

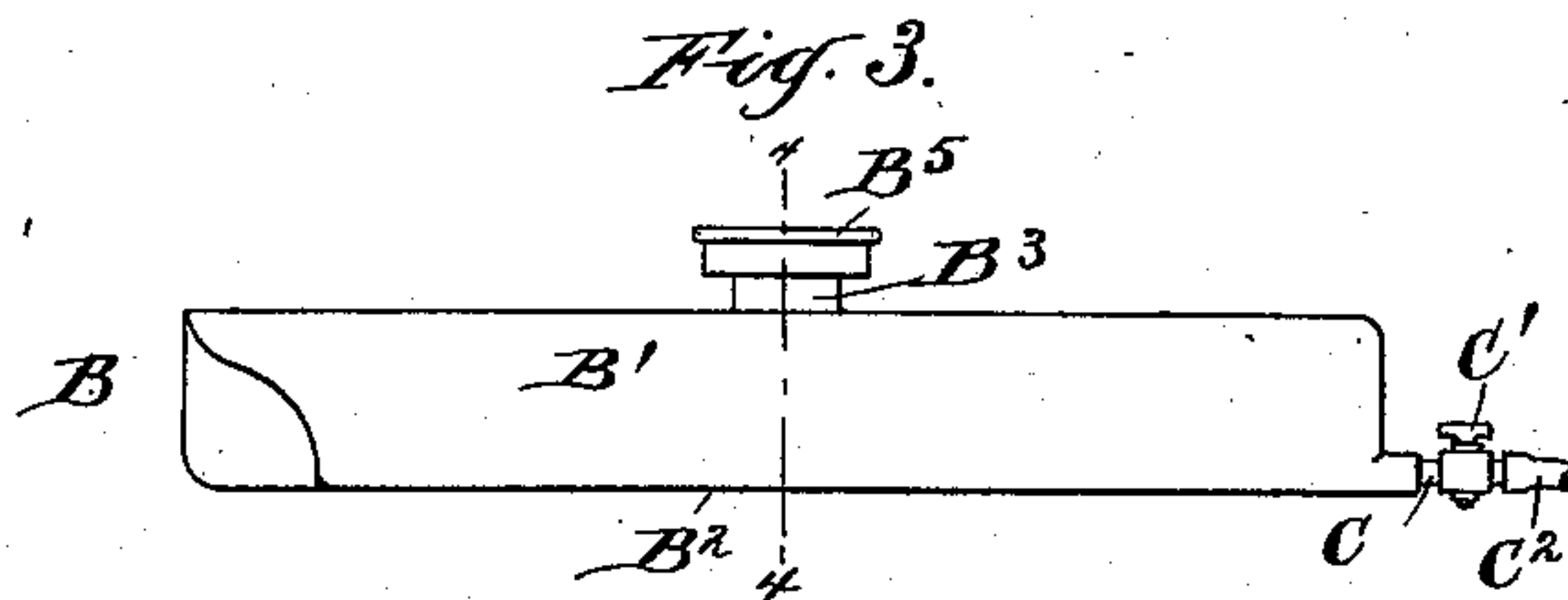
