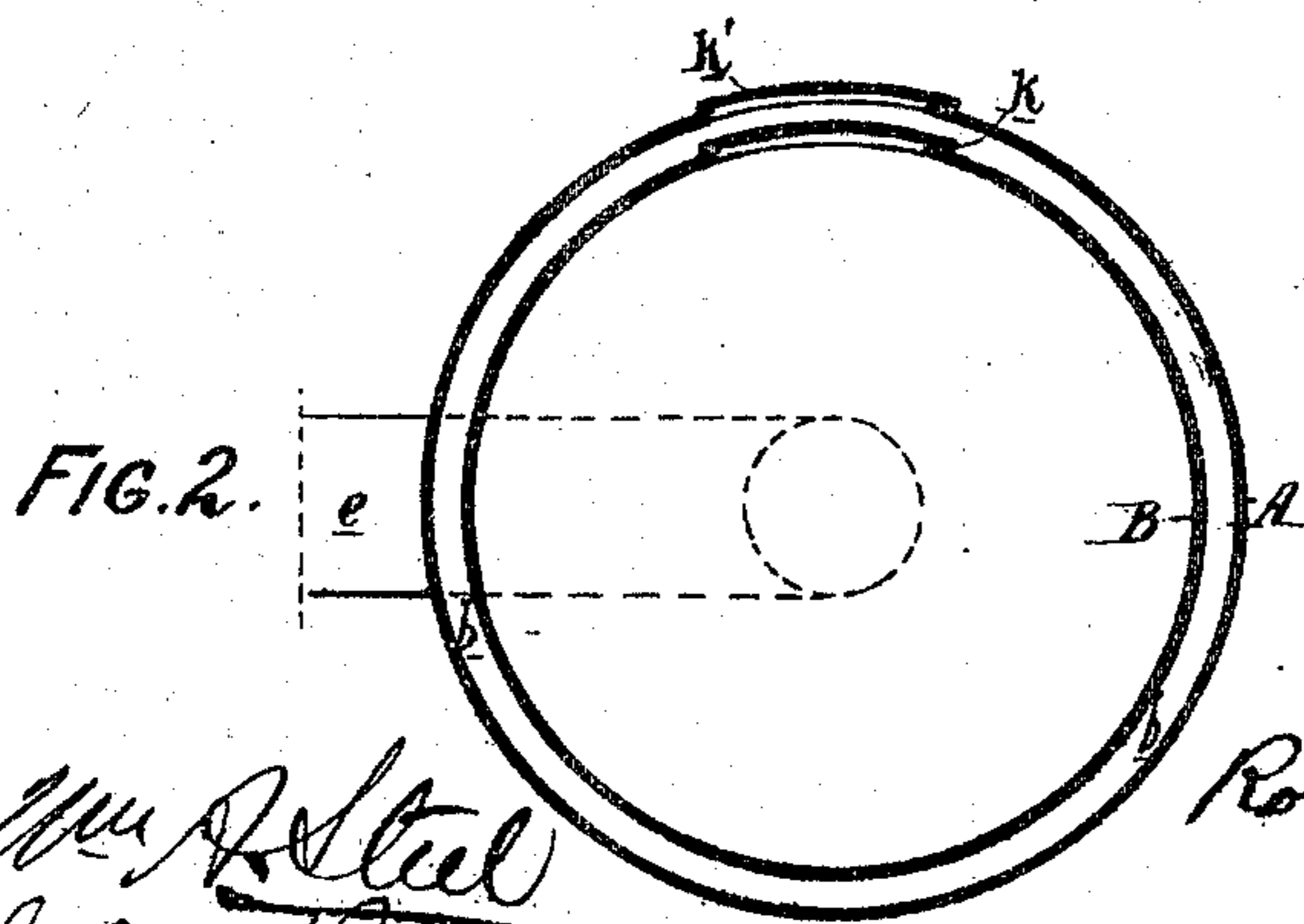
