

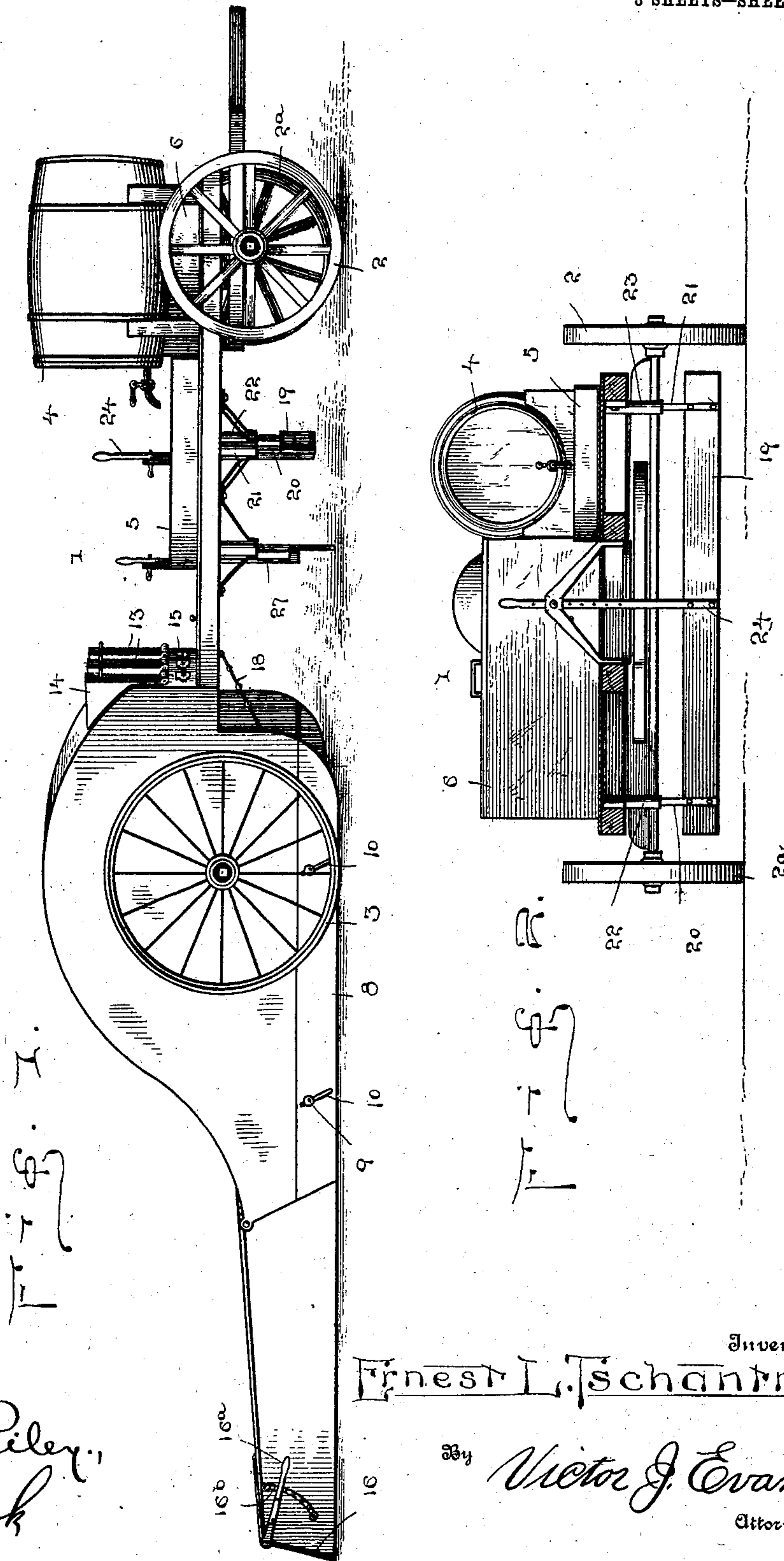
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PATENTED FEB. 24, 1903.

