

J. S. SNIDER
Cistern.

No. 159,364.

Patented Feb. 2, 1875.

Fig. 1.

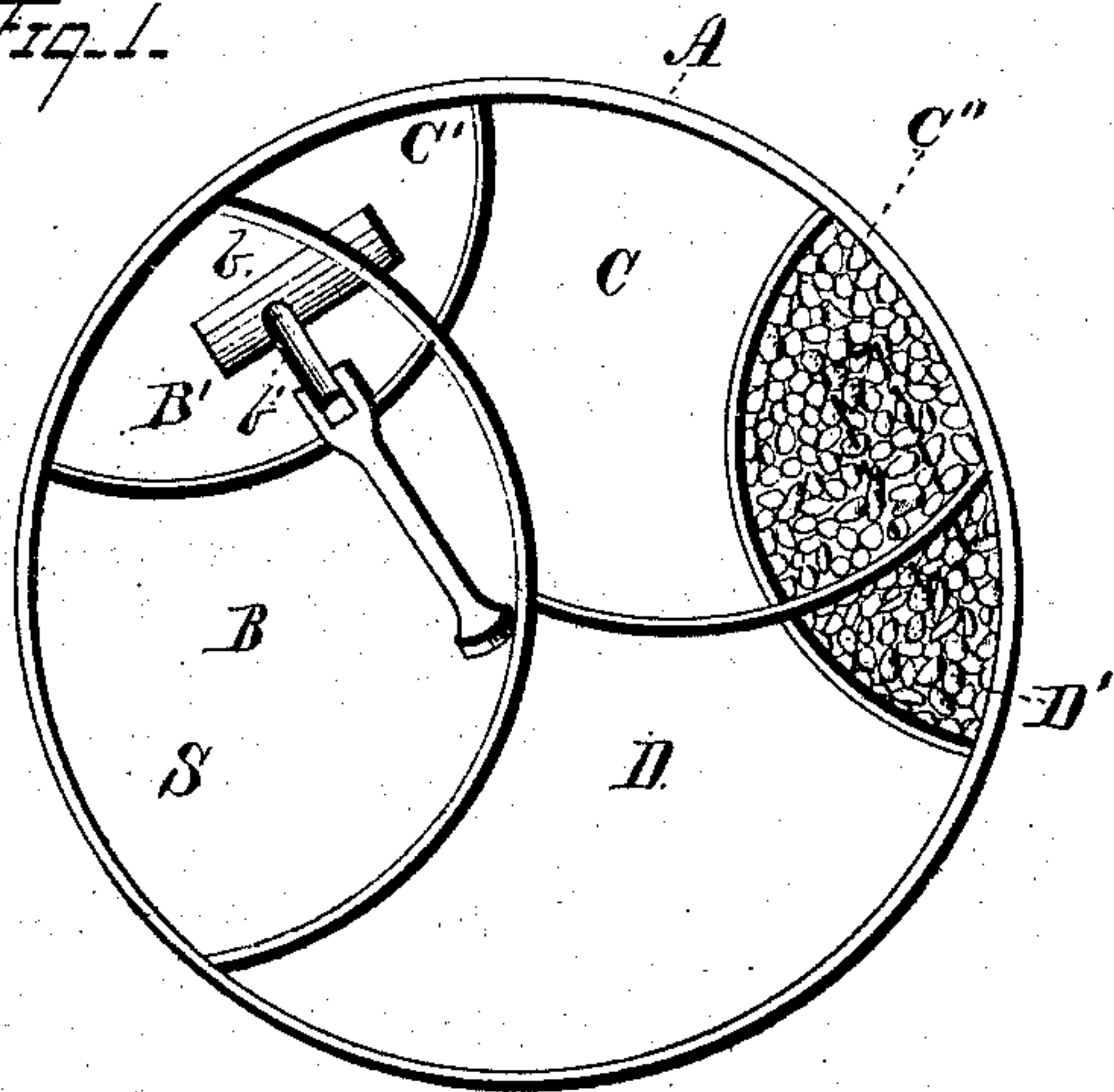


Fig. 2.

