

F. LOMAX.  
REFRIGERATOR.

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955,174.

Patented Apr. 19, 1910.

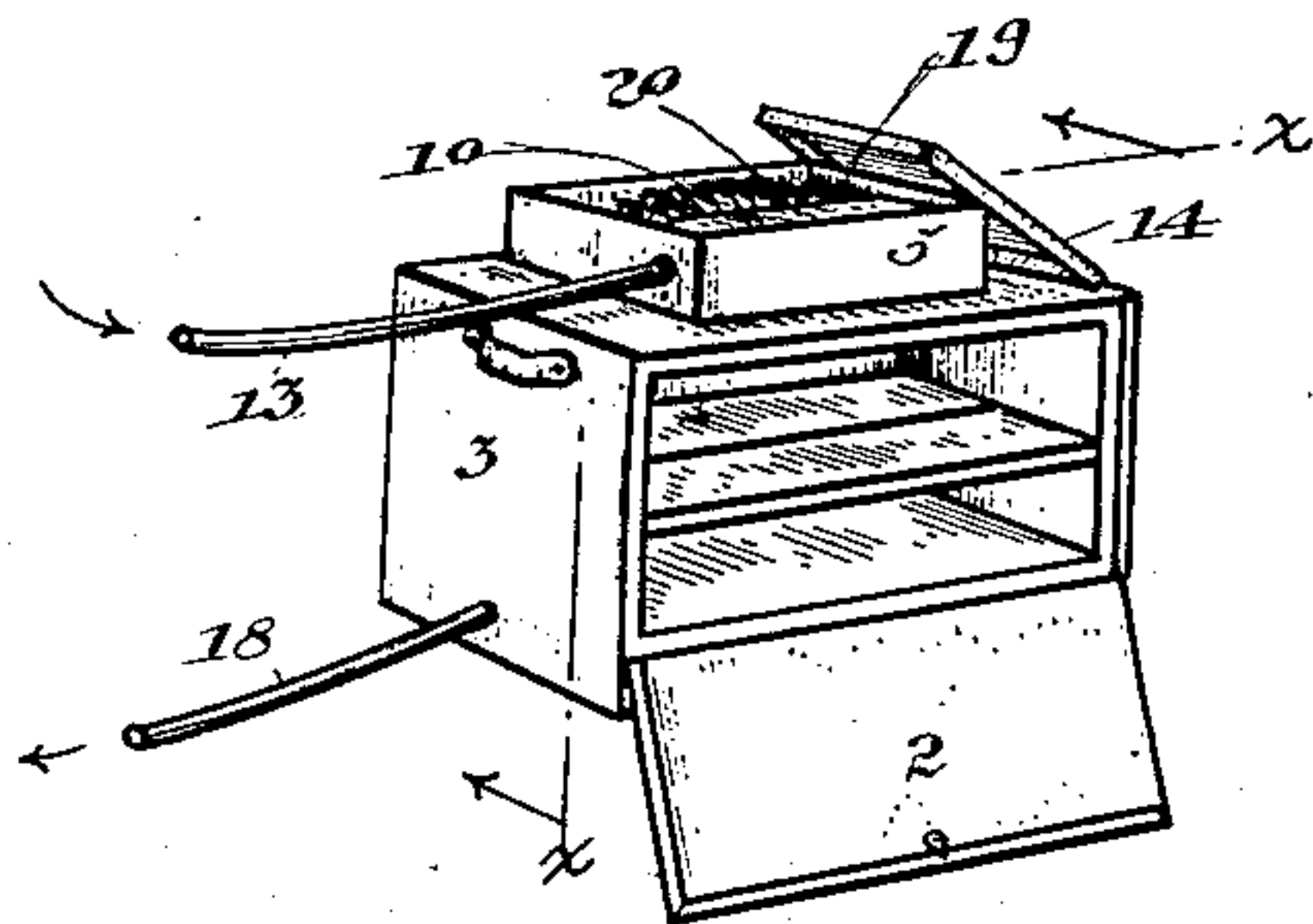


Fig. 1.