E. L. TSCHANTRE.  
ICE AND SNOW MELTER.  
APPLICATION FILED JUNE 11, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses

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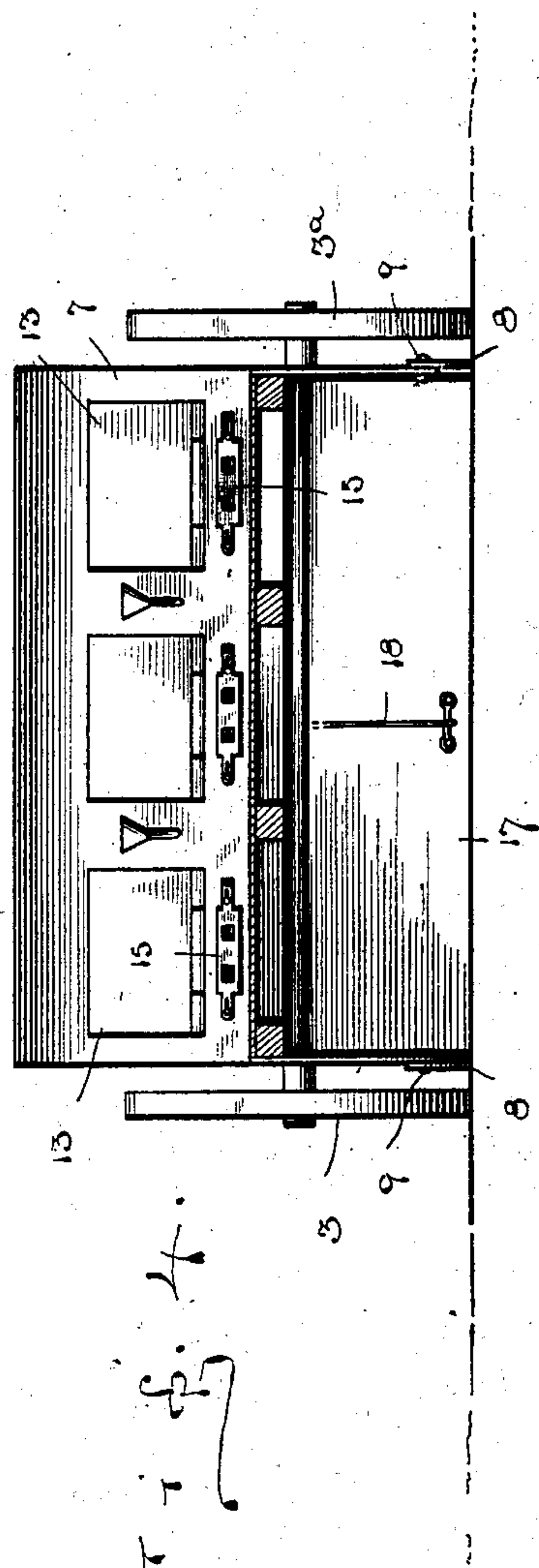
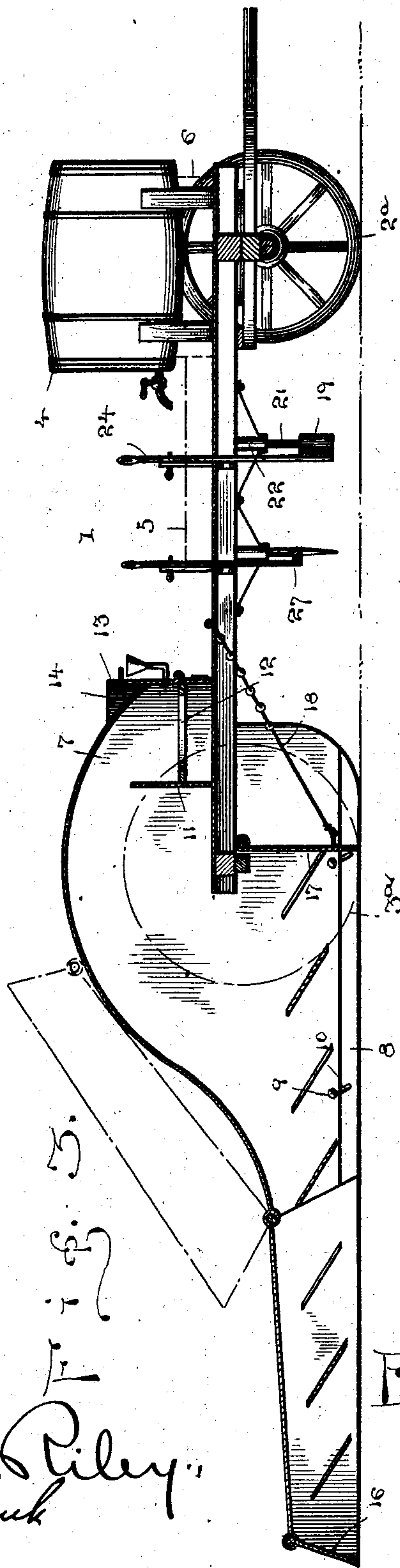
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3 SHEETS—SHEET 2.



