

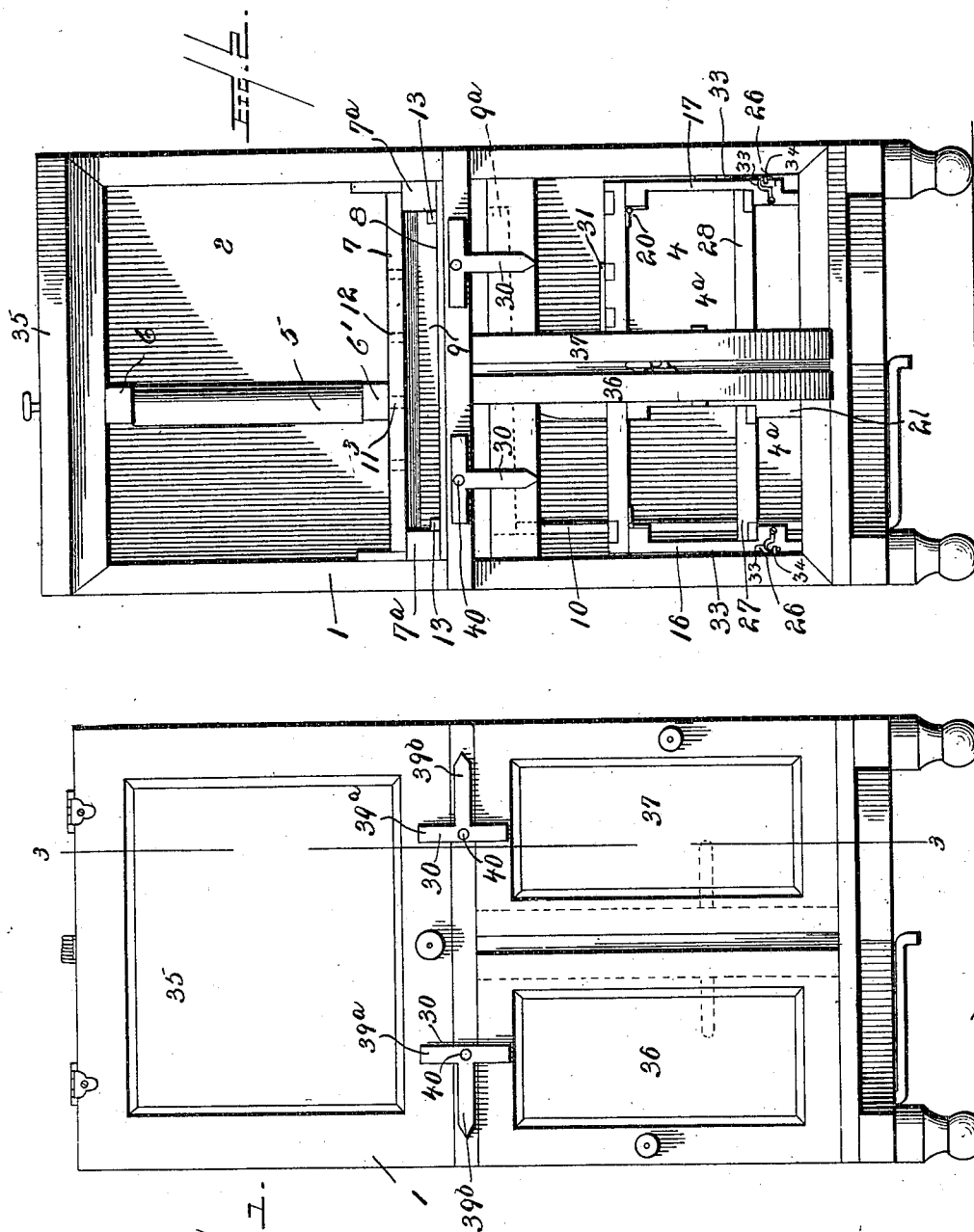
No. 838,437.

