July 6, 1948. R. S. WYETH 2,444,887

SUPPLEMENTAL FOOD-STORAGE CABINET FOR USE IN CONJUNCTION WITH REFRIGERATORS

Filed Feb. 17, 1945 2 Sheets-Sheet 1

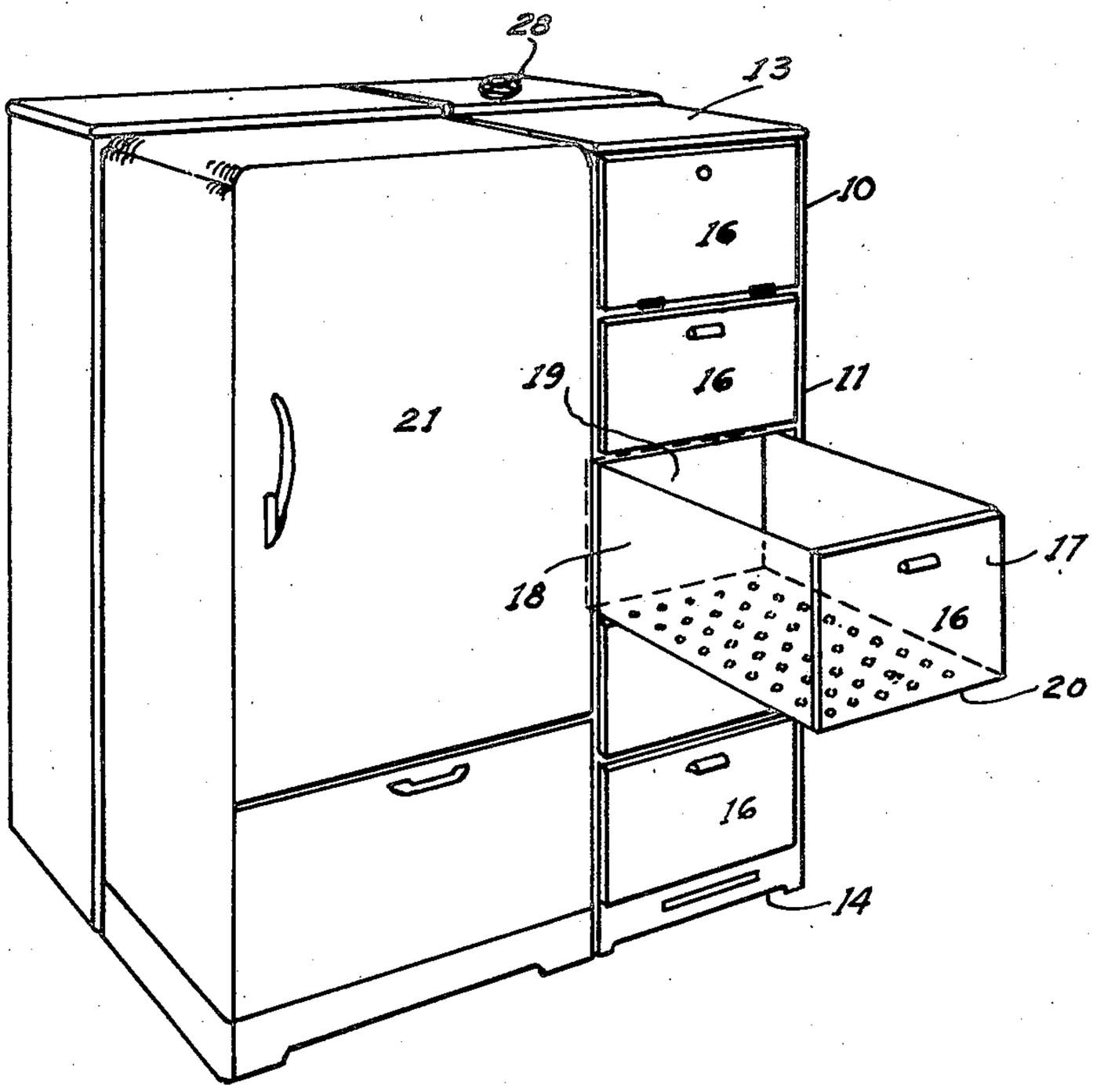

Fig. 1

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