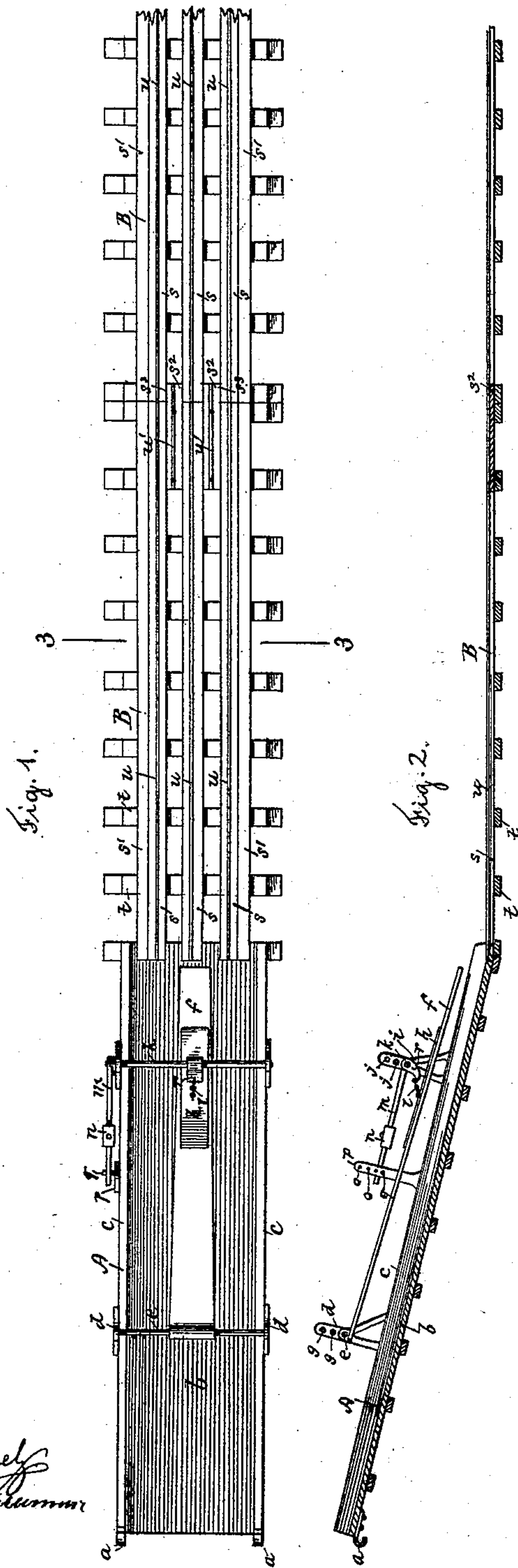


(No Model.)

I. A. MANCHESTER.  
PORTABLE ICE RUN.

No. 488,080.

Patented Dec. 13, 1892.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## PORTABLE ICE-RUN.

SPECIFICATION forming part of Letters Patent No. 488,080, dated December 13, 1892.

Application filed March 8, 1892. Serial No. 424,223. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC A. MANCHESTER, a citizen of the United States, residing at Fall River, in the State of Massachusetts, have invented a new and useful Improvement in Portable Ice-Runs, of which the following is a specification.

The object of my invention is to provide a portable ice-run by means of which the deposit of ice in an ice-house or a railway-car may be greatly facilitated; and it consists in an improved sectional run adapted for the lateral removal of ice from the same at any required portion of its length, and also in a pivotally-held run-section provided with an adjustable brake for checking the too-rapid movement of the ice, as hereinafter fully set forth.

Figure 1 represents a top view of my improved ice-run. Fig. 2 represents a longitudinal section of the same. Fig. 3 represents a transverse section taken in the line 3 3 in Fig. 1.

In the accompanying drawings, A represents an inclined run or section provided with the flooring *b* and the upright sides *c*, the distance between the said sides being made slightly greater than the width of the cake of ice, the upper end of the said run being provided with the hooks *a* for pivotal engagement with the sill of the ice-house window or other support and the lower end being preferably notched to receive the longitudinal wooden rails of the horizontal run B. To the sides *c* are attached the opposite standards *d*, which serve to support the cross-bar *e*, held loosely in suitable bearings, and to the said cross-bar is attached the brake-blade *f*, which is provided with the stiffening-piece *h*, the said bar *e* being made adjustable in height in order to provide for proper operation of the brake-blade upon cakes of different thicknesses by means of a vertically-arranged series of bearing-holes *g*, arranged in the standards *d*, into which the bar *e* may be shifted, or other suitable means may be provided for this purpose. To the sides *c* are also attached the upright standards *i*, which may also be provided with a vertical series of bearing-holes *j*, adapted to receive the ends of the rock-shaft *k*, to the middle portion of which

is attached the cam *r*, connected by means of the short chain *l* with the brake-blade *f*, and to one end of the shaft *k* is attached the arm *m*, provided with an adjustable weight *n*, and the extent of movement of said arm when in operation may be controlled by means of suitable stop-pins placed in the holes *o* of the upright standard *p* or otherwise. When the arm *m* is at its lower position, resting upon the pin *q* in the standard *p*, the brake-blade *f* will be supported from the lower end of the cam *r* by means of the chain *l*, and upon the engagement of the forwardly-moving cake of ice with the under side of the brake-blade the said blade will be raised into contact with the face of the cam, which is so inclined that the resulting pressure will cause the cam to turn sufficiently to allow the cake of ice to pass from the lower end of the brake-blade *f* at the proper rate of speed to carry it to its required place of deposit.

