

(No Model.)

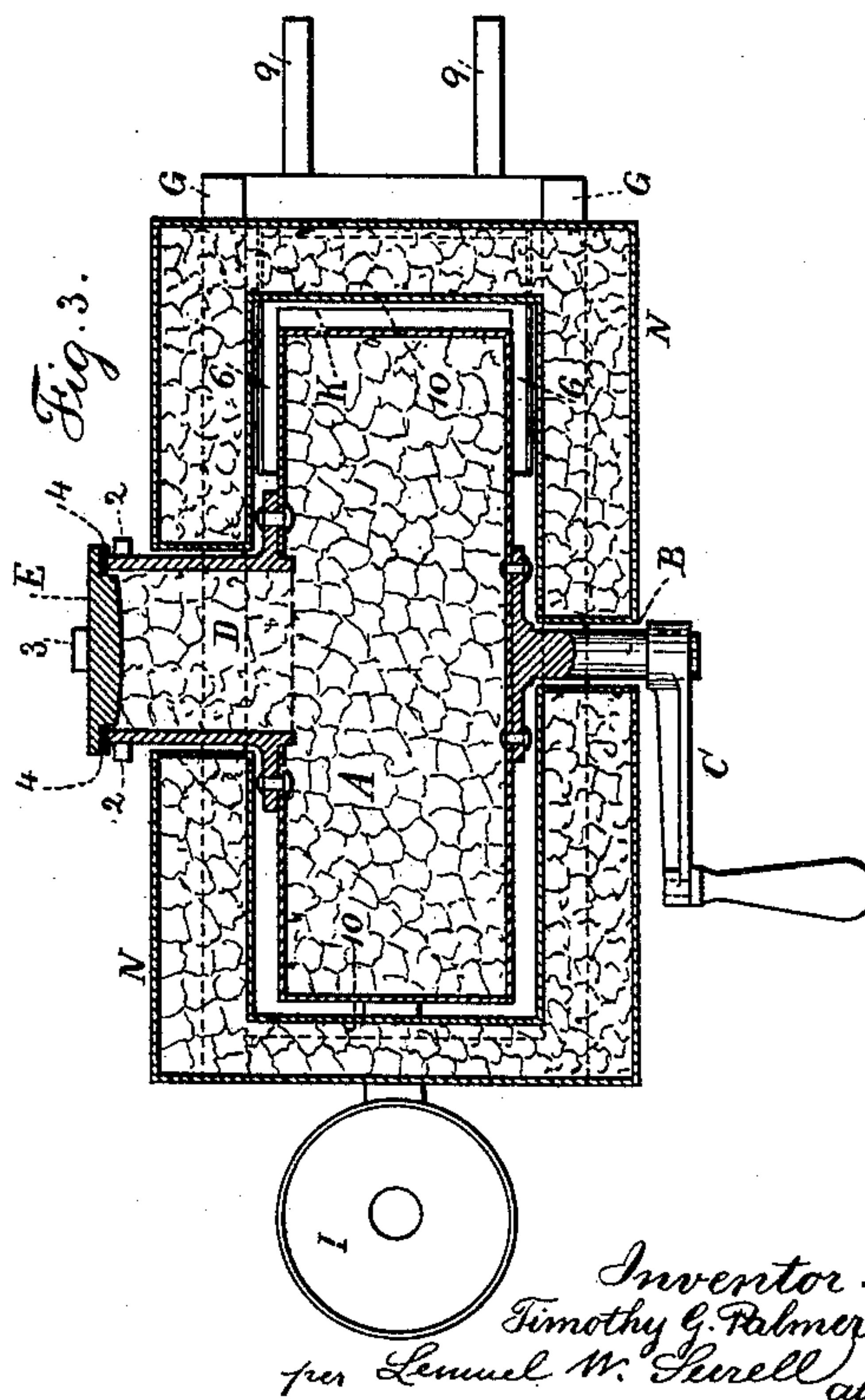
