No. 765,927. PATENTED JULY 26, 1904.

A. B. KOKERNOT.

MACHINE FOR HOLDING REFRIGERATOR TUBES.

APPLICATION FILED MAR. 4, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

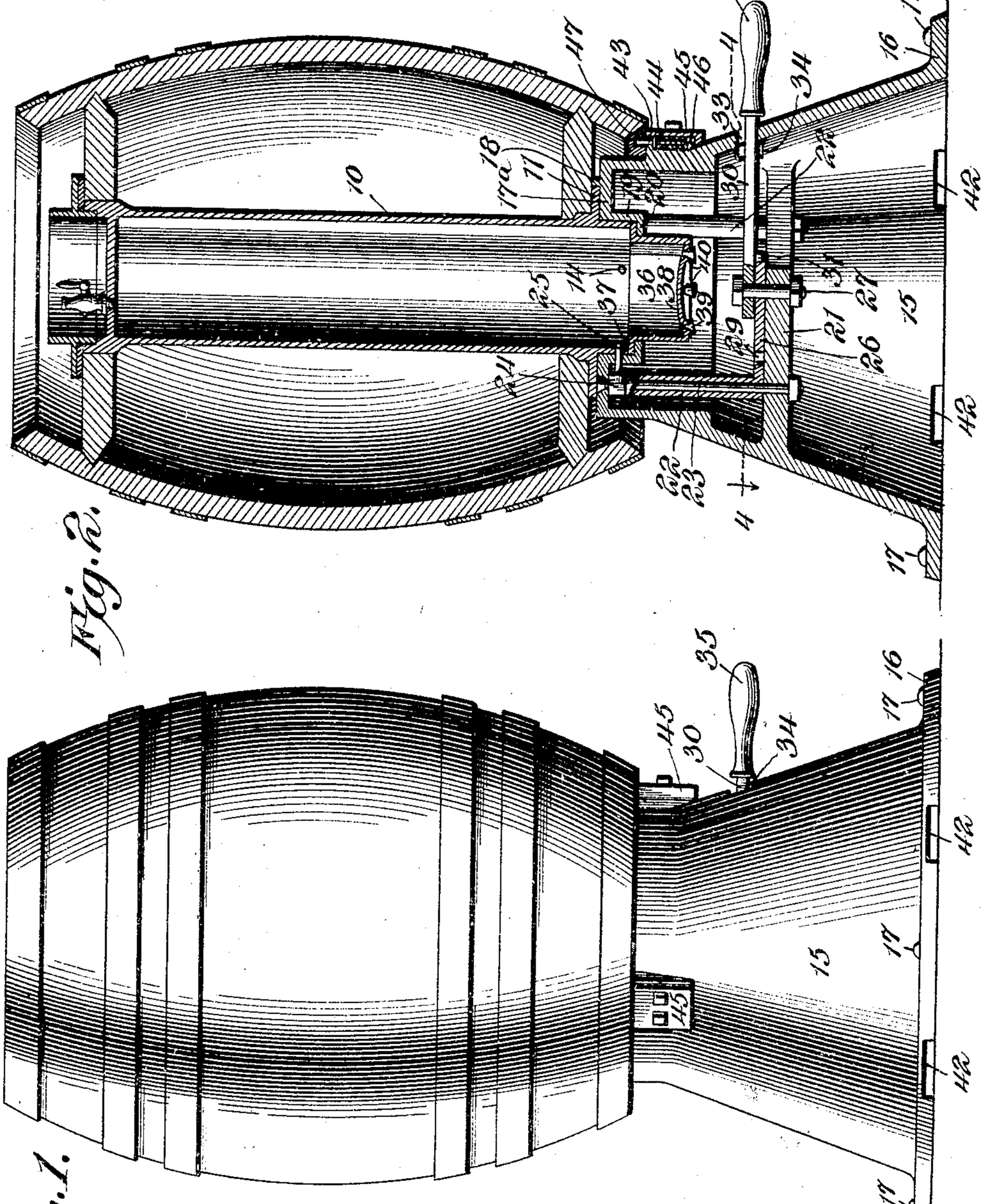

Fig. 2.

Fig. 1.

