

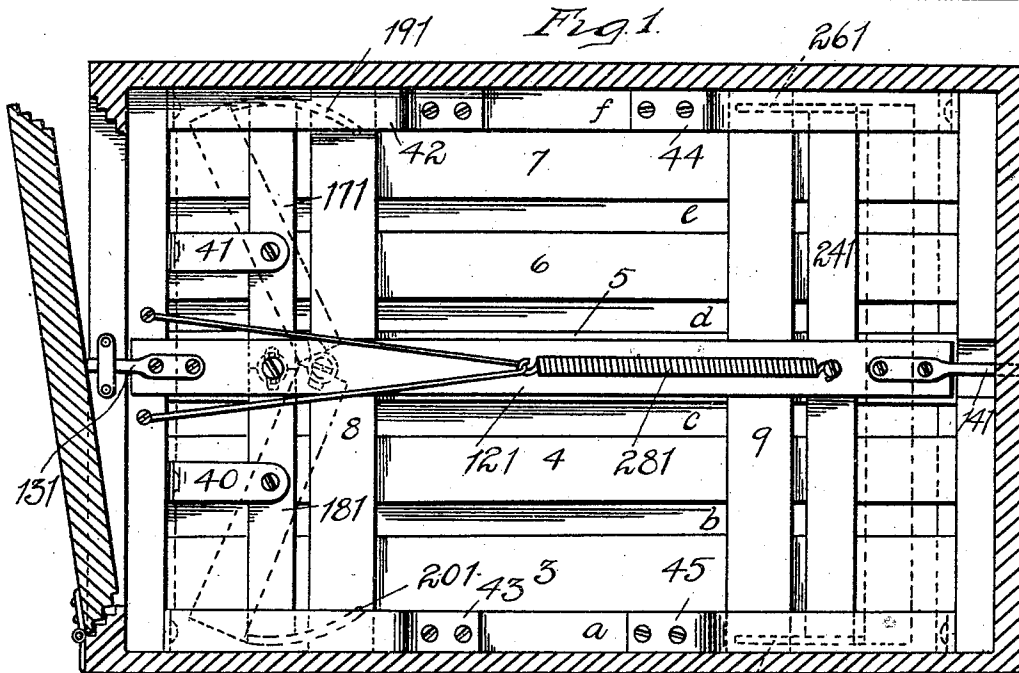
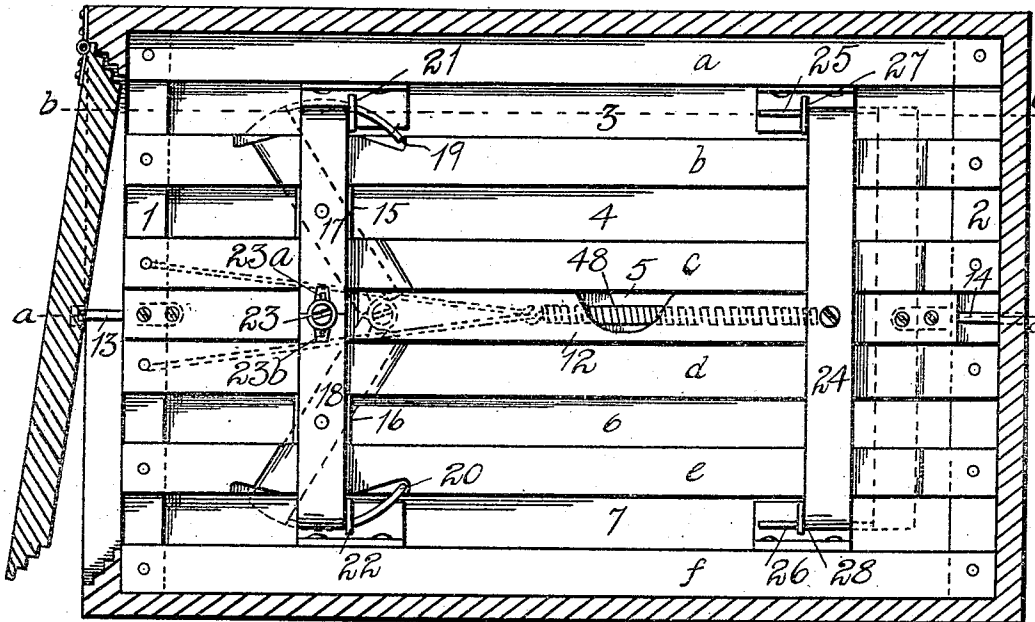
W. FRYZEK.
REFRIGERATOR.