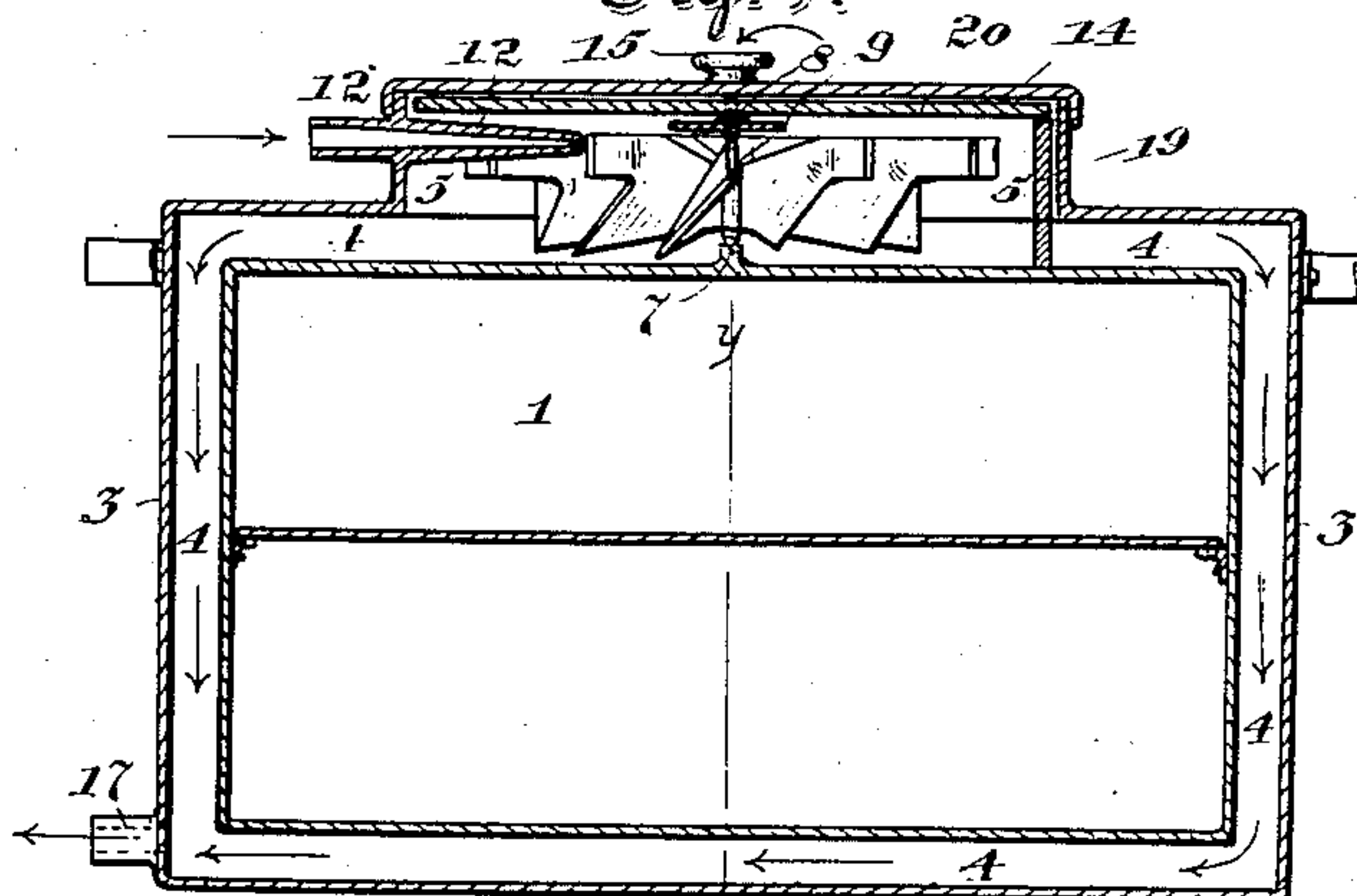


Fig. 2.