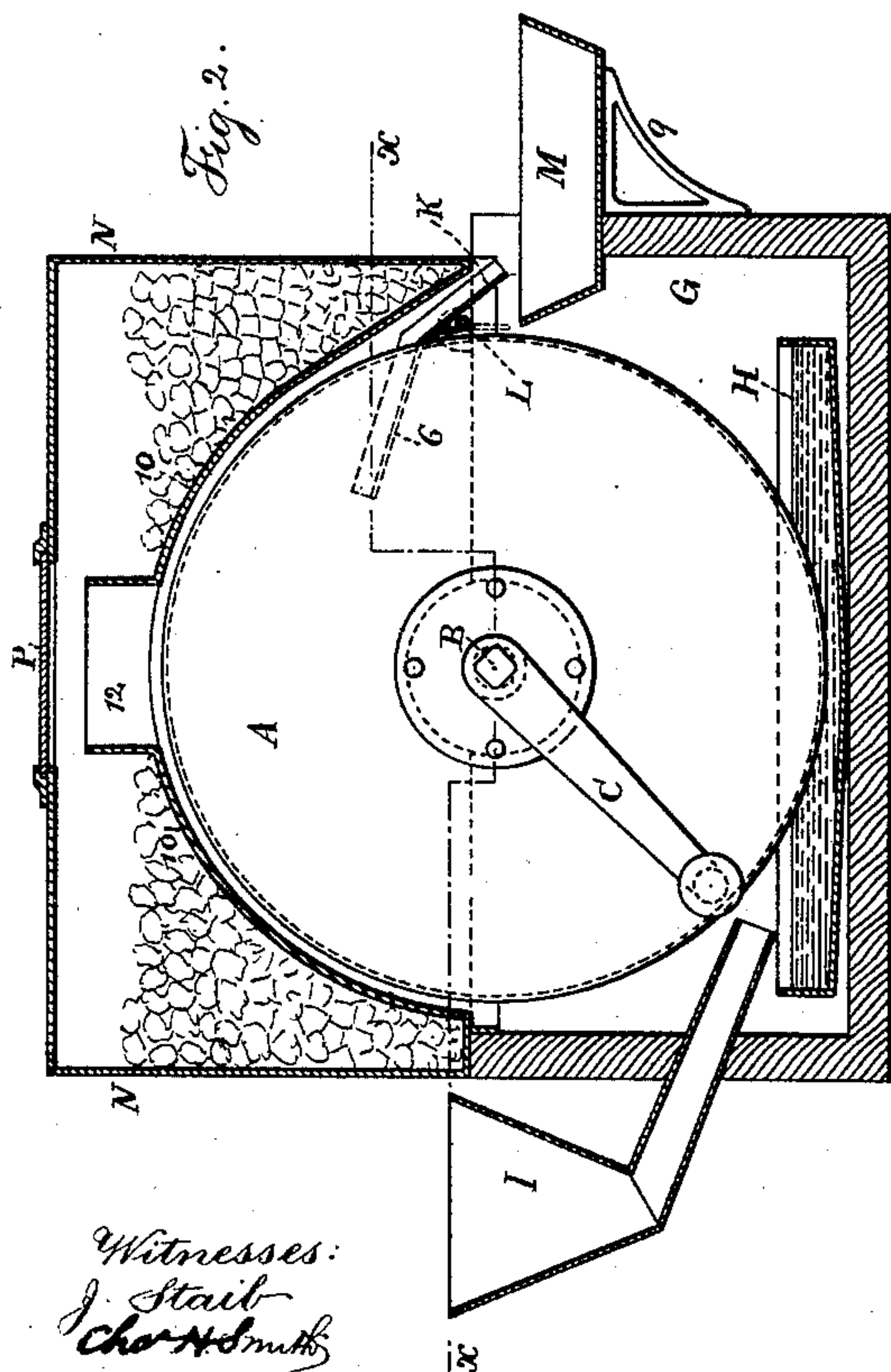
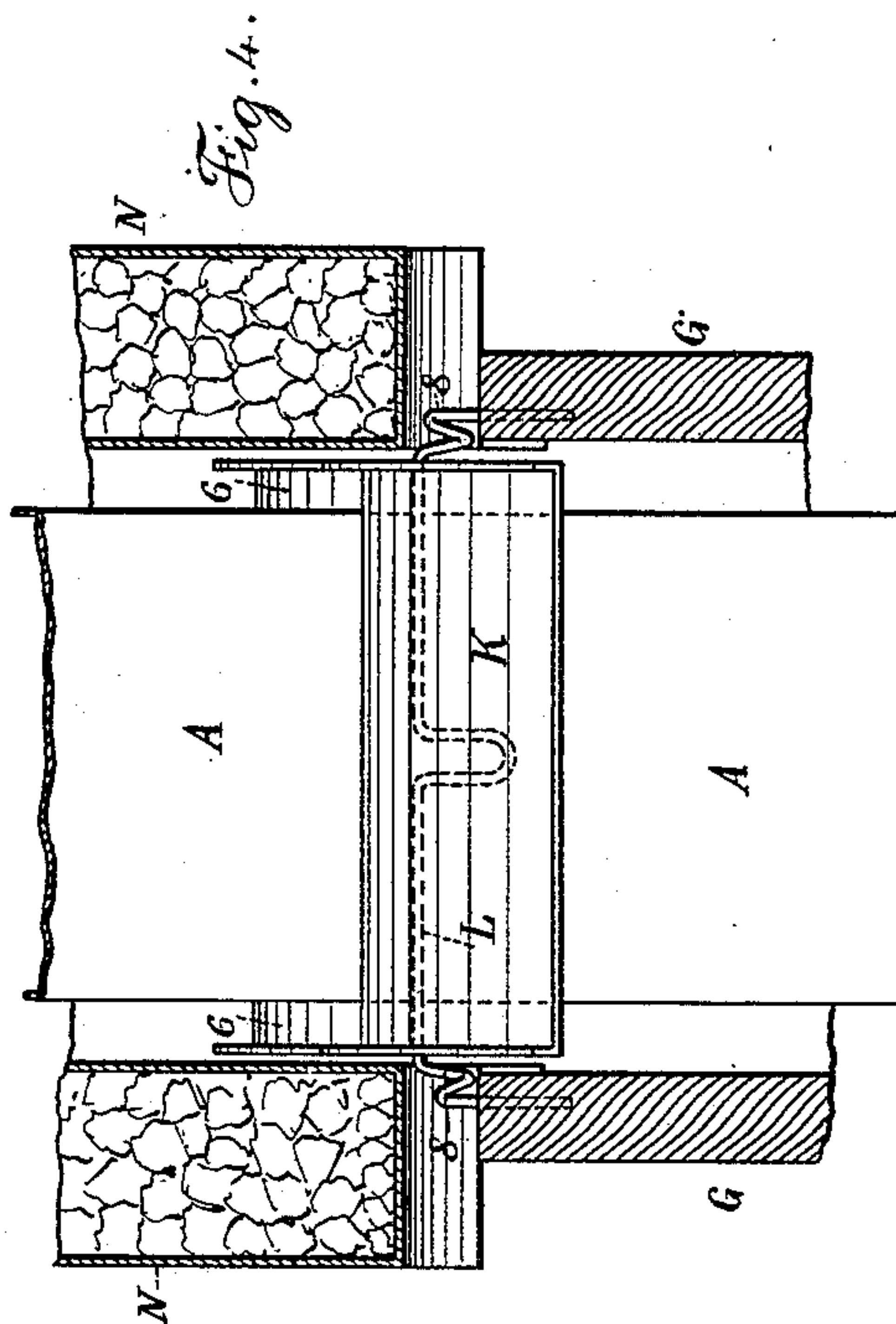