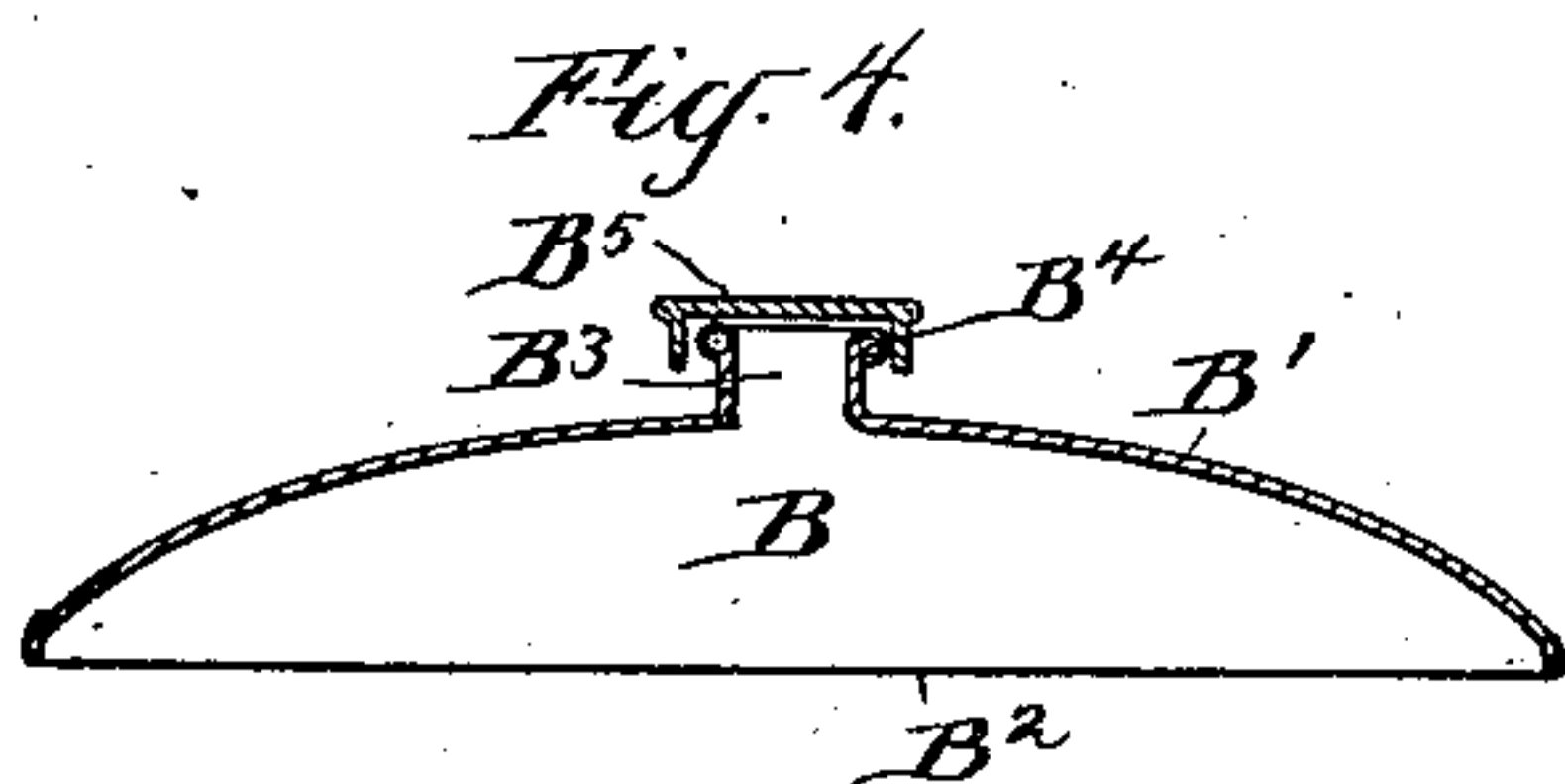
