Feb. 27, 1934. H. B. ADAMS 1,948,780

REFRIGERATOR

Original Filed Oct. 21, 1931 2 Sheets-Sheet 1

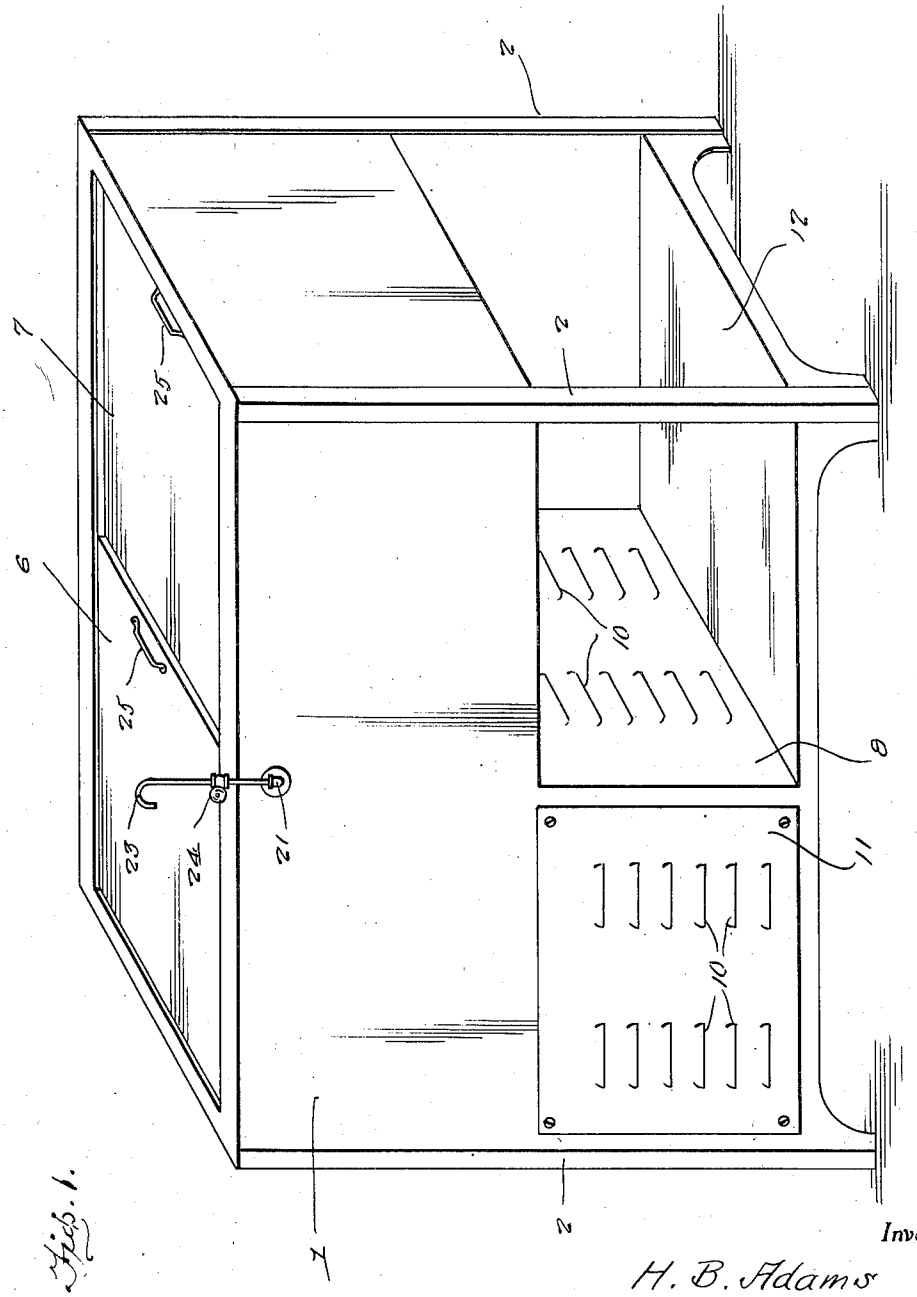


Fig. 1.

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Fig. 2.