PATENTED DEC. 11, 1906.

J. H. McDANIEL.
REFRIGERATOR.

APPLICATION FILED AUG. 31, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

W. F. H. K.
C. A. Bailey.

INVENTOR
John H. McDaniel

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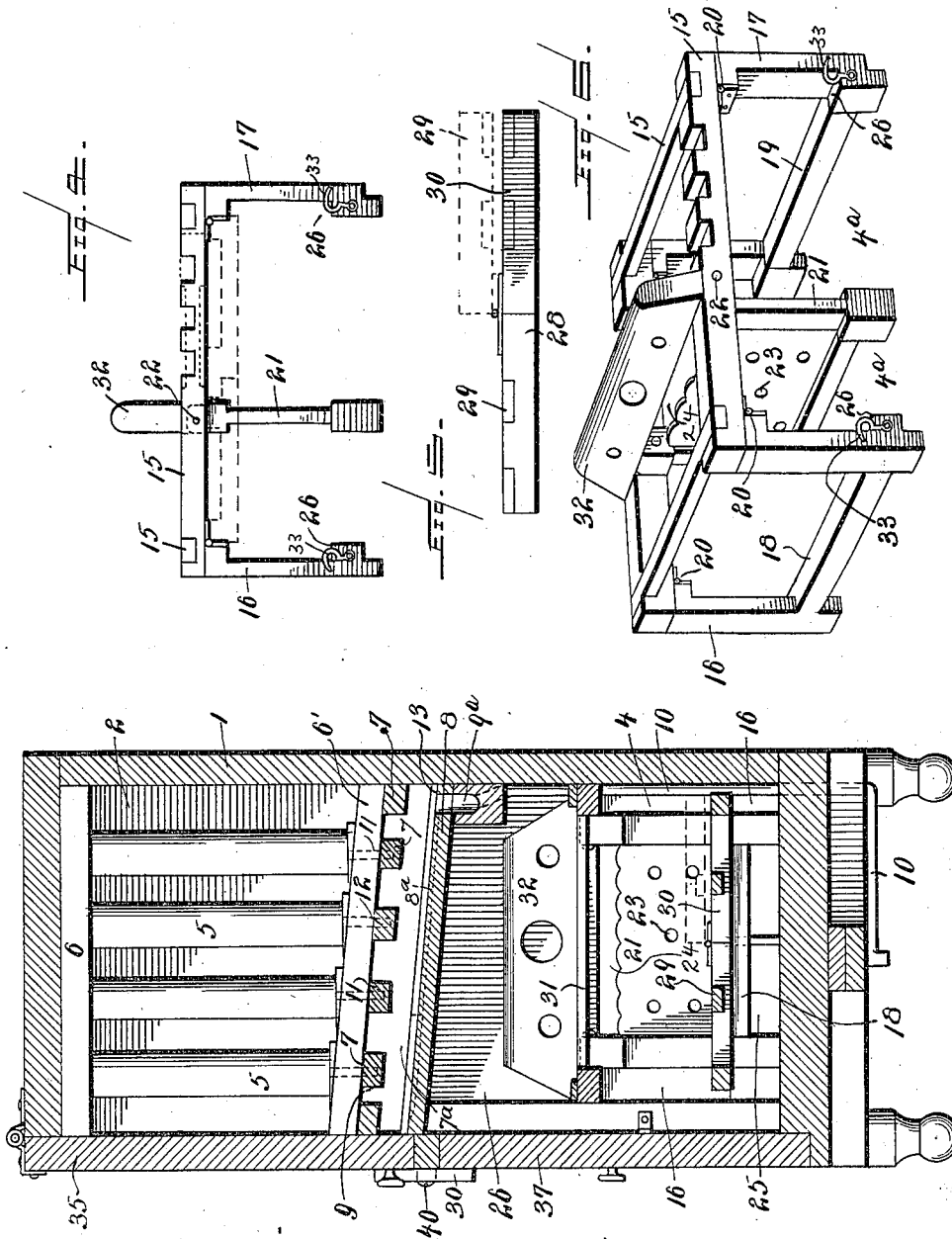
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UNITED STATES PATENT OFFICE.

