(No Model.) 2 Sheets—Sheet 1.

G. WILKINSON.

REFRIGERATOR.

No. 574,975. Patented Jan. 12, 1897.

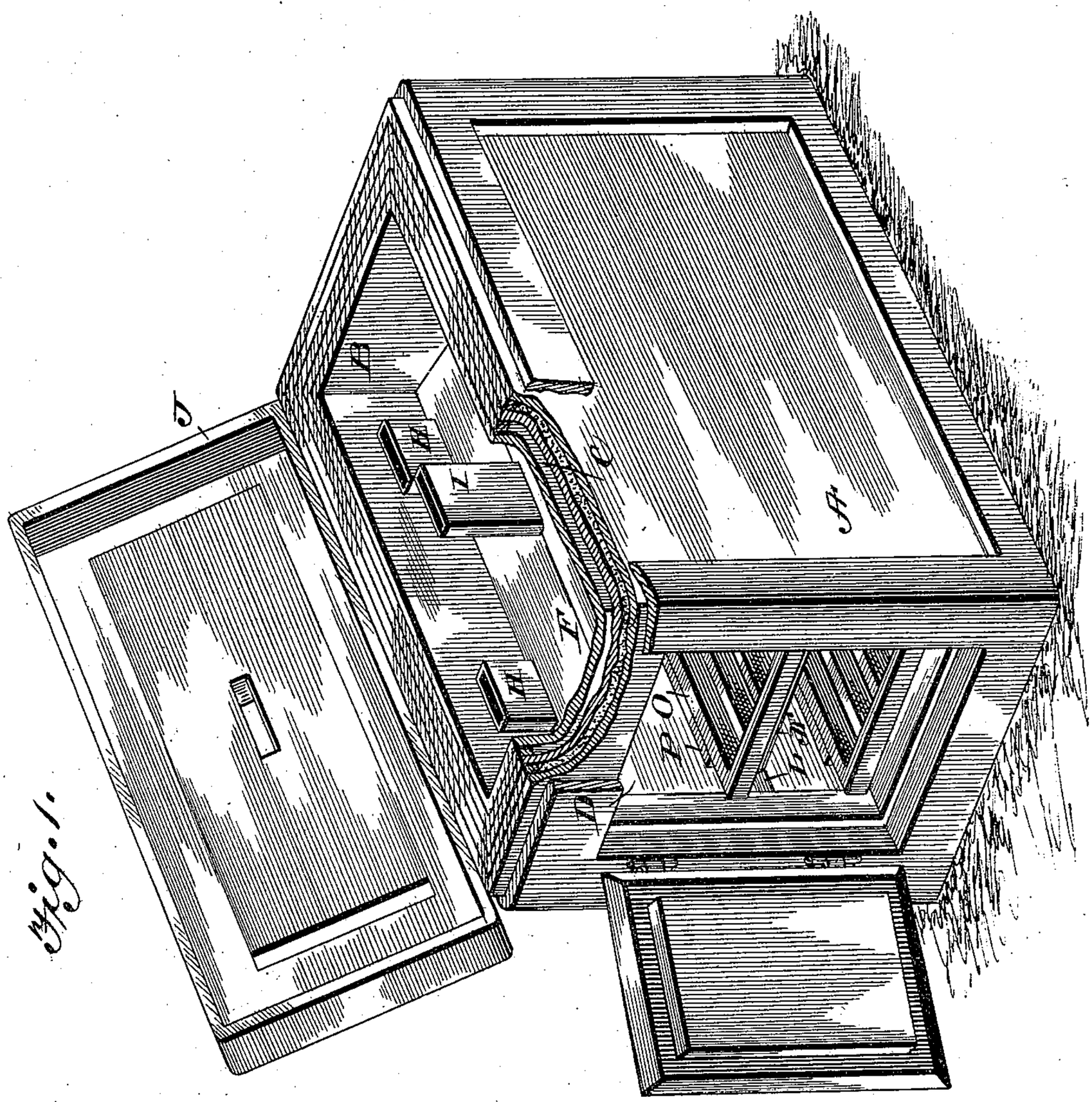