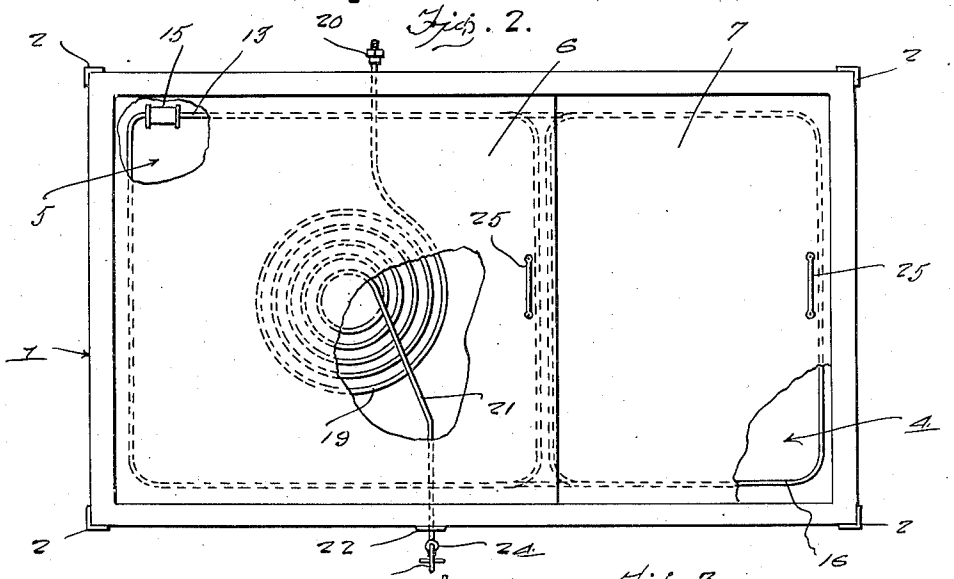
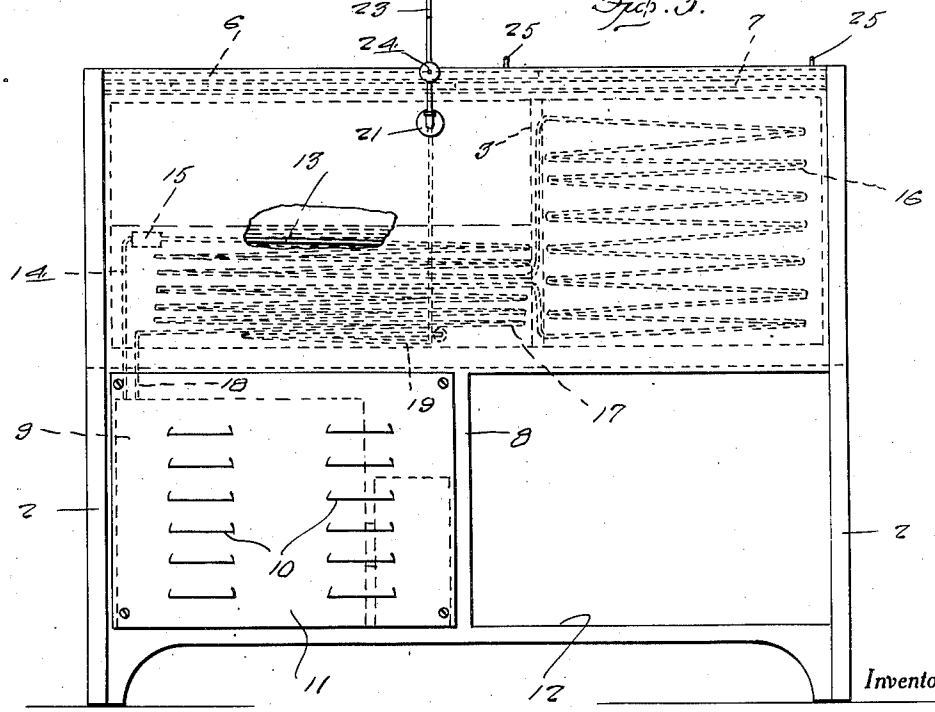


Fig. 3.



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REFRIGERATOR

Harold B. Adams, Monett, Mo.

Application October 21, 1931, Serial No. 570,190
Renewed October 26, 1933

2 Claims. (Cl. 62—89)

The present invention relates to refrigerators and has for one of its important objects to provide, in a manner as hereinafter set forth, a refrigerator of the mechanical type embodying a novel construction and arrangement for accommodating both bottled and unbottled goods.

Another important object of the invention is to provide a refrigerator of the aforementioned character embodying novel means for cooling drinking water from any suitable source.

