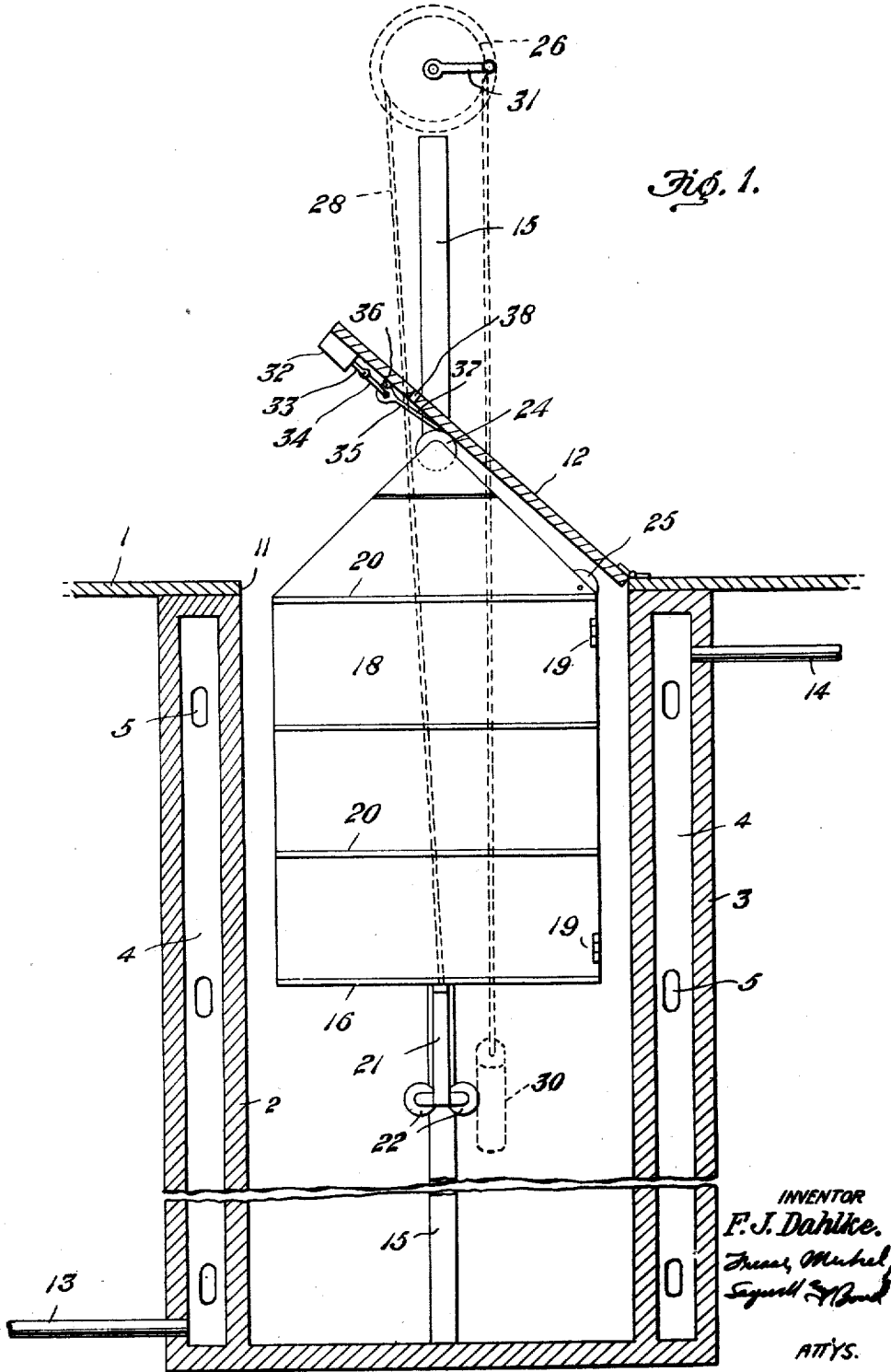


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F. J. DAHLKE.  
REFRIGERATOR.  
APPLICATION FILED JUNE 4, 1919.