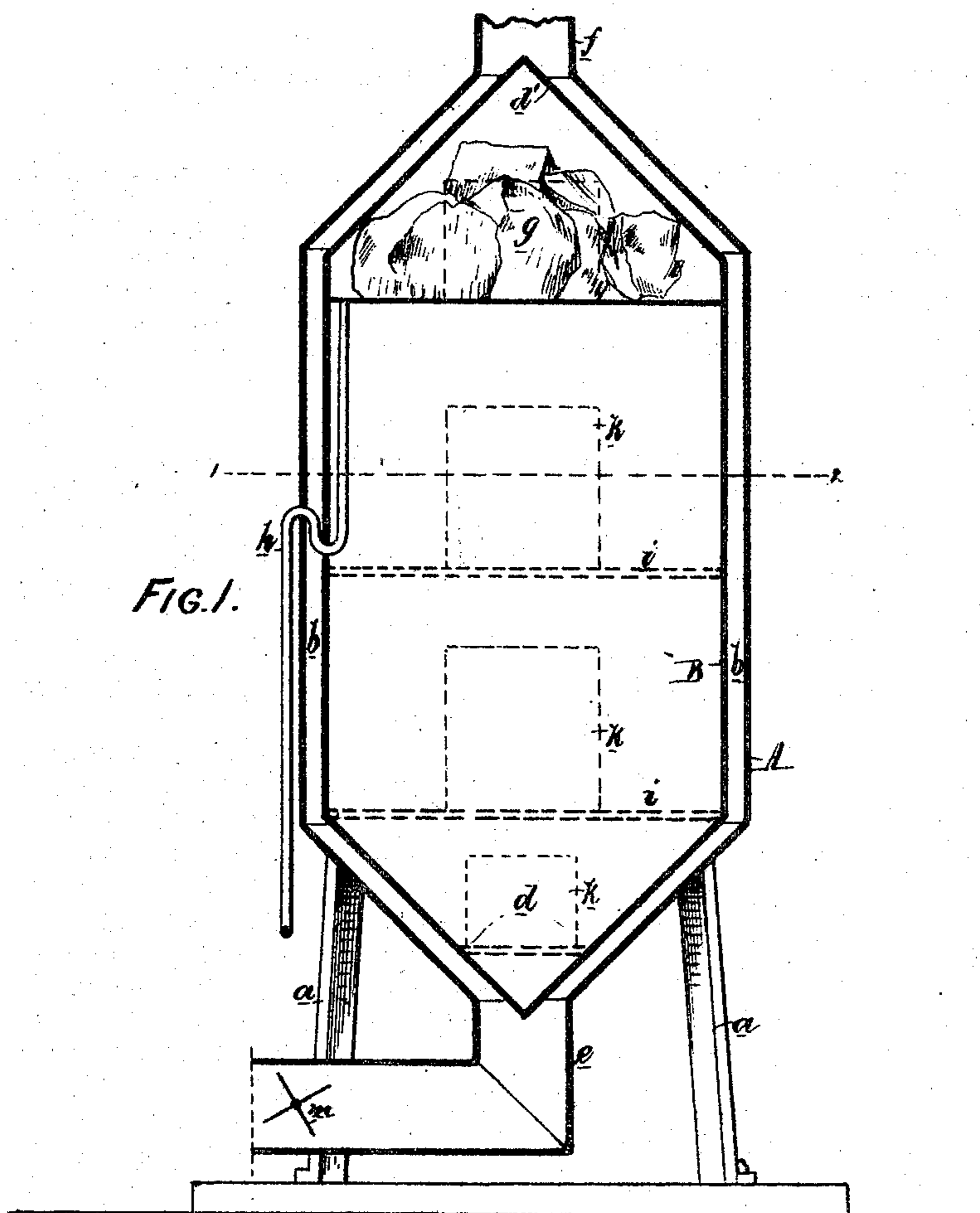