**Witnesses**

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3 SHEETS—SHEET 3.

Fig. 5.

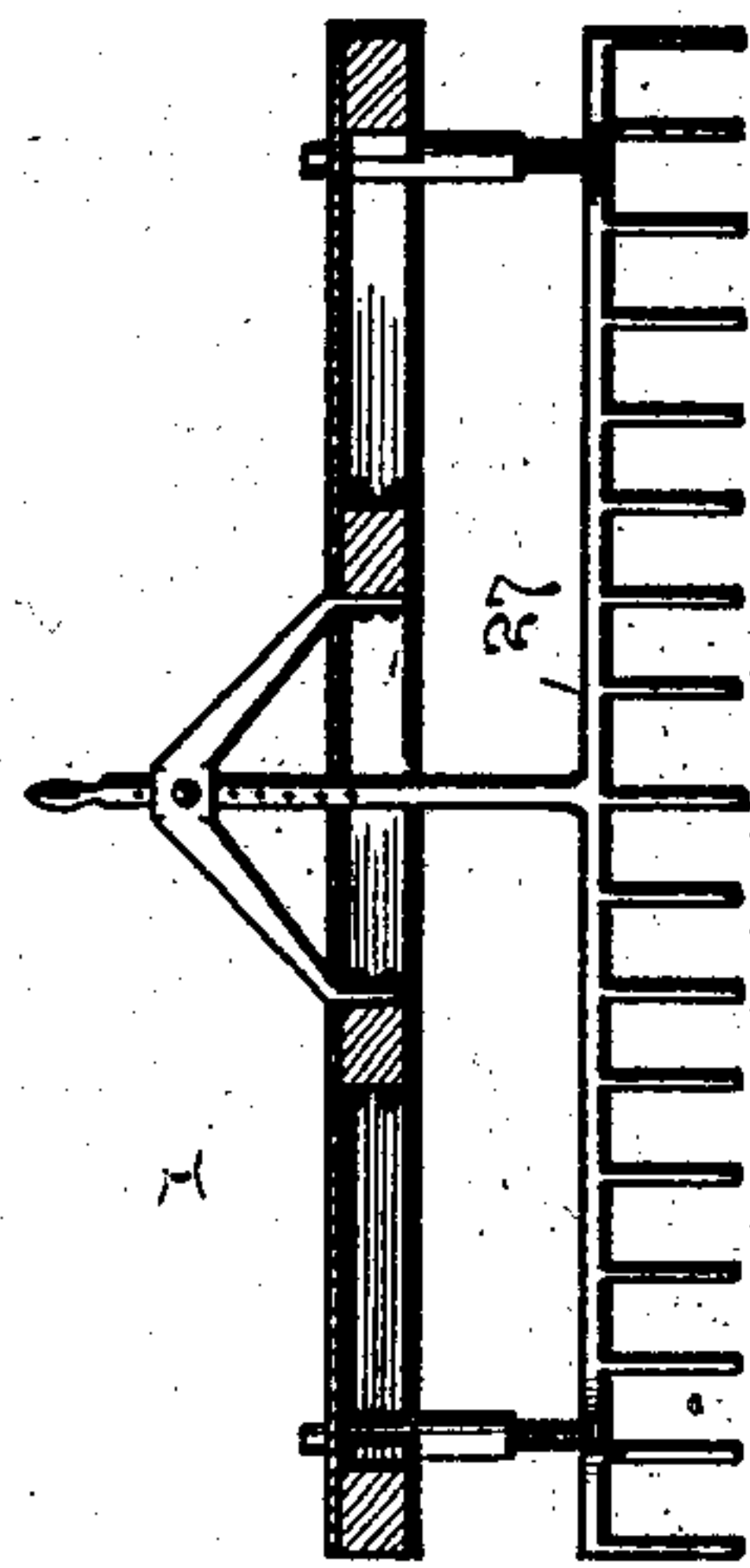
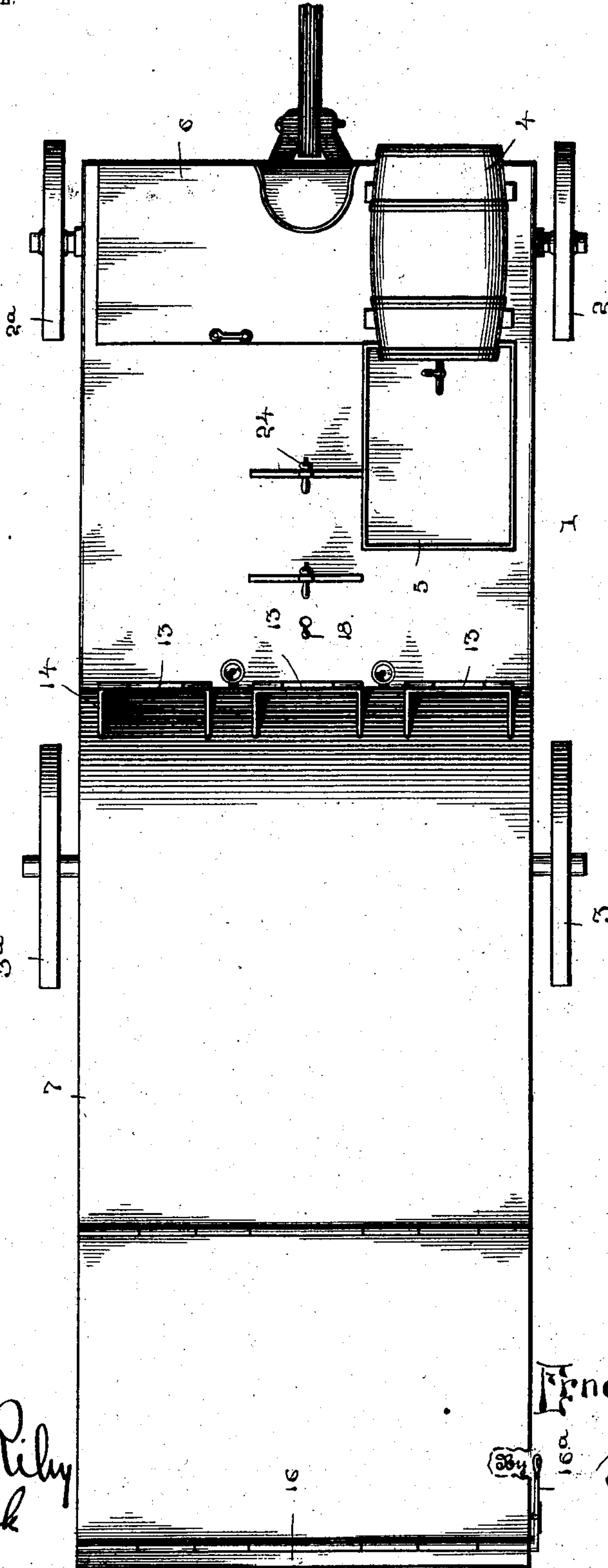


