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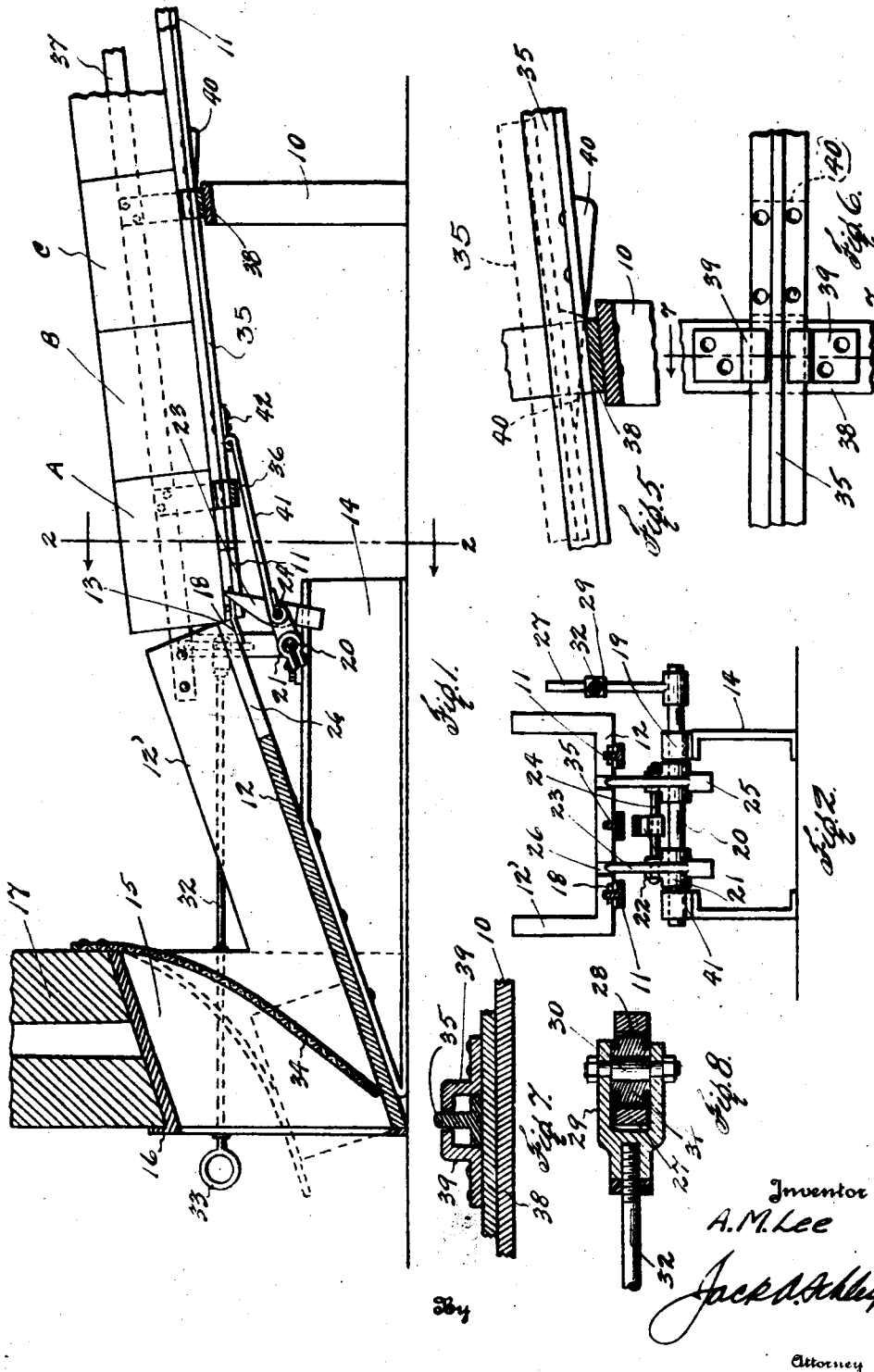
1,703,773

