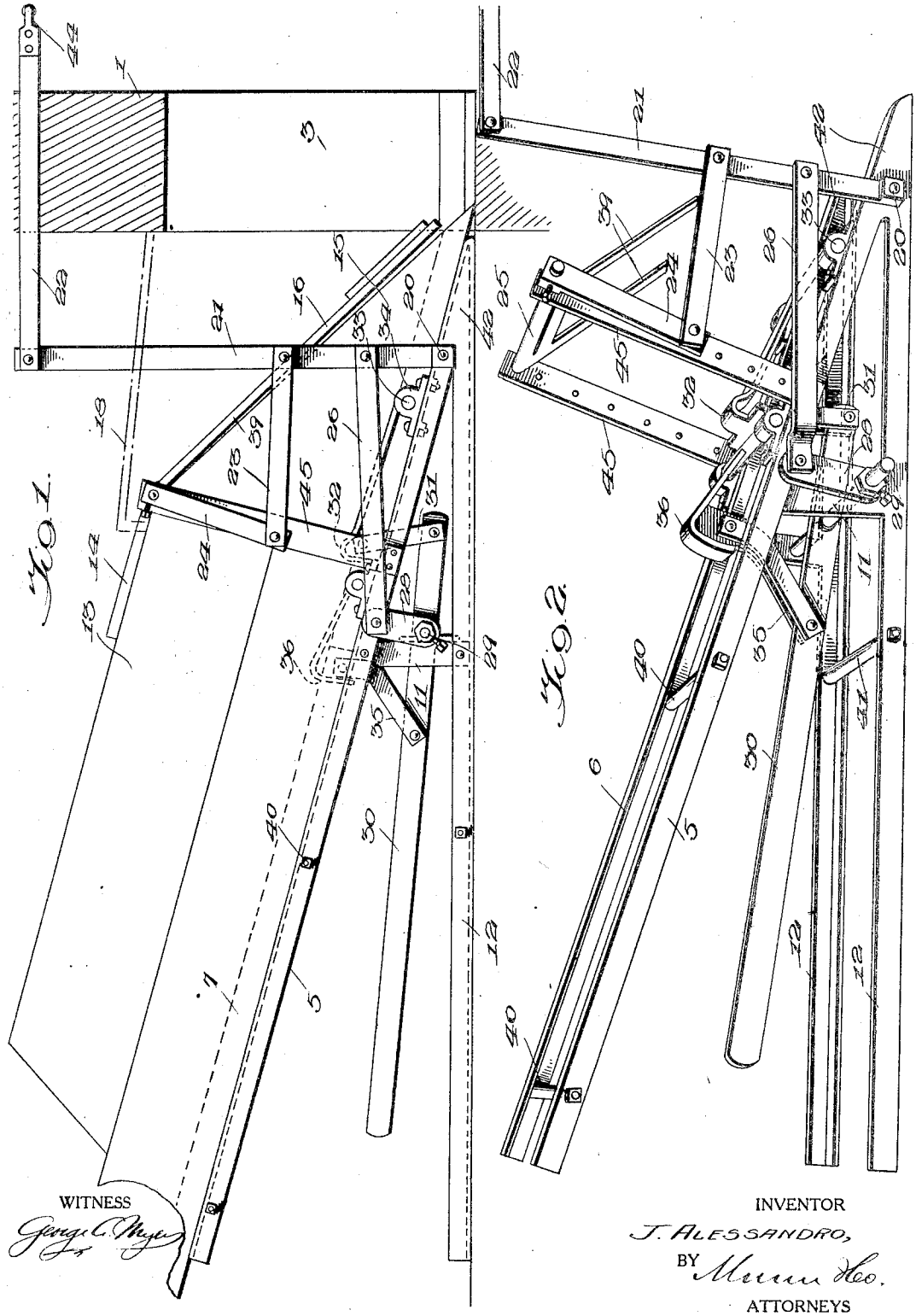
June 16, 1925. 1,542,651

J. ALESSANDRO

ICE CHUTE

Filed Aug. 16, 1924 2 Sheets-Sheet 1



WITNESS

George C. Meyer Jr

INVENTOR

J. ALESSANDRO,

BY Munn & Co.