Fig. 6.

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# UNITED STATES PATENT OFFICE.

ERNEST L. TSCHANTRE, OF NEW YORK, N. Y.

## ICE AND SNOW MELTER.

SPECIFICATION forming part of Letters Patent No. 721,479, dated February 24, 1903.

Application filed June 11, 1902. Serial No. 111,175. (No model.)

*To all whom it may concern:*

Be it known that I, ERNEST L. TSCHANTRE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Ice and Snow Melters, of which the following is a specification.

This invention relates to ice and snow melters; and one of the objects thereof is to provide a simple and efficient device for the purpose which will be portable and easily moved over an area, completely melting the frozen ground.

Other objects, as well as the novel details of construction, will be clearly described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a snow-melter constructed in accordance with my invention. Fig. 2 is a transverse sectional view taken immediately in rear of the scraper. Fig. 3 is a top plan view of the device. Fig. 4 is a transverse sectional view looking rearward and taken immediately in front of the furnace. Fig. 5 is a top plan view of the melter; and Fig. 6 is a transverse sectional view through the vehicle-body, the rake being shown in detail.

The reference-numeral 1 designates the vehicle-body, which is substantially rectangular and supported by wheels 2 and 2<sup>a</sup> at one end and 3 and 3<sup>a</sup> at the opposite end. On the body 1 and positioned preferably near the front is a tank 4, designed to carry any of the hydro-carbon oils and empty into the adjacent mixing-vat 5, so as to impregnate or saturate the fuel, whereby a perfect combustion will take place in the furnace, to be referred to hereinafter.

The reference-numeral 6 designates the fuel-box, which is positioned on the body 1, so as to be within convenient reach of the driver, who may remove a sufficient amount of fuel from time to time and place it in the vat 5.

The furnace (designated by the reference-numeral 7) is attached to the rear of the vehicle and comprises a shell closed on the top, ends, and sides, said shell being in two sections, the rear section being adapted to fold upon the front section for ease in transportation, as will be explained hereinafter. The front section of the furnace is provided with

vertically-adjustable runners 8, which are attached to the sides thereof by bolts 9, fitting in slots 10. The fire-box of the furnace is supported upon the rear of the body 1, a partition and grate-support 11 being arranged within the furnace and upon the top of the vehicle-body. This partition 11 supports one side of the grate 12, while the other side of the grate is supported by the front vertical wall of the furnace, which is provided with hinged doors 13 in series to admit of the granular fuel and flared-mouthed pipes 14 for the reception of liquid fuel. Immediately below the furnace-doors are the ash-pit doors 15 to admit a rake to manipulate the material on the grate and permit of the removal of the ashes. It will be noticed that the front section of the furnace is provided with a curved top which extends down toward the ground rearwardly until its end is of approximately the same size as the rear section hinged thereto and which comprises a hollow rectangular shell having its rear end normally closed, but adapted to be opened by a hinged door 16, operated by a lever 16<sup>a</sup>, engaging a segmental rack 16<sup>b</sup>, secured to the side of the rear section.

The reference-numeral 17 designates a hinged front for the furnace, which is carried by the body 1, to the under side of which it is secured, and the door 17 may be manipulated by the driver through the medium of a flexible connection 18, connected to the door and projecting through an opening in the vehicle-body.

Positioned intermediate the ends of the body 1 and secured to the under side thereof is a vertically-adjustable scraper or leveler 19, from the ends of which project two upwardly-extending rods 20 and 21, telescoping in sleeves 22 and 23, secured to the under side of the body 1. This leveler may be adjusted to the desired height by a perforated rod 24, carried thereby, and which is adapted to be engaged with a brace 25 on the top of the body, and which is also perforated to receive a pin 26.

Immediately in rear of the leveler is a rake 27, which is also vertically adjustable in a manner similar to the leveler and is designed to rake over the snow before it is acted on by the heat in the furnace.



In using the invention the leveler will pass over the snow and ice and reduce any inequalities of the surface. The raker in passing over the surface immediately thereafter will in a measure reduce lumps and large pieces of snow and prepare the surface to be acted upon by the furnace. Of course it will be understood that the furnace will have been previously heated, and as the lower portion of the furnace covers a considerable area the excessive heat caused by the hydrocarbon fuel will reduce the solid to a liquid. The heat may be increased or diminished by pouring on more oil through the funnels in the front of the furnace, and the ash-pit doors may be operated as dampers to increase or diminish the draft, so as to regulate the consumption of the fuel.

It will thus be apparent that a device constructed in accordance with my invention will readily perform the service for which it is intended and will be inexpensive, strong, and durable.

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

1. A snow-melter comprising a vehicle, a furnace carried thereby and composed of two

sections, the front section being supported by the rear axle of the vehicle and provided with vertically-adjustable runners which rest upon the ground, the other section of the furnace being secured to the first-named section.

2. In a snow-melter, the combination with a vehicle a fuel-box carried thereby, an oil-tank also carried by the vehicle, a mixing-vat arranged adjacent the oil-tank and a furnace secured to the rear of the vehicle for the purpose specified.

3. In a snow-melter, the combination with a vehicle and a furnace secured thereto, said furnace comprising two sections adapted to rest upon the ground, one of the sections being adapted to be swung upon the other section and out of contact with the ground, a fire-box arranged in the furnace, of doors adjacent the fire-box, and means alternating with said doors and positioned between the same for introducing liquid fuel into the fire-box.

In testimony whereof I affix my signature in presence of two witnesses.

ERNEST L. TSCHANTRE.

Witnesses:

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A. C. SMITH.