

April 22, 1924.

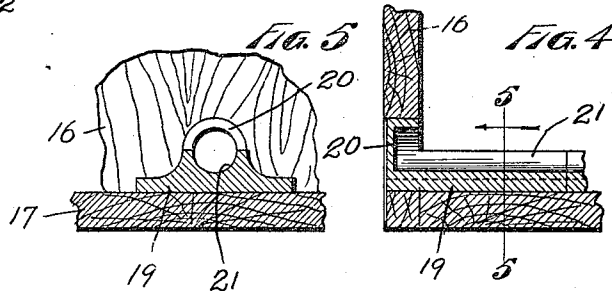
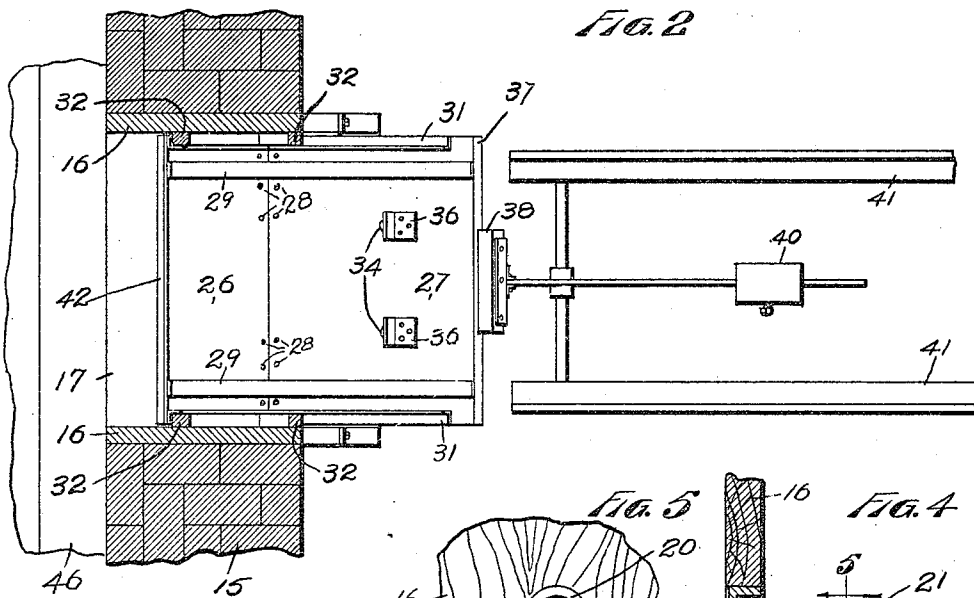
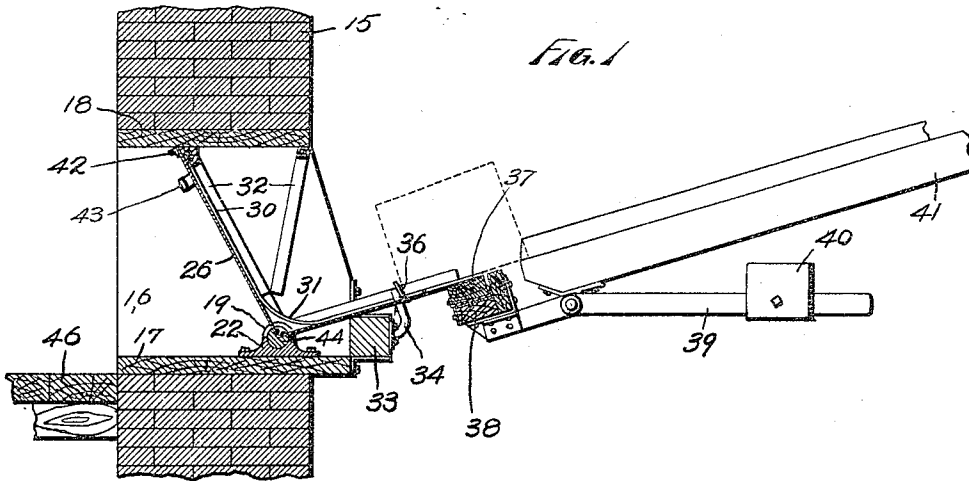
L. P. REISS

1,491,546

AUTOMATIC ICE DUMP

Filed Feb. 12, 1923

2 Sheets-Sheet 1



INVENTOR
LOUIS P. REISS
BY Edward G. Langan
ATTY

April 22, 1924.