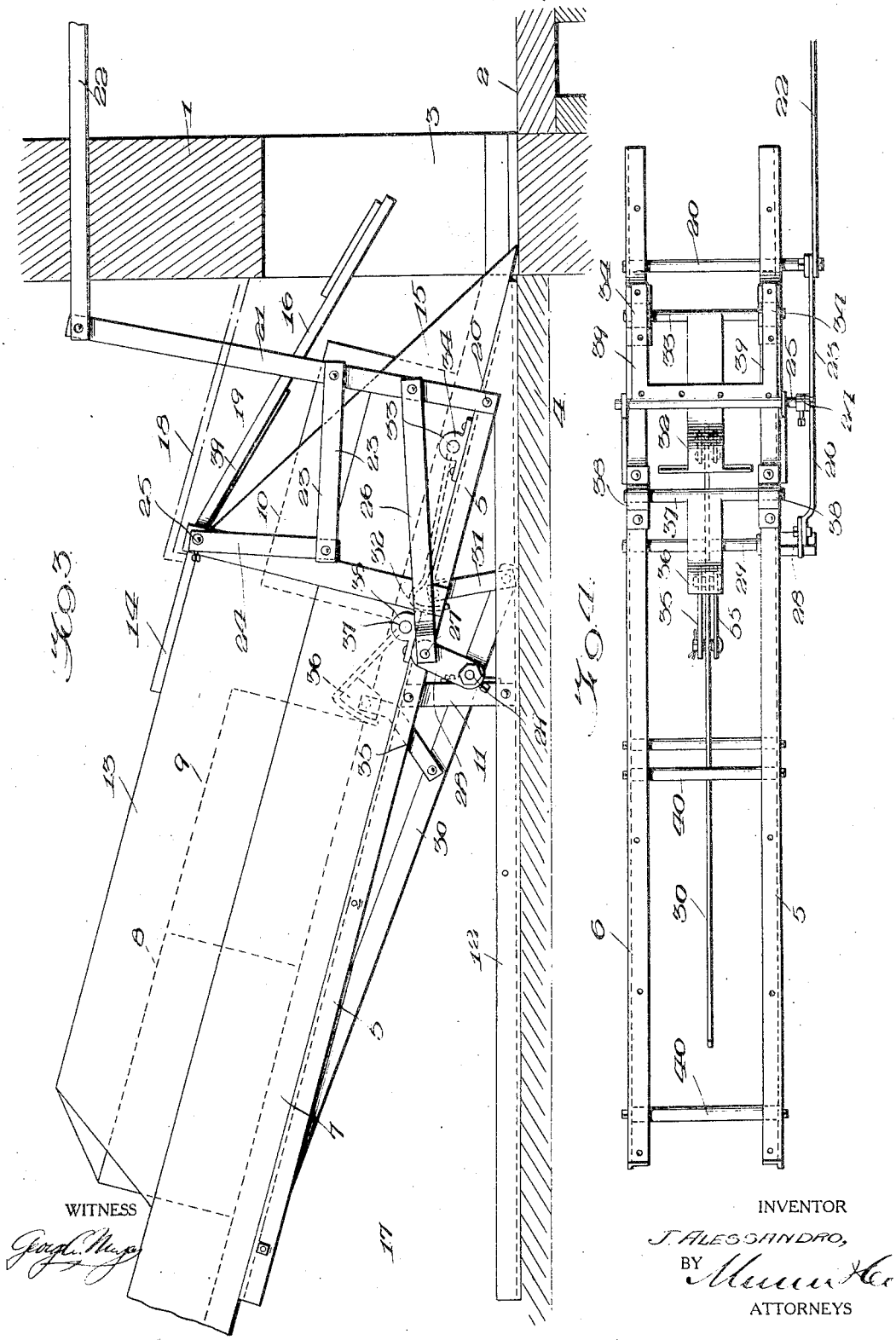
ATTORNEYS

June 16, 1925. 1,542,651

J. ALESSANDRO

ICE CHUTE

Filed Aug. 16, 1924 2 Sheets-Sheet 2



WITNESS

George Murphy

INVENTOR

J. ALESSANDRO,

BY Munn & Co

ATTORNEYS

Patented June 16, 1925. 1,542,651

UNITED STATES PATENT OFFICE.

JACK ALESSANDRO, OF WACO, TEXAS.

ICE CHUTE.

Application filed August 16, 1924. Serial No. 732,479.

To all whom it may concern:

Be it known that I, JACK ALESSANDRO, a citizen of the United States, and a resident of Waco, in the county of McLennan and State of Texas, have invented certain new and useful Improvements in Ice Chutes, of which the following is a specification.

This invention relates to chutes for refrigerating storage plants and has for its object the provision of a device which may be operated from the exterior of the building whereby a closure at the discharge end of the chute is simultaneously operated in conjunction with a device for releasing and for forcing a block of ice through the chute and through the opening in a wall so that the ice is discharged readily from the plant without requiring the salesman at the plant to enter the building in order to obtain a piece of ice.

A further object of the invention is the provision of a device for automatically discharging a predetermined quantity of ice from a refrigerating plant and which is operated from a platform outside of the building, thus eliminating the usual opening and closing of doors to the refrigerating plant whereby warm air is admitted to the same causing a loss of refrigeration.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawing forming a part of the specification; nevertheless it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications which shall define no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a wide elevation of an automatic chute as applied to a refrigerating plant.

