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W. F. WAGNER

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BOTTLE MAGAZINE FOR REFRIGERATORS

Filed Oct. 20, 1925

Fig. 1.

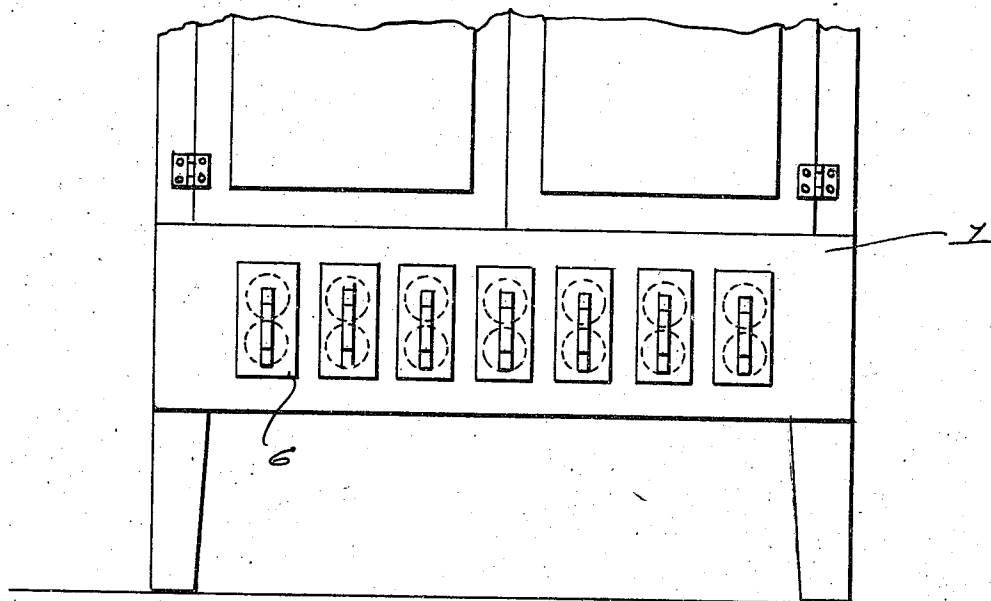


Fig. 2.

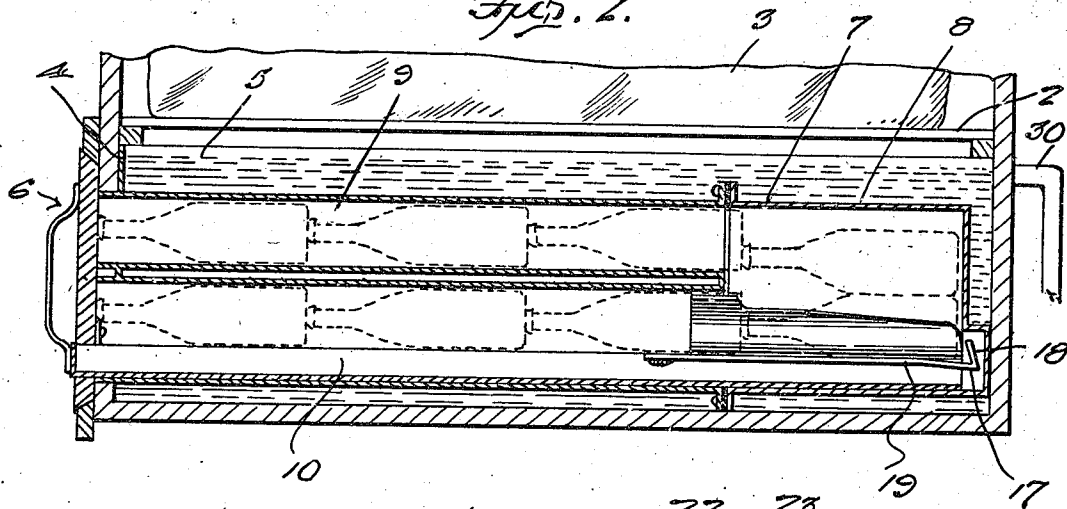
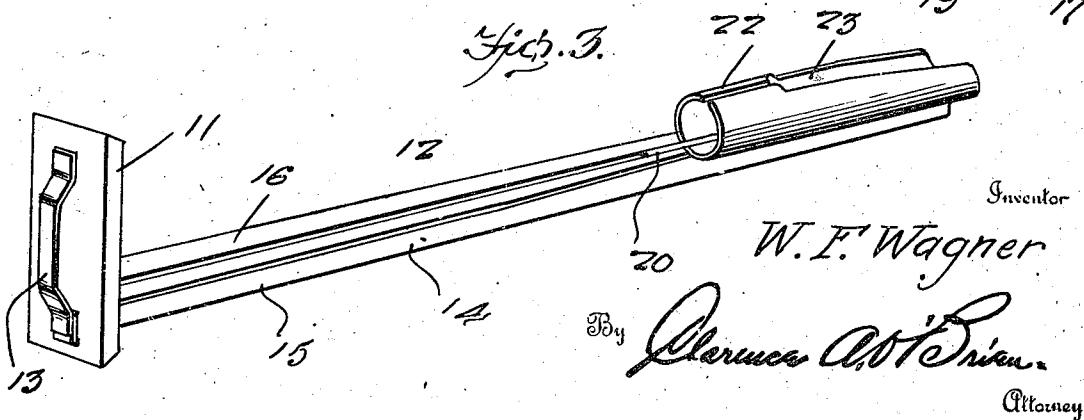