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

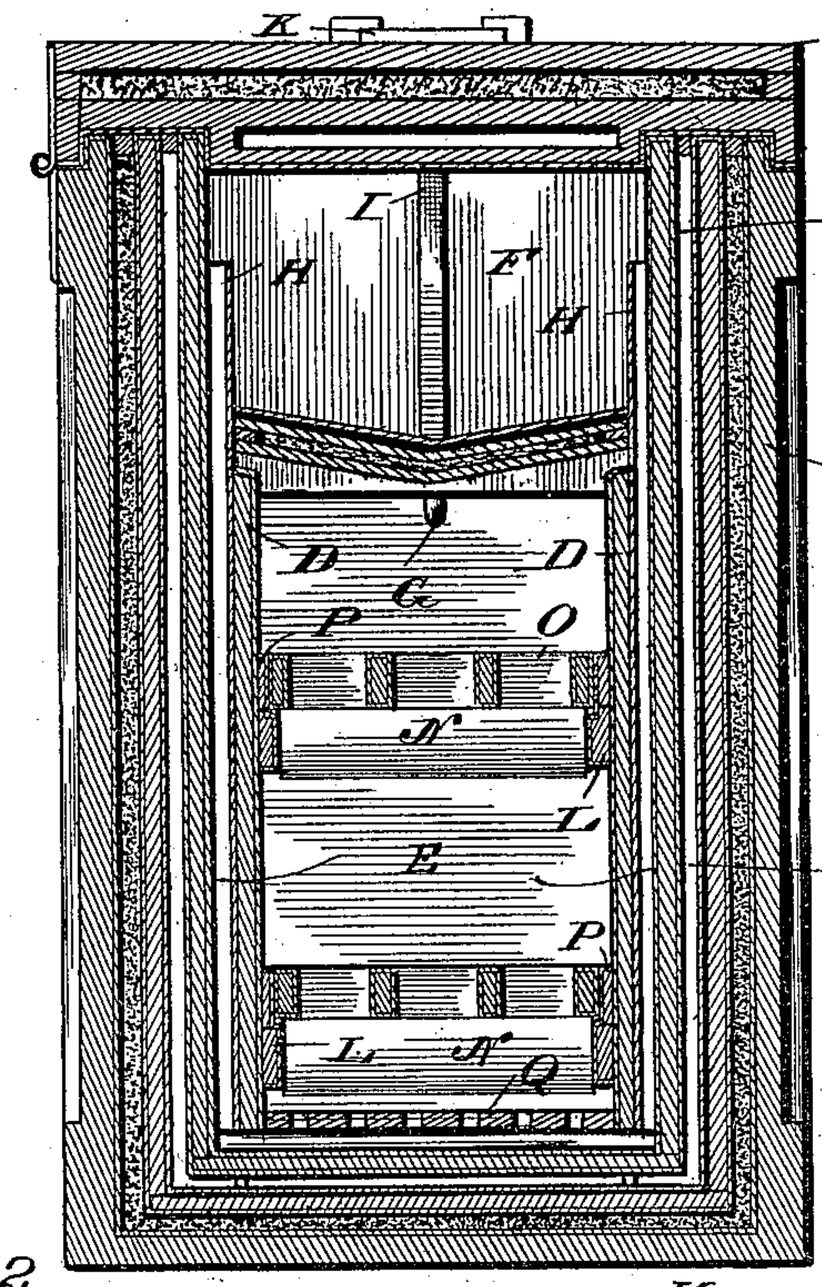

Fig. 4.