APPLICATION FILED MAR. 25, 1908.

933,546.

Patented Sept. 7, 1909.

2 SHEETS—SHEET 1.



Witnesses
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Fig. 2. 251
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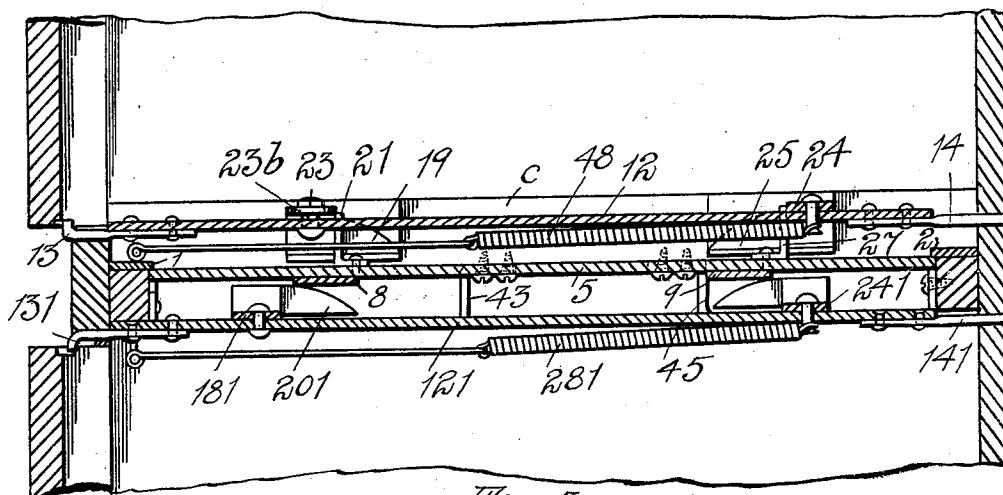


