

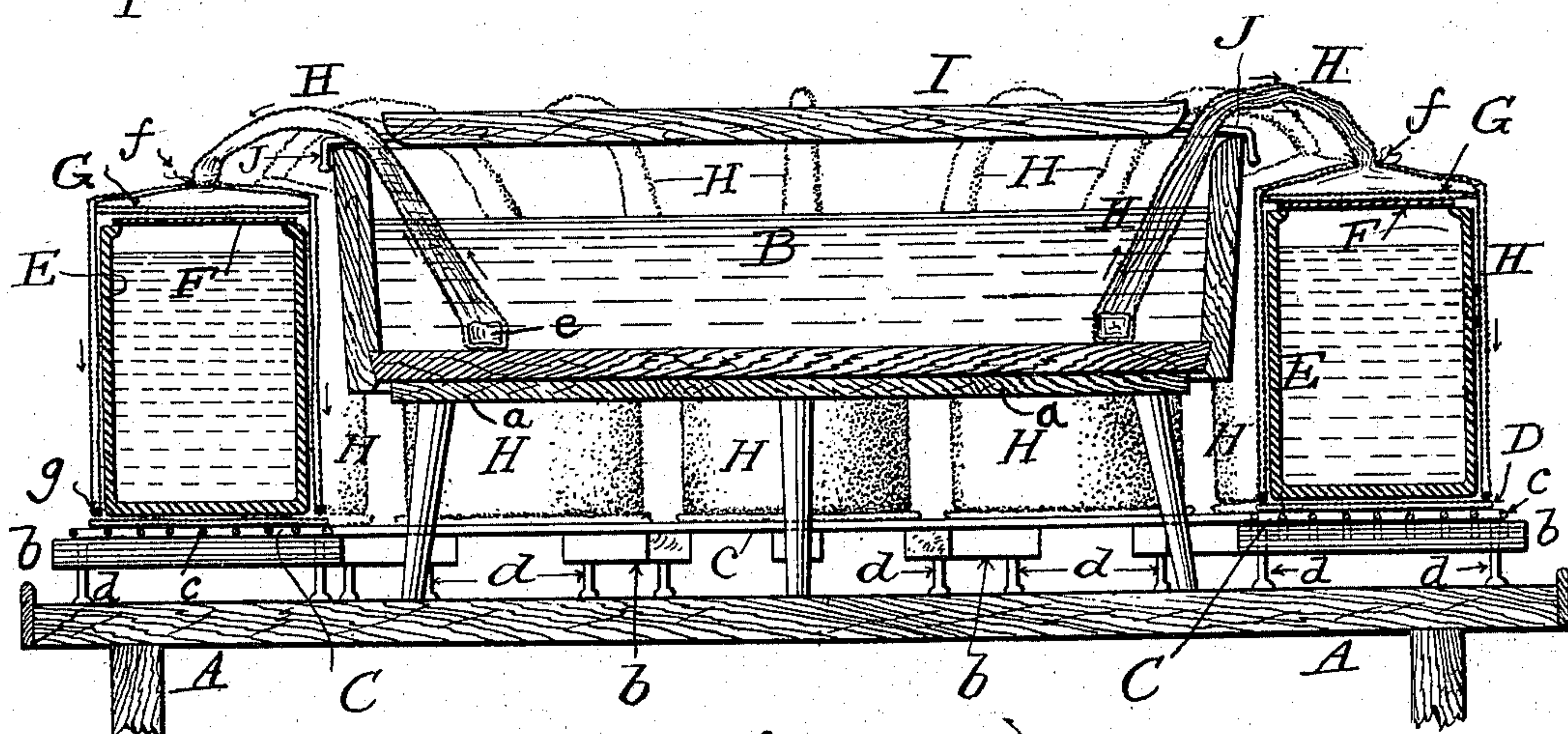
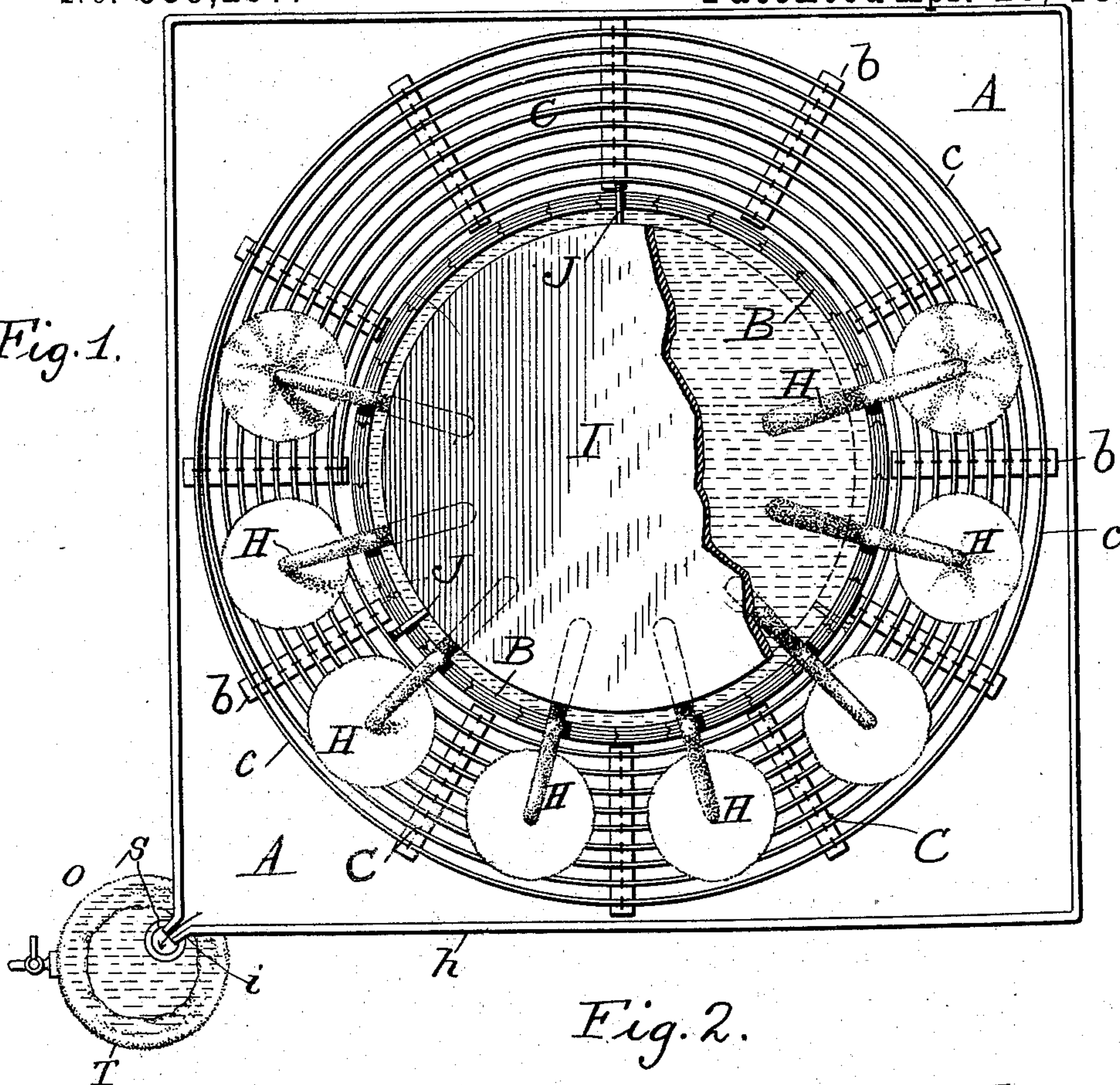
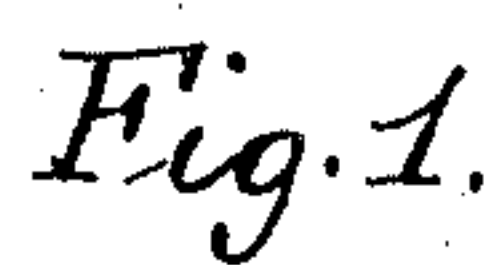
(No Model.)