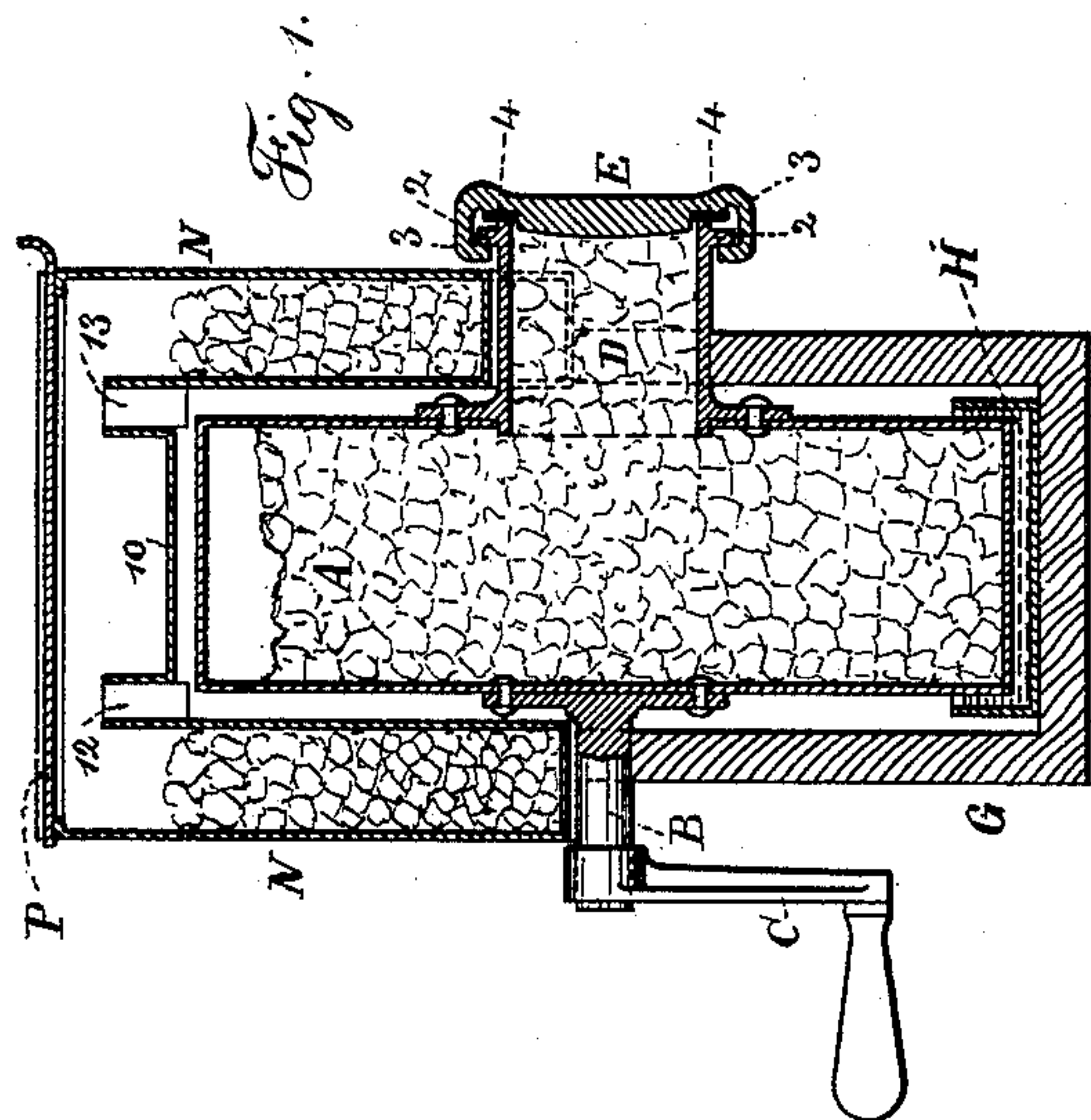
T. G. PALMER, Dec'd.