Fig. 2

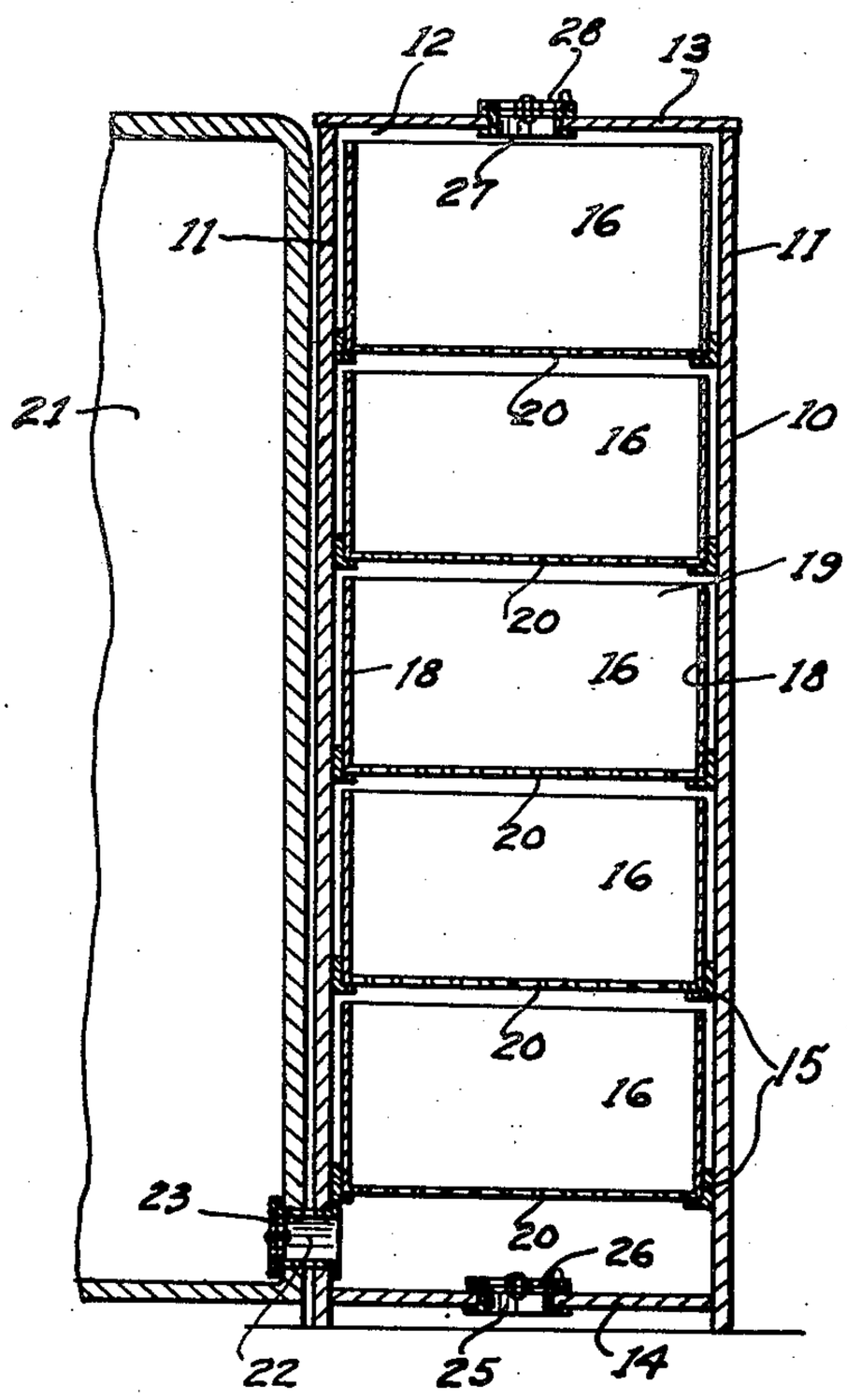
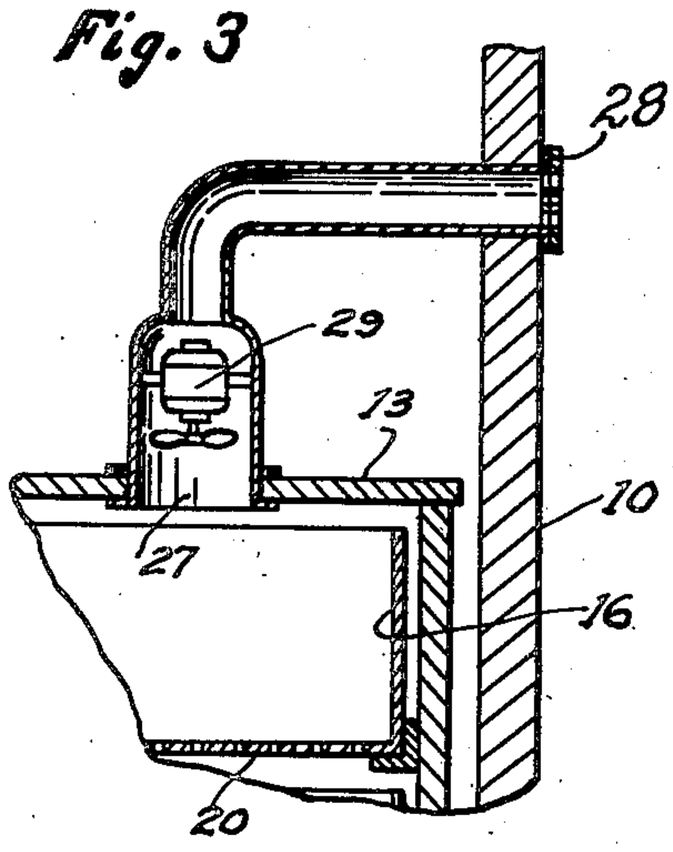