2 Sheets—Sheet 1.

I. A. DODGE.
REFRIGERATING APPARATUS.

No. 559,267.

Patented Apr. 28, 1896.



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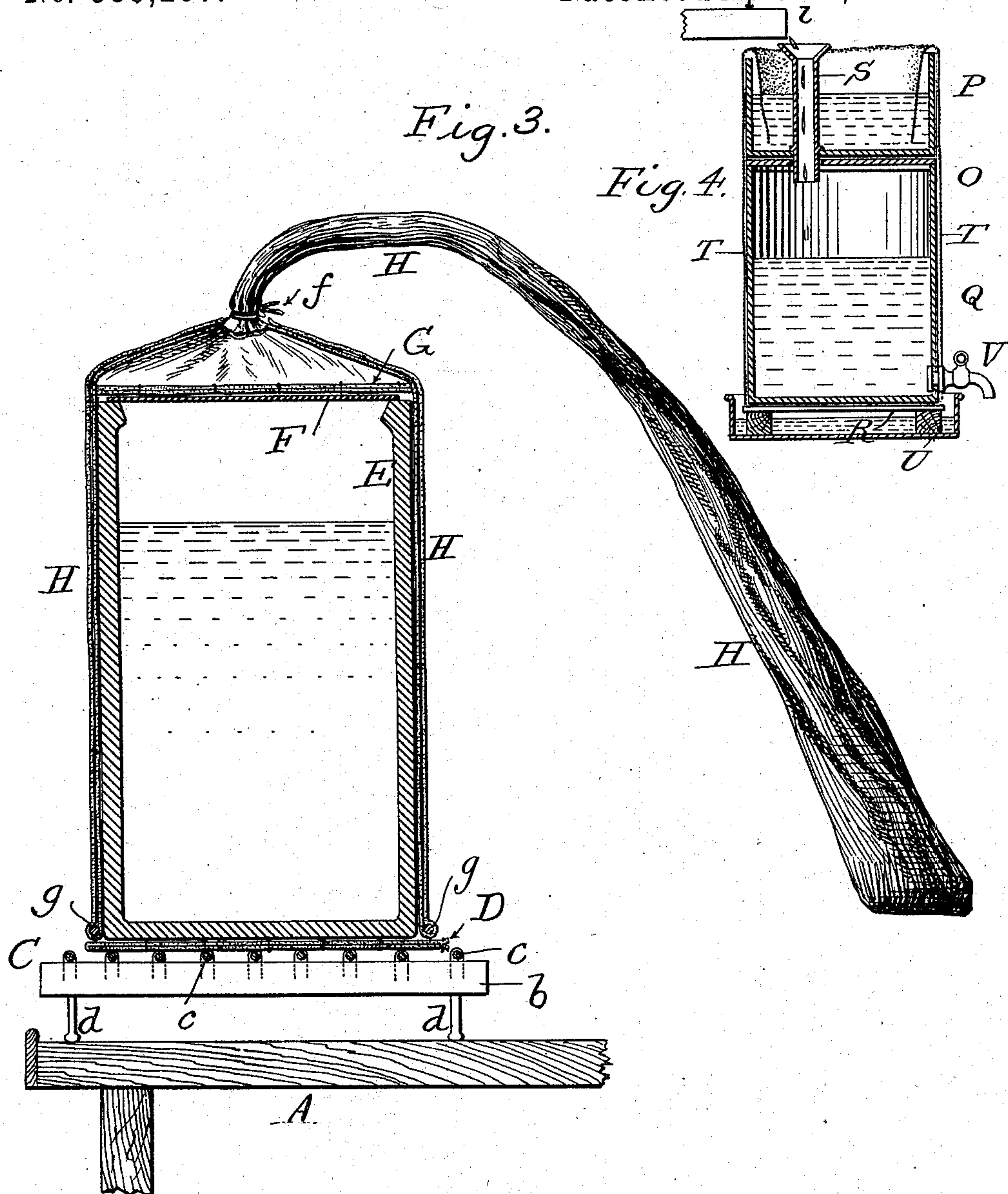
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UNITED STATES PATENT OFFICE.

