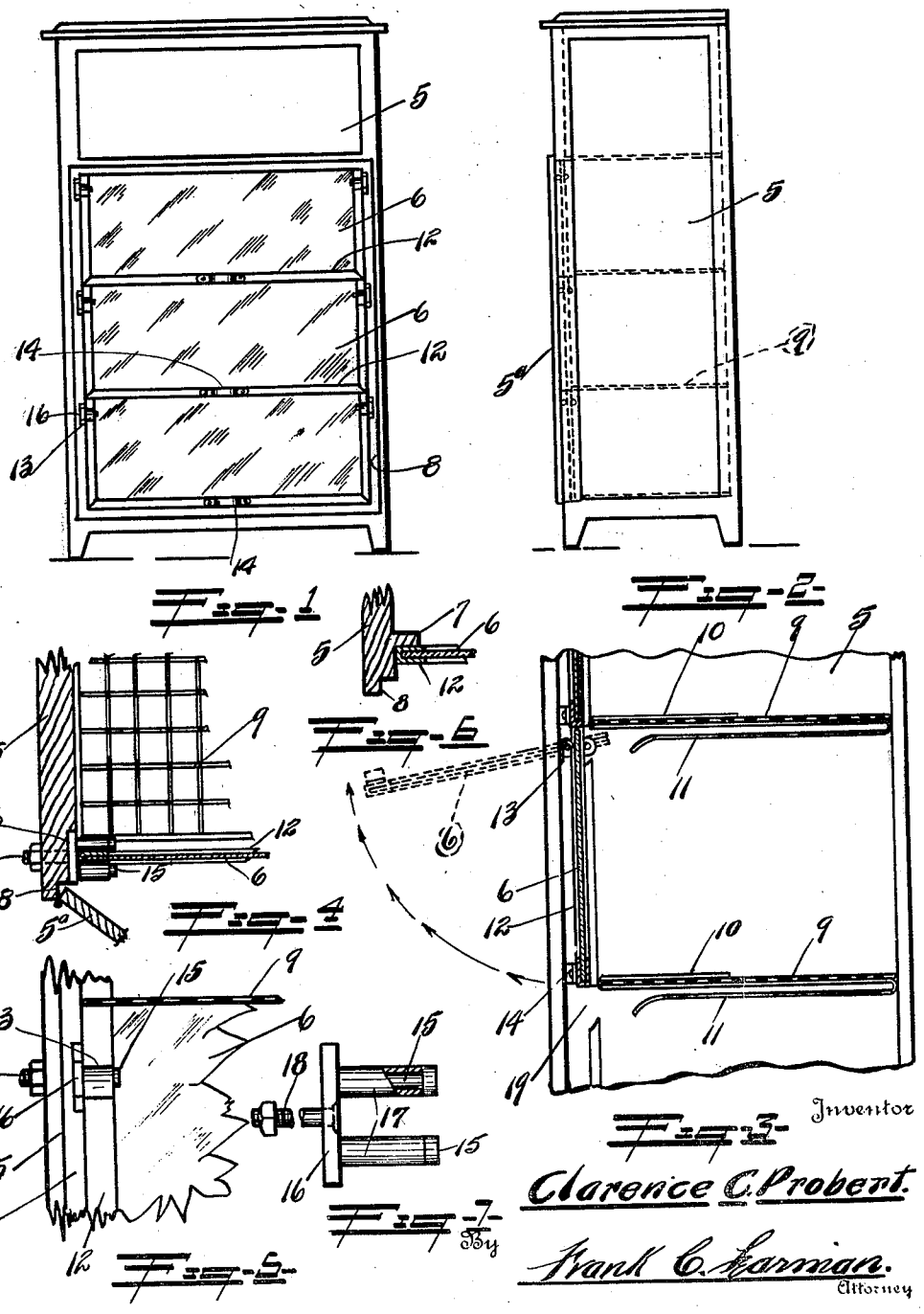
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C. C. PROBERT

REFRIGERATOR DOOR

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UNITED STATES PATENT OFFICE.

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REFRIGERATOR DOOR.

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This invention relates to interior refrigerator doors and the like, and particularly to a door which swings out and inwardly into the refrigerator.

The prime object of the invention is to provide a refrigerator door which when being opened, will not have a tendency to form a partial vacuum or suction to draw the cold air out of the refrigerator.

Another object of the invention is to provide a glass door so that the location of the dish or article wanted can be determined before the door is opened, so that when opened it can be procured in the shortest possible time, increasing the efficiency of the refrigerator, lessens maintenance through decrease in amount of ice used, or where the refrigerator is cooled by a liquid distributed by an electrically driven pump the electric current consumption is decreased in proportion.