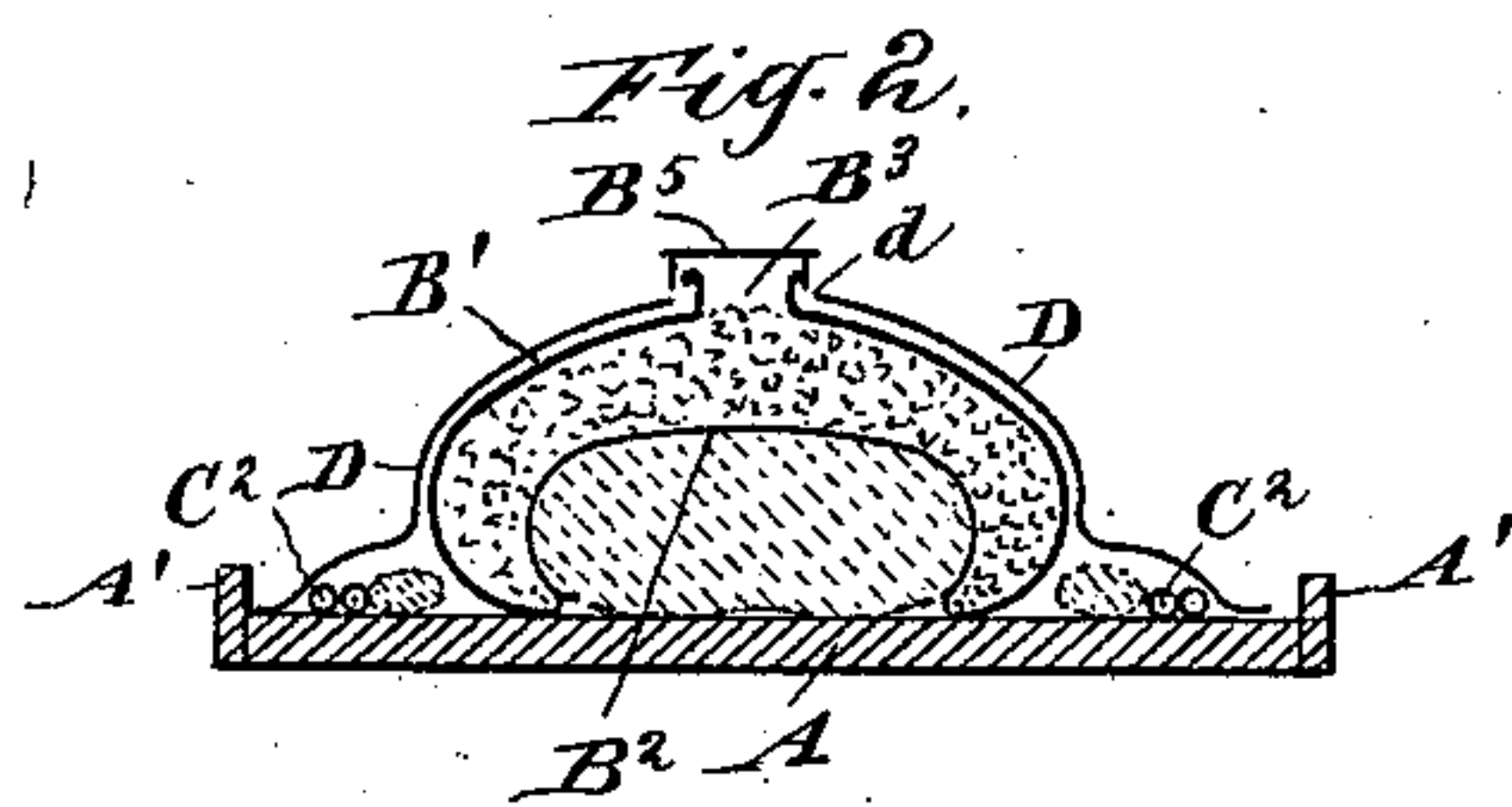