Witnesses
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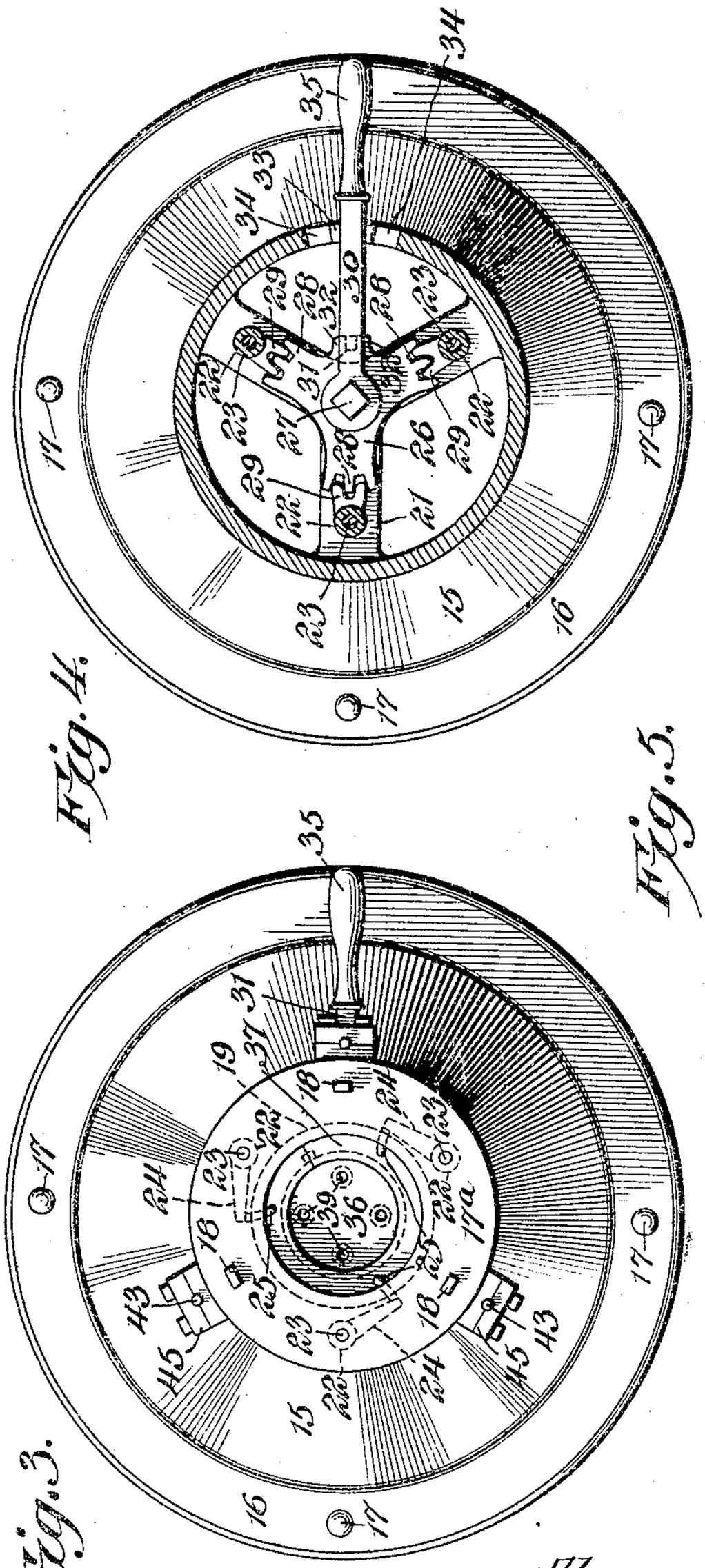

Fig. 4.

Fig. 3.

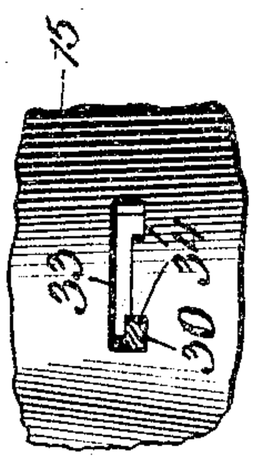

Fig. 5.

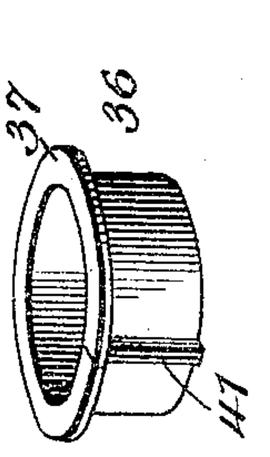

Fig. 6.

Fig. 7.

