

No. 711,465.

Patented Oct. 21, 1902.

H. BRADSHAW.

TANK.

(Application filed June 13, 1902.)

(No Model.)

Fig. 2.

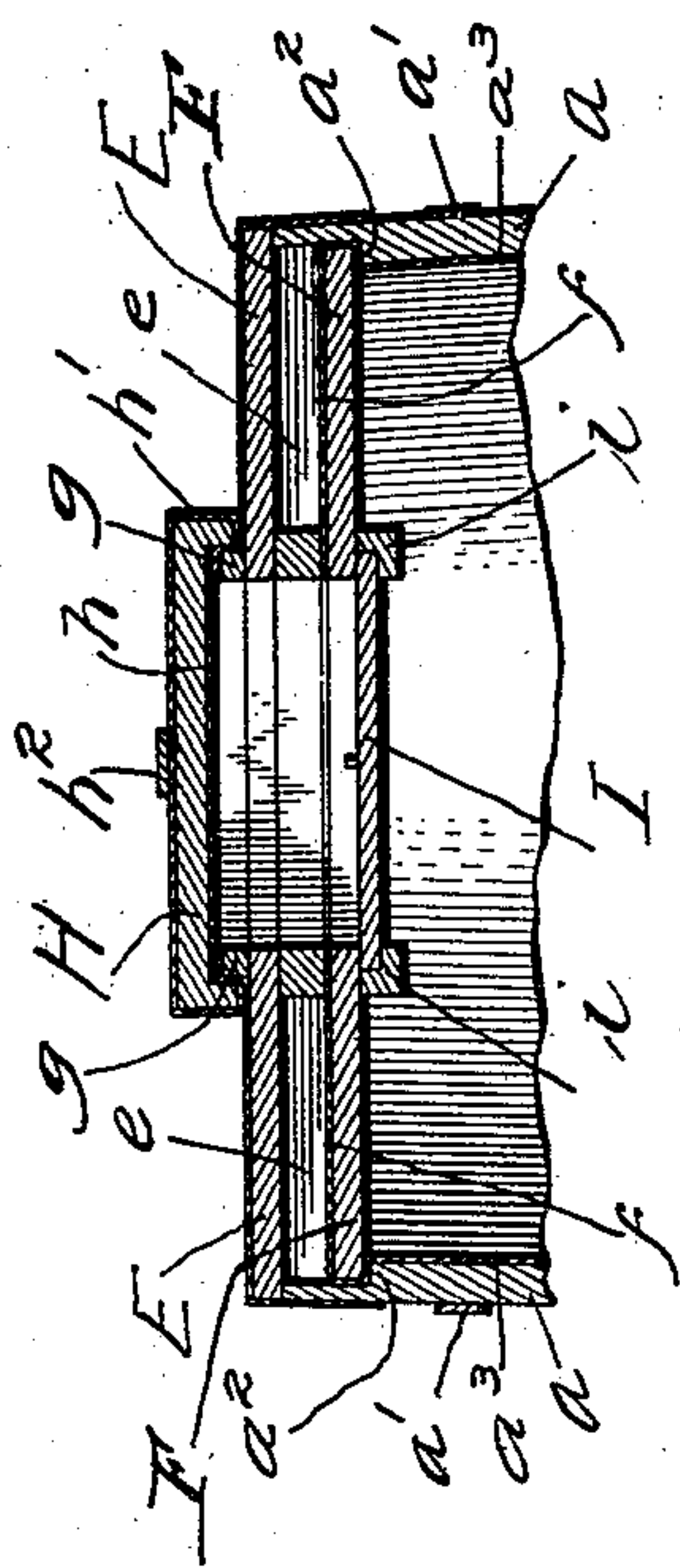


Fig. 3.