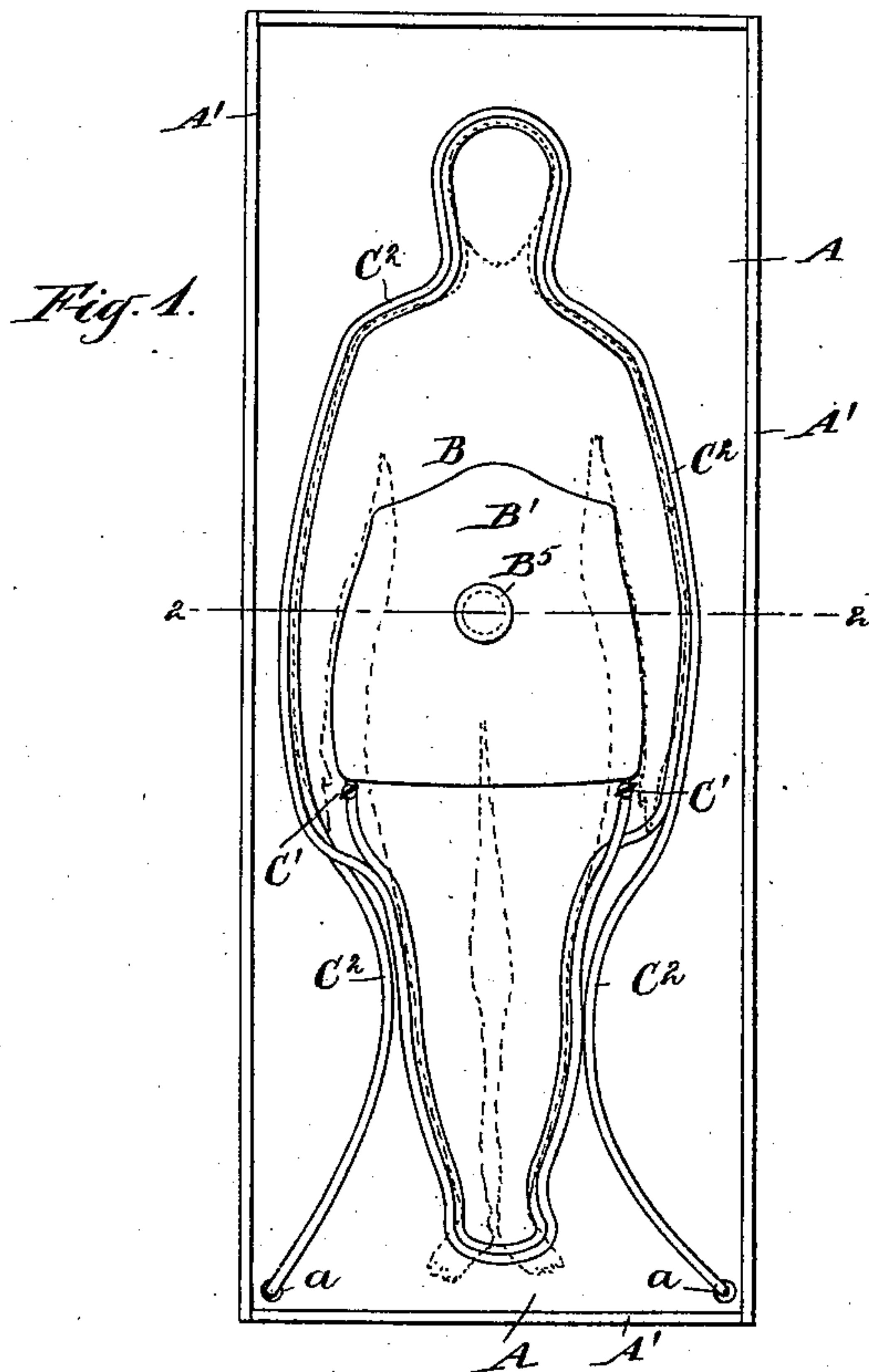
No. 614,108.

