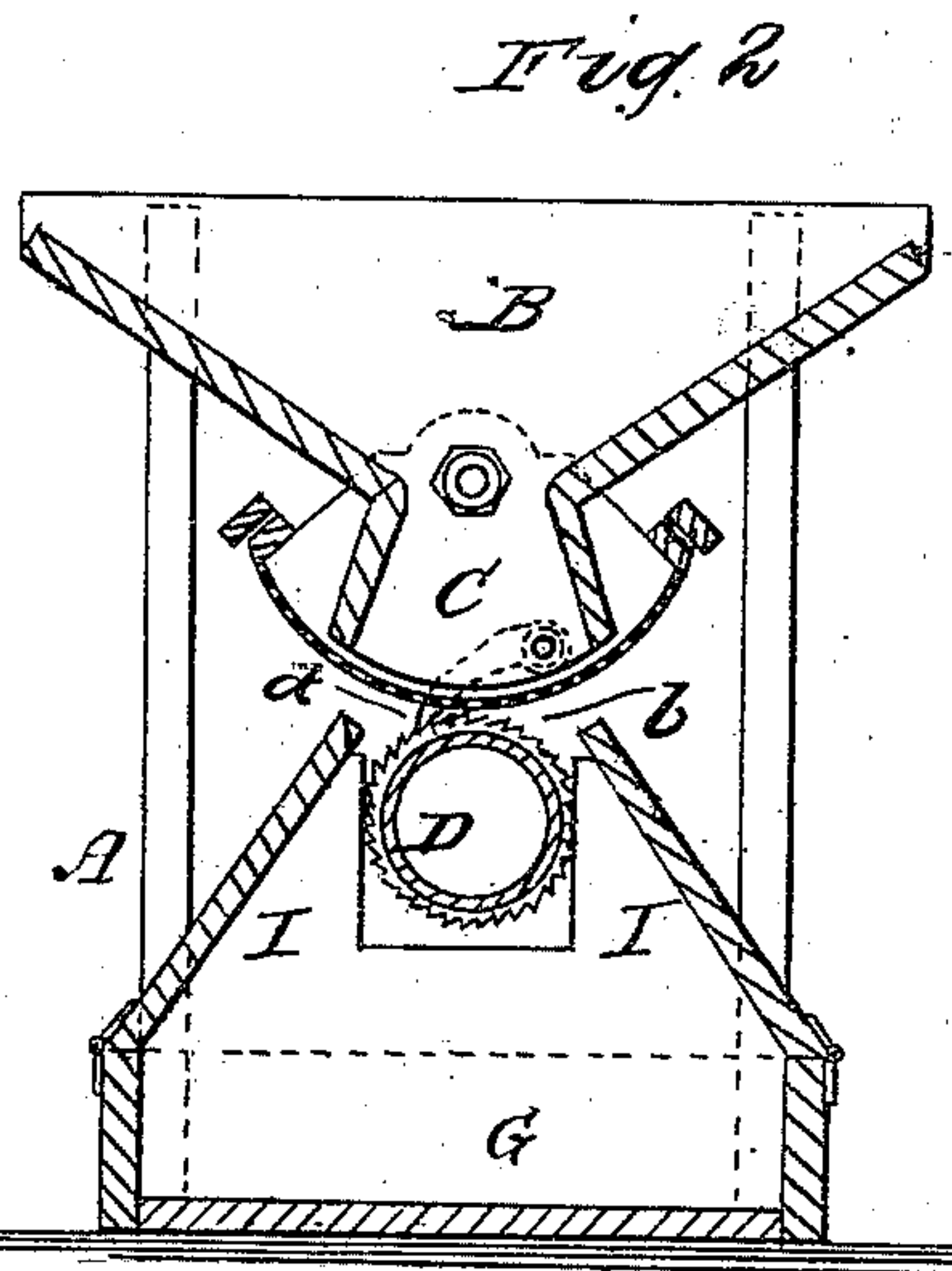
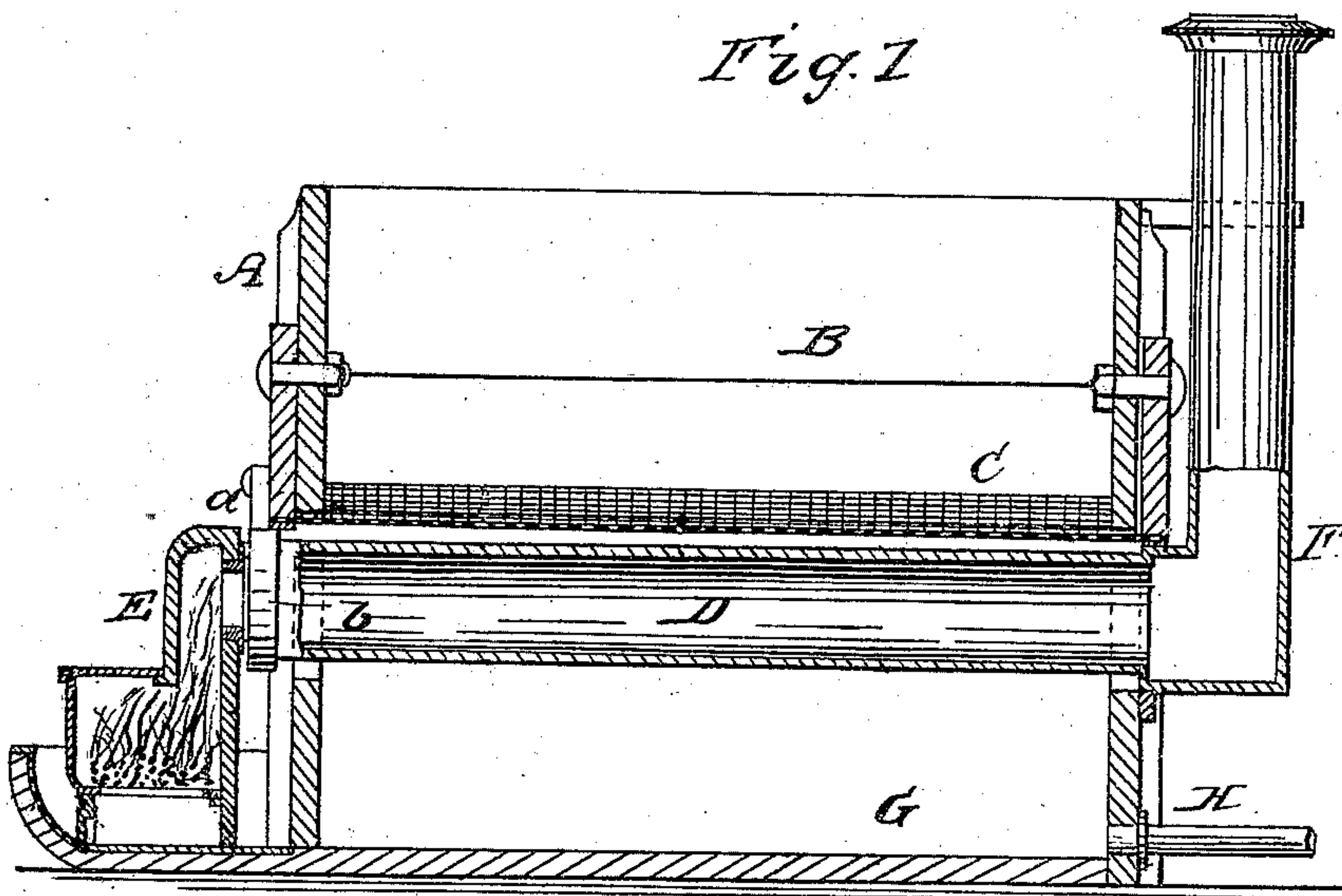