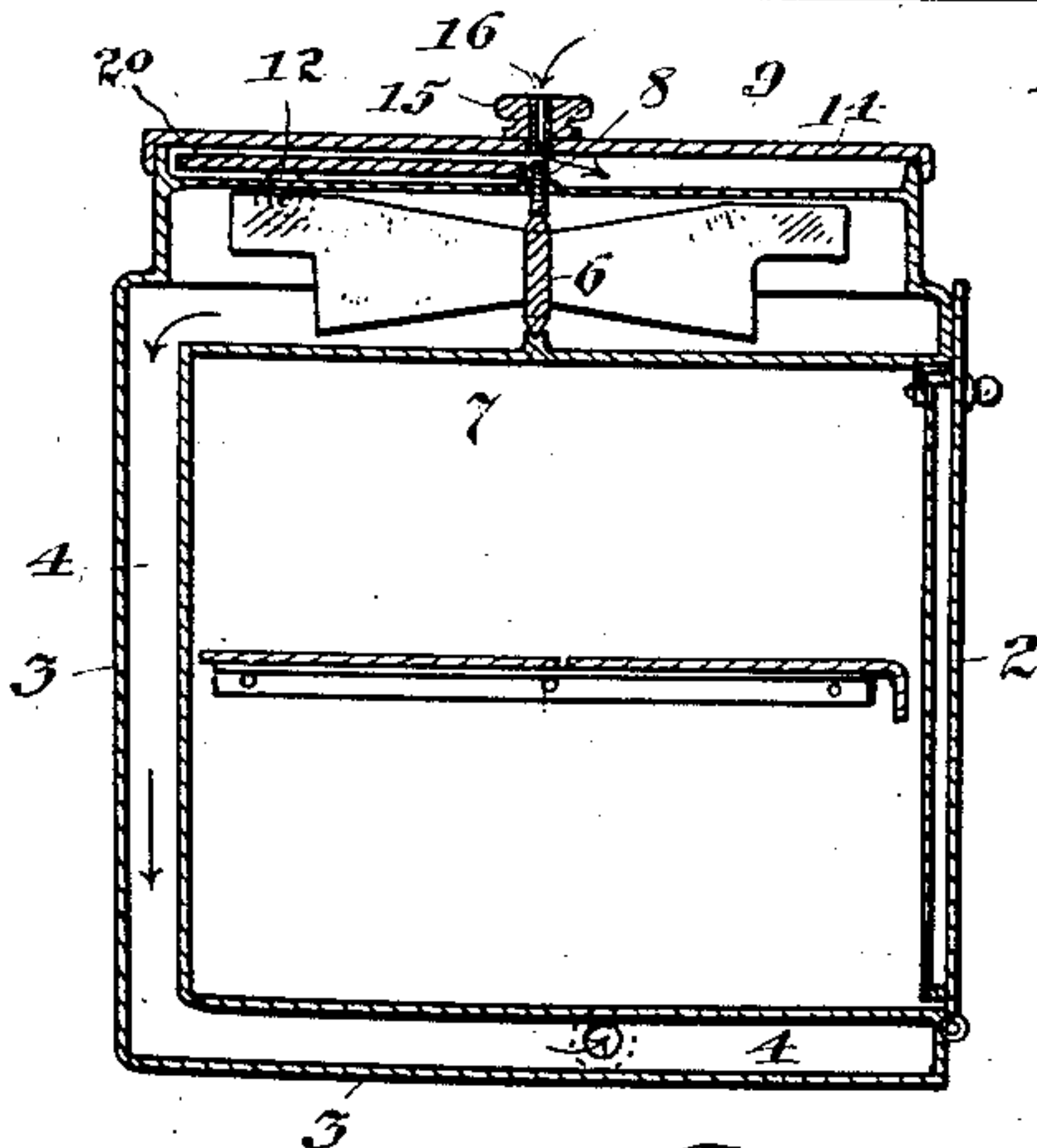


Fig. 3.