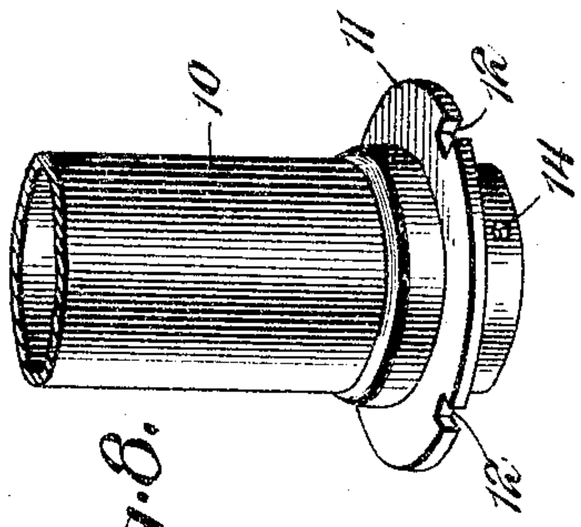

Fig. 8.

Witnesses
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No. 765,927. Patented July 26, 1904.

UNITED STATES PATENT OFFICE.

ALEXANDER BENJAMIN KOKERNOT, OF NEW ORLEANS, LOUISIANA.

MACHINE FOR HOLDING REFRIGERATOR-TUBES.

SPECIFICATION forming part of Letters Patent No. 765,927, dated July 26, 1904.

Application filed March 4, 1903. Serial No. 146,167. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER BENJAMIN KOKERNOT, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Machine for Holding Refrigerator-Tubes, of which the following is a specification.

This invention relates to improvements in that class of structures described and claimed in a prior patent granted to me on April 1, 1902, and numbered 696,645.

It is the object to provide mechanism of a more simple nature than that described in the prior patent and at the same time have said mechanism positively operable.

It is also the object to provide means for catching the refuse and drip from the tubes and directing the latter so that it will not come into contact with the holding means for said tubes.

The preferred means for accomplishing these objects is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of the improved machine, showing the barrel in place thereon. Fig. 2 is a vertical sectional view through the same. Fig. 3 is a top plan view of the machine with the barrel removed. Fig. 4 is a horizontal sectional view taken on the line 4 4 of Fig. 2. Fig. 5 is a detail view of a portion of the wall of the support. Fig. 6 is a detail perspective view of the refuse-cup employed. Fig. 7 is a detail perspective view of one of the rock-shafts and the elements carried thereby, and Fig. 8 is a detail perspective view of the lower end of one of the refrigerator-tubes operated upon by the machine.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

This machine is used in connection with refrigerator-tubes arranged to be placed in barrels or other receptacles, and more particularly to that class of tubes described and claimed in Patent No. 696,646, granted to me on April 1, 1902. Such a tube is illustrated in Figs. 2 and 8 of the accompanying drawings and is designated by the reference-numeral 10. It will be observed by referring to Fig. 2 that the tube is detachably placed within a barrel and extends from end to end thereof, being removable through one head. This tube is provided contiguous to one end with the outstanding flange 11, having sockets 12 therein, the portion of said tube extending beyond the flange being provided with openings 14. For a detailed description of this tube reference may be had to the above-mentioned patent and also to Patent No. 696,645, wherein is fully described a machine having the same general characteristics as this one and intended for holding the tube while being placed in or removed from a barrel or other receptacle. As before stated, the present machine is an improvement on the structure set forth in said latter patent. In this embodiment a bell-shaped base-support 15 is employed, which is hollow and provided with an outstanding rim 16 at its lower end, through which fastening devices, as 17, may be passed. The upper end of the support is provided with a flat-faced centering-ring 17ª, having upstanding positioning-lugs 18 projecting from its upper surface. This ring surrounds an opening formed in the top of the support, and a depending wall 19, extending from its inner edge, forms an annular tube-receiving seat, the lower end of said wall having an inwardly-extending flange 20. The support is provided between its ends with an interior spider 21, formed by a plurality of radiating arms joined together at their central portions and directly beneath the tube-receiving seat. Between the spider and the centering-ring are arranged vertical rock-shafts 22, journaled upon bolts 23, connecting said spider and ring. The upper ends of the rock-shafts are provided with substantially horizontal crank-arms 24, carrying at their free ends fingers 25, that are movable through suitable openings formed in the wall 19 when the shafts are actuated. For the purpose of moving these shafts a master-wheel 26 is journaled, by means of a bolt 27, upon the spider and is provided with peripheral teeth 28, intermeshing with teeth 29, formed upon the lower ends of the rock-shafts. The master-wheel is operated by a lever 30, also journaled upon the bolt 27 and having a lug 31, fitting between a pair of spaced lugs 32, formed upon the master-