Patented Aug. 10, 1920.  
2 SHEETS—SHEET 1.



INVENTOR  
F. J. Dahlke.  
James, Mitchell,  
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ATTYS.

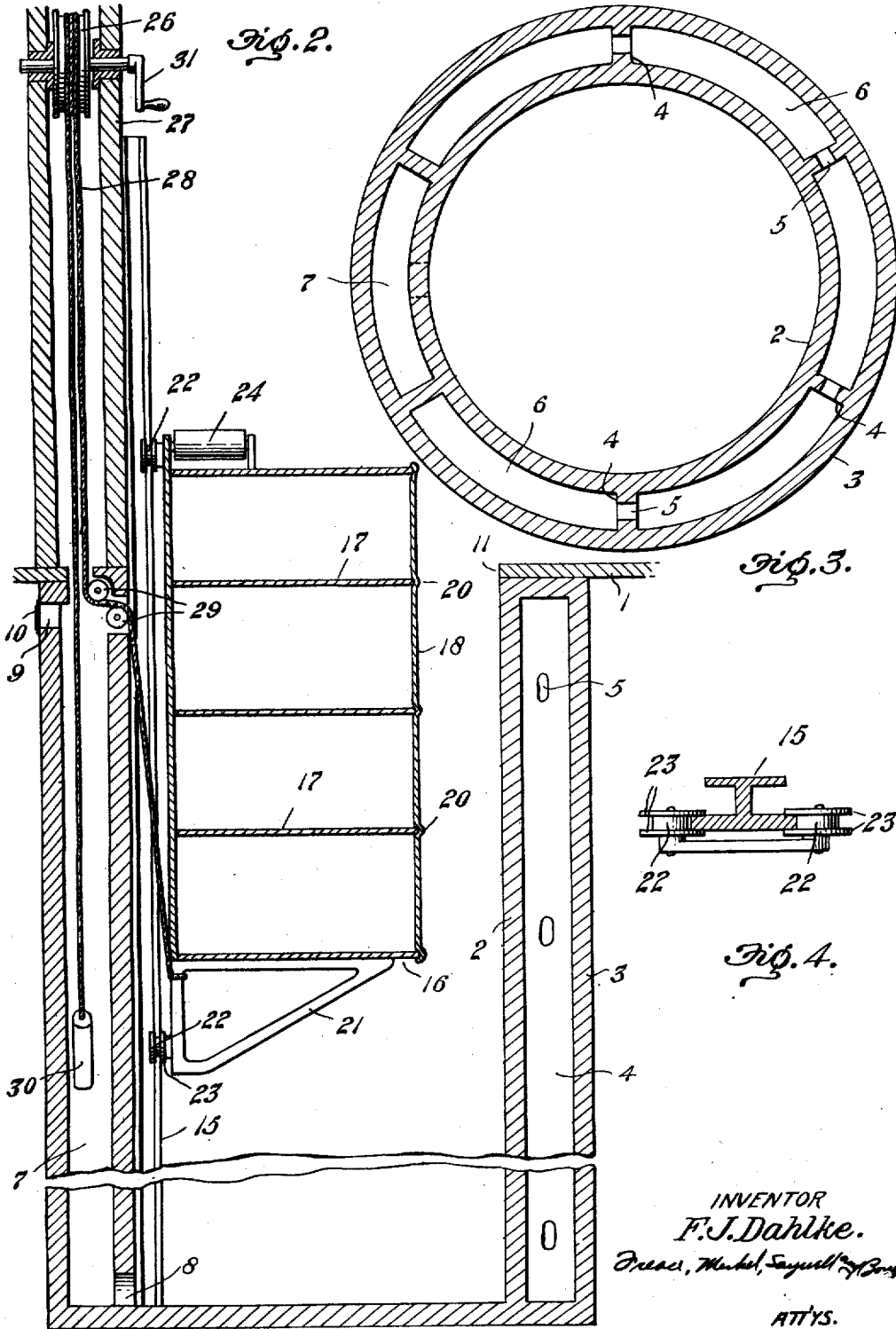
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INVENTOR  
*F. J. Dahlke.*  
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ATTYS.

