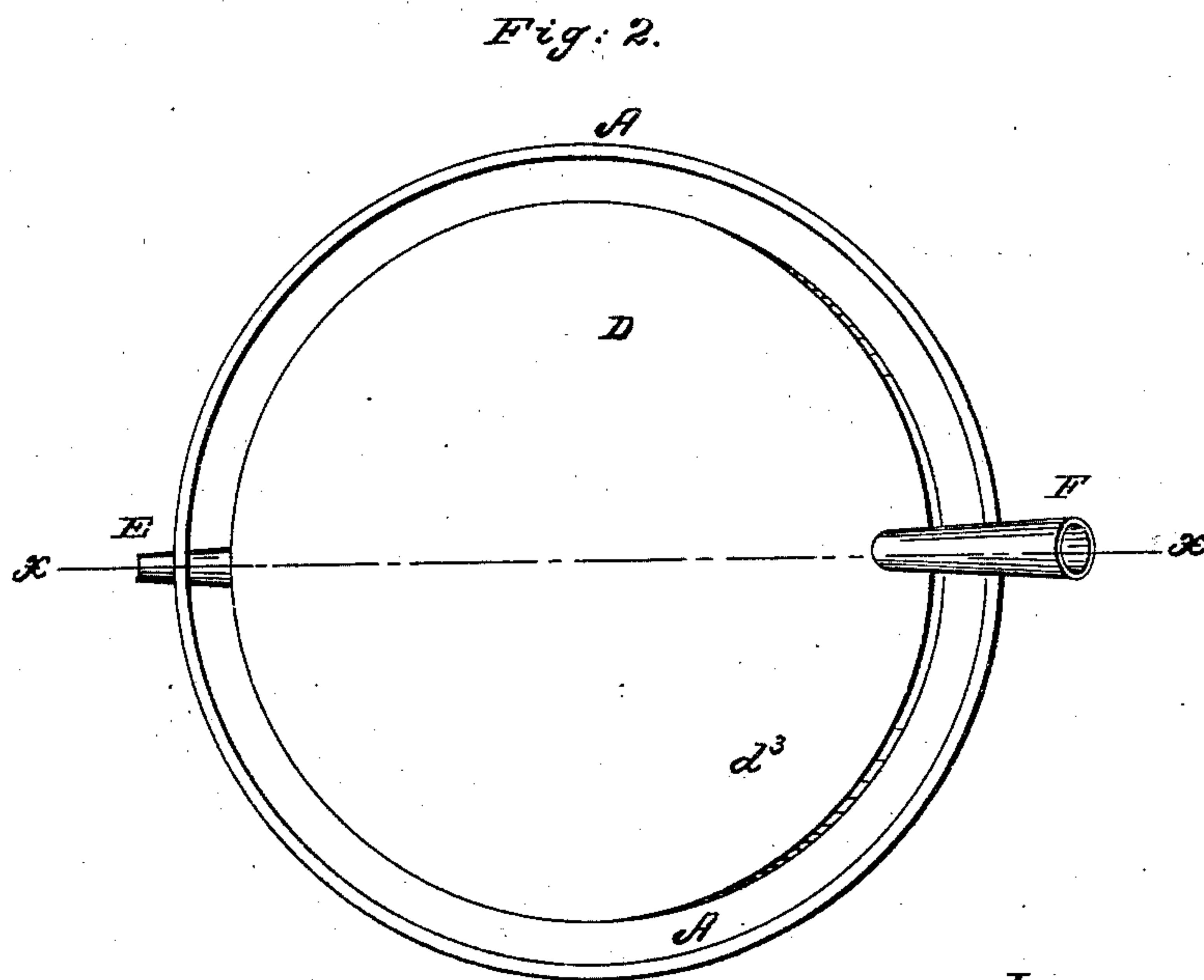
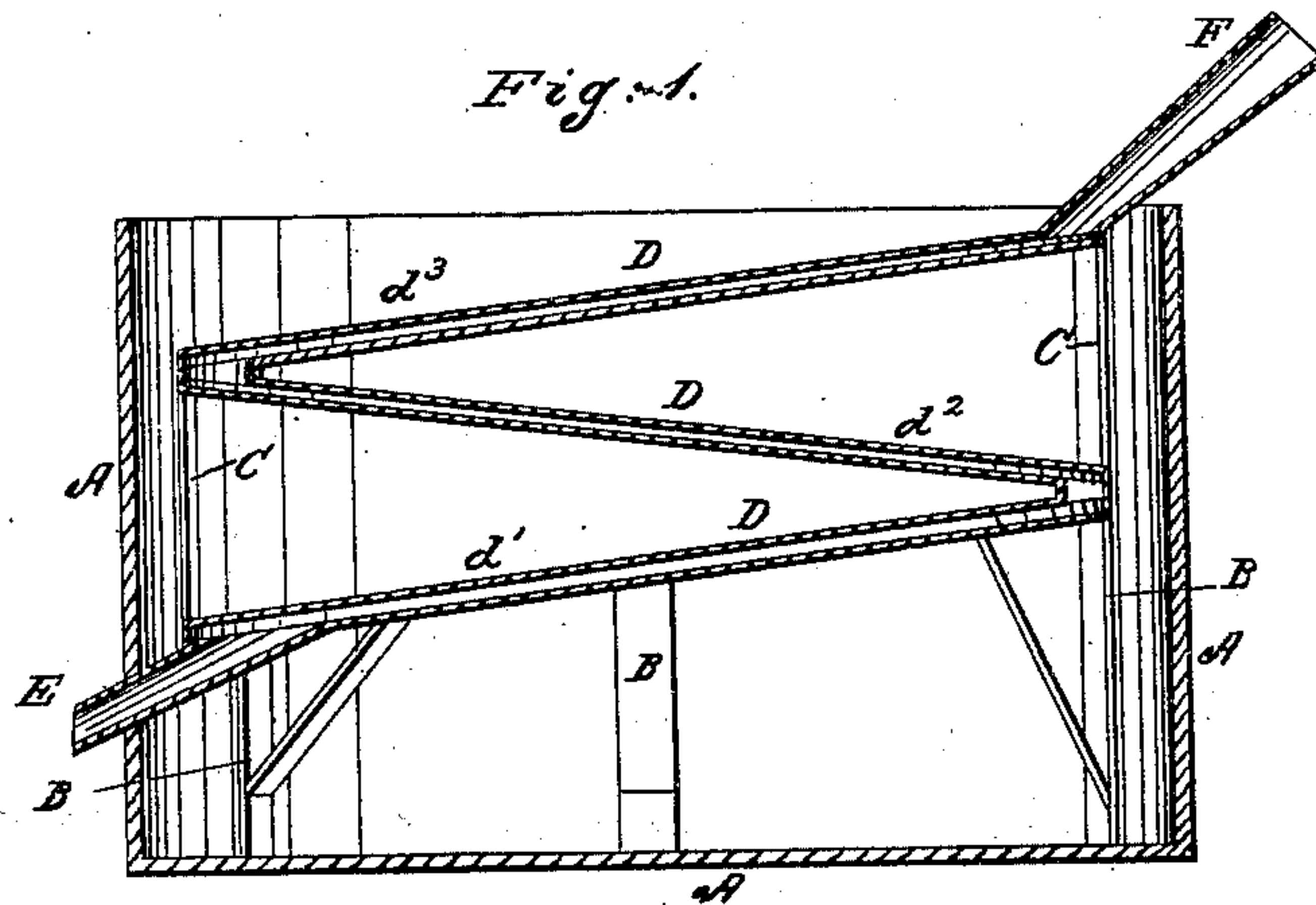


