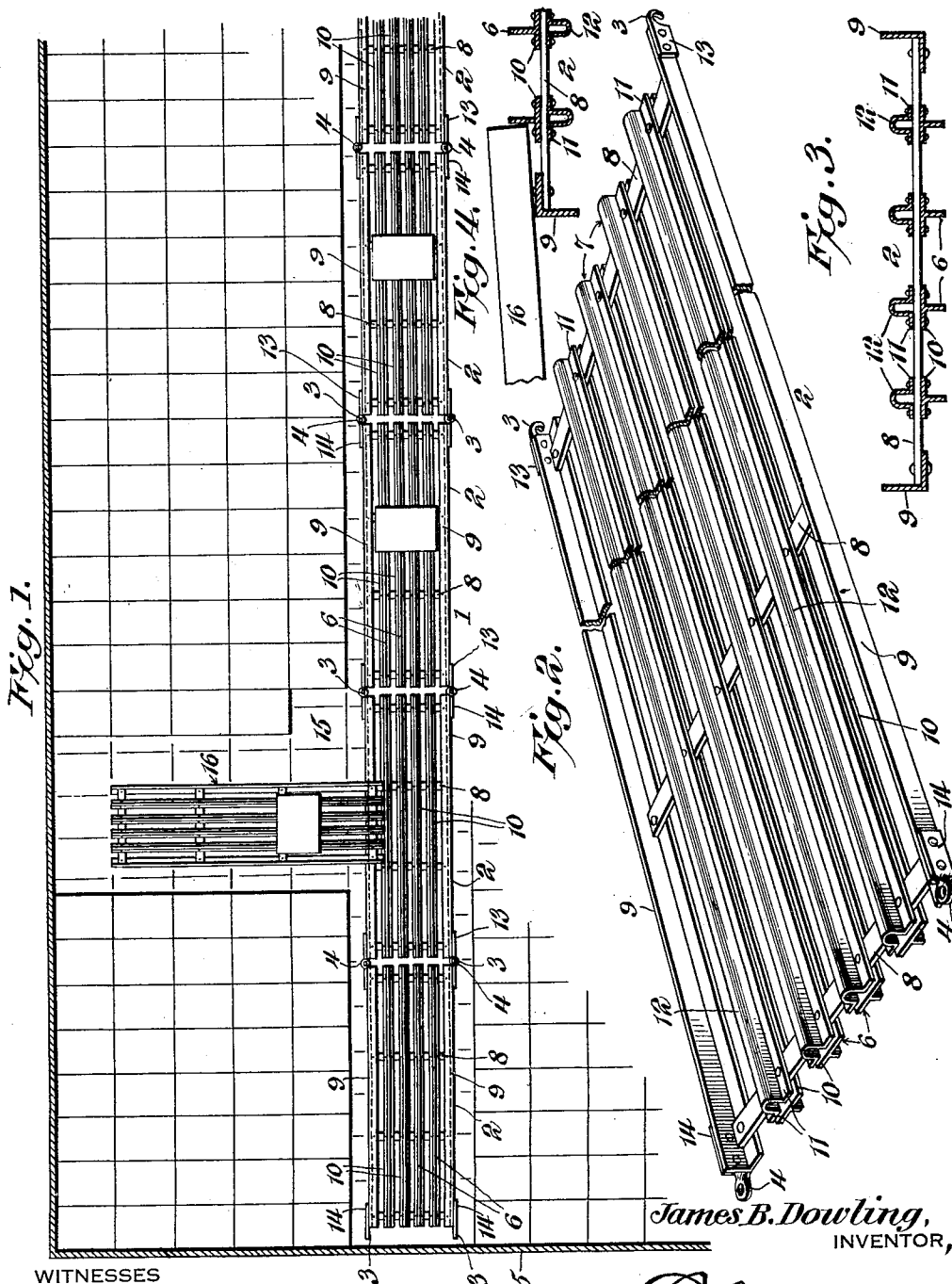


J. B. DOWLING.
 REVERSIBLE ICE CHUTE.
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1,126,731.

Patented Feb. 2, 1915.