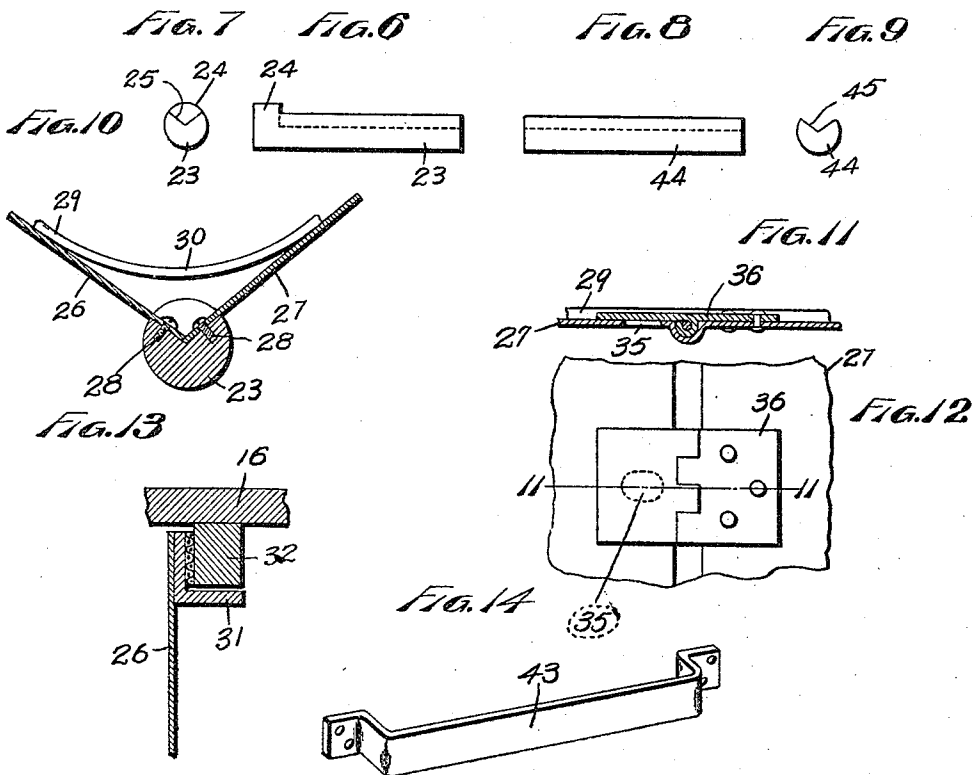
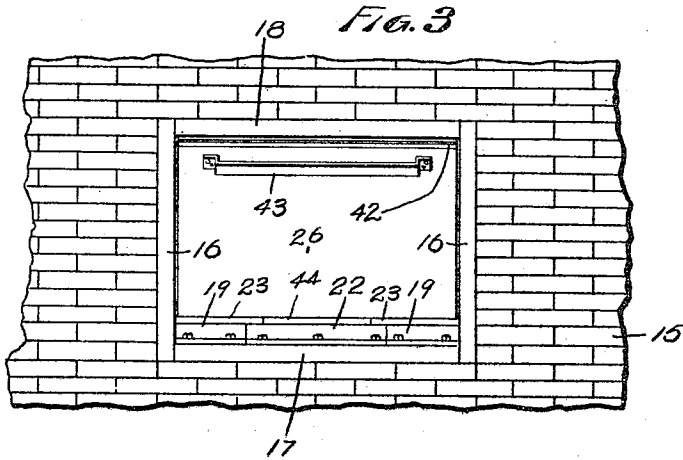
1,491,546

L. P. REISS

AUTOMATIC ICE DUMP

Filed Feb. 12, 1923

2 Sheets-Sheet 2



INVENTOR
LOUIS P. REISS
BY Edward E. Langan
ATTY.

UNITED STATES PATENT OFFICE.

LOUIS P. REISS, OF MATTOON, ILLINOIS.

AUTOMATIC ICE DUMP.

Application filed February 12, 1923. Serial No. 618,589.

