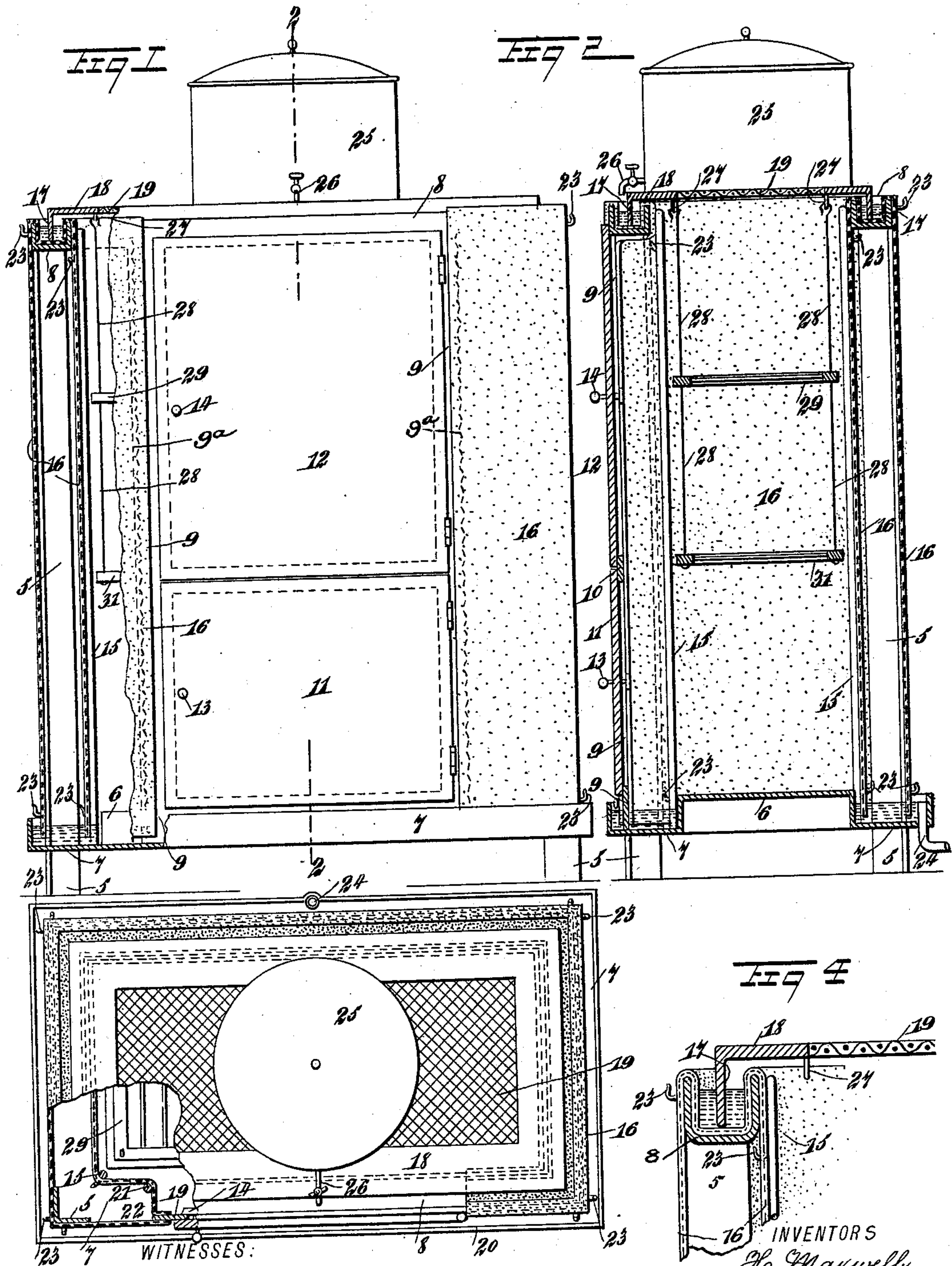


(No Model.)

