Oct. 13, 1925. 1,556,684

C. M. GARDNER

DISTRIBUTING TRAY

Filed Dec. 10, 1924 3 Sheets-Sheet 1

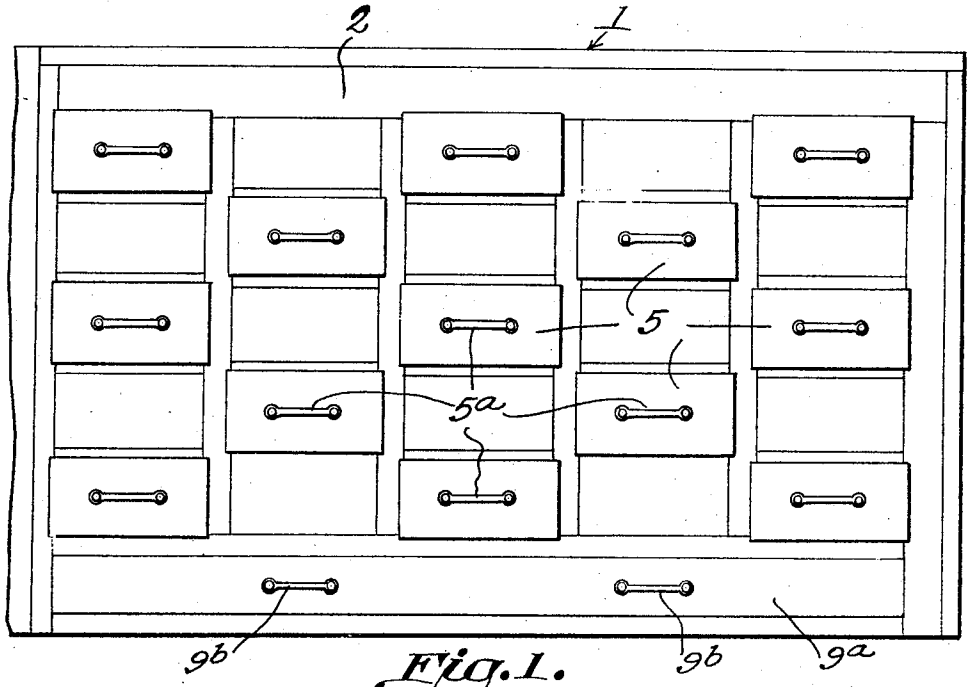


Fig. 1.