J. GREENE, Executor.

ICE CREAM FREEZER.

No. 452,315.

Patented May 12, 1891.



Witnesses:  
J. Stait  
Chas. H. Smith

Inventor:  
Timothy G. Palmer  
per Lemuel W. Farrell atty



# UNITED STATES PATENT OFFICE.

TIMOTHY G. PALMER, OF SCHULTZVILLE, NEW YORK; JOHN GREENE, EXECUTOR OF SAID TIMOTHY G. PALMER, DECEASED, ASSIGNOR TO MELVIN W. PALMER, OF CATSKILL, NEW YORK.

## ICE-CREAM FREEZER.

SPECIFICATION forming part of Letters Patent No. 452,315, dated May 12, 1891.

Application filed August 20, 1890. Serial No. 362,475. (No model.)

*To all whom it may concern:*

Be it known that I, TIMOTHY G. PALMER, a citizen of the United States, residing in Schultzville, in the county of Dutchess and State of New York, have invented an Improvement in Ice-Cream Freezers, of which the following is a specification.

Coolers and freezers have been made of a hollow cylinder into which the ice or other cooling substance is inserted and the material to be cooled has been brought into contact with the exterior of such hollow cylinder and scraped off as it is consolidated.

My invention relates to a freezer of this general character; and it consists of the peculiarities in construction hereinafter set forth.

In the drawings, Figure 1 is a vertical cross-section of the apparatus. Fig. 2 is an elevation of the cylinder and crank and a section of the case and refrigerating-cover. Fig. 3 is a sectional plan view at the line  $xx$ , Fig. 2, and Fig. 4 is an elevation of the scraper and section of the case and cover in larger size.