Fig. 3



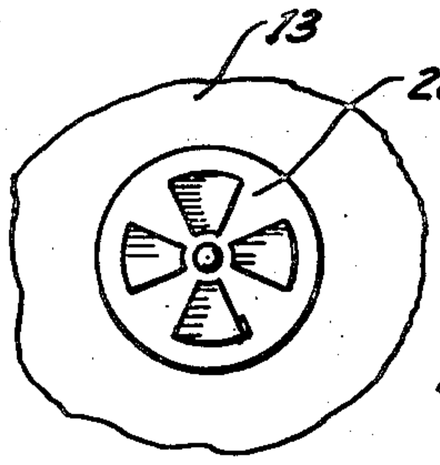


Fig. 4

Fig. 5.

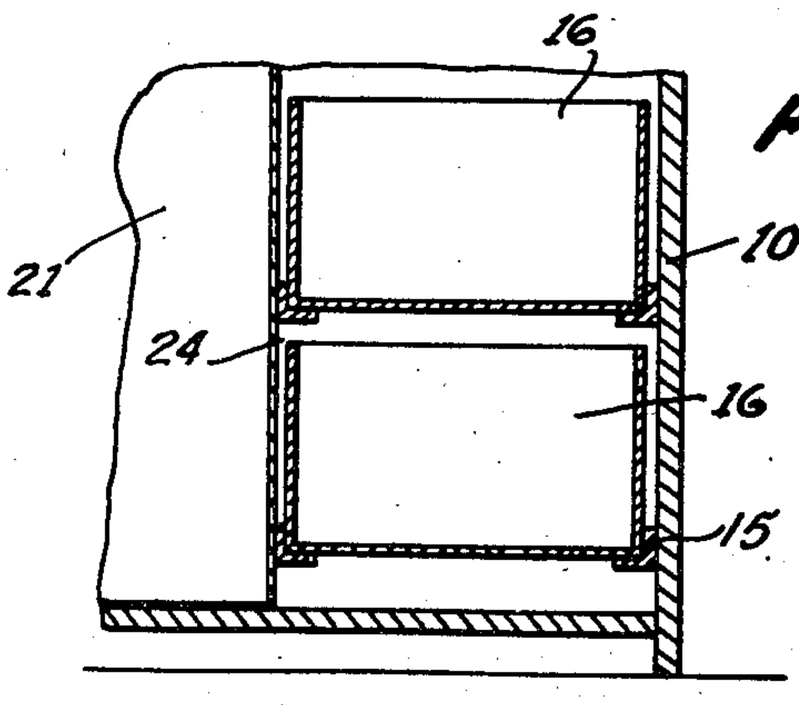
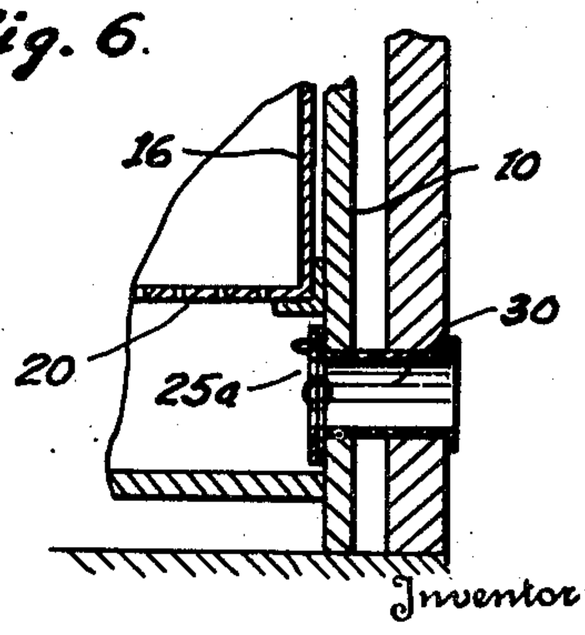


Fig. 6.



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SUPPLEMENTAL FOOD-STORAGE CABINET FOR USE IN CONJUNCTION WITH REFRIGERATORS

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3 Claims. (Cl. 62—89)

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This invention relates to food-storage cabinets and, more particularly, is directed to cabinets adapted for the preservation and storage of many fresh foods which do not require low refrigerating temperatures, such as various kinds of fruits, vegetables and the like.

Accordingly, it is an object of the present invention to provide a food storage cabinet which will maintain fresh fruits and vegetables at temperatures and under conditions adequate to prevent premature deterioration thereof, so that such comestibles will maintain their freshness and flavor for reasonable periods of time pending final use thereof.

The present invention consists in the provision of a food storage cabinet in which the outer casing of the cabinet is formed with a plurality of sliding drawers of reticular formation and wherein provision is made in the construction of the cabinet to provide for the circulation of cool air through the comestibles contained in the sliding drawers, whereby to maintain the same in a fresh state over protracted periods by arresting or minimizing decay or other deterioration thereof.

For a further understanding of the invention, and additional objects and advantages thereof, reference is to be had to the following description and the accompanying drawings, wherein:

Fig. 1 is a perspective view of a food-storage cabinet formed in accordance with the present invention and showing the same mounted in association with a refrigerator casing;

Fig. 2 is a vertical sectional view taken through the cabinet and adjoining side wall of the associated refrigerator;

Fig. 3 is a vertical sectional view disclosing the use of an exhaust fan in the venting outlet of the cabinet;

Fig. 4 is a detail elevational view of the damper regulated cool air inlet of the cabinet;

Fig. 5 is a vertical sectional view disclosing a modified form of my improved receptacle in which the interior thereof is separated from the interior of the associated refrigerator by an imperforate heat-exchanging wall;

Fig. 6 is a detail sectional view disclosing the air inlet of the receptacle when extended through an outside building wall.