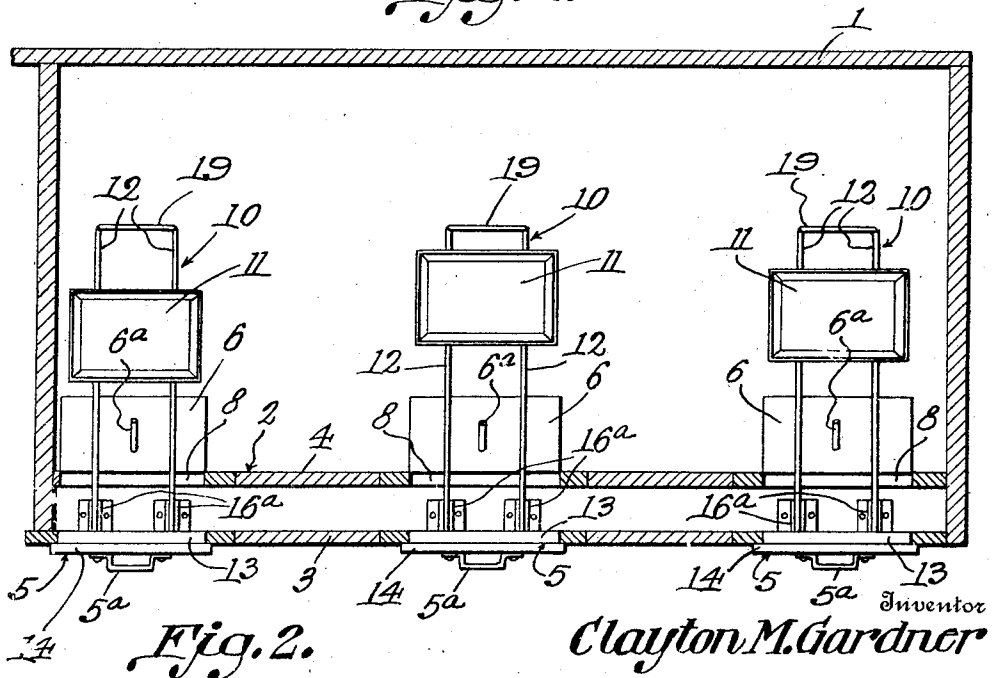


Fig. 2.

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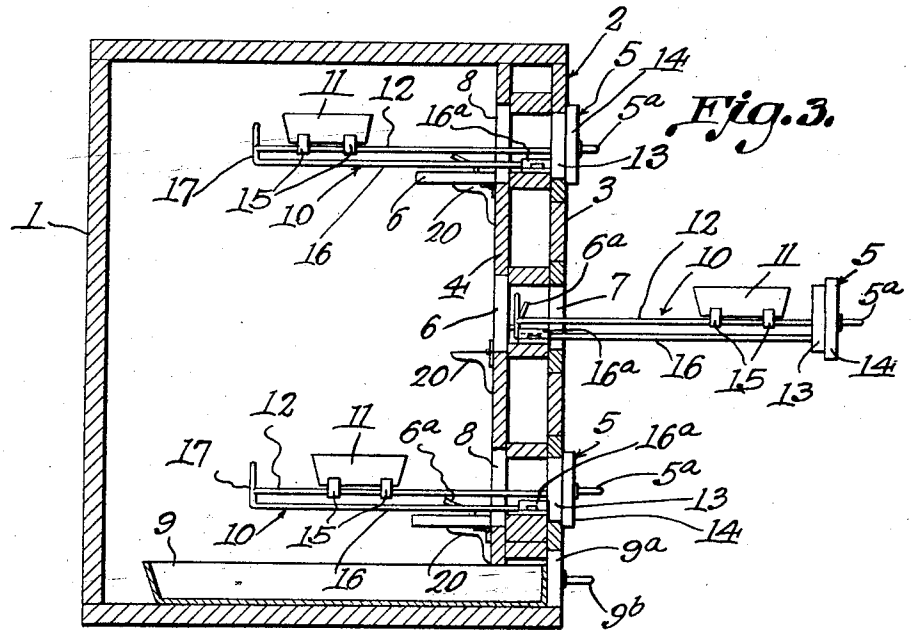


Fig. 3.

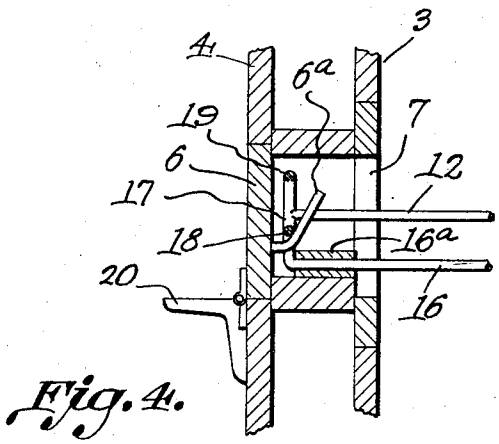


Fig. 4.

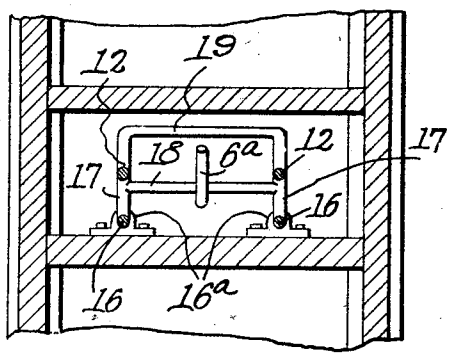


Fig. 5.