JOHN H. McDANIEL, OF ST. LOUIS, MISSOURI.

REFRIGERATOR.

No. 838,437.

Specification of Letters Patent.

Patented Dec. 11, 1906.

Application filed August 31, 1905. Serial No. 276,523.

To all whom it may concern:

Be it known that I, JOHN H. McDANIEL, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Refrigerators, of which the following is a specification.

This invention relates to refrigerators; and it consists in certain peculiarities in the construction and arrangement of parts and in certain novel combinations of elements, substantially as hereinafter described, and particularly pointed out in the subjoined claims.

The invention aims primarily to provide a cooling-chamber with shelves of peculiar construction adapted to be folded to accommodate different sizes of articles to be cooled and for convenience in transportation. This object is well accomplished by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a refrigerator embodying my improvements with the doors closed and locked. Fig. 2 is a similar view with all the doors opened. Fig. 3 is a vertical transverse section on the line 3 3 of Fig. 1. Fig. 4 is a detail view of the foldable frame for supporting the shelves within the cooling-chamber. Fig. 5 is a detail view of one of the foldable shelves drawn on an enlarged scale. Fig. 6 is a perspective view of the shelf-supporting structure and shelves in the lower cooling-chamber.

The same numbers of reference designate the same parts in the several figures.

The body of the case 1 may be of any suitable construction and may have the usual spaced walls packed with mineral wood or other non-conductive material. As such constructions of bodies are well known and as it forms no part of the present invention, I have not deemed it necessary to show the same herein.

The upper portion of the refrigerator is divided into two chambers 2 and 3 by means of a partition. The chamber 2 is intended for the ice, while the chamber 3 constitutes a cooling-chamber well adapted to contain bottled water or other liquid or to contain any other class of goods. The bottom of said chambers is preferably provided by a grating, (hereinafter described,) through which the water from the ice will freely flow, thereby keeping the ice free from contact with water. The lower portion of the re-

frigerator constitutes a cooling-chamber 4 and is provided with shelves of peculiar construction, hereinafter described. The partition between said chambers 2 and 3 is an open one to provide for free circulation of air between the chambers 2 and 3. It is preferably formed of a series of spaced rollers 5, journaled at their tops to a connecting-strip 6 and at their bottoms in strips 6'. The journals 11 of these rollers are elongated and have bearings in recesses 12 in bars 7 of the grating forming the bottom of said chamber, as shown in dotted lines in Figs. 2 and 3, in which recesses said journals are removably inserted. By providing the bars 7 with series of rows of recesses 12, as shown in dotted lines in Fig. 2, adjustment of the partition 4 may be effected. These rollers permit ice to be slid into the ice-chamber without retarding the passage of said ice.

The grating referred to preferably comprises spaced bars 7, connected with each other at their ends by longitudinal bars or rods 7^a. It is supported on a platform 8 in such position relative to said platform as to leave between them a space 9. The grating and platform 8 are preferably inclined from the front to the rear, and said platform is preferably formed with longitudinal grooves or channels 8^a, which lead to a trough 9^a, located at the rear and extending across the refrigerator. Said trough has communication with the space between the platform 8 and grating-bars 7. It will thus be seen that the water from the ice-chamber will flow between the grating-bars 7 to the platform 8 and be conducted by gravity from the latter to the trough 9^a. Said trough 9^a is inclined transversely of the refrigerator and is provided with a suitable drain-pipe 10.

The grating, with the partition 4, is removable from the body of the refrigerator, being slidably mounted therein on the platform 8, beads 13 being preferably provided to form guide-passages receiving the members 7^a of said grating.