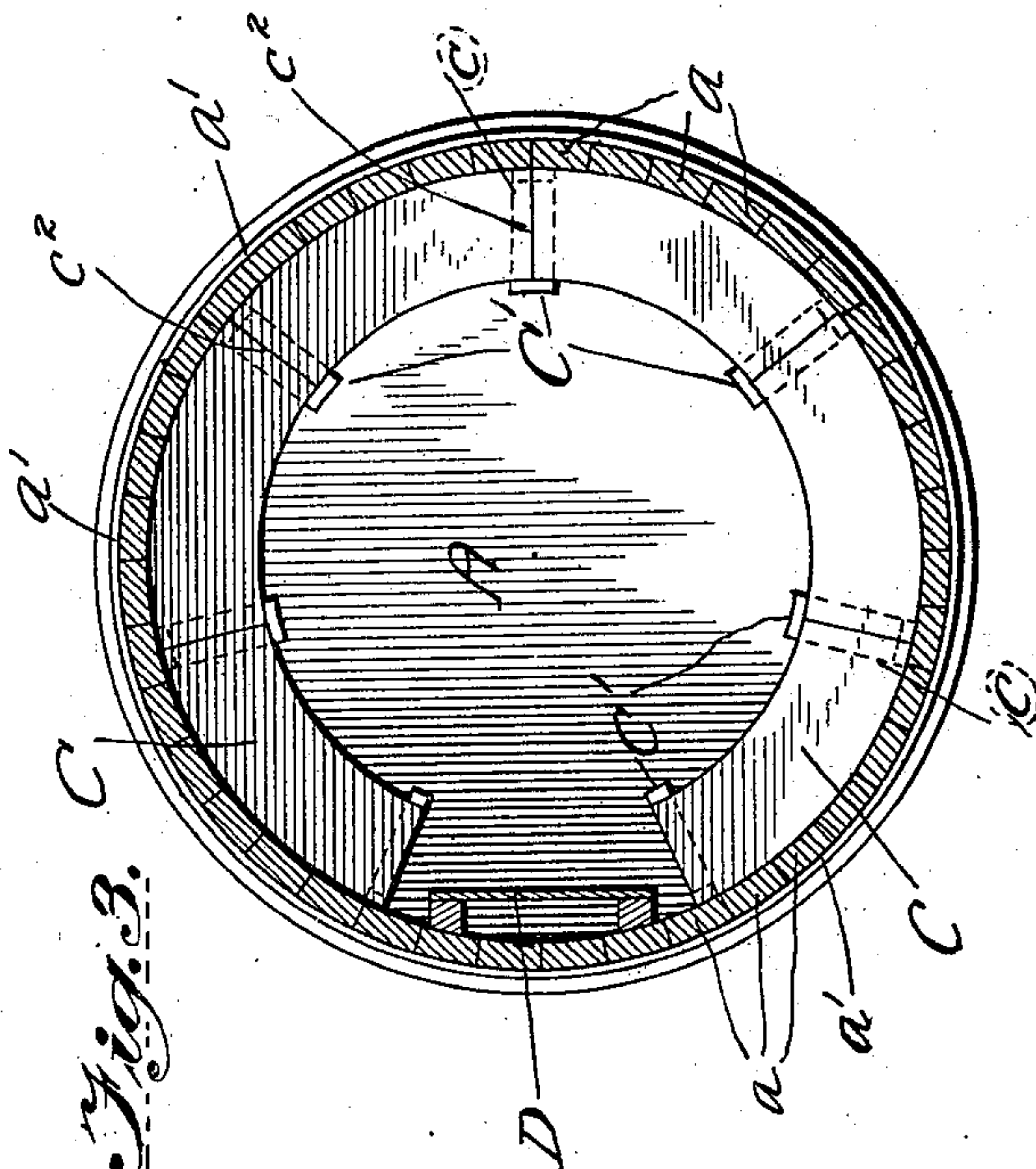
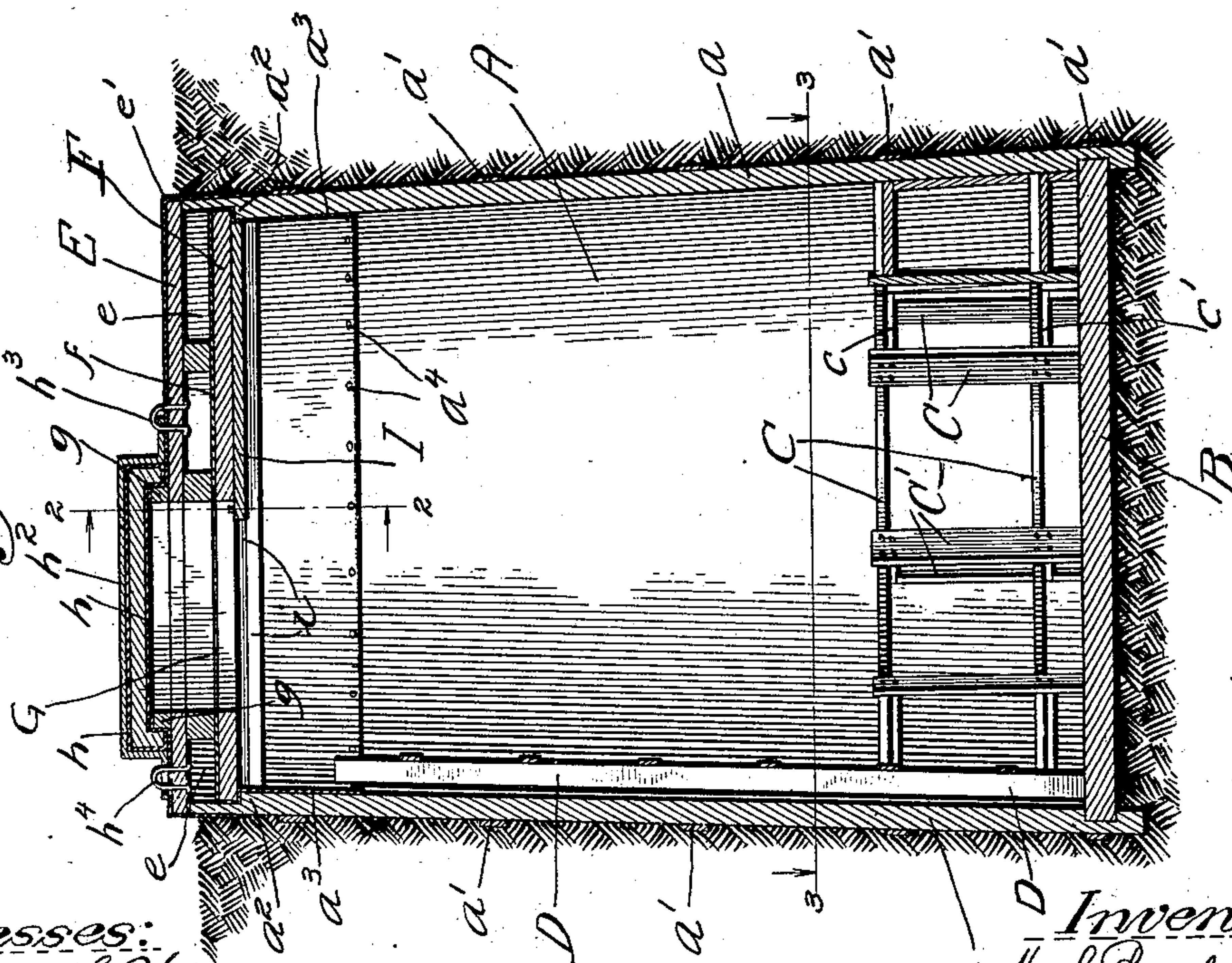