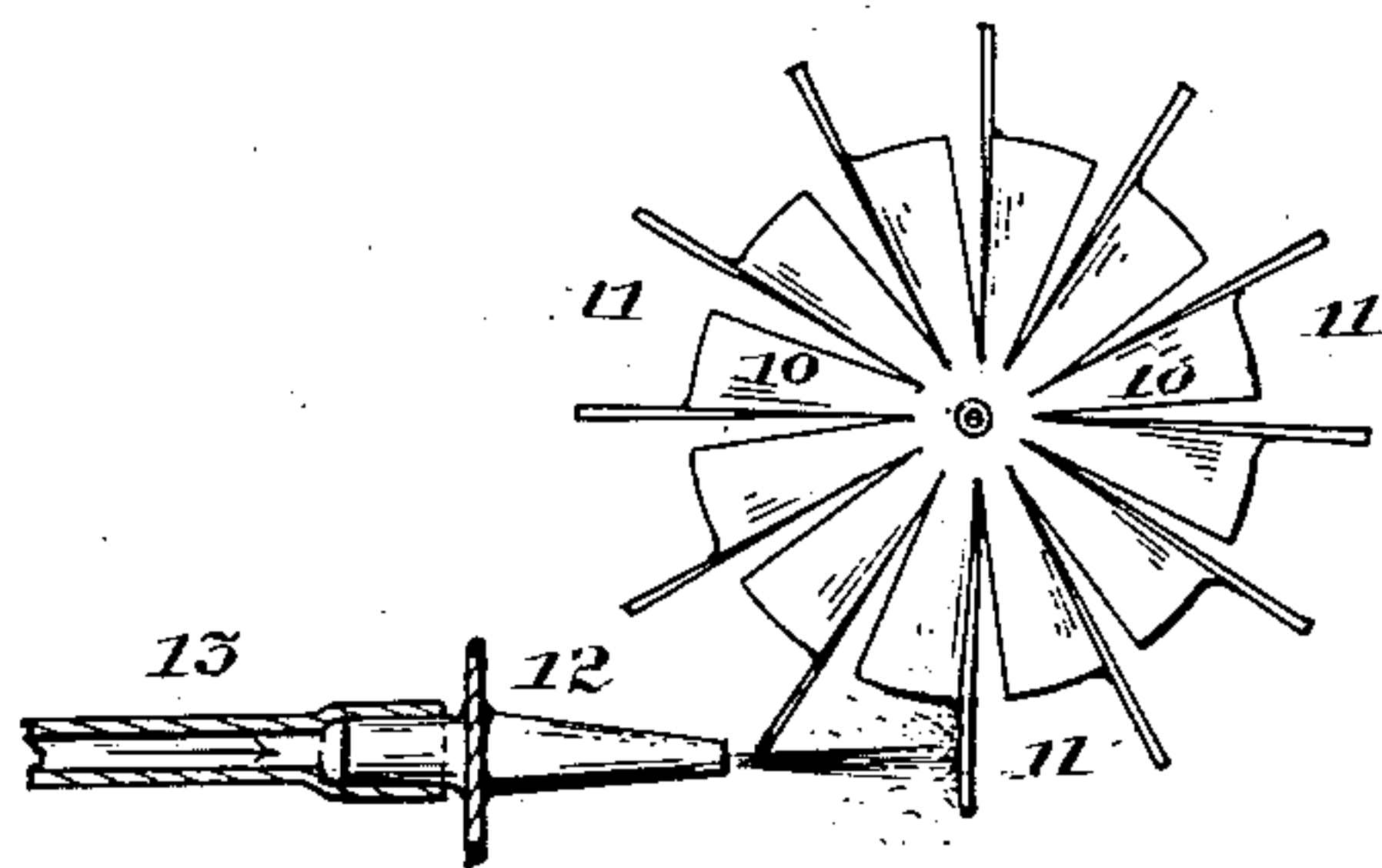


Fig. 4.

Witnesses:

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# UNITED STATES PATENT OFFICE.

FRED LOMAX, OF CHICAGO, ILLINOIS.

REFRIGERATOR.

955,174.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed November 1, 1909. Serial No. 525,714.

*To all whom it may concern:*

Be it known that I, FRED LOMAX, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Refrigerators, of which the following is a specification.

My invention relates to improvements in refrigerators and has for its object the production of a water cooled refrigerator of improved construction and operation.

My invention consists in the combination and arrangement of parts hereinafter described and claimed.

My invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a perspective view of a refrigerator embodying my invention, Fig. 2, an enlarged section on line  $x-x$  of Fig. 1, Fig. 3, a section on line  $y-y$  of Fig. 2, and Fig. 4, a top plan view of the fan employed in the refrigerator and illustrating the action of the water jet employed thereon.