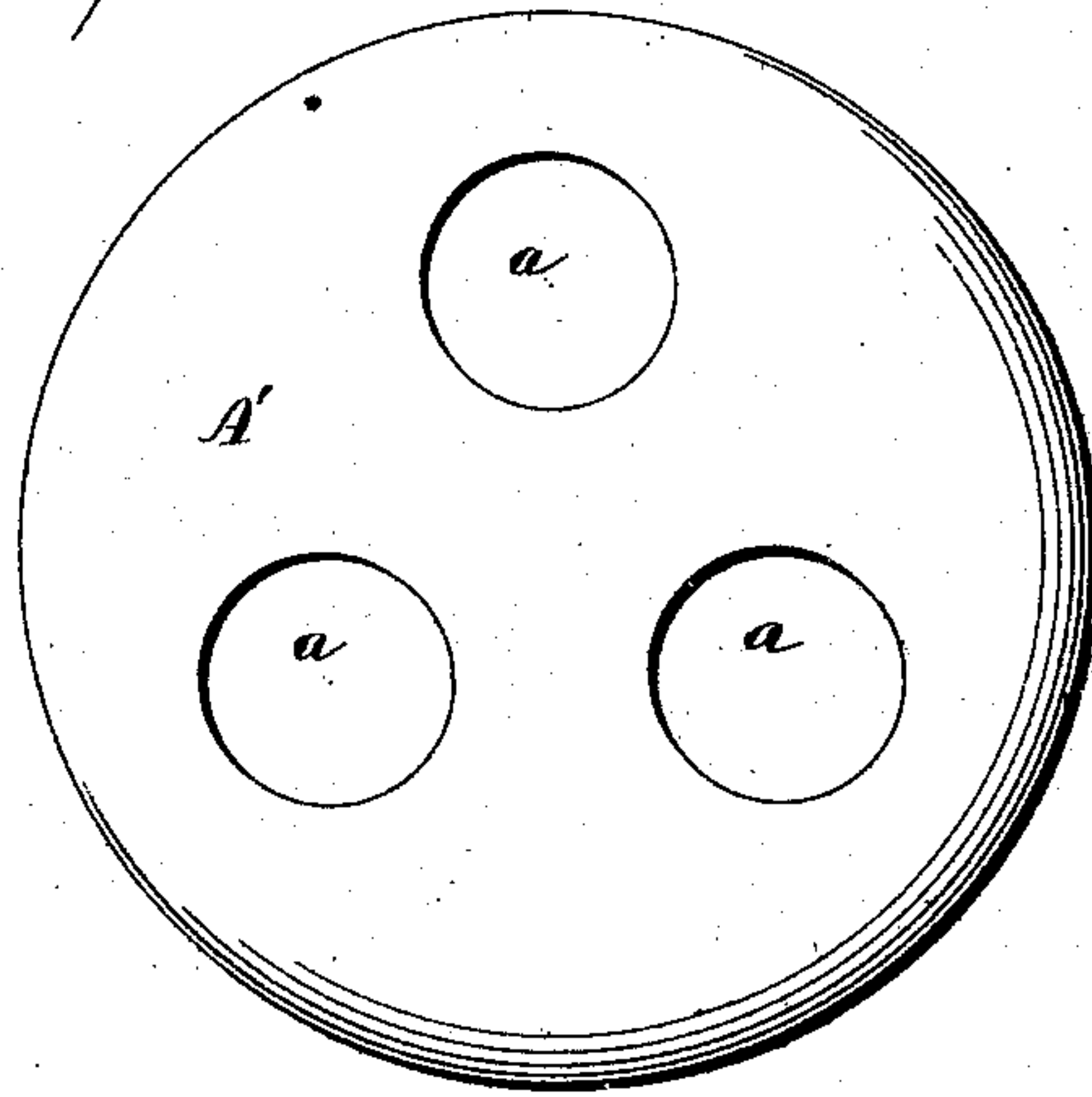