Patented Nov. 15, 1898.

P. E. HOMMELL.  
MEANS FOR PRESERVING CORPSES.

(Application filed Oct. 22, 1897.)

(No Model.)



Witnesses:  
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Charles H. Searle.



# UNITED STATES PATENT OFFICE.

PHILEMON E. HOMMELL, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO HIMSELF, AND ELLIS T. JONES, OF NEW YORK, N. Y.

## MEANS FOR PRESERVING CORPSES.

SPECIFICATION forming part of Letters Patent No. 614,108, dated November 15, 1898.

Application filed October 22, 1897. Serial No. 655,994. (No model.)

*To all whom it may concern:*

Be it known that I, PHILEMON E. HOMMELL, a citizen of the United States, residing in Jersey City, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Means for Preserving Corpses, of which the following is a specification.

The invention relates particularly to means for preventing the decay of those tissues and portions of the human body which are the first to decompose after dissolution. The ordinary means now usually employed are the ice-box and the embalming-needle. The first is objectionable on account of the size and cumbersomeness of the apparatus and the general obtrusiveness attending its introduction and use in the apartment and because of its liability to spread disease-germs. Embalming is preferable for many reasons; but there remains the objection, serious though largely sentimental, against the use of the needle and mutilation of the corpse. This process is, moreover, not always successful, especially in cases of certain diseases in which the tissues are greatly affected and putrefaction commences immediately. The ingredients of the embalming fluids frequently interfere with the chemist in making analytical examinations in cases of suspected poisoning.

My invention is based on the fact that decomposition first appears in the contents of the abdominal cavity and if arrested there the remaining portions of the body will in ordinary temperatures resist decay for the short time usually elapsing between death and burial.

The apparatus I employ consists of a pouch or bag of suitable material normally convex on the upper face and plain on the lower face, having an outline shaped to approximately conform to the abdomen and adjacent surfaces, adapted to receive a freezing mixture, preferably crushed ice and coarse salt, the melting of which rapidly absorbs the heat from those portions and reduces the temperature below the freezing. The upper portion is thicker to better insulate the freezing mixture from the air and surrounding objects, while the lower face is thinner to more readily

allow transference of heat from the body to be cooled. The result is the actual congelation of the easily-decomposed tissues in whatever state they may be in. Decomposition is immediately arrested, and the period during which the corpse may be kept in a sanitary condition is extended to the time at which decomposition attacks the longer-resisting parts. I provide means for draining the bag, and in the most complete form use the cold brine in reducing the temperature of the more remote portions. Provisions are also made for insulating the pouch and its contents from the heat of the atmosphere and surrounding objects, so that the effect is, so far as may be, centralized on the abdominal portions.

The entire apparatus may be folded to occupy but little space and carried unobtrusively in a small package or hand-bag.

The invention supplies a simple but highly-effective means for temporary preservation and avoids the introduction of embalming fluids, with their objectionable features.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a view from above, showing the apparatus in use with the insulating covering or blanket removed. Fig. 2 is a section taken on the line 2 2 in Fig. 1, showing the blanket in place. The remaining figures are on a larger scale. Fig. 3 is a side view of the pouch alone, and Fig. 4 is a corresponding section on the line 4 4 in the preceding figure.

Similar letters of reference indicate the same parts in all the figures.

A is a cooling-board, which may be of any ordinary or approved construction. I prefer the form shown having a raised ledge A' on all sides and two openings *a a* in the corners at one end.

B is a bag or pouch of sufficient area to completely cover the lower portion of the body and extend downward upon the thighs and upward to and upon the chest. The upper part, forming the top and sides of the pouch, is of strong closely-woven fabric incorporated with rubber and vulcanized and



is of greater area than the bottom  $B^2$ , which is of a single sheet of thin vulcanized rubber of sufficient strength when reinforced by the top  $B'$  to resist the slight pressure of water and the handling to which it is subjected in use. The whole forms a convex waterproof receptacle having a flat bottom capable of folding into small compass and easily transported in a small package. A cylindrical neck  $B^3$ , opening into the interior, is attached at about the center of the top  $B'$  and is held distended by an inclosed ring of metal, forming the lip  $B^4$ , and  $B^5$  is a close-fitting cap serving to close the opening when required. At opposite corners at one end are inserted the metal nipples or short tubes  $C$ , provided each with a stop-cock  $C'$  and shaped to receive and hold the long vulcanized-rubber drain-tubes  $C^2$ , which may be easily detached, if desired, for convenience in carrying.