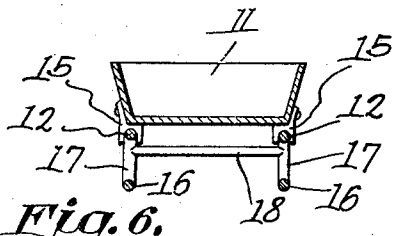


Fig. 6.

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Fig. 7.

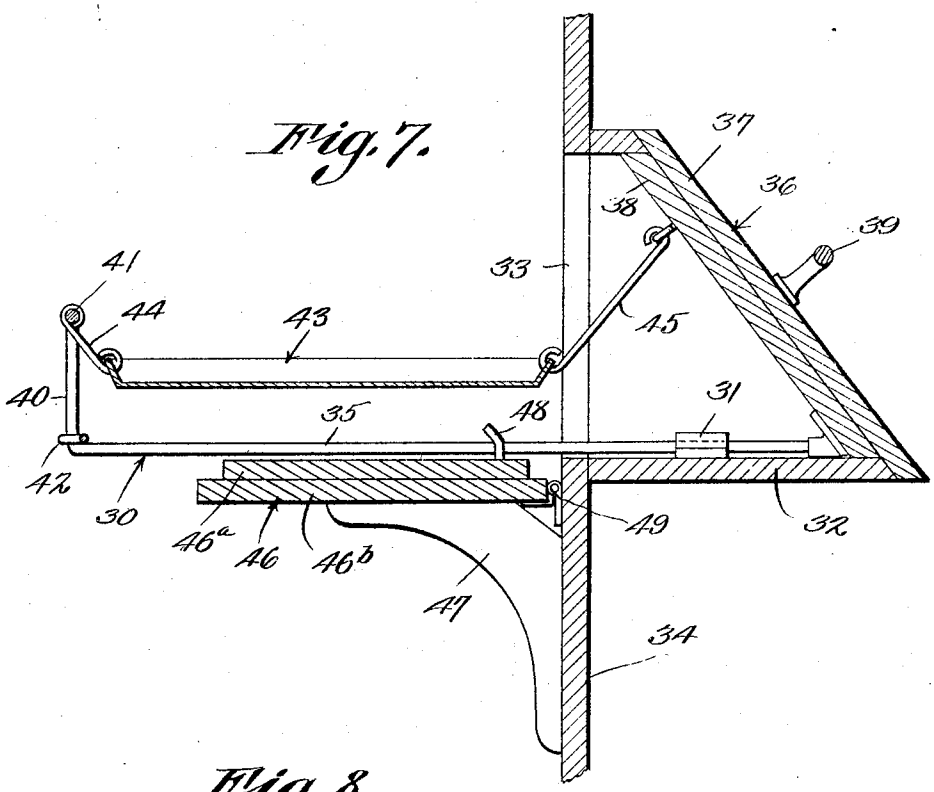


Fig. 8.