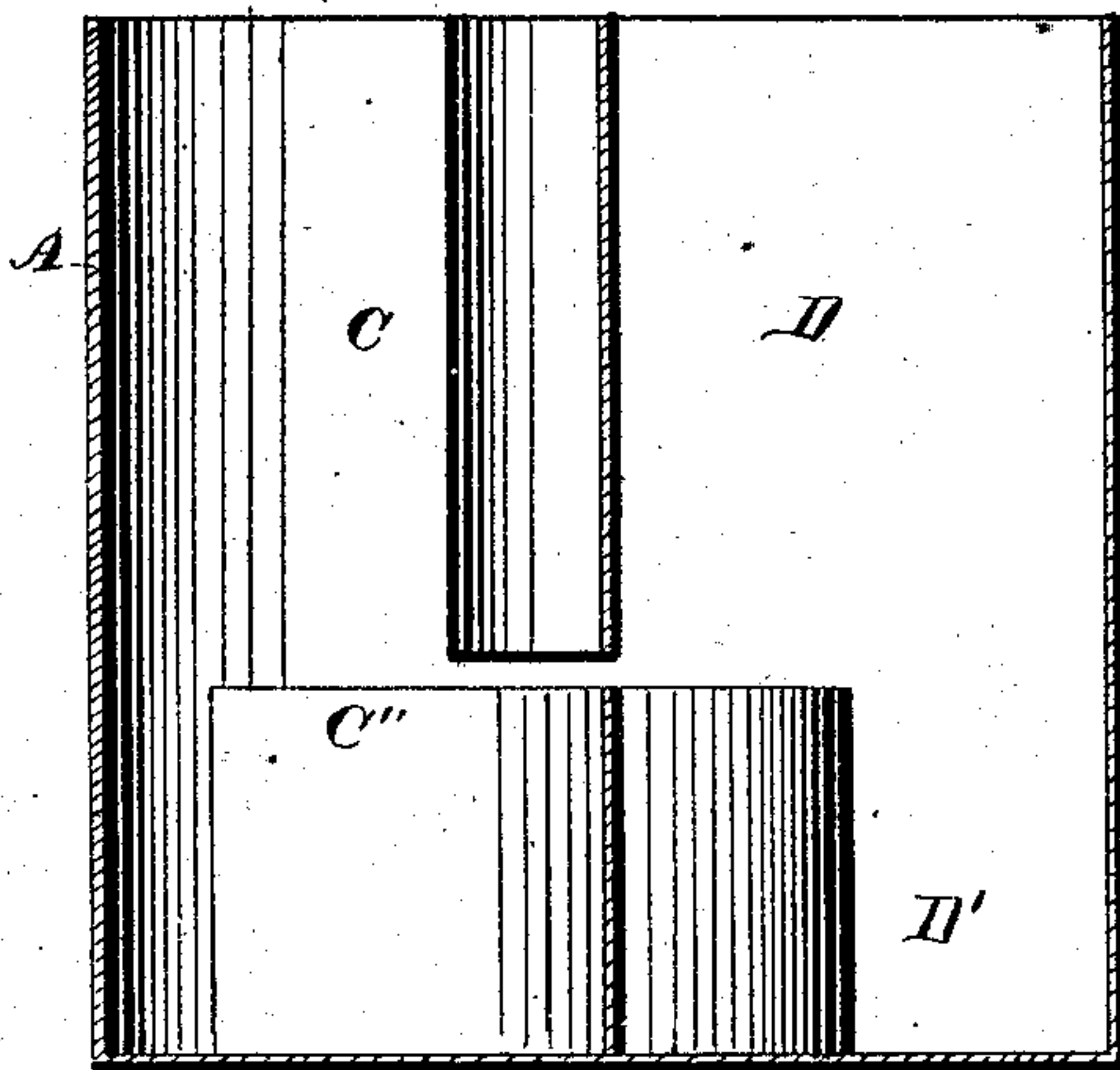