Within the lower cooling-chamber 4 there is located an open shelf-supporting frame comprising longitudinal and transverse connected members 15, supported by legs 16 and 17, arranged under its corners. Said legs are arranged in pairs at the opposite ends of the frame, and the members 16 of one pair are connected with each other by a bar 18, while the members 17 of the other pair are similarly connected with each other

by a bar 19. Said pairs of legs are respectively hinged, as shown at 20, to the under side of the contiguous frame members 15, whereby they may be folded toward each other, as shown in dotted lines in Fig. 4, in order to increase the height of the cooling-space above the shelf-supporting frame or for convenience in storage or transportation.

Pivotally connected at 22, at its upper end, to inner surfaces of contiguous frame members 15 is a partition 21, which depends from said frame members and divides the lower portion of the cooling-chamber 4 into two spaces 4^a, located side by side. This partition 21 is suitably formed or arranged to permit a free circulation of air between said spaces 4^a. As shown, it has for this purpose perforations 23 in its wall, and its body portion is of less height than the portion of the cooling-chamber in which it is located and is arranged to leave open spaces 24 and 25 above and below it respectively. Said partition may be turned on its pivot 22 into the space between opposite members 15 of the shelf-supporting frame in order to permit the before-described folding of the legs.

The legs 16 and 17 and the opposite sides of the platform are formed with shoulders 26, which support the ends of shelves 27 and 28, each of which shelves is made of sections hinged together, as shown at 29 and 30, whereby said sections may be folded one onto the other when desired. Said shelves, further, are removable, and they preferably merely rest on said shoulders and are not secured thereto.

Opposite members 15 of the shelf-supporting frame are preferably formed with recesses which receive the ends of shelf-slats 31, which may be connected with each other to constitute a shelf.

From the above description it will be seen that I have provided a shelf structure the elements of which may be readily removed or adjusted to adapt the refrigerator to goods of any and various sizes within the capacity of the entire cooling-chamber 4 and also that said structure provides for a free circulation of air through the various parts of the cooling-chamber 4. Moreover, said shelf structure is such that it may be folded into very compact form when desired. The shelf-supporting structure is preferably provided with a handle 32 for convenience in handling it, and it may have hooks 33 to engage eyes 34 or be provided with other suitable means for securing it in the case or body of the refrigerator.

The front of the casing or body 1 of the re-

frigerator is open, and it is provided with three doors, one, 35, giving access to its chambers 2 and 3 and the others, 36 and 37, respectively affording access to the sides of the cooling-chamber 4. These doors are preferably provided with springs to open them automatically when they are free to open. To lock them, a pair of T-shaped latches 39 are employed, each of which is pivoted at 40 to the portion of the refrigerator casing or body 1 between the upper door 36 and the pair of lower doors 37. When turned into the position shown in Fig. 1, the head 39^a of each latch engages the upper door and a lower door, and thus locks both in closed position. When both are turned, so that their heads 39^a will be horizontal and their stems 39^b vertical and downward, the upper door will be released, and when either or both are turned with their said heads in horizontal position and their stems vertical and projecting upward either or both of the lower doors will be released according to whether it is one or both of the latches that is thus turned.

From the foregoing the construction and advantages of the refrigerator will be readily apparent and need not further be set forth herein.

Having thus described the invention, what I believe to be new is—

1. A refrigerator having its cooling-chamber provided with a shelf-supporting structure having legs and a partition each pivotally connected therewith, and a shelf removably supported by said legs and partition.

2. A refrigerator having its cooling-chamber provided with a shelf-supporting structure having legs and a partition each pivotally connected therewith, and a shelf removably supported by said legs and partition, said shelf being composed of pivotally-connected sections.

3. A refrigerator having its cooling-chamber provided with a shelf-supporting structure having legs and a partition each pivotally connected therewith, said legs and partition having shoulders, and shelves in the spaces at the sides of said partition and each supported on the shoulders of said partition and legs, each of said shelves being formed of pivotally-connected sections.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. McDANIEL.

Witnesses:

J. W. McDOWELL,
D. W. SCOTT.