Figure 2 is a view in perspective showing the operating mechanism of the chute.

Figure 3 is a side view of the chute as applied to a refrigerating plant showing the closure in open position with the chute discharging a block of ice.

Figure 4 is a plan view of the chute.

Referring more particularly to the drawings, 1 designates a wall having a platform 2 from which the ice is delivered to the customers. The wall is provided with a passage 3 through which the ice is discharged onto the platform. The floor 4 of the interior of the refrigerating plant is adapted to support a pair of longitudinal beams 5 and 6 upon which is mounted an inclined platform 7. The blocks of ice 8, 9 and 10 are adapted to slide upon the platform and be discharged through the opening when they are released in a manner which will be presently described. The beams 5 and 6 are maintained at an acute angle to the floor 4 and are supported in their inclined position by means of bars 11 connected to the horizontal bars 12 which are secured to the floor of the building.

A pair of side walls 13 are secured to the longitudinal edges of the inclined platform 7 and a cover 14 is provided adjacent the outer end of the chute. The forward ends of the side walls 13, as shown at 15, is cut off at an angle and project into the passage 3 of the wall 1 upon which is adapted to rest a cover 16 so that the chute is closed to prevent the loss of cold air from the storage room 17 and at the same time to prevent the entrance of warm air to the refrigerating plant.

A casing having a top 18 and side walls 19 completely encloses the forward end of the chute and the movable cover 16 to prevent the loss of cold air around the sides and above the forward end of the chute where the chute is connected with the passage 3. Thus the only time that cold air is permitted to escape is when the cover 16 is momentarily raised for permitting the discharge of a block of ice from the chute.

To the forward end of the beam 5, as shown at 20, is pivotally mounted an operating lever 21. This lever is connected with an operating rod 22 which passes through the wall 1 and is provided with a handle at its outer end where the same extends above the platform 2, so that the lever 21 may be operated by an attendant at the outside of the building.

A link 23 is pivotally connected with the lever 21 and a rock arm 24 which is rigid with a shaft 25 mounted in bearings at the upper forward end of the chute. The closure 16 for the forward end of the chute is rigidly connected with the shaft 25 so that as the shaft is rocked the cover will be raised or lowered as the case may be.

A link 26 is pivotally connected with the lever 21 below the link 23 and also has pivotal connections as showns at 27 with a rock

arm 28. This rock arm is rigid with a shaft 29 mounted in bearings carried by the bars 11. This shaft is rigidly connected with a rock arm 30 which has its one end connected by means of a link 31 to a dog 32. This dog is rigid with a shaft 33 mounted in bearings 34 carried by the beams 5 and 6. The bearings are located below the level of the platform 7 so as not to interfere with the sliding movement of the blocks of ice. A second link 35 connects the rock arm 30 at the opposite side of its pivotal point 29 with a second dog 36 which likewise is connected with a shaft 37 mounted in bearings 38 carried by the beams 5 and 6. The dogs 32 and 36 are adapted to be moved upwardly through openings in the platform 7 and engage a block of ice as shown in Figure 3.

As shown more particularly in Figure 2 arms 39 are provided which are rigid with the shaft 25 and the closure 16 is secured to such arms so that by the rocking of the shaft 25 the closure is likewise rocked to open or closed position.

The pair of angle irons or beams 12 are connected by spacing bolts and sleeves 40. The pair of angle irons or beams 5 and 6 are connected by spacing bolts and sleeves 41. It will be seen from Figure 2 that the inner ends of the beam 12 is integrally connected as at 42 to beam 5 while the other beam 12 is connected with beam 6 as shown at 42 at the forward end of the chute.

The operation of my device is as follows: Blocks of ice are supplied by an attendant within the refrigerating chamber 17 and placed upon the inclined platform 7 until the forward block of ice moves down and engages the dog 32 which is elevated above the platform 7, the dog 36 being located below the platform. At this time the trap door 16 is closed. When it is desired to release a cake of ice the rod 22 is pulled through the handle 44 whence the shaft 25 is simultaneously rocked through the lever 21 for opening the door 16 and simultaneously with the movement of the link 23 and 26 the dog 32 is depressed below the platform while the dog 36 is elevated. The lowering of dog 32 releases a block of ice while the elevation of dog 36 urges the block of ice forwardly to the platform 2 and at the same time the dog 36 is in position, by reason of its elevation, to engage the next block of ice 9 and maintain it against being discharged through the passage 3.