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DELIVERY APPARATUS

Filed April 13, 1927

2 Sheets-Sheet 1



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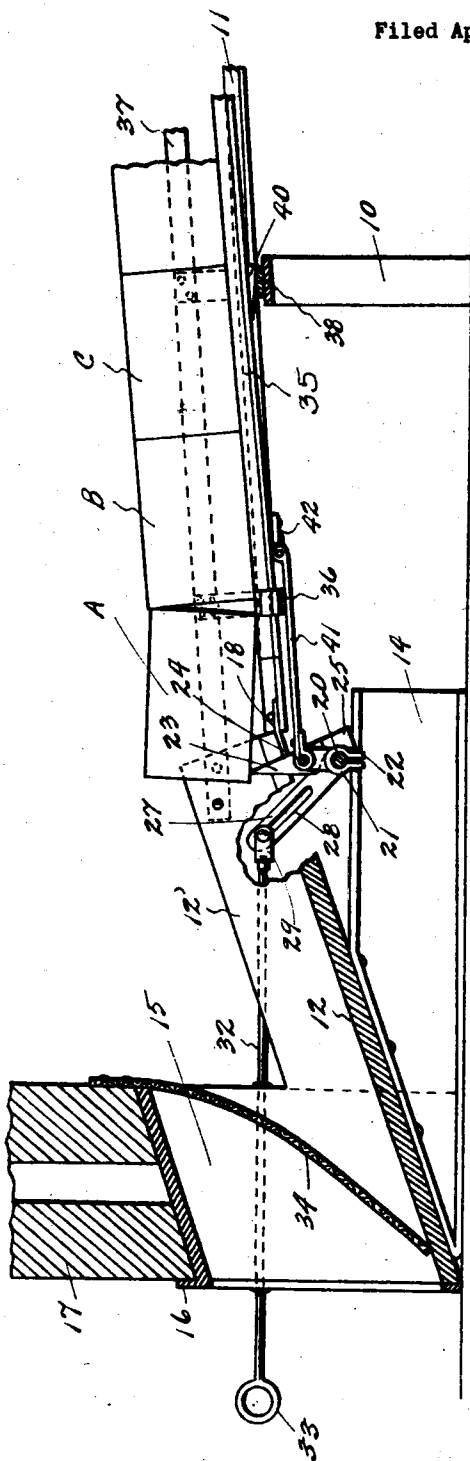
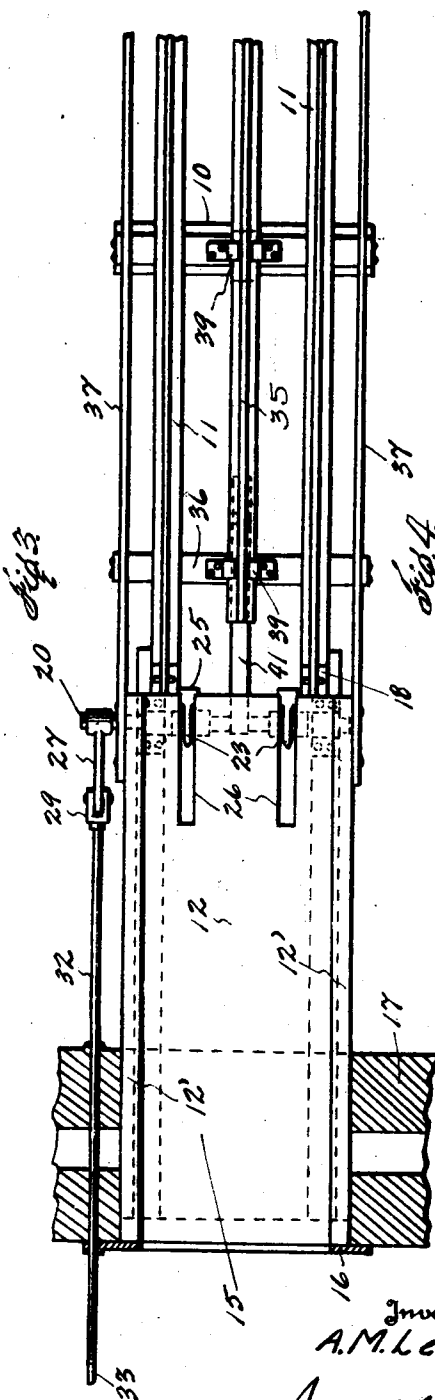
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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DELIVERY APPARATUS.

Application filed April 13, 1927. Serial No. 183,530.

This invention relates to new and useful improvements in delivery apparatuses.

The principal object of the invention is to provide a delivery apparatus whereby articles such as blocks of ice or any other article, which, when supported on tracks, have a tendency to hang or adhere thereto, may be dislodged and caused to travel downward along said tracks even though the latter are not disposed at a steep inclination.

