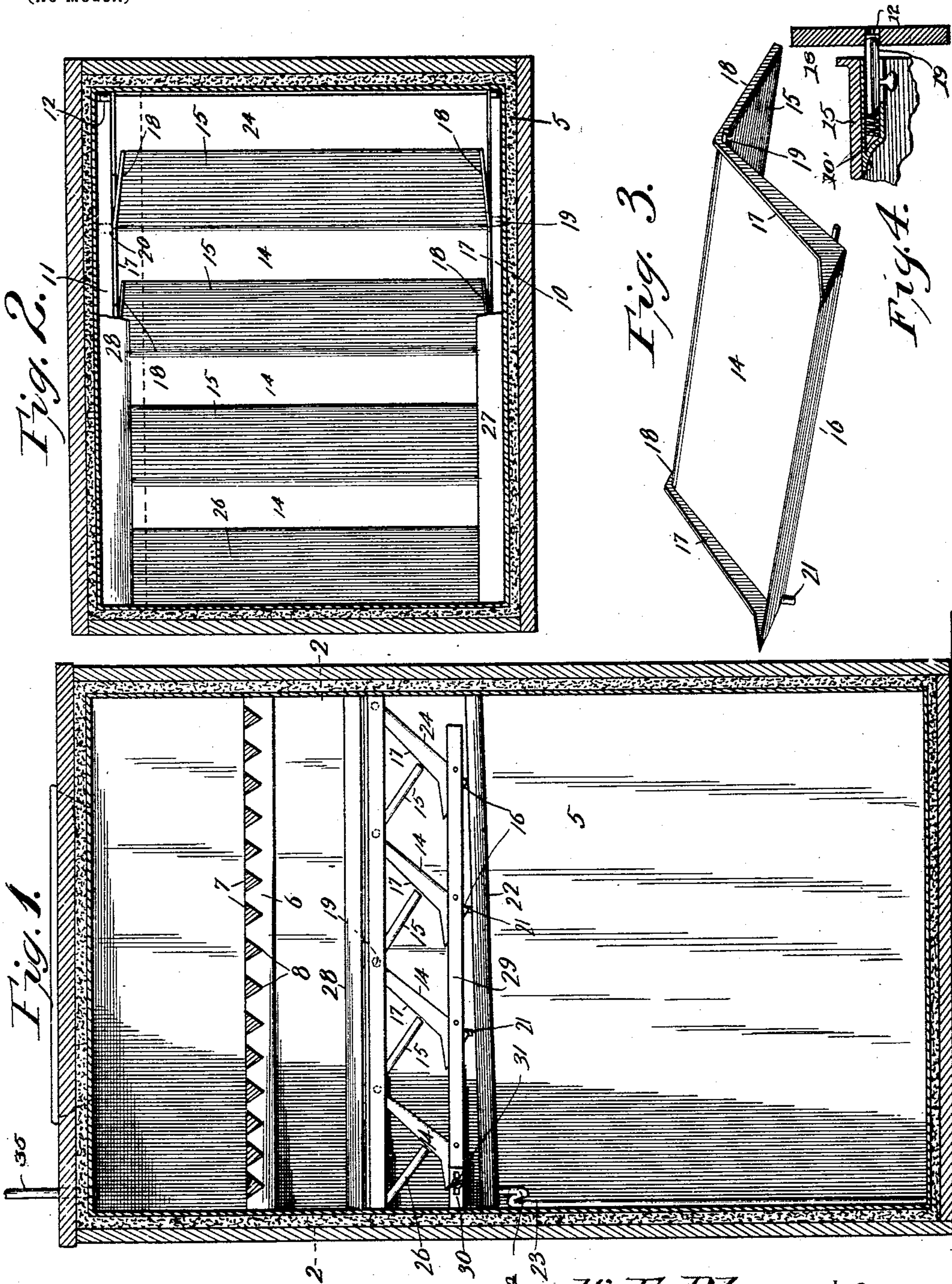


No. 684,177.

Patented Oct. 8, 1901.

W. E. BLUE.
REFRIGERATOR ATTACHMENT.
(Application filed Mar. 7, 1901.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM E. BLUE, OF NIAGARA FALLS, NEW YORK.

REFRIGERATOR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 684,177, dated October 8, 1901.

Application filed March 7, 1901. Serial No. 50,249. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. BLUE, a citizen of the United States, residing at Niagara Falls, in the county of Niagara and State of New York, have invented a new and useful Refrigerator Attachment, of which the following is a specification.

This invention relates to refrigerators in general, and more particularly to draining attachments therefor, the object of the invention being to provide a device which will be so situated as to catch the water of condensation in the refrigerator and to carry it away, so that the provision-compartment in the lower portion of the refrigerator will be kept free of excess moisture.

A further object of the invention is to provide such a specific construction of the attachment as will permit of its adjustment to modify the circulation of air in the refrigerator, additional objects and advantages being apparent from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a vertical section of the refrigerator, the draining apparatus being shown in elevation. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a perspective view of one of the tilting water-sheds. Fig. 4 is a vertical section through one end of a water-shed and showing the arrangement of a spring-pressed trunnion.

Referring now to the drawings, there is shown a refrigerator 5, such as is used in meat-markets, and in the upper portion of which is disposed an ice-rack. This ice-rack comprises sills 6, having cross-pieces 7 fixed thereto, and these cross-pieces are cross-sectionally triangular and are arranged with their bases inverted, so that there will be presented a flat upper surface to receive the ice cakes, while the lower sides of the cross-pieces will converge downwardly to form a drip edge 8. Thus the water that drips from the ice will fall from the cross-pieces in transverse lines.