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JAMES BERNARD DOWLING, OF GOULDSBORO, PENNSYLVANIA.

REVERSIBLE ICE-CHUTE.

1,126,731.

Specification of Letters Patent.

Patented Feb. 2, 1915.

Application filed April 25, 1914. Serial No. 834,417.

To all whom it may concern:

Be it known that I, JAMES B. DOWLING, a citizen of the United States, residing at Gouldsboro, in the county of Wayne and State of Pennsylvania, have invented a new and useful Reversible Ice-Chute, of which the following is a specification.

The invention relates to improvements in ice chutes.

10 The object of the present invention is to improve the construction of ice chutes and to provide a simple, practical, and comparatively inexpensive reversible ice chute, of light, strong, and durable construction, capable of being easily handled, and adapted to be reversed, whereby it may be used in winter for harvesting ice, and in summer for loading ice, thereby obviating the necessity of providing two separate chutes for this purpose, and storing one of such chutes when the other is in use.

25 A further object of the invention is to provide a reversible chute of this character capable of enabling ice to be rapidly and conveniently handled both in harvesting and loading, and adapted to have applied to it an adjustable side chute of the usual construction, designed for use in summer time and adapted to be moved along the main chute and to be arranged at different points without the necessity of blocking it in position.

30 It is also an object of the invention to provide a sectional ice chute adapted to be varied in length and equipped with detachable sections capable of being arranged on the layers of ice and of remaining in the position in which they are placed, without the use of anchoring or other fastening means.

40 With these and other objects in view the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims here-
45 to appended, it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacri-

50 ficing any of the advantages of the invention.

In the drawing:—Figure 1 is a plan view of a reversible ice chute constructed in accordance with this invention, and shown arranged for loading ice. Fig. 2 is a perspective view of one of the sections of the ice chute. Fig. 3 is a transverse sectional view of the same. Fig. 4 is a detail sectional view illustrating the manner of arranging one end of the side chute upon the reversible chute.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

65 In the accompanying drawing, in which is illustrated the preferred embodiment of the invention, 1 designates a chute consisting of a series of sections 2 detachably connected together by hooks 3 and eyes 4 and arranged in alinement to form a continuous chute, and adapted to extend from one end of an ice house 5 to another. Each section of the main chute is composed of rails 6 and 7, transverse connecting bars 8, and side bars 9. The rails 6, which are designed for use when unloading the ice from an ice house, are T-shaped, being composed of central, relatively sharp web and laterally extending attaching flanges 10 which are fitted flat against the transverse connecting bars 8. The rails 7, which are located at the opposite faces of the connecting bars 8 from the rails 6, are approximately U-shaped, and are provided with laterally extending flanges 11, which are also fitted flat against the connecting bars. The flanges 10 and 11 of the rails 6 and 7 are secured to the transverse connecting bars by rivets or other suitable fastening devices, which pierce the said flanges and the bars 8. The side bars 9, which are arranged at the ends of the transverse bars 6, are L-shaped in cross-sections, being composed of two wings or flanges, one of which is fitted flat against the connecting bars 8 at the faces to which the rails 6 are secured. The other wing or flange is arranged vertically and extends through the connecting bars at the faces to which the

rails 7 are secured. The chute is reversible to present the relatively sharp webs of the rail 6 to the ice, or the rounded treads 12 formed by the U-shaped portions of the rails 7.

The hooks 3 and the eyes 4 have flat attaching shanks 13 and 14, which are rigidly secured to the outer faces of the side flanges of the side bars 9 by rivets or other suitable fastening devices. The hooks 3 have their bills or engaging portions disposed in vertical planes, and the eyes 4 are horizontally arranged to receive the hooks 3.