Referring more particularly to the drawings, the numeral 10 designates the cabinet of my improved food storage receptacle. The cabinet is formed to comprise spaced vertical side walls 11, a back wall 12, a top 13, a bottom 14 and an open front. These walls may be formed from any suitable materials, such as metal, wood or the like and, depending upon the cost of the cabinet, the walls may or may not be thermally insulated, although it is preferred that such insulation be employed for temperature-holding purposes.

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The inner surfaces of the side walls 11 are provided with fixed drawer guides 15 for the reception of a plurality of horizontally sliding drawers 16. Each of these drawers includes imperforate front, side and back walls 17, 18 and 19, respectively, a perforate bottom 20 and an open top. These drawers, when moved outwardly, as in Fig. 1, permit food stuffs to be readily placed therein but, when closed, the drawers serve to seal the front of the cabinet but, through the provision of the perforate bottom walls thereof, air circulation through the interior of the cabinet is obtained, whereby to provide relatively uniform temperatures throughout the interior of the cabinet and around the food stuffs contained therein.

Many fresh foods or vegetables do not require for their preservation low temperatures, such as those which obtain normally, in the interior of domestic refrigerators employing mechanical refrigerating means. When fruits and fresh vegetables, particularly, are stored in the interior cabinets of domestic refrigerators, the same occupy a considerable space and place an additional burden on the cooling equipment of the refrigerator. Again, the presence of such fruits or vegetables in the storage cabinet of a refrigerator often results in the transmisson of their taste characteristics to other foods, such as butter, and this creates an undesirable condition.

Therefore, in its preferred form, I construct my improved food-storage receptacle as a separate unit from the associated cabinet of a domestic refrigerator, such as that indicated at 21. However, the construction of my receptacle is such as to permit it to be positioned immediately adjacent to one of the side walls of the refrigerator for the convenience of the housewife.

To chill or cool the interior of the cabinet 10, the adjoining side wall of the refrigerator 21 adjacent to the bottom thereof is provided with a cold air duct 22, the latter establishing air flow communication between the interior of the refrigerator and the cabinet 10. The duct 22 is equipped with a flow-regulating valve 23, which may be closed or opened to the desired extent for the regulation of cold air flow from the refrigerator into the food-storage cabinet.

As shown in Fig. 5, when the food storage cabinet is formed to constitute a component part of the refrigerator casing, the separating wall 24, between the refrigerated food storage compartment of the refrigerator and that of the receptacle 10, may be in the form of a relatively thin sheet metal panel, devoid in whole or in part of thermal insulation, the panel serving as a head-exchanging element for maintaining the interior of the receptacle at temperatures adequate for the preservation of fresh food substances, but at a higher temperature than that which prevails within the refrigerator proper.

During periods when the cooling mechanism of the refrigerator 21 is inactive, the valve 23 may be closed, and relatively cool air admitted into the bottom of the cabinet 10 by way of an air inlet 25 disposed adjacent to the floor, said inlet being provided with a damper or other valve shutter 26, so that the inlet may be opened or closed at will. Likewise, the top of the cabinet 10 may be provided with an air outlet 27, regulated by a damper valve 28. If desired, as shown in Fig. 3, the air outlet 27 may extend to the exterior of the building in which the cabinet is situated and, also, may be provided with a motor driven air circulating fan 29.

Similarly, the air inlet 25a, shown in Fig. 6, may communicate with a duct 30 leading to the exterior of the building. Thus, in periods of cool or cold weather, the interior of the cabinet may be kept at a proper temperature through the use of the exteriorly leading inlet and outlet ducts which lead to the exterior of the building, so that the mechanical refrigerating apparatus of the refrigerator 21 will be relieved of the added work of cooling the cabinet 10. The exteriorly leading ducts are also useful when the food-storage receptacle is constructed to comprise an independent unit entirely separate from the associated refrigerator.