# UNITED STATES PATENT OFFICE.

FREDRICK J. DAHLKE, OF DAMASCUS, OHIO.

REFRIGERATOR.

1,349,369.

Specification of Letters Patent. Patented Aug. 10, 1920.

Application filed June 4, 1919. Serial No. 301,831.

To all whom it may concern:

Be it known that I, FREDRICK J. DAHLKE, a citizen of the United States, residing at Damascus, in the county of Columbiana and State of Ohio, have invented a new and useful Refrigerator, of which the following is a specification.

This invention relates to refrigerators, and has more especial reference to that type of refrigerators which do not require ice and which are arranged to be cooled by being lowered into a shaft and to be raised from the shaft when access to its contents is desired.

The objects of the present invention are to provide a refrigerator which may be lowered into and raised from a shaft located beneath the floor, to provide a water jacket around the shaft for cooling the interior of the shaft to provide means for circulating water through the jacket, to maintain the temperature of the shaft at the desired point, to provide means for shutting off each compartment in the refrigerator from the adjoining compartments in order to prevent the odors of the foods passing from one compartment to another, to maintain the interior of the shaft dry and clean; and to generally improve and simplify the construction of this type of refrigerator.

With these objects in view the invention consists in the novel construction and arrangement of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of construction may be made within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

The invention thus set forth in general terms is illustrated in the accompanying drawings forming part hereof, in which—  
Figure 1 is a vertical sectional view through a refrigerator embodying the invention;

Fig. 2, a vertical transverse sectional view through the device;

Fig. 3, a horizontal sectional view through the shaft; and

Fig. 4, a horizontal sectional view through the track, showing a pair of the rollers mounted thereon.

A practical embodiment of the invention

is disclosed in the accompanying drawings, forming a part of this specification in which similar numerals of reference indicate corresponding parts throughout the several views.

Referring more especially to the construction illustrated in the accompanying drawings, the floor is indicated by the numeral 1, the shaft 2 being shown extending down from the floor to a suitable depth and provided with a water jacket 3, radial walls 4 being located at intervals between the shaft and the water jacket for the purpose of bracing the structure, these walls being provided with apertures 5 to allow the water to circulate through all of the compartments 6 thus formed.

It should be noted that one compartment 7 does not communicate with the adjoining compartments, but communicates with the lower extremity of the shaft by means of the aperture 8, a similar aperture 9 being formed in the outer wall of this compartment adjacent the floor. A screen 10 is placed over the aperture 9 for the purpose of preventing dirt or insects from entering the shaft. Air is thus admitted into the interior of the shaft from the outside and as the refrigerator is lowered into the shaft the air displaced will be forced out through the compartment 7.

The shaft is located beneath the aperture 11 formed in the floor, said aperture being closed by means of a hinged trap door. The shaft is built of any suitable material preferably of concrete tiles. For the purpose of admitting water to the jacket, a pipe 13 communicates with one of the compartments 6, said pipe leading to a suitable source of water supply either a pump, cistern or the like. An outlet pipe 14 communicates with one of the compartments 6, preferably upon the opposite side of the water jacket. It will be seen that the water within the water jacket may be changed as often as desired, fresh water being admitted through the pipe 13 and allowed to circulate around the jacket, the stale water overflowing through the pipe 14, which pipe leads to a suitable drain. The temperature of the interior of the shaft may thus be maintained at the desired point while the interior of the shaft remains dry.

The refrigerator is mounted for vertical movement upon the track 15, which track is preferably of the cross sectional form best

shown in Fig. 4 and is mounted within the shaft and extends up through the opening in the floor for a sufficient distance to allow the refrigerator to be moved out of the shaft and above the floor level.

The refrigerator proper is indicated by the numeral 16 and is preferably formed of sheet metal being provided with a plurality of shelves 17 which extend out flush with the front of the refrigerator, a door 18 being hinged at 19 to one side edge of the body of the refrigerator, said door being provided with horizontally disposed grooves 20, which receive the forward edges of the shelves, thus entirely shutting off each compartment from the remaining compartments in the refrigerator and preventing odors of food in one compartment from passing to the other compartments.