Fig. 3.



UNITED STATES PATENT OFFICE.

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BOTTLE MAGAZINE FOR REFRIGERATORS.

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The general object of my present invention is the provision of a magazine adapted to be positioned in proper proximity to a refrigerating agent, and constructed with a view to holding a large number of bottles in proportion to the size of the magazine, and also constructed to facilitate the feeding of bottles to the magazine, and the removal of bottles from the magazine, and to assure the bottle that is removed being the coldest of the lot.

Other objects and practical advantages of the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:—

Figure 1 is a front elevation illustrative of a portion of a refrigerator, and also illustrating a battery of magazine units, each one of which constitute the preferred embodiment of my invention.

Figure 2 is a vertical section, on an enlarged scale, showing a portion of the refrigerator, and also showing one of my magazine units; a plurality of bottles being shown by dotted lines in the unit.

Figure 3 is a perspective showing the bottle extracting or removing member of the improvement.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

I have elected to illustrate the preferred embodiment of my invention in association with a refrigerator 1, containing a rack 2 for the support of ice, designated by 3, and also containing a tank 4 to receive the water, designated by 5, which water is maintained in a cold state after dripping from the ice 3 by reason of its close proximity to the ice.

In the illustrated arrangement, Figures 1 and 2, I employ a battery or horizontal series of magazine units, each of the said units being designated by 6. The units 6 are identical in construction, and therefore a detailed description of the unit shown in Figures 2 and 3 will suffice to impart a definite understanding of all.

Referring therefore, to Figures 2 and 3, it will be noted that the unit includes a casing 7, having at its inner end portion what I term a dropping chamber 8, and having in its forward portion upper and lower tubes numbered 9 and 10, respectively, the said tubes being arranged in substantially super-

posed relation as clearly appears in Figure 2. The outer ends of the tubes 9 and 10 are open, and are designed to be closed by a door 11 forming part of the bottle extractor 12 and equipped with a hand grasp 13. The shank 14 of the bottle extractor is fixed to the door 11 and in the preferred embodiment of my invention the said shank includes a pendent portion 15 of U-shape in cross section, adapted to snugly occupy and move rectilinearly in a correspondingly shaped channel below the lower tube 10, and flanges 16 reaching laterally outward from the said portion 15 and adapted to bear and move on the lower portion of the tube 10 above the said channel. This construction manifestly assures the extractor resting and moving in correct position for engagement of the bottle taker 17 with a bottle in the lower portion of the dropping chamber 8. The bottle taker 17 is in the form of a spring strip, having a beveled head 18 and also having a shank 19, the latter fastened at one end 20 in the shank portion 15. For cooperation with the said bottle taker, the shank 14 is provided with a bottle holder 22, the said holder being by preference of resilient sheet metal, of a shape and size to snugly fit the lower tube 10, and being provided in its upper side with a longitudinal opening 23.

In the practical operation or use of my improvement, the casing of each magazine or magazine unit is charged with bottles, relatively arranged as shown in Figure 2. Manifestly the contents of the said bottles will be cooled by the immersion of the magazine casing in ice water or in any other desired refrigerant. When it is desired to use one of the bottles, the extractor is pulled outwardly and the first or cold bottle is taken from the lower tube. Another bottle is then inserted in the upper tube 9, and the extractor is pushed home and so that the door 11 is completely closed, Figure 2. This operation is repeated incident to the taking of a bottle from the magazine unit. As the name of the dropping chamber 8 imports, the said chamber is for the gravitation of bottles from the horizontal plane of the upper tube 9 to the horizontal plane of the lower tube 10, and it will also be appreciated that by virtue of the resiliency and construction of the bottle taker, the said taker on the inward movement of the extractor is adapted to ride past the innermost bottle of the lower series, and so that the head of the

taker will bring up and be opposed to the base end of the adjacent bottle. The bottles are preferably arranged in the magazine with their neck ends outermost, as appears in dotted lines in Figure 2.