wheel. This lever has a slight vertical movement and projects through a transverse horizontally-disposed slot 33, formed in the wall of the base-support. The ends of the slot are provided with depressed seats 34, clearly shown in Fig. 5 of the drawings. The outer end of the lever is formed into a suitable handle 35, and it will be evident that by swinging said lever the master-wheel will be turned, thereby rocking the shafts and throwing the fingers either into or out of the tube-receiving seat. The movement of the lever 30 is limited by the length of the slot 33, and when at either end of the slot said lever will drop into one of the seats, and is thus secured against accidental movement.

For the purpose of catching the refuse, such as salt and the like, used for refrigerating purposes in the tube a receiving-cup 36 is employed, which is suspended from the tube-receiving seat by having an outstanding flange 37 at its upper edge, which flange rests upon the inturned flange 20 of the lower end of the wall 19. The bottom 38 of the cup is preferably concaved, as shown in Fig. 2, and is provided with drip-openings 39, extending through nipples 40, arranged upon the under face of the bottom. These nipples direct the dripping moisture so that it will not fall upon the actuating mechanism for the rocker-shafts, and in order that the cup will always be properly positioned it is provided on its outer face with a flanged seam 41, arranged to engage in a notch formed in the flange 20, as indicated in Fig. 3. This cup, while permitting the free egress of moisture to the floor, where it can find an escape through the openings 42, formed in the bottom of the support, will retain the salt or other solid material that may fall from the tube. Being detachably suspended within the support, it can of course be emptied as often as found desirable or necessary.

The manner of using the apparatus will be readily understood. Assuming the tube is to be inserted in a barrel, the fingers 25 are first withdrawn from the seat and the lower end of the tube is placed in said seat. The tube is then rotated until the sockets 12 of the flange 11 are engaged by the positioning-lugs 18 of the centering-ring. This will bring the openings 14 of the tube opposite the inner ends of the fingers 25, whereupon by moving the actuating-lever said fingers will be projected into the seat, and consequently through the openings 14. As a result the tube will be locked securely upon the machine. The barrel is then placed in position and the tube secured, after which by moving the lever the holding-fingers are again withdrawn so that the barrel and tube may be removed.

In order to properly position the barrel, a plurality of pins 43 are arranged upon the sides of the supporting-base, being located in sockets 44, formed in the inner faces of blocks 45, fastened to said base. The pins are yieldingly supported by coiled springs 46 and their upper ends are arranged to engage in sockets 47, formed in the chime of the barrel.

In removing the tube from a barrel the barrel and tube are placed upon the support, as illustrated in Fig. 2, and the tube is then locked in place. As said tube may contain considerable salt and moisture, which will gravitate from the same when in position, it will be seen that the cup will receive the same and retain the salt while directing the moisture to the floor.

The machine as a whole operates in substantially the same manner as that described in my previous patent above mentioned, but has distinct advantages in that the mechanism is much simpler, is not as liable to become deranged, and, furthermore, in that provision is made for taking care of the waste material contained within the tubes.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine of the class described, the combination with a support having an intermediate recess constituting an interior seat for a tube, of means for holding the tube, said means being normally located outside the seat and movable into engagement with a tube placed in said seat.

2. In a machine of the class described, the combination with a support having an annular depending wall forming therebetween an inclosed seat for a tube, of holding devices for the tube arranged outside the wall and movable through the same into the seat and into engagement with the tube placed therein.

3. In a machine of the class described, the combination with a support having a depressed interior seat for a tube, of a plurality of substantially horizontally swinging arms carrying fingers that are normally located outside the seat and are movable inwardly into the seat and into engagement with the tube placed in the seat.

4. In a machine of the class described, the combination with a support having an intermediate recess constituting an interior seat for a tube, of a plurality of rock-shafts carrying tube-engaging devices, and means for simultaneously operating the rock-shafts.

5. In a machine of the class described, the combination with a hollow support having a tube-seat in its upper end, of a plurality of

upright rock-shafts arranged within the support and having crank-arms provided with fingers that are movable into the seat and into engagement with the tube placed therein, and means for moving the rock-shafts.