In view of the foregoing, it will be seen that the invention provides a useful pantry or kitchen receptacle especially constructed for the ordinary reception and prolonged keeping of various fresh food products, such as fruits and vegetables. The receptacle is so constructed as to maintain a cooled atmosphere around the food products stored therein, without actual refrigeration of such products.

While my improved receptacle may be used separately, I find it advantageous to associate the same with a refrigerator of the mechanically cooled type, so that the refrigerating equipment of the associated refrigerator, without placing too great a burden thereon, may be used advantageously in maintaining adequately cooled temperatures within my improved food receptacle. However, the latter is provided with associated air inlet and outlet controls so that a circulation of cool air may be maintained within the cabinet thereof sufficient to maintain within the receptacle atmospheric temperatures substantially reduced as compared with extraneous room temperatures without resort to the artificially produced temperatures of the associated refrigerator.

My improved receptacle is relatively inexpensive to manufacture and, by reason of its sliding drawer construction, provides for maximum convenience in the matter of inserting foods into and removing the same from the receptacle. It will be understood that various changes and modifications may be made in the details of construction and design of the above specifically described embodiments of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

I claim:

1. A supplemental food-storage cabinet for use in conjunction with a household refrigerator comprising vertical side and rear walls and horizontal top and bottom walls, a plurality of horizontally movable food-receiving drawers slidably mounted in connection with said walls, the bottom of said drawers being formed with perforations provided for the passage therethrough of air circulating within said cabinet, said drawers being provided with unperforated front walls forming the front of said cabinet when the drawers are closed, an inlet for the admission of relative cool air provided in the said cabinet adjacent to the bottom thereof, an outlet for the discharge of air leading from the upper portion of said cabinet, and a second air inlet provided in the lower part of said cabinet and attached for communication with the interior of the associated refrigerator.

2. A supplemental food-storage cabinet for use in conjunction with a household refrigerator comprising vertical side and rear walls and horizontal top and bottom walls, a plurality of horizontally movable food-receiving drawers slidably mounted in connection with said walls, the bottom of said drawers being formed with perforations provided for the passage therethrough of air circulating within said cabinet, said drawers being provided with unperforated front walls forming the front of said cabinet when the drawers are closed, an inlet for the admission of relative cool air provided in the said cabinet adjacent to the bottom thereof, an outlet for the discharge of air leading from the upper portion of said cabinet, and a second air inlet provided in the lower part of said cabinet and attached for communication with the interior of the associated refrigerator, and valve means for regulating the flow of air through said inlets and outlet.

3. A supplemental food-storage cabinet for use in conjunction with a household refrigerator comprising vertical side and rear walls and horizontal top and bottom walls, a plurality of horizontally movable food-receiving drawers slidably mounted in connection with said walls, the bottom of said drawers being formed with perforations provided for the passage therethrough of air circulating within said cabinet, said drawers being provided with unperforated front walls forming the front of said cabinet when the drawers are closed, an inlet for the admission of relative cool air provided in the said cabinet adjacent to the bottom thereof, an outlet for the discharge of air leading from the upper portion of said cabinet, and a second air inlet provided in the lower part of said cabinet and attached for communication with the interior of the associated refrigerator, and valve means for regulating the flow of air through said inlets and outlet and motor actuated air in displacing means provided in said outlet.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,228,523	Best	June 5, 1917
1,768,598	Hofferberth	July 1, 1930
1,798,281	Stevenson	Mar. 31, 1931
1,830,305	Walsh	Nov. 3, 1931
2,163,182	Warren	June 20, 1939
2,216,873	Browne	Oct. 8, 1940
2,346,287	Borgerd	Apr. 11, 1944
2,414,588	Elliott	Jan. 21, 1947