The horizontal sections B of the run are constructed with the longitudinally-arranged wooden rails *s s s*, made of spruce boards about six inches in width and about sixteen feet in length, and at the outer edge of the outer spruce rails are placed the hard-pine strips *s'*, which are adapted for the lateral movement of the cakes of ice over them without causing the excessive wear or fraying of their edges, as would be the case with the edges of the lighter spruce rails *s*. The rails *s* and the strips *s'* are attached to the cross-ties *t*, preferably made of spruce board about one and one-quarter inches in thickness and beveled at their ends, as shown in Fig. 3, in order that the cakes of ice as they are being drawn laterally from the run will not be broken by falling suddenly from the ends of the said ties. To the wooden rails *s* are attached the iron rails *u*, made of half-round iron, with the rounding side uppermost, the said tracks serving to guide the cake of ice in its forward movement along the run and at the same time allowing an attendant to cause the lateral removal of the ice from the run at any desired point, owing to the slight hold of the half-round iron rails upon the ice.

The horizontal run is made in sections adapted to fit into each other at their ends, one end of each section being provided with



the projecting pieces  $s^2 s^2$ , which enter the corresponding spaces  $s^3 s^3$  between the rails  $s s s$  of the opposite section, and upon the short pieces  $s^2 s^2$  are placed the half-round metal rails  $u'$ , which serve to prevent the ice from catching at the joint between the two sections when for any reason the said sections are placed slightly out of level with each other.

10 The operation of my invention will be as follows: When the several sections B have been placed on the floor of the ice-house to be filled and the run A hooked onto the sill of the lower windows of the ice-house, so as  
15 to rest in the proper inclined position, with the brake properly adjusted, then as the cakes are passed forward down the incline of the run A and pass the brake-blade  $f$  they will pass to the horizontal runs B, from which they  
20 may be drawn to either side or allowed to pass to the end of the run, as desired, and when the first tier of cakes has been laid the sections B are to be raised to the top of the same, thus changing the inclination of the in-  
25 clined run A, and after filling in the second tier of cakes the sections B are to be again raised, and owing to the gradually-decreasing inclination of the run A a readjustment of the pressure upon the brake-blade  $f$  may be required,  
30 and such readjustment may be also required in accordance with the greater or shorter length of the horizontal runs B for the ice, the said adjustment being readily effected, and when  
35 by the continued filling, tier upon tier, the inclination of the run A has been so reduced as to prevent the cakes of ice from passing along the horizontal runs B properly then the outer end of the said run A is to be raised to the sill of the second window of the ice-house and  
40 the filling proceeded with, as before. In filling the house with ice I prefer to first send the ice to the farther horizontal section B of the run and after filling in a layer at this point removing the last section B of the run  
45 and filling in from the next adjoining section, and so on, removing section after section until the inclined run A is reached, by means of which the ice may be filled in at the front of the building, as required, and in some cases,

as in filling a railway-car with ice, the horizontal sections B may not be needed, the pivotally-adjustable inclined run A, provided with the adjustable brake, being sufficient for the purpose. Various other devices for suitably adjusting the pressure of the brake-  
55 blade may be employed without departing from the spirit of my invention.

I claim as my invention—

1. An ice-run comprising a removable inclined section, in combination with the pivotal  
60 attaching means and the yielding brake-blade adapted to check the forward movement of the cake of ice as it leaves the said section, substantially as described.

2. An ice-run comprising two or more removable interlocked sections, each provided with parallel metallic rails adapted to guide the ice in its forward movement and to allow its ready lateral removal therefrom, the interlocking projection of one of the said sections  
70 being provided with a supplementary metallic rail, substantially as described.

3. In an ice-run, the combination, with the removable inclined section provided with the pivotal attaching means and the yielding  
75 brake-blade adapted to check the forward movement of the cake of ice as it leaves the said section, of the interlocked removable horizontal section provided with parallel metallic rails adapted to guide the ice in its forward  
80 movement and to allow its ready lateral movement therefrom and the cross-ties having beveled ends, whereby the cakes of ice as they pass laterally from the rails will be brought gradually to the surface upon which  
85 they are to be deposited, substantially as described.

4. In an ice-run, the combination, with the pivotal attaching means, of the adjustably-pivoted brake-blade, the adjustably-pivoted  
90 cam, the weighted arm, and stop means for controlling the movement of the weighted arm, substantially as described.

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Witnesses:

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