6. In a machine of the class described, the combination with a hollow support having a tube-seat in its upper end, of a plurality of upright rock-shafts arranged within the support and having crank-arms provided with fingers that are movable into engagement with the tube placed in the seat, teeth located on the rock-shafts, and a master-wheel having teeth engaging the teeth of the shafts.

7. In a machine of the class described, the combination with a hollow support having a tube-seat in its upper end, of a plurality of upright rock-shafts arranged within the support and having crank-arms provided with fingers that are movable into engagement with the tube placed in the seat, teeth located on the rock-shafts, a master-wheel having teeth engaging the teeth of the shafts, and an actuating-lever for moving the master-wheel.

8. In a machine of the class described, the combination with a hollow support having a tube-seat in its upper end and a transverse slot in one wall, of a plurality of upright rock-shafts arranged within the support and having crank-arms provided with inwardly-extending fingers that are movable into the seat and into engagement with the tube placed therein, teeth located on the shafts, a master-wheel journaled between the rock-shafts and having teeth engaging the teeth of said shafts, and an actuating-lever connected with the master-wheel and projecting through the slot of the support.

9. In a machine of the class described, the combination with a support having a seat in its upper end in which the lower end of the tube may be placed, said seat having an inturned flange, of a cup having a perforated bottom and an outturned flange at its upper end which rests upon the inturned flange of the seat.

10. In a machine of the class described, the combination with a support having a seat in its upper end, said seat having an inturned flange provided with a notch, of a cup having a perforated bottom provided with depending nipples, said cup having an outturned flange that rests upon the flange of the seat and an outstanding portion that engages in the notch of the same.

11. In a machine of the class described, the combination with a hollow supporting-base having a transverse slot in its wall, said slot having depressed seats at its ends, of movable tube-engaging means, and an actuating-lever for the means, said lever projecting through the slot and being arranged to engage in the depressed seats thereof, whereby it is held against movement.

12. In a machine of the class described, the combination with a supporting-base having a depressed tube-receiving seat in its upper end, of tube-holding devices movable into the seat, and a plurality of upwardly-projecting yielding fingers located upon the support around the seat and arranged to engage a barrel placed thereover.

13. In a machine of the class described, the combination with a support having an open depressed tube-receiving seat in one end, of a plurality of tube-holding devices mounted on the support around and outside of the seat, and means for moving the devices inwardly into the seat and into engagement with a tube placed therein.

14. In a machine of the class described, the combination with an annular wall forming an inclosed support having a tube-receiving seat, of a plurality of tube-holding devices mounted on the support outside of the seat, means for moving the devices inwardly into engagement with a tube placed in said seat, and means independent of the wall and located on the support for positioning the tube in proper relation to the tube-holding means.

15. In a machine of the class described, the combination with a support having an open depressed tube-receiving seat in one end, of a plurality of tube-holding devices mounted on the support around and outside of the seat, means for simultaneously moving the devices inwardly into the seat and into engagement with the tube placed therein, and devices located on the end of the support outside the seat for positioning the tube in proper relation to the holding devices.

16. In a machine of the class described, the combination with a support for a tube, of a refuse-receptacle located on the support and below the lower end of a tube placed thereon, said receptacle having a perforated bottom.

17. In a machine of the class described, the combination with a support for a tube, of a refuse-receptacle located on the support and below the lower end of a tube placed thereon, said receptacle having a perforated bottom provided with depending nipples.

18. In a machine of the class described, the combination with a hollow tubular support, the upper portion of the tube being provided with a tube-receiving seat and the lower portion having escape-orifices through the walls thereof, of a refuse-receptacle detachably suspended within the support at the lower end of the seat and having a perforate bottom.

19. In a machine of the class described, the combination with a support having a tube-receiving seat, of tube-engaging means mounted on the support and movable inwardly into engagement with the tube placed thereon, said means leaving an unobstructed space beneath the seat, and a refuse-receptacle mounted on the support beneath the seat.

20. In a machine of the class described, the combination with a support having a depressed

open-bottomed tube-receiving seat, of tube-engaging means mounted on the support and movable inwardly into the seat and into engagement with the tube placed therein, said means leaving an unobstructed space beneath the seat, and a refuse-receptacle detachably supported in said space and arranged to be in alinement with the tube placed in the seat.

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

ALEXANDER BENJAMIN KOKERNOT

Witnesses:
OTTO THOMAN,
EDWIN BELKNAP.