The refrigerator is mounted upon a bracket 21, said bracket being provided with a pair of rollers 22 having annular flanges 23, which engage opposite sides of the track 15, thus preventing lateral movement of the refrigerator with reference to the track. A similar pair of pulleys 22 is mounted at the upper end of the refrigerator.

For the purpose of opening the trap door 12 as the refrigerator is raised, the upper portion of the refrigerator is tapered as best shown in Fig. 1, a roller 24 being provided at its upper extremity to engage the under surface of the door. A similar roller 25 is provided upon the side of the refrigerator adjacent the hinge side of the door to assist in raising the door, this second roller engaging the door after it has been engaged by the first roller.

For the purpose of raising and lowering the refrigerator within the shaft a drum 26 is mounted within the wall 27, a cable 28 being wound around said drum and connected to the bracket 21 which carries the refrigerator, said cable being passed over suitable pulleys 29. The other extremity of the cable extends down into the compartment 7 and is provided with a counterweight 30 to balance the weight of the refrigerator.

It will be seen that a refrigerator is thus provided which is not unsightly, as when the refrigerator is lowered into the shaft and the trap door closed the only portions of the device appearing within the room are the upper portion of the track 15 which is located against the wall, and the crank 31 by means of which the drum is operated. The shaft within which the refrigerator is lowered is dry and at the same time is maintained at the proper temperature by means of the water circulated through the water jacket and the refrigerator proper is so constructed that each compartment is shut off from the remainder of the refrigerator, thus making it possible to keep various kinds

of food within the refrigerator without danger of their becoming contaminated with the odor of other foods kept therein.

For the purpose of keeping the door 12 positively closed, at all times to prevent opening of the same by any small children playing upon the floor and prevent their falling into the shaft, a spring lock 32 of any usual and well known character is provided upon the door, the bolt 33 of said lock extending backwardly through the casing of the lock by being pivotally attached to the link 34, which link is pivoted to the lever 35, which lever is pivotally mounted to the bracket 36 carried by the door, the tail 37 of the lever extending rearwardly and being arranged to be engaged by the roller 24 as the refrigerator is raised unlocking the door and allowing it to be opened by the upward movement of the refrigerator. It will be seen that as the door closes the spring lock will automatically operate to lock the door in the closed position. For the purpose of opening the door from above, an aperture 38 is provided in the door through which a wire or other suitable device may be placed to engage the lever 35.

Although the drawings and above specification disclose the best mode in which I have contemplated embodying my invention, I desire to be not limited to the details of such disclosure, for in the further practical application of my invention, many changes in form and construction may be made, as circumstances require or experience suggests, without departing from the spirit of the invention, within the scope of the appended claims.

I claim:—

1. A device of the character described, comprising a shaft, a hinged door covering said shaft, a spring lock upon said door, a refrigerator within said shaft, means for raising and lowering the refrigerator within the shaft and means for automatically unlocking said door as the refrigerator is raised.

2. A device of the character described comprising a shaft, a hinged door covering said shaft, a spring lock upon said door, a refrigerator within said shaft, means for raising and lowering the refrigerator within the shaft and means for automatically unlocking said spring lock and raising the door as the refrigerator is raised.

3. A device of the character described, comprising a shaft, a hinged door covering said shaft, a spring lock upon said door, a lever operatively connected to said lock, a refrigerator within said shaft, means for raising and lowering the refrigerator within the shaft and means upon the refrigerator for engaging the lever to unlock the door as the refrigerator is raised.

4. A device of the character described 130

comprising a shaft, a hinged door covering  
said shaft, a spring lock upon said door, a  
refrigerator within said shaft, means for  
raising and lowering the refrigerator with-  
5 in the shaft, means for automatically un-  
locking the door as the refrigerator is raised  
and rollers upon the refrigerator arranged

to engage the under surface of the door to  
raise the same after the lock has been un-  
locked.

In testimony that I claim the above, I<sup>10</sup>  
have hereunto subscribed my name.

FREDRICK J. DAHLKE.