Another object of the invention is to provide certain improvements in connection with the delivery apparatus set forth in my co-pending application, Serial No. 152,349 which has since matured into Patent 1,647,530, issued Nov. 11, 1927.

A particular object of the invention is to provide means operated by the delivery mechanism for agitating the ice or articles standing on the tracks prior to delivery to the chute.

A construction designed to carry out the invention will be hereinafter described, together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings, in which an example of the invention is shown and wherein:

Fig. 1 is a vertical sectional view of a delivery apparatus constructed in accordance with my invention, and showing blocks of ice held on the tracks and ready to be delivered to the chute.

Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1,

Fig. 3 is a view similar to Fig. 1 showing the delivery and agitating means in operative positions,

Fig. 4 is a plan view of the parts shown in Fig. 3,

Fig. 5 is a side view showing in detail a portion of the displacement rail in its normal position in full lines and in its operative position in dotted lines,

Fig. 6 is a plan view of the same,

Fig. 7 is a cross-sectional view taken on the line 7—7 of Fig. 6, and Fig. 8 is a detail of the lever connection.

In the drawings the numeral 10 designates a standard on which a pair of track members 11 are supported. These tracks are spaced apart and are preferably made of T-rails which are inverted so as to form single runners. The track is disposed at a

sufficient incline to cause blocks of ice to slide down the same. The lower ends of the members 11 are fastened to the bottom of an inclined chute 12 by means of hangers 13. The chute is disposed at a much greater pitch than the track and is fastened on a pair of supporting members 14 of suitable construction. The chute has side walls 12' and is provided at its lower end with a housing 15 having a frame 16, whereby it is secured in the wall 17 of the structure in which the apparatus is mounted. The track members 11 have their lower ends terminating at the upper end of the chute, but are spaced below the surface of the bottom of the chute so that the upper edge 18 forms a stop or abutment.

Blocks of ice, A, B and C, or other objects, when placed on the track members 11 will slide down the same, the lower front edge of the block A engaging the stop 18, as is shown in Fig. 1. The blocks will be held in this position until the block A is dislodged. It will be seen that by elevating the front end of the block A and moving it forwardly, it will be deposited in the chute 13 and will thus slide down the same and be delivered.

On the members 12 I mount bearing boxes 19 in which a transverse rock shaft 20 is journaled. On the shaft I fasten a pair of split collars 21, each having a pair of ears 22. Between each pair of ears, a dog 23 is pivoted on a pin 24, as is shown in detail in Fig. 2. Each dog is tapered to a point and has a tripping weight 25 at its opposite end. The weight acts as a counter-balance, but the dog 23 has sufficient weight outwardly beyond the pivot 24 to normally hold the weight up against the collar 21, as is shown in full lines in Figs. 1 and 3. The bottom of the chute 13 has slots 26 extending downwardly from the edge 18 located over the dogs so that the latter may swing downwardly through said slots.

For rocking the shaft 20 I provide a lever 27 which is fastened on one end of said shaft and has a slot 28 at its outer end. A clevis 29 is provided with a shouldered axle 30 carrying a roller 31 engaged in the slot 28. An operating rod 32 extends outwardly from the clevis through the wall 17 and terminates in a handle 33.

The track formed by the rails 11 may of course vary in length and the blocks of ice,

if allowed to stand any length of time, may tend to adhere to the rails. The tongues of the T-shaped rails have a tendency to embed in the under sides of the blocks. This could be overcome to a great extent by giving the track a greater pitch or inclination, but this would involve lifting the blocks of ice a greater height to load them onto the rear of the track and would also create a greater pressure against the block A, which must be lifted onto the chute 12.

In order to agitate or impel the blocks of ice I mount a riser bar or rail 35 between the rails 11. This rail 35 is also preferably T-shaped and is inverted to form a single runner. The riser rail rests at its forward end on a stirrup 36 which passes under the rails 11 and is secured to side bars 37 having their forward ends fastened to the sides 12' of the chute.

A second stirrup 38 is fastened on the standard 10 and the rail 35 also slides on the stirrup. Guide keepers 39 (Figs. 6 and 7) are fastened to the stirrups on each side of the riser rail and overhang the flanges of said rail. Each keeper extends high enough to permit the rail to be raised, but terminates short of the runner of the rail, so as not to interfere with the blocks sliding on said runner.