Fig. 3.



WITNESSES
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JOHN S. SNIDER, OF LANCASTER, OHIO.

IMPROVEMENT IN CISTERNS.

Specification forming part of Letters Patent No. **159,364**, dated February 2, 1875; application filed August 3, 1874.

To all whom it may concern:

Be it known that I, JOHN S. SNIDER, of Lancaster, in the county of Fairfield and State of Ohio, have invented certain new and useful Improvements in Cisterns; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in cisterns.

In the drawings, Figure 1 represents a plan view of my cistern with the top removed, one system of filters being empty, so as to show the connecting-pipe between the two chambers with its stop-cock arrangement. Fig. 2 is a plan view of the top of my cistern. Fig. 3 is a view, part in section and part in side elevation, of the inside of one of the chambers of my cistern, showing the filter-wall therein.

My invention consists in the various parts and combinations as hereinafter specified and claimed, wherein A is the main body or reservoir, constructed of masonry, or from any suitable material preferable, fashioned in the shape of a cylinder, so as to resist strain and pressure. The main body A is provided with a roof, A', which may also be arched, as shown, and through which are made three traps or openings, a, leading into the chambers B, C, and D, into which I subdivide the main body or reservoir A. The partitions separating the chambers B, C, and D are built from the bottom to the roof of the cistern, thereby constituting each of the said chambers separate and independent. The reservoirs B and C are each provided with filters B' and C', placed opposite each other and against the partition separating the said chambers B and C. The walls of the filters B' and C' are made sufficiently high from the bottom of the cistern, so as to provide on the outside of the said filters what I term a "sediment-chamber," S, wherein the heavier impurities or particles of matter may be deposited before reaching the filters. These filters B' and C' are connected through the partition between them by the pipe b, provided with the stop-cock b', which may have a handle or key of such length as to enable the

stop-cock to be operated from above the cistern. In the chambers D and C are placed the filters D' and C'', set opposite each other, and connected by a pipe provided with a stop-cock, similar in manner and construction to the filters B' and C' of the chambers B and C, just described. The filters B' and C' and C'' and D' are filled with any suitably filtering material, and may be constructed in any suitable manner, inasmuch as the specific construction of the filters themselves forms no part of my invention.

The water is received, primarily, into the chamber B. This chamber may be made larger than the chambers C and D, as desirable, in order to contain more water, for reasons which will hereinafter appear. The arched or curved partitions separating the chambers of my cistern will withstand any pressure brought against them by the contained water much better than were said partitions plain walls. And this arched system is the plan upon which I prefer to construct the partition-walls between the chambers B, C, and D. The water, as it is first received into the chamber B, deposits a greater portion of its sediment upon the bottom of said chamber, and outside of the filter B', saving said filter to a material extent. By opening the stop-cock in the pipe connecting the filters B' and C', the contained water of the chamber B will be filtered and conducted at the same time into the chamber C through its filter C'.

It will be observed that the water will pass out of the filter C' in a calm and gentle manner, and passing quietly, as it does, to the filter C'', any foreign matter which will still be held in suspension will be deposited upon the bottom of the sediment-chamber of the compartment C, thus saving the filter C''. By opening the stop-cock between the filters C'' and D', the water may be again filtered and transmitted from the chamber C to the chamber D in an obvious manner, from whence it is drawn for use. Any desired quantity of water, be it more or less, may be admitted into the chambers C and D by means of the stop-cock arrangement in the pipes connecting them; and when desirable to clean any one of the chambers, or to empty it for repairs or other purposes, it may be isolated from its neighboring

chamber by the stop-cock arrangement, as hereinbefore described.

It will be seen that I accomplish the following: first, a thorough filtering and purifying of the water before it is drawn from the cistern; second, a means whereby the water to be used may be medicated, or treated in any desired manner, by the proper preparation of the filtering substance; third, a cistern safely and conveniently kept clean and in repair; fourth, a system of filtering and sediment chambers, whereby the said filtering substance can be used much longer without renewal, on account of the sediment-chambers, as herein described, receiving the main deposits of foreign matter; fifth, a cistern cheap and simple in its construction, and not liable to get out of repair; sixth, a cistern whereby cool and refreshing water can be drawn in the hottest weather, in case said cistern is built in the ground, or in case the compartment from which the water is drawn be provided with a little ice, inasmuch as any desired quantity of water, be it more or less, may be admitted into the chamber from which the water is drawn, thus being able to economize the ice used for cooling the water in said compartment.

I do not necessarily limit my device to its use as a cistern, inasmuch as, constructed on a smaller scale, its utility as a filter is sufficiently obvious.

I claim as my invention—

1. A cistern composed of two, three, or more separate and independent compartments or chambers, provided in their partition-walls with

adjustable openings or connections, placed in such a relation to filtering material that water or other fluid passing through one chamber into the other through said opening or connection between them shall be acted upon by said filtering substance, substantially as and for the purposes set forth.

2. A cistern provided with two, three, or more independent compartments, divided by one or more arched partitions, substantially as and for the purpose shown.

3. In combination with a cistern provided with two or more compartments, as described, a filter whose outside wall extends sufficiently up from the bottom of said cistern to provide around it the sediment-chamber S, substantially as and for the purpose shown.

4. In combination with the partition wall or walls of two or more compartments of a cistern, an adjustable connection between them, adapted to be operated from the outside of the cistern, substantially as and for the purpose shown.

5. A combination, in a cistern or filter, of the reservoir A, two or more independent compartments, B and C, and filters B' and C', said filters connected by an adjustable opening, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of July, 1874.

JOHN S. SNIDER.

Witnesses:

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