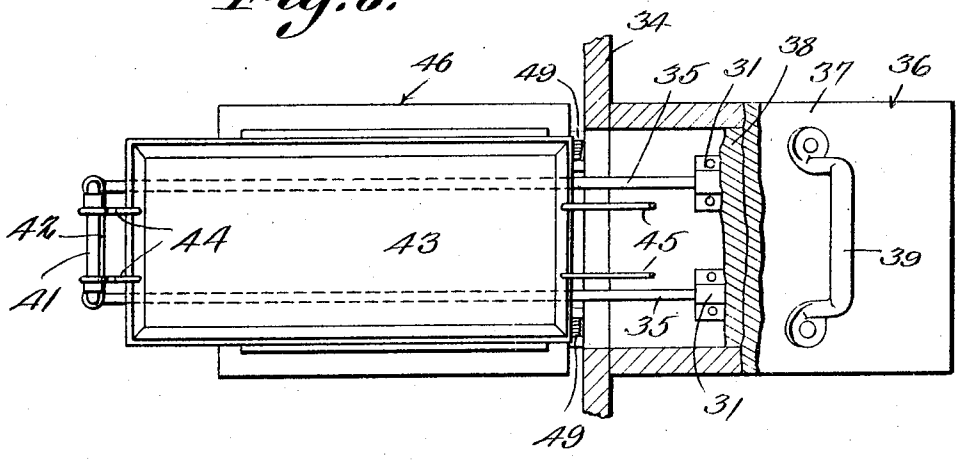
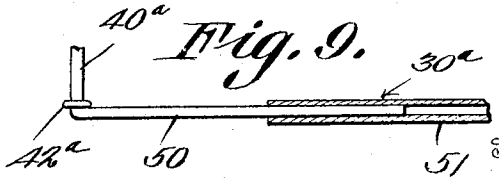


Fig. 9.



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Patented Oct. 13, 1925. 1,556,684

UNITED STATES PATENT OFFICE.

CLAYTON M. GARDNER, OF ST. REGIS FALLS, NEW YORK.

DISTRIBUTING TRAY.

Application filed December 10, 1924. Serial No. 755,112.

To all whom it may concern:

Be it known that I, CLAYTON M. GARDNER, a citizen of the United States, residing at St. Regis Falls, in the county of Franklin and State of New York, have invented a new and useful Distributing Tray, of which the following is a specification.

This invention relates to a distributing tray for refrigerators, ice boxes, ice counters and the like.

The object of the invention is to provide a tray for use in refrigerating structures constructed so that the contents of the tray may be displayed without an inrush of warm air, or an outrush of cold air from the refrigerator being caused.

Another object is to so construct a device of this character as to prevent the possibilities of flies entering the chamber while the tray is being withdrawn or inserted.

Another object is to provide a tray of this character which is sanitary and easily cleaned and the use of which effects a great saving in the ice.

Another object is to provide a tray of this character having an inner and an outer door forming a part thereof and so arranged that they automatically close and open with the movement of the tray outward or inwardly as the case may be.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 represents a front elevation of a refrigerator, ice counter or the like equipped with a plurality of these improved trays;

Fig. 2 is a horizontal section thereof;

Fig. 3 is a transverse vertical section through a refrigerator equipped with a plurality of these distributing trays one being shown in withdrawn or serving position and the other two housed within the refrigerator;

Fig. 4 is a detail sectional view;

Fig. 5 is an enlarged detail section; and

Fig. 6 is a detail transverse section through one of the food containers;

Fig. 7 is an enlarged detail vertical section showing the invention applied to a single-walled structure;

Fig. 8 is a top plan partly in horizontal section thereof; and

Fig. 9 is a detail section of the telescopic rod used.

In the embodiment illustrated in Figs. 1 to 6 a refrigerator casing 1 is shown which may be a cooling counter, an ice box or the like in which food of a perishable nature is kept. The front wall 2 of the refrigerator 1 is made double as shown clearly in Figs. 2 and 3 the front and rear sections 3 and 4 of which are spaced laterally apart and each equipped with doors 5 and 6 which close openings 7 and 8 in the wall sections through which the tray 10 is designed to pass. The door 5 which closes the opening 7 in the outer wall section is carried by the sliding tray while the door 6 is hinged to swing downward into the position shown at the top and bottom of the refrigerator in Fig. 3 when the trays are in retracted or housed position. These doors 6 swing up into closed position as shown at the center of the ice compartment in Fig. 2 when the tray is drawn out to display or deliver goods. It is of course understood that these doors 6 have spring hinges for closing them when the tray is drawn out any suitable form of hinges being used. Brackets 20 are arranged inside the refrigerator on the inner wall of the wall section 4 and are designed to support the doors 6 when swung downwardly and which also operate as supports for the trays when in retracted position.