In use the pouch is laid upon the corpse, preferably placed upon the board  $A$  in the position shown in Fig. 1, with the lower face  $B^2$  covering the abdomen and adjacent portions, and crushed ice and coarse salt in the proportions to form a freezing mixture, are introduced through the opening  $B^3$  until the pouch is nearly filled, care being taken to crowd the edges well under the sides of the body to insure close contact therewith of the lower face  $B^2$  over as great an area as may be. The weight of the contained mixture, acting on the thin flexible sheet forming the lower face, aids in inducing this intimate contact, and the insulating effect of the thin sheet being very slight the heat from the covered portions of the body is rapidly absorbed by the mixture. The remaining space in the pouch is then filled and the cap  $B^5$  applied to tightly close the opening and exclude warm external air. The drain-tubes  $C^2$ , controlled by the cocks  $C'$ , are then attached to the nipples  $C$  and passed through the holes  $a$  to lead the water to any suitable receptacle placed for the purpose beneath the board  $A$ . I prefer to use a vulcanized-rubber tank, (not shown,) which may also, for convenience, be folded and carried with the pouch.

In practice it will be found advantageous to use long drain-tubes and lay them in convolutions following the outline of the corpse along the line of contact between the latter and the board, causing the cold brine to circulate through one or more complete circuits before escaping and aiding materially in lowering the temperature of those portions not covered by the pouch. The ledge  $A'$  serves to retain the tubes in place and prevent their accidental fall from the board. The whole is then covered with a sheet or blanket  $D$ , of any good non-conducting material, laid with its edges in smooth contact with the board adjacent to the body and serving to insulate the corpse from any external sources of heat. The blanket  $D$  is provided with an orifice  $d$ , matching to the neck  $B^3$ , to allow the removal of the cap  $B^5$  and the introduction of addi-

tional ice and salt as the supply is exhausted without admitting warm air to the body.

My experiments indicate that thus conditioned the entire contents of the abdominal cavity will in a few hours be not only chilled sufficiently to arrest decomposition, but will be actually frozen, and with the refrigerating effect of the encircling drain-tubes the corpse may be preserved for several days and maintain its resistance to decay after the removal of the apparatus for a much longer period than is usually required.

Modifications may be made in the forms and proportions within wide limits without departing from the principle or sacrificing the advantages of the invention, and parts of the invention may be used without the whole.

Any of the well-known folding cooling-boards may be substituted for the form here shown, and the special covering-blanket may be omitted.

The stop-cocks  $C'$ , controlling the flow to the drain-tubes, are not essential.

Other freezing mixtures or artificial cooling means may be substituted for the ice and salt described.

I claim—

1. A bag or pouch of flexible waterproof material adapted to receive and contain a freezing mixture, the upper convex portion wider than the lower plane portion so as to allow the pouch to follow the outline of the body and extend downward toward the line of contact with the cooling-board, the said upper portion being thicker, for insulation, and the said lower portion thinner, to better allow the transfer of heat and to lie in close contact with the irregular surface to be cooled, all combined and arranged to serve substantially as and for the purposes herein specified.

2. The bag or pouch  $B$  of flexible waterproof material, adapted to receive and contain a freezing mixture, the insulated thicker upper portion  $B'$ , and the thinner lower portion  $B^2$  adapted to better allow the transfer of heat and lie in close contact with the irregular surface to be cooled, combined and arranged to serve substantially as and for the purposes herein specified.

3. The board  $A$  having the holes  $a$ , the ledge  $A'$  thereon, in combination with the pouch  $B$ , the neck  $B^3$  thereon, cover  $B^5$ , nipples  $C$ , cock  $C'$  and long drain-tubes  $C^2$  having a length sufficient to be placed around the body on the line of contact with said cooling-board, and the covering-blanket  $D$  having the opening  $d$  matching to and receiving said neck, all arranged to serve substantially as and for the purposes herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

P. E. HOMMELL.

Witnesses:

ROBT. CONNOR,  
CHARLES R. SEARLE.