R. H. MACMUNN.

Improvement in Refrigerators.

No. 128,643.

Patented July 2, 1872.



WITNESSES

*Wm. A. Steel*  
*John K. Rupert*

*Robert H. Macmunn*  
*by his Attn.*  
*Hewson and Son*

# UNITED STATES PATENT OFFICE.

ROBERT H. MACMUNN, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. 128,643, dated July 2, 1872.

Specification describing an Improved Refrigerator, invented by ROBERT H. MACMUNN, of Philadelphia, Pennsylvania.

### *Improved Refrigerator.*

My invention consists in the combination, in a refrigerator, of inner and outer casings with a space between them communicating with pipes for creating and maintaining a draught of cool air through the said space, as fully described hereafter; and my invention also consists of certain other improvements, hereafter described, in the construction of the refrigerator.

In the accompanying drawing, Figure 1 is a vertical section of my improved refrigerator; and Fig. 2, a sectional plan on the line 1 2, Fig. 1.

The refrigerator consists of an outer casing, A, supported by legs *a* or otherwise, and of an inner casing, B, contained within and supported by the outer casing, so that a narrow space, *b*, shall intervene between the two. The inner casing has a cylindrical body, terminating at one end in a cone-shaped bottom, *d*, and at its opposite end in a similar conical top, *d'*, and the outer casing A, which is correspondingly shaped, communicates at the bottom with a pipe, *e*, and at the top with a pipe, *f*, leading to a flue or chimney. The inner casing has an ice-box, *g*, at the top, the drip from which is carried off through a pipe, *h*, formed with a goose-neck, in order that it may retain a portion of the water and thus prevent the passage of external air through the said pipe into the refrigerator. The lower portion of the inner casing beneath the ice-box is provided with gratings or shelves *i* upon which to place meat and other provisions, access being obtained to this portion of the refrigerator, as well as to the ice-box, through doors *k*, arranged opposite to each other in the outer and inner casings. As the opening and closing of a hinged door causes considerable agitation of the air within and adjacent to a refrigerator, and is apt to cause warm air to be admitted into the latter, I propose to use sliding doors *k* upon the inner casing, while the doors *k'* of the outer casing can be either sliding or hinged. The pipe *e*, at the bottom of the refrigerator, is conducted to any point from which a supply of air cooler than that of

the apartment in which the refrigerator is situated can be obtained, and, as a constant draught is produced by the upper pipe *f* connected with a flue or chimney, this cool air will be caused to pass constantly upward through the space *b* between the two casings. The air, in passing from the pipe *e* to the refrigerator, strikes the conical bottom *d* of the inner casing, and is thoroughly distributed by the same into the space *b*, from which it passes between the conical upper ends of the two casings to the outlet-pipe *f*.

A shaft with vanes may be arranged within the pipe *e*, so as to be revolved by the incoming current of air, for the purpose of indicating, by its speed, the amount of air which enters the said pipe.

The current of cool air constantly passing through the space between the two casings will prevent the provisions or ice from being affected by the heat of the room in which the refrigerator is contained; but it should be understood that the air has no access whatever to the ice-box and provision-chamber, as in other refrigerators through which a current of air is carried.

In cold weather the current of air passing through the space *b* will be sufficient to keep the provisions cool without the use of ice. This renders my invention especially available for grocery and provision stores, where butter, meats, &c., have, for convenience sake, to be kept constantly at hand in a warm apartment.

I claim as my invention—

1. The combination, in a refrigerator, of a closed casing, B, an outer casing, A, an intervening air-space, *b*, and pipes *e f* for creating and maintaining a draught of cool air through the said space, all substantially as described.

2. The combination of the said casing A, inlet-pipe *e*, casing B having a conical bottom, and the space *b*, substantially as set forth.

3. The combination of the casings A and B, intervening space *b*, outer hinged or sliding doors *k'*, and inner sliding doors *k*.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

R. H. MACMUNN.

Witnesses:

WM. A. STEEL,  
HARRY SMITH.