N. H. BORGFELDT.
Apparatus for Melting Snow.

No. 88,693.

Patented April 6, 1869.



Witnesses

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APPARATUS FOR MELTING SNOW.

Specification forming part of Letters Patent No. 88,693, dated April 6, 1869.

To all whom it may concern:

Be it known that I, NICHOLAS H. BORGFELDT, of the city, county, and State of New York, have invented a new and useful Improvement in Apparatus for Melting Snow; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which drawings—

Figure 1 represents a longitudinal vertical section of this invention. Fig. 2 is a sectional end view thereof.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of a screen or sieve in combination with a heated surface or space in such a manner that the snow to be melted has to pass through the meshes of the sieve before it is permitted to enter the heated space or to come in contact with the heated surface, and thereby the snow is divided up into flakes, and the operation of melting is materially facilitated.

It consists, further, in the arrangement of an oscillating sieve in combination with a movable heating-surface in such a manner that by the motion imparted to the sieve the separation of the snow into flakes is facilitated, and at the same time the heating-surface is propelled, thereby changing the surface which the snow strikes as the same drops down from the sieve, and preventing said heated surface from getting cooled off.

It consists, finally, in the combination of a hopper, a sieve, a heated surface, and a tank, in such a manner that the snow on being deposited in the hopper has to pass through the sieve in order to reach the heated surface, and that the water resulting from the melted snow collects in the tank, whence it can be run off to a sewer without difficulty.

A represents a frame made of wood or any other suitable material, and intended to be supported by wheels or sleigh-runners so that it can be readily moved from place to place. On the top of this frame is secured a hopper, B, which is open at the bottom, and from the ends of which is suspended the sieve C, the connection between said sieve and hopper being by preference arranged in such a manner

that an oscillating motion can be imparted to the sieve. Under the sieve is situated the flue D, which connects at one end with a stove, E, and at the opposite end with a smoke-stack, F. This flue is made of sheet metal, sufficiently large to catch the snow dropping down through the meshes of the sieve C. The connections of the flue with the chimney at one end and with the stove at the opposite end are, by preference, so arranged that a revolving motion can be imparted to the flue without disengaging it from its connections. This revolving motion may be produced by a pawl, *a*, which is secured to the oscillating sieve, and which engages with the teeth of a ratchet-wheel, *b*, mounted on one end of the flue, as shown in the drawings. The space below the flue D forms a tank, G, which serves to receive the water resulting from the melting snow, and which is provided with a discharge-pipe, H, by preference made of india-rubber or other flexible material. To the sides of the tank are attached the hinged flaps I, so that the space below the flue can be closed to prevent the waste of heat. The stove E is supported by one end of the frame A.

This apparatus is intended particularly to relieve the streets of a city from the snow. The snow is shoveled into the hopper B, and by the action of the sieve it is divided into flakes, which melt as soon as they come in contact with the heated flue, whereas the melting of snow in lumps is very difficult and impracticable, since a lump of snow, if placed on a heated plate cools off said plate so rapidly that the melting progresses very slowly.

It is obvious that in carrying out my invention a flat heated plate might be substituted for the flue D, and to this plate a reciprocating motion might be imparted instead of the rotary motion imparted to the flue.

By making the heated surface movable the snow, as the same drops down from the sieve, is prevented from striking such heated surface always in the same place, and the operation of melting the snow is materially facilitated.

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

1. The combination of a sieve with a heated surface, substantially as described, so that the mass of snow before being permitted to come

in contact with the heated surface, is subdivided into flakes, and the melting process is thereby facilitated.

2. The movable heated surface D, in combination with the oscillating sieve C, substantially as and for the purpose described.

3. The combination of the hopper B, sieve

C, heated surface D, and tank G, substantially as and for the purpose set forth.

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Witnesses:

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