A further object is to provide a door which occupies but a minimum of space when opened, and provide improved means for mounting said door and supporting it when in open position.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawing and particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing.

Fig. 1 is a front view of a refrigerator equipped with my interior doors, the outer hinged doors being omitted.

Fig. 2 is a side view thereof.

Fig. 3 is an enlarged fragmentary sectional view of the refrigerator, the dotted lines showing the door being opened.

Fig. 4 is an enlarged sectional fragmentary top plan view of one of the doors and shelves, and also showing one of the hinged outer doors.

Fig. 5 is an enlarged fragmentary front view of one of the interior doors.

Fig. 6 is an enlarged plan or detail of the refrigerator front corner member.

Fig. 7 is a top plan view of the rollers.

Refrigerators are usually constructed with doors which are vertically hinged to swing outwardly, either single or double doors, and are generally of a size so that when opened, the entire contents of the refrigerator are exposed, and access may be had to all of the interior of the refrigerator, with the exception of the compartment in which the ice or other cooling medium is stored, and when the doors are swung open, a partial vacuum or suction is created which draws the cool air out of the refrigerator, as well as exposing all of the interior and permitting the escape of additional cold air. This is expensive, as it requires more ice to maintain the refrigerator at the proper temperature, and this objectional feature I have overcome by providing an interior door for each tray or compartment, mounting it so that it slides upwardly and inwardly and out of the way, without creating the suction present with the hinged type of door above described.

Referring now particularly to the drawing in which I have shown the preferred embodiment of my invention, the numeral 5 indicates a refrigerator of the conventional design and which is provided with hinged doors 5[a] hung in the usual manner, interior doors 6 are provided as shown and extend the entire width of the structure, but it will of course be understood that the refrigerator may be divided vertically, and two rows or sets of interior doors can be supplied instead of the one.

The front corners of the refrigerator are formed as clearly shown in Fig. 6 of the drawing, the side walls being provided with an inwardly projecting strip of shoulder 7, and which forms a stop of the interior doors, the shoulder 8 forming the frame for the hinged outer doors. Shelves or trays 9 are provided in the refrigerator in spaced apart relation, and are held in position in any approved manner, spring clips 10 being secured to the side edges of each tray and are formed with a bottom fold 11 forming a track and support for the interior door when open, the end being curved downwardly as shown.

The doors are preferably formed of glass having a metal binding 12, one end of which is split and turned to a loop 13 for a purpose to be presently described, a handle 14 being secured to the door to facilitate manipulation thereof.

Spaced apart pin members 15 are mounted on a plate 16, and rollers 17 are mounted on said pins as clearly shown in Fig. 7 of the drawing, a bolt 18 being provided for securing said plate to the side wall, this plate

being pivotally mounted on the bolt to permit it to rotate as necessary when the door is swung to horizontal position, and preparatory to sliding it inwardly on the track 11, the door hanging on the loop 13 when in vertical or closed position.

The refrigerator proper can be of any desired constructon, and while in the present instance I have shown the lower end of the inner doors flush with the lower edge of the trays, it will be obvious that a cross member can be provided and with which the lower edge of the door will engage, and that the stop 7 must be cut away as shown at 19 to permit the inner door to be swung as necessary.

From the foregoing description it will be obvious that I have perfected a very simple and convenient door for refrigerators, which does not create a suction to pull the cold air out of the refrigerator, which swings out of the way when open, and which can be easily and quickly operated.

What I claim is:—

1. The combination with a refrigerator having an interior door, of a plate pivotally mounted on the edges of the opening in said refrigerator, and provided with spaced apart rollers engaging the edges of said door, and stops projecting into the door opening and forming a seat for the door.

2. The combination with a refrigerator having an interior door adapted to swing upwardly and slide inwardly into the refrigerator, a plate pivotally mounted on the edge of the opening and provided with spaced apart rollers engaging the edges of the door, and resilient clips mounted in said refrigerator and forming a track for the door when it is slid into the refrigerator.

3. The combination with a refrigerator having conventional hinged outer doors, and an interior door, plates pivotally mounted on the side walls of the refrigerator, and provided with spaced apart rollers adapted to engage the edges of the interior door, clips on the interior of the refrigerator and forming a track and support for the interior door when open, and a loop on the edges of said door and adapted to engage one of said rollers when the door is in closed position.

4. In a refrigerator for retaining cold air within the storage compartment of said refrigerator and preventing the entrance of warm air when the refrigerator door is open, and comprising a normally closed interior door adapted to swing upwardly and slide inwardly into said storage compartment, said interior door having a transparent panel, and a track provided with a downwardly curved end mounted in said compartment and on which said door slides.

In testimony whereof I hereunto affix my signature.

CLARENCE C. PROBERT.