks, streets, and roads.

It consists in a roller with which is combined a furnace, as hereinafter described and claimed.

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 both figures.

Figure 1 is a side elevation, partly sectional, of my improved apparatus; and Fig. 2 is a vertical longitudinal section of the roller.

A is the roller, made as a hollow cylinder, of suitable length and diameter and of any suitable material. As shown, it consists of the rings *a a* and shell *b*, at the ends of which the rings *a a* are secured.

B B are heads attached upon the ends of a smaller interior cylinder or box, C, which constitutes the furnace proper. The heads B B fit the interior of the shell *b* loosely, and are provided with rollers *c* upon studs, upon which the rings *a a* of the rollers rest, and the rings *a a* are flanged to lap over the faces of the roller *c*, so as to prevent endwise movement of the heads B B, and also to serve as trucks for the rollers.

*e e* are forked braces, attached rigidly to the heads B, and extending in a horizontal direction, so as to serve as thills for connection of the draft-pole. These braces are attached at front and rear, the front one receiving the pole *f* and the rear brace formed for connection to the forward brace of a second melting-roller that is attached behind the first. The furnace is provided with grate-bars *g*, and the head B at one end of the furnace is fitted with doors *h*, that give access above the grate-bars, and an opening, *i*, is provided for access to the space below the grate-bars.

Dis the draft-tube, the same being preferably a coil of tubing connected by one of its ends to the rear of the furnace and at the other end to a horizontal tube, *k*, that extends through the rear head, B, and upward to form a chimney.

These coils of tubing will be placed as closely as may be, so as to obtain as much heating-surface as possible within the main cylinder.

I prefer to form the shell *b* of the roller of sheet metal, and in that case it is strengthened by interior rings, *m*, of angle iron.

*l* is a hood of sheet metal, covered with any suitable non-conductor, secured around the rollers so as to cover the upper portion and ends of the same, and thereby confine the heated air, so that it may not pass off, except at the under side of the roller near the ground. Space is left between the roller and the hood for accumulation of the heated air. The hood is sustained by attachment to the braces *e* and by stays *n*, attached to the heads B B.

It will be observed that the roller has no axle, but that the shell *b* revolves upon the rollers *c* of the heads B B as the apparatus is drawn along. The heads B B and the furnace carried by the heads are not revolved with the rollers.

The apparatus may be propelled by horse-power or otherwise, according to its size.

The lower portion of the roller, resting upon the ground, and passing over the snow, melts the snow rapidly as the machine progresses. The roller being of comparatively large size, the surfaces have time to become highly heated before coming a second time in contact with the snow, so that a continuous heat is applied. The hood prevents loss of heat by radiation, and the revolution of the roller within the hood tends to carry the heated air down to the opening at the under side.

This apparatus is intended principally for use in cities for removing snow from streets and walks, but may be used wherever available, and used for rolling roads wherever heated rollers are required.

I do not limit myself to the details of construction exactly as shown, as they may be varied within the scope of my invention.

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

1. An improved snow-melting apparatus, consisting of a roller fitted to revolve upon rollers on the heads of a stationary furnace, substantially as herein shown and described, and for the purpose set forth.

2. The hollow roller A, provided with flanged rings *a a*, the heads B B, fitted with rollers *c*, and the furnace C, attached to the heads B B and provided with the escape-flue D, substantially as described, combined for operation as set forth.

3. The furnace C, coiled escape-flue D, and chimney *k*, in combination with the stationary heads B B and revolving cylindrical shell *b*, substantially as shown and described.

4. The combination, with the furnace B C, provided with rollers *c*, of the roller A, pro-

vided with flanged ends and the hood *l*, substantially as and for the purpose set forth.

5. In a snow-melting apparatus, the combination, with two or more rollers, A A, fitted to revolve upon rollers on the heads of the stationary furnaces B C, of the braces *e* and the draft-pole *f*, substantially as and for the purpose set forth.

FRANCIS D. RIKER.

Witnesses:

GEO. D. WALKER,

FRANCIS BANNERMAN.