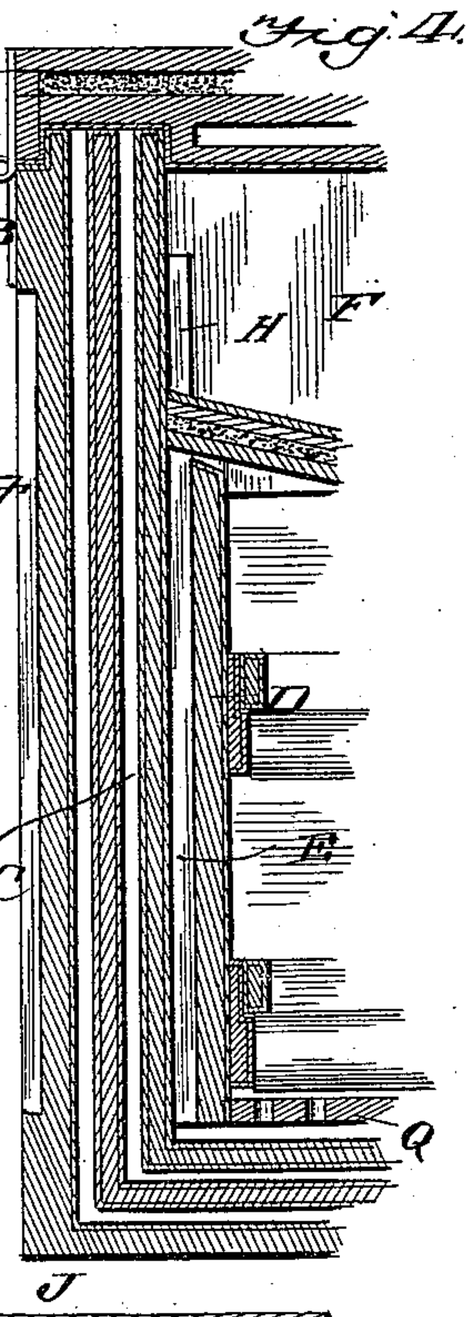

Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE WILKINSON, OF CHARLESTON, PENNSYLVANIA.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 574,975, dated January 12, 1897.

Application filed December 19, 1895. Serial No. 572,658. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WILKINSON, a citizen of the United States, residing at Charleston, in the county of Tioga and State of Pennsylvania, have invented certain new and useful Improvements in Refrigerators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in refrigerators and cold-storage systems; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of my improved refrigerator. Fig. 2 is a transverse section of the same on the line 2 2, Fig. 3. Fig. 3 is a longitudinal section of the same. Fig. 4 is a detail transverse section on the line 4 4, Fig. 3.

Referring particularly to the drawings by letter, A designates the outer walls or casing of the device, which is lined or filled with tarred paper, sawdust, or similar material, so as to form a temperature-proof structure. Within the outer casing are the inner walls B, separated from the outer walls, so as to leave a dead-air space C on each side and end of the refrigerator. A slight distance within the inner walls I arrange the side partitions D, which terminate a short distance above the floor or bottom of the device and a short distance below the bottom of the ice-chamber, and form with the inner walls live-air spaces or ducts E.

In the upper portion of the device I provide a tank or ice-chamber F, which entirely fills the top of the refrigerator and is provided with an escape or discharge tube G, extending through one of the end walls of the refrigerator, the escaping flow being regulated by an adjustable slide or valve G^2 in said tube. Within the tank or ice-chamber and on the sides of the same I provide the cold-air flues H, extending from the said chamber into the live-air spaces on the sides of the device. Rising centrally through the ice-chamber is a flue I, which communicates with the space below the ice-chamber and with the outer air through the top of the device. The top or cover J is hinged to the side of the device and is constructed with a dead-air space in the same manner as the sides and is provided on its outer side with a slide-valve K, which extends over the top of the flue I and may be adjusted so as to allow more or less of a flow from said flue, as will be readily understood.

The space below the ice-chamber is intended for the storage of meats, vegetables, &c., which it is desired to preserve. On the side walls of the device I secure the longitudinal cleats L, in which notches M are formed at suitable intervals. In the said notches I journal the rollers N, upon which the trays or platforms O are supported, said trays or platforms consisting of a series of bars forming an open frame, so as to present no obstacle to the free circulation of the cold currents. Suitable guides P are secured to the side walls of the device, so as to prevent lateral movement of the trays as they are being inserted into or removed from the refrigerator.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the advantages of my improved refrigerator will be readily understood. It will be observed that the walls of the device contain dead-air spaces and are also lined or filled with some material which will not readily conduct heat, so that the articles stored in the refrigerator will be effectually guarded against the heated outer air. The heated air within the provision-chamber rises through the central flue I and escapes from the end of the same above the top of the refrigerator, and the partial vacuum thus created is filled by the cold air falling through the flues H and passing under the lower edges of the partitions D and up through the perforated floor Q. A circulation of the air within the refrigerator is thus maintained and the stagnation of the air around the contents of the provision-chamber is obviated. The partitions D, it will be noticed, provide for live-air spaces on the sides of the provision-chamber, and consequently some of the cold air will pass over the edges of the partitions into the said spaces. The cold air will thus be thoroughly diffused.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

In a refrigerator, the combination with the ice-chamber, and the provision-chamber below the same, of vertical side partitions arranged adjacent to the side walls of the provision-chamber and terminating a short distance above the bottom of said chamber and a short distance below the bottom of the ice-chamber, a hot-air-escape flue rising centrally from the provision-chamber and passing through the ice-chamber but having no communication therewith, and cold-air flues passing downward from the ice-chamber into the space between the side partitions and the side walls of the provision-chamber.

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

GEORGE WILKINSON.

Witnesses:

B. F. EDWARDS,

F. E. WARNER.