A wedge block 40 is secured to the under side of the riser rail adjacent the stirrup 38, so that when said rail is pulled downwardly along the track, said wedge will ride onto the stirrup and raise the rail 35. When the rail is raised, as is shown in dotted lines in Fig. 5 and in full lines in Fig. 3, the blocks of ice will be lifted and dislodged from the rails 11. If the blocks are sticking or hanging on the rails 11, they will be freed and thus caused to slide down the track, for operating the riser rail 35 a link 41 has one end pivoted to the pin 24 which connects the dog 23, while its opposite end is pivoted to a hinge member 42 on the bottom of said rail.

Normally the parts occupy the positions shown in Fig. 1. When it is desired to deliver a block of ice, or other object, the operator grasps the handle 33 and pulls the rod 32 outwardly, whereby the lever 27 is swung. Owing to the slot 28 and roller 31, the rod maintains a substantially horizontal position as the lever is swung. When the lever is swung, the dogs 23 are moved upwardly through the track 10 and engage in the forward bottom portion of the block A, thus elevating it as is shown in Fig. 4. When the points of the dogs have been carried over the center of the shaft 20, as is indicated in Fig. 4, the weight of the block A will continue to swing the dogs forwardly, thus permitting said block, which has been raised above the edge 18, to fall forwardly onto the bottom of the chute

and thus slide down the same, the dogs being carried down into the slots 26. A curtain, or other door, 34 may be provided at the housing 15 for closing the chute. The block will be expelled from the chute and thus delivered on the platform beyond the frame 16.

When the ears 22 are swung, the pin 24 is moved upwardly and forwardly. This carries the link 41 forwardly, whereby the riser rail 35 is pulled downwardly along the track. The wedge block 40 rides onto the stirrup 38 as the rail 35 is slid, thus raising said rail and dislodging the blocks of ice, particularly the blocks B and C. Thus when the block A is delivered to the chute 12, the blocks B and C will slide down the rails 11, so that the front of the block B comes to rest against the edge 18. It will be seen that the lower or front end of the riser rail terminates short of the edge 18 and also that said front end is not elevated by the wedge block.

By pushing inwardly on the rod 32 the arm 27 is returned. The dogs 23 traveling through the slots 26 and under the block B, finally come to rest in the position shown in Fig. 1, due to the counter-balancing weights 25. When the shaft 20 is rocked by the return of the lever 27 the ears 22 and the pin 24 are swung backward, whereby the link is moved to slide the rail 35 up the track and withdraw the wedge block 40 from the stirrup 38, thus lowering the riser rail to its normal position.

Various changes in the size and shape of the different parts, as well as modifications and alterations, may be made within the scope of the appended claims.

What I claim, is:

1. In a delivery apparatus, an inclined chute, an inclined track leading to the chute and including a plurality of rails having runners for supporting articles which slide thereon, one of said rails being movable, means for discharging an article from the track to the chute, and means for raising the movable rail above the plane of the other rails to dislodge the articles thereon when the first article is discharged, whereby the succeeding articles are freed to slide down the track.

2. In a delivery apparatus, an inclined chute, an inclined track leading to the chute and including a plurality of rails having runners for supporting articles which slide thereon, one of said rails being movable, means for discharging an article from the track to the chute, a wedge block carried by the movable rail, and means for connecting the movable rail to the discharging means for actuating the movable rail to bring its block onto its support, whereby said movable rail is raised.

3. In a delivery apparatus, an inclined

chute, an inclined track leading to the chute, swinging dogs for raising an article from the track to the chute, a riser rail disposed longitudinally of the track, a support for said rail, a wedge block carried by the rail and engaging said support when the rail is slid to elevate the said rail, and means connecting the rail with the dogs for sliding said rail when the dogs are swung.

4. In a delivery apparatus, an inclined track for supporting articles to be delivered, a bar extending along said track, means for reciprocating said bar, and means for causing the bar to rise slightly during its forward movement for engaging

and imparting movement to the articles on the track, substantially as set forth.

5. In a delivery apparatus, an inclined track adapted to support a plurality of articles to be delivered, dislodging means extending along said inclined track and arranged to engage said articles and impart movement to the same, means for operating said dislodging means for imparting initial movement to the articles on the track and for advancing them along the track whereby they will be caused to slide by gravity down the track, substantially as set forth.

In testimony whereof I affix my signature.

AUBREY M. LEE.