The hollow cylinder A is preferably of sheet metal, and at one side is a central shaft B for the crank-handle C, and at the other side is a hollow axis D, having a suitable removable cap E. The cap E is to be secured in place by any convenient device. I prefer to employ a notched and outwardly-projecting flange 2 around the hollow axis D, and fingers 3 at opposite sides of the cap E, projecting backwardly, so that such fingers are entered at the notches of the flange, and by giving the cap a partial rotation the fingers come behind the flange and hold the cap to the end of the hollow axis. A ring or washer of rubber or similar material at 4 makes the joint between the cover and hollow axis water-tight.

The case or box G of the freezer is preferably rectangular and made of wood or other inferior conducting material, and into this case a movable pan H is inserted for holding the cream to be frozen, and a spout with a funnel end I is shown as passing through one end of the case for conducting cream to the pan H.

It is to be understood that the shaft B and tubular axis D rest in bearings in the upper edges of the case G, and the cylinder A can be revolved by the crank C, and the periphery of

the cylinder will come into contact with the cream in the pan H, and the cylinder can be lifted from the case when desired, and the cap E taken off and ice and salt or other refrigerating material introduced into the cylinder or the water removed therefrom and the cover replaced.

In ice-cream freezers having a cylinder that is revolved a scraper has been used; but it does not always act with uniformity, and the cream is liable to adhere thereto. To avoid these difficulties I make the scraper narrow, so that the frozen cream passes off easily, and support it by a self-accommodating spring that yields in any direction so as to keep the scraper properly against the refrigerating-cylinder. The scraper K is of sheet metal with edges 6 extending against the ends of the cylinder A, and this scraper is connected to and supported by the spring-wire L, the middle portion of which wire is soldered or otherwise permanently fastened to the under side of the scraper K, and the ends of this wire are bent vertically to pass into holes in the top edges of the case G; and there are coils at 8 in the wire, forming self-accommodating springs, so that the scraper is pressed against the surface of the cylinder A, and it can also play laterally to accommodate any inequalities in the cylinder A; and the ice-cream as it is scraped off falls into a dish or vessel M, that is directly below the scraper, and passes at one end into the case G, and it rests upon brackets 9.

The refrigerating mixture in the cylinder A is often insufficient to freeze the layer of cream raised upon the surface of the cylinder as it is revolved. I therefore combine with such cylinder a hollow refrigerating-cover N, having a semicircular interior or lining of sheet metal near to the surface of the cylinder A, so that the cream may be more rapidly cooled by the joint action of the refrigerating material in the cylinder A and within the cover N. This cover N rests upon the case G, and may be lifted off the same. The exterior of this cover can be of inferior conducting material and a movable slide or door P is provided at the top of the cover for the insertion of ice and salt or similar material, and I provide tubes 12 13, passing through the semicircular lining of the



cover, and rising near to the door P, and open at both ends. These allow air to circulate within the freezer and cover, so as to keep the air around the cylinder A cold and to cause any vapors to pass into the cover and condense on the ice, so as to keep the freezer free from objectionable odors or vapors.

In starting to freeze the cream it is preferable to press with the hand against the bottom part of the scraper and throw the upper part of the scraper away from the cylinder A, so that the latter can be revolved to cool and commence to freeze the cream before the scraper is brought into action. The spring-support allows for moving the scraper away from the cylinder.

I claim as invention—

1. The combination, with a scraper and a hollow refrigerating-cylinder adapted to receive ice, of a hollow removable cover having a semicircular interior of sheet metal and hol-

low sides extending down at each side of the revolving cylinder and adapted to receive ice, and a case for inclosing the lower part of the cylinder and supporting its axis and also supporting the removable cover, substantially as specified.

2. The hollow removable refrigerating-cover having a semicircular interior of sheet metal, the air-tubes passing through the same and open at both ends, and the removable door or slide, in combination with the case upon which the cover rests, the hollow refrigerating-cylinder, the tubular axis, shaft, and handle, and the pan below the refrigerating-cylinder and the scraper, substantially as specified.

Signed by me this 11th day of August, 1890.

T. G. PALMER.

Witnesses:

GEO. T. PINCKNEY,

WILLIAM G. MOTT.