The preferred form of construction as illustrated in the drawings comprises a sheet metal food compartment 1 having a hinged door 2 for access thereto. Compartment 1 is surrounded on its other sides by a sheet metal casing 3 inclosing an air space 4 around compartment 1. Above compartment 1 is formed a fan chamber 5 in which is rotatably mounted an air and water fan. The fan comprises a central spindle 6 having a conical bearing in a boss 7 on the top of compartment 1 and an adjustable conical bearing in set screw 8 threaded in a metallic cross piece 9 in the upper portion of chamber 5. The fan proper comprises blades having interior propeller blade portions 10 and exterior radial plane portions 11 as shown. Near one corner the fan chamber 5 is provided with a tapered jet nozzle 12 adapted to direct a jet of water perpendicularly against the radial plane portions 11 of the fan blades. Water is supplied to nozzle 12 by means of a hose or tube 13. Fan chamber 5 is provided with a removable cover 14 provided with a central knob 15 for manipulation of the same. The knob 15 is provided with a central aperture 16 for the admission of air to chamber 5 at the axis of the fan. Air and water are withdrawn from space 4 through tubular sleeve 17 and hose or tube 18 attached thereto.

Chamber 5 is provided with a removable wooden lining 19 arranged opposite jet nozzle 12 and with a removable wooden cover portion 20 arranged over jet nozzle 12.

By the construction as being set forth it will be seen that by supplying water under pressure to jet nozzle 12 a jet of high velocity will be projected substantially perpendicularly against radial plane portions 11 of the blades of the fan. This will cause rapid rotation of the fan and the consequent drawing in of air through aperture 16 under the combined influence of the action of propeller blade portions 10 and the centrifugal action of radial plane portions 11. Thus a rapid blast of air will be passed over and commingled with water spray in chamber 5, which will cause the rapid evaporation of said water and the consequent extraction of the latent heat of evaporation thereof from the air. This will cool the incoming air which passing around compartment 1 will maintain the same at a low temperature, the water and air introduced passing off through tube 18. The lining 19 and cover 20 serve to intercept the water which is otherwise thrown violently against the corresponding portions of chamber 5 and thus would cause disagreeable noise.

While I have illustrated and described the preferred form of construction for carrying my invention into effect this is capable of variation or modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the exact details of construction set forth but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a refrigerator, the combination of a food compartment surrounded by an inclosed air space; a fan chamber mounted above said compartment and in open communication with said air space; a rotatable fan mounted in said fan chamber, each blade of said fan comprising an interior propeller blade portion and an exterior radial plane portion; a water jet nozzle adapted to direct a jet of water against said radial plane portions; means for admitting air to said fan chamber; and means for withdrawing air and water from said air space, the propeller portion of the blades being adapted to direct



an air blast directly against the casing and the radial end portions being adapted to distribute the water evenly over the top of the casing from whence it runs down the sides thereof, substantially as described.

2. In a refrigerator, the combination of a food compartment surrounded by an inclosed air space; a fan chamber mounted above said compartment and in open communication with said air space; a rotatable fan mounted in said fan chamber, each blade of said fan comprising an interior propeller blade portion and an exterior radial plane portion; a water jet nozzle adapted to direct a jet of water perpendicularly against said radial plane portions; means for admitting air to said fan chamber at the axis of said fan; and means for withdrawing air and water from said air space, substantially as described.

3. In a sheet metal refrigerator, the combination of a food compartment surrounded by an inclosed air space, a fan chamber mounted above said compartment and in open communication with said air space; a rotatable fan mounted in said fan chamber, each blade of said fan comprising an interior propeller blade portion and an exterior radial plane portion; a water jet nozzle adapted to direct a jet of water against said radial plane portions; a removable wooden lining for the end of said fan chamber op-

posite said jet; a removable cover for said fan chamber above said jet; means for admitting air to said fan chamber; and means for withdrawing air and water from said air space, substantially as described.

4. In a sheet metal refrigerator, the combination of a food compartment surrounded by an inclosed air space; a fan chamber mounted above said compartment and in open communication with said air space, a rotatable fan mounted in said fan chamber, each blade of said fan comprising an interior propeller blade portion and an exterior radial plane portion; a water jet nozzle adapted to direct a jet of water perpendicularly against said radial plane portions; a removable wooden lining for the end of said fan chamber opposite said jet; a removable wooden cover for said fan chamber above said jet; means for admitting air to said fan chamber at the axis of said fan; and means for withdrawing air and water from said air space, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED LOMAX.

Witnesses:

HELEN F. LILLIS,  
JOSHUA R. H. POTTS.