As is well known, in a refrigerator of this class the moist and cold air from the ice is condensed by the upwardly-moving warmer air from the bottom of the refrigerator and that this condensation takes place at a point just below the ice-rack. Therefore if water

sheds or drains are disposed below this point of condensation the water of condensation will fall thereon and may be conveyed from the refrigerator without excessively moistening the air in the lower portion of the refrigerator. To provide this mechanism, sills 10 and 11 are mounted against the inner faces of the opposite walls of the refrigerator and below the said point of condensation, and in these sills are disposed or formed bearing-slots 12, which are disposed oppositely in pairs to receive the trunnions of the water-shedding plates. These water-shedding plates consist each of a sheet of metal, which is bent to form two members 14 and 15, which lie at a right angle to each other, and the member 14 has its lower edge bent upwardly to form a trough 16, into which will drain any water that may fall or form upon the member 14. Any water that may fall or form upon the member 15 will drip from the lower edge thereof. The end edges of the members 14 and 15 are turned upwardly, as shown at 17 and 18, and the portions 17 form ends for the trough 16. In the angle between the members 14 and 15 are disposed trunnions 19 and 20, which project outwardly beyond the ends of the members, and said members are of such lengths that they will fit snugly between the sills 10 and 11, so as to swing therebetween, the trunnions being held engaged with the bearings 12, lying mutually opposite, by suitably-disposed springs 10'. In the present instance three of these water-shedding devices are shown, and they are so hung upon their trunnions that the troughs 16 lie beneath the edges of the adjacent members 15 to receive the drip therefrom, or the edges of said members 15 may project over the trough, so as to permit the water therefrom to drip onto the members 14, down which it will of course run to the troughs.

The water-shedding plates are tilted all in the same direction, so that one end of each trough is lower than the opposite end, and the lower end of each trough is provided with a drain-pipe 21, disposed to discharge to a tilted trough 22, secured to the wall of the refrigerator and from which runs a waste-pipe 23.

At one end of the series of water-shedding plates there is mounted a swinging plate 24,

having the same form as the member 14 and provided with trunnions which engage bearings in the sills 10 and 11 close to one side of the refrigerator, while at the opposite end of the series a plate 26 is fixed to the wall of the refrigerator and is disposed to discharge to the trough 16 of the adjacent member 14. To catch the water of condensation that may form upon the side walls of the refrigerator, slanting plates 27 and 28 are attached there- to above the sills 10 and 11 and project with their lower edges over the ends of the members 14 and 15, so that the water therefrom may drip to said members.

By swinging the water-shedding plates upon their trunnions the interspaces there- between may be varied in width to vary the circulation of air from the top to the bottom of the refrigerator, and vice versa. To thus tilt the plates and hold them in tilted posi- tions, shift-bars 29 are pivoted to the ends of the troughs 16, and at one end of each of these shift-bars is an extensible section 30, held adjustably by a set-screw 31, passed through a slot therein and engaged with the shift-bar. This extensible section rests with its end against the wall of the refrigerator and holds the plates against pivotal move- ment in one direction under the influence of gravity, the plates being so weighted that their tendency is to move this extension against the wall of the refrigerator. By lengthening the shift-rod by adjusting the extension the plates are moved pivotally and are held in such adjusted positions. It will be thus seen that the space between the ice- rack and the water-sheds is in effect a con- densing-chamber and that the cold air there- from passed downwardly between the shed- ding-plates and into the space therebelow for the provisions.

To ventilate the refrigerator, a vent-pipe 35 is provided of suitable length, and to ex- clude warm air that might enter through the drain-pipe 23 said pipe has the turn 24' formed therein, which is adapted to hold a quantity of water, and thus form a water seal.

As is well known, natural ice often con- tains much solid matter that is frozen there- in, and as the ice melts this matter drops down into the refrigerator. With this con- struction, however, the plates catch these impurities, and they may be readily removed therefrom without removing the plates from their supports. Furthermore, the drain-pipe

above the turn may be removed to permit of cleaning out. The plates thus have three functions—to catch and convey the water of condensation, to catch the solid matter that would otherwise drop upon the provisions in the provision-chamber, and to modify the air- currents in the refrigerator.

It will be understood that in practice modi- fications of the specific construction shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. The combination with a refrigerator of a series of drain-plates each consisting of two downwardly-diverging members one of which has a trough at its lower edge and disposed to receive the drip from the lower edge of the opposite member of the succeeding plate, said plates being mounted for pivotal move- ment, and a shift-rod pivotally connected with the plates to move them pivotally, said rod having an extensible end section adapted to rest against the wall of the refrigerator to hold the plates at different points of their pivotal movements.

2. The combination with a refrigerator of a series of drain-plates each consisting of two downwardly-diverging members one of which has a trough formed longitudinally of its lower edge and disposed to receive the drip from the lower edge of the opposite member of the succeeding plate, said plates being mounted for pivotal movement, a shift-rod pivoted to the plates, and means for holding the shift-rod in its different adjusted posi- tions to hold the plates with their members variously separated to vary the circulation of air in the refrigerator.

3. A drain-plate for refrigerators compris- ing two members lying at an angle to each other to diverge downwardly, one of said members having its lower edge turned up- wardly to form a trough and both members having their end edges turned upwardly, a drain-pipe at one end of the trough, and trunnions disposed in the angle of the two members.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. BLUE.

Witnesses:

WM. S. PIERCE,
J. E. RUTLEDGE.