To all whom it may concern:

Be it known that I, LOUIS P. REISS, a citizen of the United States, and resident of the city of Mattoon, county of Coles, and State of Illinois, have invented certain new and useful Improvements in Automatic Ice Dumps, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in automatic ice dumps and has for its primary object an ice dump for use in ice storage houses which will permit the delivery of one cake of ice at a time, the dump returning automatically and being charged with a fresh piece of ice.

A further object is to construct an automatic ice dump which is so constructed as to permit practically no air to enter an ice storage house while ice is being removed therefrom. My device is particularly intended for the retail department of large ice dealers or when a great many customers are served with pieces of ice already cut to retail dealers. Heretofore the ice has been delivered to the retail platform through an ordinary door which, when a rush was on, was almost continuously open thus allowing a great deal of warm air to enter the storage house and consequently causing quite a loss of ice due to melting. My improved ice dump eliminates all this by cutting down the period in which air can enter the storage house to a minimum.

In the drawings:

Fig. 1 is a longitudinal vertical section of my device in position in an ice storage house;

Fig. 2 is a top plan view of my device with the door frame and walls in section;

Fig. 3 is a front elevation of my device with the loading platform removed;

Fig. 4 is a vertical longitudinal section of one of the pivot bearings made use of;

Fig. 5 is a cross section taken on a line 5—5 of Fig. 4;

Fig. 6 is a side elevation of one of the pivots made use of;

Fig. 7 is an end elevation of the same.

Fig. 8 is a side elevation of the filler block;

Fig. 9 is an end view of the same;

Fig. 10 is an enlarged fragmental section through one of the pivots showing the manner of attaching the door plates thereto;

Fig. 11 is a longitudinal section of the folding stop made use of taken on a line 11—11 of Fig. 12;

Fig. 12 is a fragmental view of one of the door plates showing the folding stop in position and covering the pin opening in the door plate;

Fig. 13 is a fragmental sectional view showing the manner of weather-stripping the frame so as to prevent air leakage and

Fig. 14 is a perspective view of the handle made use of.

In the construction of my device 15 represents the wall of an ice house, this wall is provided with an opening in which is located a frame consisting of side members 16, a sill 17, and a top 18, secured to the sill 17 are pivot blocks 19, these pivot blocks are provided with a bearing 20 which is circular and which is secured in the sides 16 of the frame. The upper portion of that part of the pivot blocks 19 which extends beyond the frame 16 is cut away so as to leave only a semi-circular bearing 21, these pivot bearings extend partially across the frame and the space between these blocks is filled in with a filler block 22 which is likewise provided with a semi-circular recess. Within the blocks 19 are placed pivots 23 which have a circular end 24 which is designed to fit in the bearing 20, the remainder of the pivot is provided with a V shaped cut 25 in which the door plates 26 and 27 extend, these plates are secured to the pivots 23 by means of screws or bolts 28. Secured to the door plates 26 and 27 are rails or strips 29, these strips are firmly secured to the plates and are provided with a curved portion 30 which allows ready sliding of the blocks of ice. The door plates have secured adjacent their side edges angle irons 31 which act as a guide for the blocks of ice, these angle irons are adapted to contact with weather strips 32 which are secured to the frame and are so arranged that when the door is closed the angle irons carried by the plate 26 will contact with one set and prevent the entrance of air, while, when the door is opened the angle irons carried by the plate 27 will contact with the other strips and prevent the entrance of air. Secured to the side of the frame is a bar 33 to which pins 34 are secured, these pins project through the pin openings 35 formed in the plate 27, adjacent the pin openings 35 are folding stops 36, these stops consist of two members pivotally

secured together, one member is securely fastened to the plate 27 while the other member is free to raise and assume an almost vertical position when the pins 34 pass through the pin openings 35, the free member is also permitted to swing down and cover the openings 35 when the dump is operated and prevent the passage of air through said openings. Secured to the under side of the plate 27 and along its rear edge is a counterweight 37, this counterweight is adapted to come in contact with the L shaped stop 38 which is carried by a pivoted lever 39, this lever is provided with a counterweight 40 which permits the stop 38 to move upwardly when the dump is operated; the stop 38 is adjacent the lower end of the skid or chute 41 down which the blocks of ice to be delivered slide in a continuous stream. The plate 26 is preferably provided along its top edge with an angle iron 42 which is for the purpose of stiffening that part of the door. The plate 26 has also attached thereto, a handle 43 by means of which the dump can be operated.