Other objects of the invention are to provide a refrigerator of the character described which will be simple in construction, strong, durable, compact, efficient and reliable in operation and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a view in perspective of the refrigerator in accordance with the present invention.

Figure 2 is a view in top plan thereof with portions broken away.

Figure 3 is a view in front elevation with a portion broken away and showing, in broken lines, the cooling coils and the slidable closures.

Referring now to the drawings in detail, it will be seen that the reference numeral 1 designates a tank which is open at its top and which is mounted on the supporting legs 2. The tank 1 is substantially rectangular in plan and has extending transversely thereacross a vertical partition 3 dividing the tank into a comparatively small compartment 4 for the reception of unbottled goods and a comparatively large compartment 5 for the reception of bottled goods. The longitudinal sides of the tank 1 are provided, in the upper portion thereof and in their inner sides with opposed pairs of grooves or channels in which the closures 6 and 7 are slidable, the closure 6 being for the compartment 5 and the closure 7 being for the compartment 4.

A housing 8 depends from the tank 1 beneath the compartment 6 for the reception of a conventional refrigerating unit 9. The housing 8 has its walls provided with ventilating openings 10 and includes a removable plate 11 for permitting access to be had to the unit 9. A shelf 12 extends from the inner lower portion of the housing 8 beneath the compartment 4. Any desired articles may be placed on the shelf 12, such as empty bottles.

A coil 13 is provided in the compartment 5, the convolutions of said coil extending adjacent the walls of the compartment 5. A pipe 14 connects the inlet end of the coil 13 with the unit 9, an expansion valve 15 being interposed in said pipe 14. As best seen in Figure 3 of the drawings, the coil 13, at an intermediate point, extends through the partition 3 into the compartment 4 and is formed to provide the coil 16, the convolutions of which extend adjacent the walls of said compartment 4. From the lower or outlet end of the coil 16, the tube returns to the compartment 5 through the partition 3 and is formed to provide the lower coil 17 beneath the coil 13. A return pipe 18 connects the lower coil 17 with the unit 9.

A flat water cooling coil 19 is disposed horizontally in the lower portion of the chamber 5 and extends outwardly at one end through the rear wall of the container, as at 20, for connection with a suitable source of supply. The pipe 21 extends from the inner end of the coil 19 forwardly and then upwardly and through the front wall of the compartment 5, as at 22 and terminates in an upstanding goose neck 23. A control valve 24 is provided for controlling the discharge of water from the goose neck 23. The reference numeral 25 designates handles on the closures 6 and 7 to facilitate the operation of said closures.

In use, the chamber 5 is filled to the desired level with water which, of course, surrounds the coils 13, 17 and 19. The bottled goods are, of course, submerged or partially submerged in the water. The refrigerant passes from the unit 9 through the pipe 14, through the expansion valve 15 to the upper coil 13 in the compartment 5 and said refrigerant then passes from the upper coil 13 into and through the coil 16 in the compartment 4. The refrigerant then passes from the coil 16 back into the compartment 5 through the lower coil 17 and is returned to the unit 9 through the pipe 18. The water in the compartment 5 is, of course, cooled by contact with the coils 13 and 17 and the air in the compartment 4 is cooled by the coil 16. The water which is thus cooled in the compartment 5 cools the coil 19 and in this manner cool water for drinking or other purposes is had.

It is believed that the many advantages of a refrigerator in accordance with the present invention will be readily understood, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction and

in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:—

1. A refrigerator comprising a tank elongated horizontally and open at its top, a vertical partition in the tank providing a pair of compartments, closures for the compartments slidably mounted in an upper portion of the tank, a housing depending from the tank beneath one of the compartments, a refrigerating unit mounted in the housing, cooling coils mounted in the said compartments and operatively connected with the refrigerator unit, and a shelf extending horizontally from the housing in spaced relation beneath the other compartment.

2. A refrigerator comprising a tank, having compartments, one of said compartments for the reception of water, closures for the compartments, a refrigerating unit, coils mounted in the compartments and operatively connected with the refrigerating unit for receiving a refrigerant therefrom, one of said coils being submerged in water in the said compartment for the reception of water, a third coil submerged in the water in the last-named compartment, means connecting one end of the last named coil to a source of water supply, and valve controlled discharge means mounted on the exterior of the tank and connected with the other end of said last named coil.

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