H. & R. R. MAXWELL.  
REFRIGERATING APPARATUS.

No. 560,516.

Patented May 19, 1896.



H. Walker

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Fig 3

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# UNITED STATES PATENT OFFICE.

HU MAXWELL AND ROBERT R. MAXWELL, OF FRESNO, CALIFORNIA.

## REFRIGERATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 560,516, dated May 19, 1896.

Application filed October 30, 1895. Serial No. 567,354. (No model.)

*To all whom it may concern:*

Be it known that we, HU MAXWELL and ROBERT R. MAXWELL, of Fresno, in the county of Fresno and State of California, have invented a new and Improved Refrigerating Apparatus, of which the following is a full, clear, and exact description.

The primary object of this invention is to provide an improved apparatus for refrigerating by evaporation, and one which will be better adapted for domestic use than those heretofore employed.

The invention has subordinate objects, among which are the production of an apparatus in which the highest degree of cleanliness will be assured, and also one which is cheaper and more durable than prior devices.

To these ends the invention consists in certain peculiar features of construction and combinations of parts that will be fully described hereinafter, and finally embodied in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 represents a front elevation of our invention, parts being shown in section. Fig. 2 is a vertical transverse section of the same, taken on the line 2 2 of Fig. 1. Fig. 3 is a plan view of the invention with parts broken away, and Fig. 4 is an enlarged detail section.

The invention comprises a frame formed of four vertical standards 5, the same being arranged in rectangular relation to each other and having a bottom portion rigidly secured to them, the said bottom portion comprising a raised central part 6 and a continuous edge trough 7, the standards 5 being passed through the middle of the trough 7. Secured to the upper extremities of the standards 5 is a second and continuous trough 8, the same being rectangular in form and conforming to the disposition of the standards 5.

A U-shaped frame 9 has its horizontal portion rested in the front part of the trough 7 midway between the front standards 5, and has its vertical portions extended upwardly and secured to the front portion of the trough 8. Extending across from one of the vertical portions of the frame 9 to the other is a brace-bar 10. Hinged to the left-hand vertical por-

tion of the frame 9 are the doors 11 and 12, said doors jointly covering the space inclosed by the frame 9 and being provided with fastening devices 13 and 14 of any approved construction. The doors 11 and 12 are arranged one above the other, and the upper edge of the door 11 is level with the middle of the bar 10, while the lower edge of the door 12 is parallel with and directly adjacent to the upper edge of the door 11.

Rigidly secured to and rising from the bottom of the apparatus and arranged one at each corner of the raised portion 6 are rods 15, said rods being four in number and being extended upwardly to a point level with the trough 8. Bent over the trough 8 and lying in folds on each side thereof is an absorbent cloth 16, which is pressed into the trough 8 by means of the downwardly-extended flanges 17 of the top 18, the said top 18 being rectangular in form to conform to the shape of the trough 8 and having a wire-gauze or other reticulated central portion 19.

The cloth 16 lies on the inner and outer sides of the standards 5, and the inner layer is held from being drawn toward the center of the device by means of the rods 15, which, as best shown in Fig. 3, serve to hold two layers or folds of cloth parallel. The cloth extends unbroken in two layers around the back and sides of the apparatus, and at the front the cloth terminates at the vertical portions of the frame 9, the edges of the outer layer or fold being secured to the perforated outer side of said portions by means of suitable threads or cords 9<sup>a</sup>, as shown in Fig. 1, while the edges of the inner layer or fold are respectively passed around the rods 21, and thence extended forwardly to the inner sides of the vertical portions of the frame 9 and secured to the same by means like that which holds the outer layer. The cloth is held in place around the corners of the frame by means of hooks 23, which are respectively arranged at the upper and lower ends of the standards 5 and rods 15 and pass through the cloth to keep it in the proper relative position and to prevent it from becoming twisted or disarranged. It will be seen that the lower edges of the cloth are held in the trough 7. The trough 7 is provided with an outlet-pipe 24, which has its upper end raised above the



bottom of the trough and located below the upper edge of the trough, so as to effectively prevent the overflow of the same.