J. C. WHARTON.

Condenser.

No. 58,009.

Patented Sept. 11, 1866.



Witnesses:

J. W. B. Corington
Jas. A. Service.

Inventor:

J. C. Wharton.
Per Munroe &
Attys.

UNITED STATES PATENT OFFICE.

J. C. WHARTON, OF NASHVILLE, TENNESSEE.

IMPROVED CONDENSER.

Specification forming part of Letters Patent No. 58,009, dated September 11, 1866.

To all whom it may concern:

Be it known that I, J. C. WHARTON, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and useful Improvement in Condensers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical section of my improved condenser, taken through the line $x x$, Fig. 2. Fig. 2 is a top or plan view of the same.

Similar letters of reference indicate like parts.

My invention has for its object to furnish a condenser by means of which the products of distillation may be condensed quickly and thoroughly; and it consists of a number or series of hollow disks constructed and connected with each other, as hereinafter more fully described.

A is the tub or tank in which the condenser is placed, and through which a stream of cold water is made to flow continuously by any convenient known means. B are the supports which sustain the condenser. They are attached to the lowest disk of the series, and rest upon the bottom of the tank, as shown.

C are braces or supports which are attached to the edges of adjacent disks, as shown in Fig. 1, to support them and keep them in their proper relative positions.

D are the disks, which are made hollow—that is to say, they are each made of sheets of metal of the desired size and form, secured to each other at their edges. The distance of these sheets or plates apart should be from one-eighth of an inch to an inch, according to the size and capacity of the condenser.

The lower disk, d' , should be set inclined, as shown, and should have an outlet, E, at its lowest point. The second disks, d^2 , should in-

cline in the opposite direction from the disk d' , and a connection should be formed between the highest point of disk d' and the lowest point of disk d^2 . This connection may be made by bringing the said disks into contact at these points, and forming an opening from one to the other, or a short pipe may be interposed. The third disk, d^3 , should incline in the opposite direction from disk d^2 —that is, it should be parallel with disk d' —and the same connection should be made between disks d^2 and d^3 as between disks d' and d^2 . To the highest point of the upper disk of the series should be attached an inlet-pipe, F, through which the steam or vapor to be condensed may be introduced from the still.

The size of the disks and the number in the series will depend upon the requirements of each case—that is, upon the amount of work to be done. It is better, however, though not essential, to form the series of an odd number of disks, as by this arrangement the outlet and inlet pipes are brought on opposite sides of the tank A, and thus do not interfere with each other.

In this condenser the vapor is exposed to the action of the cold water in thin sheets, thus exposing a greater amount of surface to the cold water, and exposing it in a smaller body than is possible to be done when a worm is used, by which means the operation of condensation is very much more rapid.

I claim as new and desire to secure by Letters Patent—

An improved condenser formed of a series of hollow disks, D, constructed and connected with each other substantially as herein described, and for the purpose set forth.

J. C. WHARTON.

Witnesses:

W. B. WALLACE,

WM. H. WHARTON, Jr.