ISRAEL A. DODGE, OF BRADY, TEXAS.

REFRIGERATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 559,267, dated April 28, 1896.

Application filed September 30, 1895. Serial No. 564,123. (No model.)

To all whom it may concern:

Be it known that I, ISRAEL A. DODGE, a citizen of the United States, residing at Brady, in the county of McCulloch and State of Texas, have invented certain new and useful Improvements in Refrigerating or Cooling Apparatus, of which the following is a specification.

My invention relates to refrigerating or cooling apparatus, the construction and operation of which will be hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of the apparatus; Fig. 2, a transverse vertical sectional view; Fig. 3, a sectional perspective view of a portion of the device, and Fig. 4 a sectional view of the water-cooling device.

The object of my invention is to produce a compact and efficient cooling apparatus, one which is simple in its construction and thoroughly effective in its operation.

In the drawings, A designates a table or similar support, upon which is placed a tub or reservoir B, elevated therefrom upon a stool or stand *a a*. The elevation of the tub permits the air to circulate freely thereunder, a matter of much importance, as will be hereinafter set forth. Around the base of the tub, and also supported on the table A, is a grid or frame C. This frame is composed of a series of bars or strips *b*, connected and held in proper relation to each other by a spirally-wound strand of wire *c*, which is fastened to the bars by staples or the like. Each bar or strip *b* is provided with a foot *d* at or near each end, which keeps the grid or frame elevated from the table or support and allows the air to pass thereunder. The wire *c*, the staples, and the feet *d* will be formed of such material as will not rust—such, for instance, as copper or galvanized iron.

Arranged around the tub upon the grid or frame C is a series of fibrous pads D, upon which are placed the jars or vessels E containing the substance to be cooled. The jars are provided with lids or covers F of a diameter slightly less than the outer diameter of the jar. Upon this cover is placed a pad G of fibrous or absorbent material. The pads D and G are made by sewing several thick-

nesses of flour-sacking bottom or any fibrous material together.

Surrounding the jar is a bag or covering H, made as clearly shown in Fig. 3. In practice this covering is usually made from a flour-sack, the closed or inner end having a weight *e* therein to hold it in its proper position in the tub. The portion of the covering that reaches over and into the tub is contracted, or its sides lie close to each other, so as to form a good conducting medium for the water. A cord *f* is tied about the bag midway of its length and defines this portion. The other end of the bag or covering which surrounds the jar both on its side and top is made of a double thickness of material, which extends to the cord *f*. In the mouth or open end of this bag H is placed a circular piece of wire *g*, of a diameter slightly larger than that of the jar. This aids in the ready placing or removal of the sack around the jar.

A cover I is provided for the tub, the cover being smaller than the diameter of the tub and held in place by pins or hooks J, which extend over the edge of the tub. An annular opening is thus formed around the cover, allowing the contracted portion of the bag H to pass freely into the tub, while the water in the tub is to a greater or less extent protected from evaporation.

In operation the pads D are disposed around the grid or frame C and the jars are placed thereon. The contracted end of the bag or cover H is then placed in the water in the tub and the larger open end passed down over the jar, the pad G, and the cover F thereof, until its lower end comes in contact with the pad D. The jar is thus entirely inclosed in a fibrous or absorbent covering to which the air has free access. The water, as is well understood, is drawn by capillary attraction up from the tub by means of the contracted portion of the bag H and finds its way down and around the jars E through the enlarged ends of the wetting-pads D and G. The evaporation of the water from the pads and the bag causes the jar and its contents to be cooled, as is well understood. The table or support for the apparatus is placed in a shady place and where it is open to the free circulation of air. The elevation of the tub

and the jars allows the air to circulate freely and come into contact with the sides and bottoms of the jars, rendering the apparatus highly efficient.