Seated on the top 18 is a water-reservoir 25, which may be of any preferred construction and which is provided with a cock or faucet 26, whereby the water from the reservoir may be fed first into the trough 8 and allowed to percolate and pass down the cloth 16 to the trough 7, from which the overflow may pass through the pipe 24, as will be understood.

Secured to the under side of the top 18 are four eyes 27, to which the rods 28 are respectively and pivotally connected. These rods have the shelves 29 and 31 secured thereto, the shelves being arranged one above the other, as shown. It will be seen that the rods 15 serve to effectively prevent the cloth from making contact with the shelves, and it will also be seen the shelves may be readily removed for cleaning and other purposes by lifting up the cover 18.

It is important that all of the parts of our invention, excepting the cloth 16, be constructed of galvanized iron or other non-corrosive metal or material, for this is effective in preventing mold and other foul accumulations, all of which are detrimental both to the efficiency of the apparatus as a refrigerator and to the health of the persons using the appliance.

In the operation of our invention the reservoir 25 is filled with water and the cloth 16 adjusted so as to cover the parts, as shown in the drawings. Water from the reservoir 25 should now be admitted into the trough 8, and this water will be quickly absorbed by the cloth 16 and will gradually percolate through and down the cloth and be deposited in the trough 7. The evaporation of the water absorbed by the cloth 16 effects the process of refrigeration, as is well understood, and articles of food and other perishable goods contained within the apparatus will be well preserved.

As the process of evaporation deprives the cloth of water more may be supplied from the reservoir 25 after the manner above described. It will be seen that, owing to the arrangement of the cloth in the troughs 7 and 8 and to the easily-removable means for securing the cloth, the cloth may be readily removed for the purpose of washing and repairing, the former of which is indispensable in this class of devices, since the accumulation of impurities in the cloth would be both detrimental to the effective operation of the apparatus and to the health of persons using the same. It will be observed that the trough 7, being continually full of water, prevents vermin from reaching the interior of the apparatus.

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

1. An evaporative refrigerating apparatus, consisting of two troughs arranged one above the other, standards connecting the troughs and supporting the upper trough, rods rigid with the lower trough and extending upwardly parallel with the standards and inward from the same, an outer and inner cloth formed of one piece and running up over the upper trough and having its lower edges dipped in the lower trough, the outer cloth engaging the standard and the inner cloth being held by the rods, and a top plate having a downwardly-extending flange depressing the cloth into the upper trough, substantially as described.

2. An evaporative refrigerating apparatus having an upper trough, standards for supporting the trough, a cloth folded over the trough and dropping on each side thereof, a top plate having downwardly-extending flanges projected into the trough and pressing the cloth therinto, and shelves suspended from the top plate and inclosed by the cloth, substantially as described.

3. An evaporative refrigerating apparatus, comprising an upper and a lower trough, standards rigidly connecting the troughs, rods rigid with the lower trough and extending upwardly parallel with and inward of the standards, an outer and inner cloth consisting of one piece carried up over the upper trough, the outer cloth being engaged with the standards and the inner cloth being engaged with the rods, the lower edges of the cloths being dipped in the lower troughs, a top plate having downwardly-extending flanges pressing the cloth into the upper trough, and shelves suspended from the top plate and inclosed by the cloths, substantially as described.

4. An evaporative refrigerating apparatus, consisting of an upper and a lower trough, standards connecting the two troughs, a top plate having a downwardly-extending flange projected into the upper trough, rods rigid with the lower trough and extending up parallel with and inward of the standards, an outer and inner cloth consisting of one piece carried up over the upper trough and pressed into the same by the flange of the top plate, the lower edges of the cloths being dipped in the lower trough, an angular frame secured to the two troughs and to which frame the cloths are connected, and a door for said frame, substantially as described.

HU MAXWELL.

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Witnesses:

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