Fig. 5

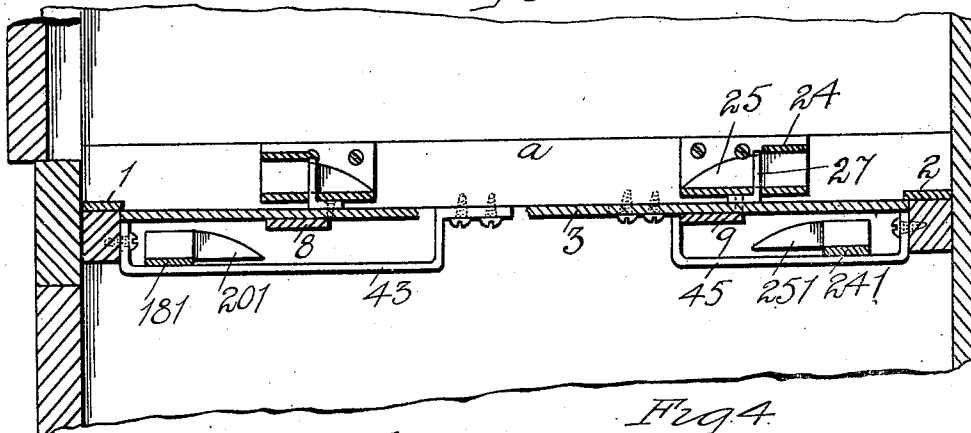


Fig. 4

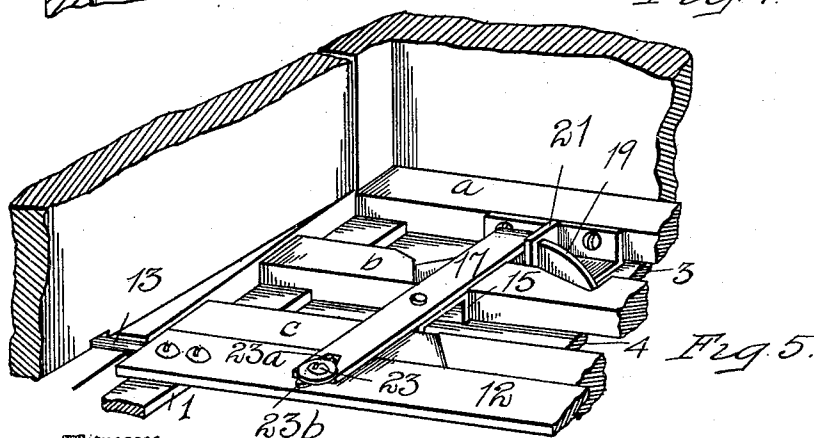


Fig. 5

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UNITED STATES PATENT OFFICE.

WILLIAM FRYZEK, OF DETROIT, MICHIGAN.

REFRIGERATOR.

933,546.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed March 25, 1908. Serial No. 423,130.

To all whom it may concern:

Be it known that I, WILLIAM FRYZEK, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Refrigerators, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to refrigerators.

It has for its object a construction of a division floor that is interposed between cooling compartments.

The invention provides means whereby openings through the floor between two compartments are closed whenever either of the doors of the refrigerator, one of which leads into an upper chamber, and the other of which leads into a lower chamber, are opened, and opened whenever both doors are closed. This is effected through the use of the upper one of the two chambers as the ice storage chamber, and the lower one as the article storage compartment, and the well known principle that cold air tends to fall rather than rise, is made use of in this connection. The two chambers are separated, one from another, by a floor, consisting of two series or sets of slats, the members of each of which are adapted to register with the spaces separating the members of the other set. When both doors are closed, the lower set of slats is caused to fall away from the upper, thus leaving a free passageway for the fall of the cold air from the upper chamber, but when the door of either chamber is opened, thus exposing it to relatively warm atmospheric air, the two sets of slats are brought into engaging proximity, so that they form an unbroken floor in a complete closure between the two chambers.

In the drawings:—Figure 1, is a plan view of the floor. Fig. 2, is a reverse plan view. Fig. 3, is a longitudinal section at the line *a—*a** of Fig. 1. Fig. 4, is a longitudinal section at the line *b—*b** of Fig. 1. Fig. 5, is a perspective of a portion of a floor.

The floor is made of slats *a, b, c, d, e* and *f*, which are fixed to suitable supports 1, 2, underneath the slats; alternating with these slats are other slats 3, 4, 5, 6 and 7. The

slats 3, 4, 5, 6 and 7 are fixed to cross bars 8 and 9, and are adapted to rise to a position to engage closely against the fixed slats *a, b, c, d, e*, and *f*, or are adapted to fall away from them to leave a passage for air through the openings between the fixed slats and the movable slats.

The movable framework of slats is lifted by the upper door through mechanism shown in Fig. 1, in which 12 indicates a bar provided with a projecting pin 13 against which the door engages, and a projecting pin 14 which guides and supports the rear end of the bar 12. Pivoted to plates 15 and 16 are two oscillating arms 17 and 18 provided at their outer ends with curved wedge plates 19 and 20, which engage through perforated lugs 21 and 22 that rise from the movable slat frame, the lug 21 rising from the slat 3 and the lug 22 from the slat 7. The plate 15 rests on and is secured to fixed slats *b*, and *c*, and the plate 16 rests on and is secured to fixed slats *d* and *e*; pivoted to the plate 15 is an oscillating arm 17; pivoted to the plate 16 is an oscillating arm 18. The adjacent ends or meeting ends of the oscillating arms 17 and 18 engage a stud 23, which rises from the plate 12, and which is provided with wings 23^a and 23^b that engage in notches in the ends of the arms 17 and 18, and the stud with its wings acts as a one-toothed rack to positively swing the oscillating arms 17 and 18 while still remaining in engagement with the notched ends of the arms 17 and 18 to such an extent that the reverse movement of the bar 12 brings the oscillating arms positively back to their original position.