As appears at the right of Figure 2, the overflow pipe 30 of the water tank has its receiving end disposed in a horizontal plane above that of the upper side of the magazine casing.

It will be appreciated from the foregoing that the insertion of a fresh bottle in the upper tube 9 after the removal of the foremost bottle from the lower tube 10, brings about the dropping of a bottle in the dropping chamber 8 as before described, and when the extractor is inserted, and the door 11 is closed, the extractor will be automatically engaged with the said bottle in the lower portion of the dropping chamber.

Notwithstanding the capacity of my improvement, and the facility which attends the removal of a cold bottle, and the insertion of a fresh bottle, it will be noted that the improvement is simple and compact in construction, and embodies no delicate parts such as are likely to get out of order after a short period of use.

I have specifically described the construction and relative arrangement of parts embraced in the preferred embodiment of my invention in order to impart an exact understanding of said embodiment. I do not desire, however, to be understood as confining myself to the structure disclosed, my invention being defined by my appended claims within the scope of which modifications may be made without departure from my invention.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:—

1. A magazine for holding bottles to be cooled, comprising a casing with a dropping chamber in its lower end portion and with lower and upper tubes extending outwardly from said chamber and open at their outer ends, said dropping chamber for the gravitation of bottles from the line of the upper tube to that of the lower tube and a bottle extractor movable longitudinally in the lower tube and portion of the said casing.

2. A magazine for holding bottles to be cooled, comprising a casing with a dropping chamber in its lower end portion and with lower and upper tubes extending outwardly from said chamber and open at their outer ends, and a bottle extractor movable in the lower portion of the said casing; the said bottle extractor having at its outer end a door for closing the outer ends of the lower and upper tubes when the extractor is moved home.

3. A magazine for holding bottles to be cooled, comprising a casing with a dropping

chamber in its lower end portion and with lower and upper tubes extending outwardly from said chamber and open at their outer ends, said dropping chamber for the gravitation of bottles from the line of the upper tube to that of the lower tube and a bottle extractor movable longitudinally in the lower tube and portion of the said casing; the said bottle extractor comprising a shank with a door for the lower and upper tubes at the outer end of the shank, and a resilient bottle taker and a bottle holder at the inner end of the shank.

4. In means for the purpose described, the combination of a casing having a dropping chamber in its inner portion and lower and upper tubes communicating with said chamber and open at their outer ends, the lower tube having a longitudinal central pendent portion, and a bottle extractor movable rectilinearly in the lower tube and having a longitudinal pendent portion disposed and guided in said portion of the tube.

5. In means for the purpose described, the combination of a casing having a dropping chamber in its inner portion and lower and upper tubes communicating with said chamber and open at their outer ends, said dropping chamber for the gravitation of bottles from the line of the upper tube to that of the lower tube the lower tube having a longitudinal central pendent portion, and a bottle extractor movable rectilinearly in the lower tube and having a longitudinal pendent portion disposed and guided in said portion of the tube; the said extractor also having at the outer end of the shank a door to normally close the lower and upper tubes, and also having on the inner portion of the shank a resilient bottle taker and a bottle holder.

6. In means for the purpose described, the combination of a casing with a drop chamber in its inner portion and with lower and upper tubes communicating with said drop chamber and open at their outer ends, said dropping chamber for the gravitation of bottles from the line of the upper tube to that of the lower tube and movable means associated with said casing for the outward movement of bottles in the lower tube.

7. In means for the purpose described, the combination of a casing with a drop chamber in its inner portion and with lower and upper tubes communicating with said drop chamber and open at their outer ends, said drop chamber for the gravitation of bottles from the line of the upper tube to that of the lower tube and movable means associated with said casing for the outward movement of bottles in the lower tube; said means constructed and arranged to normally close the outer ends of the tubes.

8. In means for the purpose described, the combination of a casing having a drop

chamber in its inner portion and also having lower and upper tubes communicating with said chamber and open at their outer ends, said drop chamber for the gravitation of bottles from the line of the upper tube to that of the lower tube and means movable longitudinally in the casing for serving the twofold function of moving bottles outwardly in the lower tube and normally closing the outer ends of the two tubes.

9. The combination of a refrigerator, means for holding a refrigerant in the refrigerator, and a transverse series or battery of bottle holding units arranged in the re-

frigerator and in close proximity to said refrigerant holding means: each of the said units comprising a casing with a drop chamber in its inner portion and with lower and upper tubes communicating with said chamber and open at their outer ends, said drop chamber for the gravitation of bottles from the line of the upper tube to that of the lower tube, and means movable longitudinally in the lower tube and casing for the extraction of bottles from the lower tube.

In testimony whereof I affix my signature.

WILLIAM F. WAGNER.