It is of course understood that any desired number of trays 10 may be employed according to the size of the refrigerator and the goods to be contained therein.

Each of these trays are exactly alike and hence one only will be described in detail. The doors 5 which are carried by these trays 10 are each equipped on their outer faces with hand grips 5^a to facilitate pushing in and pulling out of the trays.

A drip pan 9 is located in the bottom of the refrigerator chamber below the trays and is designed to receive any drip from said trays. The drip pan 9 also slides in and out and is provided on its outer end with a closure 9^a and an opening through which it passes and has hand grips 9^b to facilitate movement thereof.

The trays 10 each comprises a food container 11 of any shape or size slidably

mounted on parallel rods 12 connected at their front ends by a plate 13 which is designed to fit within the opening 7 of the front wall 3 of the refrigerator forming a portion of the closure 5, the other portion thereof being in the form of a plate 14 secured to the outer face of plate 13 and of a size larger than said plate so as to overlap the walls of the opening 7 to prevent the closure from passing into the refrigerator and to form an air tight joint at this point. The connectors which mount the tray or the container 11 on the rods 12 are shown in the form of inverted U-shaped hangers 15 fixed to the bottom of the container 11 at opposite sides thereof and adapted to straddle the rods 12 as is shown clearly in Fig. 6. This mounting of the container 11 on the rods permits it to be positioned at any location on said rod and to be removed therefrom when desired.

Parallel rods 16 are arranged below the rods 12 in vertical alinement therewith and are connected with said rods at their inner ends by upstanding fingers 17 connected by a cross rod 18. The fingers 17 extend above the rods 12 and are connected by a cross rod 19. The tracks or rods 16 are connected at their front ends to the plate 13 and are mounted in guides or bearings 16[a] mounted on one of the walls of the refrigerator.

The hinged closures 6 are each provided on their outer faces with an obliquely extending finger 6[a] which is designed to be detachably engaged with the rod 18 of the tray for limiting the forward movement of the tray and for closing the closure 6 when the tray is drawn outwardly to its full extent as is shown clearly in Figs. 3 and 4. When the tray is moved inwardly the track rods 16 will force the closure 6 downwardly against the bracket 20 and permit the tray to be moved in to its full extent, as shown in Fig. 3 and when so moved the closure 5 will close the opening in the outer wall section 3 of the refrigerator and prevent the cold air from rushing out and the hot air from rushing in.

From the above description it will be obvious that by grasping one of the handles 5[a] and exerting an outward pull thereon the tray connected therewith will follow and move outwardly causing the rod 18 to have a hook-like engagement with the handle 6[a] and close the closure 6 as shown in Fig. 3 so that access may be obtained to the container 11 which holds the meat or other articles to be displayed or distributed and the closure 6 being closed prevents the cold air of the refrigerator rushing out and hot air from rushing in.

A refrigerator or refrigerating counter equipped with these trays will obviously be very useful in stores and will effect a great economy in the cooling of the counter as well as protecting the contents from the entrance of flies, dust and the like while the contents of one tray is being exhibited.

In Figs. 7 and 8 these improved trays are shown applied to a single walled structure, the other form representing the application of the invention to a double wall.

The distributing tray shown in these Figures 7 and 8 comprises a skeleton frame 30 mounted to slide back and forth in keepers 31 mounted on the upper face of a shelf 32 which projects forwardly from the lower edge of an opening 33 formed in the wall 34 of the refrigerator, counter or other structure in connection with which the tray is to be used.

These keepers 31 are transversely alined and spaced apart and slidably receive the side rods 35 of the frame 30. These rods are secured at their front ends to a closure 36 which may be of any suitable or desired construction being here shown formed of superposed boards 37 and 38 adapted to fit and close the mouth which surrounds the opening 33, the bottom wall of which is formed by the shelf 32. This closure 36 is preferably provided with a hand grip 39 to facilitate its opening and closing movement as will be hereinafter more fully described.