The end of the bar 12 that is farthest removed from the door is provided with a simple cross piece 24, and the cross piece is provided at its extremities with wedge members 25 and 26, which engage through perforated lugs 27 and 28. The pointed end of each wedge engages in the perforated lug when the door is closed, and when in this position the movable slat frame is not lifted by the second system of levers, which will be next described. When the door opens, the bar 12 is drawn by spring 48 to a position to allow the movable slat frame to rise. On the under side of the movable slat frame is a second bar 121 provided at the end nearest the door with oscillating arms 171 and 181, and each arm is provided with oscillating wedge members 191 and 201, which engage

under the cross bar 8. At the end farthest from the door is a simple cross bar 241 provided at its end with wedge members 261 and 251, which engage under the cross bar 9.

5 This bar is pulled forward to its position to lift the slat frame by spring 281. The bar 121 is provided at the door end with a projecting member 131, and at the wall end with a projecting member 141. The oscillating

10 arms 171 and 181 are supported on brackets 41 and 40. Stirrup members 42 and 43 at the front end, and stirrup members 44 and 45 at the rear end prevent the movable slat frame from dropping too low at any time.

15 The set of slats constituted by the members 3, 4, 5, 6, and 7, which are held in fixed relation to one another by the cross bars 8 and 9, being supported, as stated, by the engagement of the curved wedge plates 19, 20,

20 25, and 26, through the lugs 21, 22, 27, and 28, it is obvious that these members, and consequently the entire slat frame, will be held at their highest point of possible travel when under the pull of the spring 48. The bar 12,

25 and consequently the cross piece 24, upon whose ends they are mounted, are pulled as far toward the door end as possible, this movement also resulting in bringing the oscillating arms 17 and 18, upon whose ends

30 the wedge plates 19 and 20 are carried, into a position of alinement, so that the broadest portion of each wedge member is forced into the perforations in the lugs 21 and 22. This occurs, of course, when the upper door, which

35 abuts against the pin 13, is opened, and not pressing the same longitudinally against the pull of the spring 48. Similarly, at this time, the lower door, which abuts against the pin 131, being closed, and thereby pressing the lengthwise bar 121 toward the opposite end of the box against the pull of the

40 spring 281, the lower wedge members 191, 201, 251 and 261 are drawn away from engagement with the cross bars 8 and 9 of the lower set of slats, so that no opposition is offered to the tendency of the slats to drop in consequence of the movements of the upper set of wedge members, above referred to.

45 When, however, either door is open, the pull of its corresponding spring upon the lengthwise bar, whose sliding control of the movement of the wedge members raises, the lower slat member, in the case of the opening of the upper door by an upward pull of the perforated lugs, and in the case of the opening

50 of the lower door, forces the movable slat piece upward by the engagement of the wedge members 191, 201, 251 and 261, against

the cross bars 8 and 9. And if both doors are opened at the same time, this closing effect of the slits or cracks between the individual slats of the two sets is only accentuated by the pull or push of the wedge members related to whichever door is last opened.

What I claim is:—

1. In a refrigerator, in combination with a casing portion provided with a plurality of doors, a partition of fixed slats dividing the interior thereof, with one of said doors opening into each of the chambers thus constituted, a movable slat frame, spring members against whose pressure said doors are adapted to be closed, and means adapted to be actuated upon the opening of either door whereby the slat frame is lifted from its normal position out of registering position with respect to said partition to a position of closing contact therewith, whereby the travel of air from one chamber to another is prevented during the time that the door is open, substantially as described.

2. In a refrigerator, in combination with a partition of spaced slats, a plurality of doors for access to the interior of the refrigerator, one above and one below said partition, a movable frame of spaced slats adapted to close the openings between the fixed slats, said movable frame being normally out of engagement with the slats of said partition, and means actuated by the opening of either door, whereby said movable frame is raised into closing position with respect to the slats of the partition, substantially as described.

3. In a refrigerator, having a plurality of chambers each provided with a door, a partition of spaced slats between said chambers, a complementary movable frame of slats adapted to close the openings between the slats of said partition, a plurality of means, one below said movable frame and the other thereabove, whereby the same may be raised into closing position with respect to said partition openings, and means connected with each of said raising means and adapted to be actuated by the movement of its proper door, whereby the actuation imparted by the contact of the door thereagainst is imparted to said raising means, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

WILLIAM FRYZEK.

Witnesses:

VIRGINIA C. SPRATT,
WILLIAM M. SWAN.