The assembling and operation of my device is as follows:—

In the construction of the frame the sides 16 are provided with suitable openings so as to permit the insertion of the ends of the pivot blocks 19, these pivot blocks are then bolted down and the insertion 22 placed in position, the pivots 23 are next placed in position and then the filler pivot 44 is placed in the filler block 22, the filler pivot 44 is provided with a V groove 45 corresponding to the V groove 25, the plates 26 and 27 are placed within the V grooves and secured by the bolts 28, the slides 30 and angle irons 31 having been previously secured in position, the dump is now ready to operate. Upon release of the door it assumes the position shown in Fig. 1 with the free ends of the folding stops projecting upward and being held in that position by means of the pins 34, a quantity of ice is then placed on the slides 41 and allowed to slide down; one block will come to rest against the folding stops but project over the end of the door sufficiently to still rest on the skid. This projection, however, is not sufficient to cause the cake of ice to tilt backward when the dump is operated. When it is desired to remove a cake of ice from the storage house, the handle 43 is pulled down, this causes the dump to rock, lifting with it a cake of ice and at the same time the stop 38 is raised by means of the lever 39 and counterweight 40 sufficiently high to engage the following cake of ice before the folding stops have fallen downward, this releases the cake of ice on the dump, as soon as the folding stops fall forward, the cake of ice slides on the strips 29 out through the opening and on to the delivery platform 46. During

this time the plate 27 has been resting against the rear weather strips and preventing the entrance of outside air. As soon as the cake of ice is removed from the forward part of the dump, the counterweight immediately brings it back, this bringing back simultaneously raises the folding stops 36 and lowers the stop 38 and allows a fresh cake of ice to come on to the dump.

When it is desired to remove my dump for any purpose, the same can be readily done by removing the bolts 28 then removing the dump after which the filler pivot 44 is first removed and then the pivots 23 can be removed from the frame. By this construction not only is an air tight pivot made, but the device can be installed after the building has been built, thus obviating the necessity of either building in the device or removing a portion of the walls for installation.

Having fully described my invention what I claim is:—

1. An ice dump comprising a pair of door plates, a pivot secured to said plates, pivot blocks for supporting said pivot, strips secured to said plates, a counterweight secured to one of said plates for returning said dump to its loading position, a handle for operating said dump on the pivot, means carried by one of said plates for limiting the movement of ice thereon when the dump is in charging position, and a stop automatically operated by the movement of the dump for preventing the movement of ice while the dump is being tilted.

2. An ice dump comprising in combination with a frame, a plurality of pivot blocks carried by said frame, a pivot provided intermediate its ends with a V groove, door plates secured in said groove and extending in opposite directions, angle irons secured to said door plates adjacent the sides thereof, rails carried by said door plates, strips carried by the frame and adapted to contact with the angle irons for making an air tight joint, a handle carried by one of said plates for tilting the dump, a counterweight carried by the other plate for returning the dump to its original position, pins carried by the frame and adapted to project through one of said plates, folding stops secured to said plate adjacent the pins whereby openings in said plate may be closed when the dump is tilted, and a stop automatically operated by the door for preventing more than one piece of ice lodging on the dump at a time.

3. An ice dump comprising a pivoted member composed of two plates, rails carried by said plates, folding stops carried by one of said plates, means for elevating said stops when the dump is in charging position, a handle for operating said dump, and

means for automatically returning and holding the dump in charging position after the same has been emptied.

4. An ice dump comprising a pivoted
5 member composed of two plates arranged at an angle to each other adapted to be moved into charging and discharging position, said plates so arranged as to close the delivery opening in an ice storage house whether the
10 dump is in charging or discharging posi-

tion thereby preventing the entrance of outside air, stops carried by said dump for limiting the initial movement of ice thereon, and means automatically controlled by said dump whereby ice may be delivered to said
15 dump only when in charging position.

In testimony whereof, I have signed my name to this specification.

LOUIS P. REISS.