The rear ends of the side bars 35 are bent upwardly at right angles as shown at 40 and are connected by a cross bar 41 which is preferably made integral therewith, a rod 42 connects the lower ends of the upstanding member 40 and forms a brace for them preventing them from spreading apart. A tray or container 43 is suspended from the cross rod 41 and the upper section of the closure 36 by links 44 and 45 which are loosely connected with these members and with the tray as is shown clearly in Fig. 7. These links are arranged in pairs at the front and rear of the container and permit the chain to be swingably supported.

An inwardly opening closure 46 is hinged to the inner face of the wall 44 adjacent the lower edge of the opening 33 and which in opening is designed to rest on a supporting bracket 47 the wall 34. This closure 40 may be of any suitable or desired construction being shown adapted to fit tightly within the opening 33 when closed. A rearwardly extending hook 48 is fixed to the outer end of said closure near its outer end and is designed to engage the cross rod 42 when the tray is moved outwardly a predetermined distance so that the further movement of the tray will operate to swing the member 46 upward into closed position and thus prevent the outrush of cold air from the interior of the refrigerator and the inrush of hot air.

The hinges 49 which connect the closure 46 with the wall 34 are preferably made in the form of spring hinges to assist in clos-

ing the closure 46 when the tray is moved outwardly.

In the use of this tray the operation is similar to that shown in the other figures, the pulling out of the closure 36 operates to draw with it the frame 30 which carries the food container 43 and when this frame reaches a predetermined point the rod 42 engages the hook 48 and swings the closure 46 up behind the frame into closed position. When so closed the opening 33 is completely filled by the closure 46, the inner member 46[a] of which fits into the opening 33 while the outer member 46[b] laps the inner face of wall 34 around the opening 33 thus forming a tight closure.

It will be obvious that when the tray-carrying frame 30 is drawn outwardly it will rest on the shelf 32 so that the contents of the container 33 may be inspected and removed if desired.

When it is desired to restore the tray to the interior of the refrigerator the frame 30 is moved inwardly into the position shown in Figs. 7 and 8 the opening 33 closed by the closure 36 and the closure 46 opened down to form a support for the tray.

The side bars 35 of the tray frame 30 may be made in the form of telescopically engaged sections 50 and 51 as shown in Fig. 9 to adapt the frame for use in connection with shorter or longer trays as desired. The section 50 has at its outer or rear end upstanding arms 40[a] similar to those shown in the other figures which are connected at their outer ends by a cross rod 42[a].

I claim:

1. A refrigerating chamber having a double wall with registering openings in the sections thereof, a tray mounted to slide through said openings, a closure for the opening in the outer section carried by the outer end of said tray, a hinged closure for the opening in the inner section, cooperating means carried by said hinged closure and said tray to be engaged on the outward movement of the tray so that said closure will be positively closed by the movement of the tray to its extreme outward position, the closure carried by the tray being adapted to close the opening in the outer section when the tray is moved to its extreme inward position.

2. The combination with a double walled structure having registering openings in the wall sections, a closure for the opening in the inner wall section, said closure being hinged to swing downwardly and provided on its inner face with an upwardly and outwardly inclined finger, a tray slidable through said opening and including laterally spaced parallel rods connected at their front and rear ends, a food container detachably and slidably mounted on said rod, a closure carried by the front edge of said rod and designed to close the opening in the outer wall section when the tray is moved inwardly and means carried by said rod for detachably engaging the finger on the inner closure on the outward movement of the tray whereby said closure is closed.

3. A chamber having an opening in one wall thereof, a tray mounted to slide through said opening, a closure for said opening mounted on the lower wall of said opening to swing downwardly, and cooperating means on said closure and tray whereby when the tray is moved outward to its extreme limit the closure will be positively closed.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

CLAYTON M. GARDNER.