As soon as the rod 22 is moved inwardly the shaft 25 is rocked in the opposite direction so that the door 16 is closed. The inward movement of the rod 22 also causes an inward movement of the links 23 and 26 thereby elevating dog 32 and depressing dog 36. The block of ice 9 which has been retained in position by the dog 36 slides down the inclined platform 7 and is engaged by the dog 32 and retained in position by said dog until the rod 22 is operated for releasing the block of ice 9 for discharging through the opening 3 to the platform 2.

It will be seen by my improved mechanism that ice may be readily discharged with a momentary opening of the closure 16 so that very little loss of cold air is had from the refrigerating chamber 17 and any number of chutes may be employed in parallel relation before similar openings to the opening 3 for discharging greater quantities of ice and the dogs 32 and 36 may be so spaced and so regulated in size that smalle pieces of ice may be discharged from other chutes,

What I claim is:

1. In an ice chute, an inclined platform, means for holding a block of ice on the platform against sliding movement, a casing embracing the platform and having an opening permitting discharge of the ice, a closure for said opening, and means for operatively connecting the closure with the holding means whereby when the closure is open the holding means will be released to permit the block of ice to slide downwardly on the platform and outwardly through the opening.

2. In a storage refrigerator having a discharge opening in its wall, an inclined platform having an end projecting into the opening, a casing cooperating with said platform to form a chute, a closure for the forward or projecting end of the chute, a pair of cooperating dogs, one of said dogs causing holding of the blocks of ice and the other dog causing moving of the blocks of ice along the platform and for holding subsequent blocks, and means adapted to be operated from the exterior of the refrigerating chamber for simultaneously opening the door and for alternately elevating and lowering the dogs relative to the inclined platform.

3. In an ice chute, an inclined platform, a pair of cooperating dogs for holding and moving the blocks of ice along the platform with one dog projecting upwardly from said platform while the other dog is depressed, means for alternately depressing one dog below the platform and for simultaneously projecting the other dog above said platform, a casing enclosing the platform and having an opening at the discharge end of the same, a door for closing said opening, means connecting the door with the operating means for dog in such a manner that when one dog is elevated the door will be opened and when the other dog is elevated the door will be closed.

4. In a storage refrigerator having a discharge opening, an inclined platform, a pair of cooperating dogs, one of said dogs causing holding of the blocks of ice and the

other dog causing moving of the blocks of ice along the platform, and means for alternately depressing one dog below the platform and for projecting the other dog above said platform, said means comprising a lever, an oscillating bar, links connecting the oscillating bar with the dogs, and means connecting the lever with the oscillating bar for rocking the same and for alternately moving the dogs in opposite directions, a closure for said opening, and means connecting the operating means for the dogs with the door whereby when said door is open the dogs will be operated to cause the block of ice to be discharged through said opening.

5. In a storage refrigerator having a discharge opening in its wall, an inclined platform having an end adjacent the opening, a casing embracing the opening and the lower end of the platform, a door mounted within the casing and adapted to normally close the inner end of the casing to prevent the circulation of air between the outside and the inside of the refrigerator, means mounted on the platform for moving one block of ice and for holding a second block in position, and means connected with the door and operated by the means for actuating the moving and holding means for the ice for simultaneously opening the door.

6. In a storage refrigerator having a discharge opening in its wall, an inclined platform having an end adjacent the opening, a casing embracing the opening and the lower end of the platform, a door mounted within the casing and adapted to normally close the inner end of the casing to prevent the circulation of air between the outside and the inside of the refrigerator, means mounted on the platform for moving one block of ice and for holding a second block in position, means connected with the door and operated by the means for actuating the moving and holding means for the ice for simultaneously opening the door, and means upon the exterior of the wall and connected with the operating means for the door when actuated for causing actuation of the operating means for the door.

7. In an ice chute, an inclined platform, said platform being provided with openings, dogs pivotally connected with the platform and adapted to be alternately projected through the openings and extended above the level of the platform, a lever pivotally mounted on the platform, a rock arm pivotally mounted intermediate its ends, links connecting the dogs to the rock arm upon opposite sides of the pivot of said arm, means connecting the rock arm with the lever whereby operation of the lever will cause alternately elevation and depression of the dogs.

8. In an ice chute, an inclined platform, said platform being provided with openings, dogs pivotally connected with the platform and adapted to be alternately projected through the openings and extended above the level of the platform, a lever pivotally mounted on the platform, a rock arm pivotally mounted intermediate its ends, links connecting the dogs to the rock arm upon opposite sides of the pivot of said arm, means connecting the rock arm with the lever whereby operation of the lever will cause alternately elevation and depression of the dogs, a casing embracing the discharge end of the platform, a closure for the outer end of the casing, and means connecting the door with the lever whereby movement of the lever causes closing or opening of the door.

Aug. 5, 1924.

JACK ALESSANDRO.