5 Instead of making the tub or reservoir circular it may be made rectangular in form and the jars arranged around or only on one side thereof.

The table is provided with a ridge *h* around
10 its outer edge and a drain *i* at one corner thereof, so that any water dripping from the apparatus will be caught by the cooler *O*. This cooler comprises an upper vessel *P* and
15 a lower vessel or reservoir *Q*, which is mounted upon a grid or support *R*, similar in its construction to the grid which supports the jars. The upper vessel *P* is provided with a
20 tube *S*, which extends through its bottom and opens into the lower vessel. An absorbent or fibrous covering *T* surrounds both vessels and has its upper end submerged in water contained in the upper vessel. The water
25 which drips from the covering *T* is caught in a pan or receptacle *U* and will from time to time be emptied back into the upper vessel. The cooler is so placed that the tube *S* will
30 be under the drain *i* of the table and the water passing therefrom will enter the lower vessel *Q*, where it is retained and cooled. A suitable faucet *V* is provided for drawing off
the water from the cooler.

It will be understood that the water placed
in the tube may or may not be pure; but in
any event the bags or coverings *H* act as fil-
35 ters, and by the time the water reaches the cooler it is quite pure. The coverings should be removed occasionally and thoroughly cleaned.

It is obvious that the jars and their attend-
40 ant parts may be multiplied to any extent desired; but the drawings represent and the description explains an apparatus such as I have used with marked success and which is well adapted for ordinary domestic use, having
45 proven capable of cooling an abundant supply of water and of preserving butter and milk for a good-sized family.

The actual embodiment of this invention
50 may be considerably varied; but for ordinary domestic use I prefer the form shown in the annexed drawings.

Having thus described my invention, what I claim is—

1. In combination with a table or support; a reservoir mounted thereon; a grid or frame 55 also mounted on the table; a series of fibrous mats placed upon the grid; a series of jars or vessels mounted upon the mats; and a series of fibrous bags or coverings surrounding the jars and entering the reservoir. 60

2. In combination with the table or support; a reservoir mounted thereon; a grid or frame also mounted upon the table; a series of fibrous mats disposed upon the grid; a series 65 of jars or vessels mounted upon the mats; a second series of mats mounted upon the jars; and a series of fibrous bags or covers surrounding the jars and entering the reservoirs.

3. In combination with the table or support; a reservoir mounted thereon; a cover for said 70 reservoir of a diameter less than that of the reservoir; pins or supports for said cover; a grid or frame mounted on the table; a series of jars or vessels supported upon the grid; and a series of fibrous bags or covers sur- 75 rounding the jars and entering the reservoir.

4. In combination with the table or support; an elevated reservoir mounted thereon; a cover for the reservoir substantially as de- 80 scribed; an elevated grid or frame mounted upon the table; a series of mats disposed upon the grid; a series of jars placed upon the mats; a second series of mats upon the top of the jars; a series of fibrous covers or bags 85 covering the jars and entering the reservoir.

5. A bag or covering for use in evaporating-coolers, comprising a contracted or narrow portion with a weight therein, a larger or bag- 90 like portion provided with a ring within its mouth, substantially as described.

6. In combination with the draining stand or table, a reservoir mounted thereon, a grid or frame also mounted upon the table; jars or vessels mounted upon said grid; and a se- 95 ries of fibrous bags or coverings surrounding the jars and entering the reservoir.

In witness whereof I hereunto set my hand in the presence of two witnesses.

ISRAEL A. DODGE.

Witnesses:

JOHN R. MCGEE,
D. C. TRAWELK.