The chute is adapted to be arranged upon the ice 15 as indicated in Fig. 1 of the drawing, and it is carried from the bottom layer to the top layer and is adapted to remain thereon until it is required for taking out the ice for loading the same onto cars. The rails 7, having the rounded treads 12, are used for filling the ice house in winter, while harvesting the ice, and the rails 6, which have the relatively sharp webs, are used during the summer time, while taking the ice out of the ice house. It will be seen that it is only necessary to reverse the sections of the chute to arrange them for either filling the ice house with ice, or removing the ice from the ice house. The sharp webs of the rail 6 are adapted to engage the supporting layer of ice when the other rails are uppermost, and when the T-shaped rails are in use, the vertical side flanges of the side bars engage the supporting layer and they extend beyond the horizontal plane of the treads of the U-shaped rails to enable them to be partially embedded in the ice. By this construction, the chute is adapted to remain firmly in the position in which it is placed in the ice, without requiring separate fastening means for securing the sections against movement.

In the summer time, when removing the ice from the ice house for loading cars, the reversible chute is adapted to have one end of an adjustable side chute 16 arranged upon it, as illustrated in Fig. 1 of the drawing. The construction of the reversible chute is such that the side chute 16 may be moved along the reversible chute and may be arranged upon the ice at any point, without blocking it up. The inner end, or the end contiguous to the main chute, is arranged upon the side of the chute, and is supported by the horizontal flange of the contiguous side bar 9, and it extends inward and fits against the adjacent T-rail. In Fig. 1 of the drawing is illustrated the manner of using the side chute, the blocks of ice being first placed upon the side or auxiliary chute and run onto the reversible chute, and then moved longitudinally thereof to the point of discharge. The side chute is adapt-

ed to be arranged at either side of the main chute.

While the ice chute is strong and durable, its sectional character renders it comparatively light, so that it may be easily handled.

What is claimed is:

1. A reversible ice chute provided at its upper and lower faces with separate sets of longitudinal rails, the rails of each set having an ice receiving tread of a character different from the rails of the other set and being spaced apart transversely of the chute, and the latter being reversible to arrange either set of the rails uppermost for use.

2. A reversible ice chute having ice receiving rails with relatively sharp edges at one of its faces and provided at its other face with ice receiving rails having relatively blunt edges, said rails extending longitudinally of the chute and having their edges spaced apart transversely of the same.

3. A reversible ice chute provided at one of its faces with longitudinal ice receiving rails having relatively sharp edges spaced apart transversely of the chute and longitudinal approximately U-shaped rails located at the other face of the chute and provided with rounded tread portions also spaced apart transversely.

4. A reversible ice chute including upper and lower sets of longitudinal rails having attaching flanges, and transverse connecting bars extending across the chute between the upper and lower rails and having the said attaching flanges fitted against and secured to them, said transverse connecting bars maintaining the rails of each set in transverse spaced relation.

5. A reversible ice chute including approximately T-shaped rails located at one of the faces of the ice chute and having ice receiving webs and laterally extending attaching flanges; approximately U-shaped rails located at the other face of the chute and provided with laterally extending attaching flanges, and connecting bars interposed between and secured to the attaching flanges of the rails.

6. A reversible ice chute including ice receiving rails located at one of the faces of the chute and presenting relatively sharp edges to the ice, relatively blunt rails located at the opposite face of the chute, and side bars provided with flanges projecting at the face of the chute having the blunt rails and extending beyond the treads of the same for engaging the ice when the chute is arranged with its blunt rails at the bottom.

7. A reversible ice chute including transverse bars, upper and lower longitudinal rails secured to the faces of the transverse

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bars and having oppositely projecting ice receiving portions, and approximately L-shaped side bars arranged at the ends of the transverse bars and having projecting side flanges arranged in parallelism with the rails.

8. A reversible ice chute composed of detachable sections, each provided with rails having relatively sharp treads at one face and relatively blunt treads at the opposite face, said sections being provided with ice

engaging means located at the faces of the sections having the rails with the relatively blunt treads and projecting beyond the plane of the latter.

In testimony, that I claim the foregoing as my own, I have hereunto affixed my signature in the presence of two witnesses.

JAMES BERNARD DOWLING.

Witnesses:

CHARLES EDWARDS,
EDGAR DOWLING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."