Fig. 1.



Witnesses:

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TANK.

SPECIFICATION forming part of Letters Patent No. 711,465, dated October 21, 1902.

Application filed June 13, 1902. Serial No. 111,465. (No model.)

To all whom it may concern:

Be it known that I, HUGH BRADSHAW, a citizen of the United States of America, and a resident of the city of Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Tanks, of which the following is a specification.

My invention relates to a form of tank adapted to be sunk into the ground for the purpose of inclosing and protecting various devices from freezing. For example, in railway-signaling systems it is the practice to employ batteries for operating the various devices of the system, and it is highly desirable that these batteries be protected against weather attacks, and particularly against freezing.

To such end, therefore, my invention contemplates an improved form of tank particularly adapted for inclosing a number of batteries. The top or cover portion of the tank, although constructed so as to be practically frost-proof, is nevertheless so arranged as to afford ready and convenient access to the batteries. The nature and advantages of my invention will, however, hereinafter more fully appear.

In the accompanying drawings, Figure 1 is a vertical section of a tank embodying the principles of my invention, the same being shown sunk in the ground and the arrangement being particularly applicable to the inclosing of the batteries employed in railway or other electrical signaling system 3. Fig. 2 is a section through the upper portion of the tank and also through the top or cover portion on line 2 2 in Fig. 1. Fig. 3 is a horizontal section on line 3 3 in Fig. 1.

As thus illustrated, my invention may comprise a tank-body A, constructed of staves a and held together by hoops or connecting-bands a' . The said tank-body is preferably constructed to flare at its bottom, and is provided with a floor or bottom wall B. Upon this floor or bottom wall a number of shelves or racks C are mounted, so as to provide suitable means for supporting the batteries. These shelves are preferably circular in form and are supported by a number of uprights C' , connected by upper and lower cross-pieces c and c' . Each shelf is preferably composed of a number of semicircular pieces having

their ends separated at one side, so as to provide suitable space for the ladder D. Each joint or juncture c^2 between the sections of each shelf is preferably located above one of the cross-pieces c and c' , as shown in Fig. 3. The shelves thus made circular to fit the curved inner surface of the upright walls of the tank, provides a maximum of shelf-surface, and at the same time a large and ample amount of floor-space is left at the center:

As shown in Fig. 1, the tank is preferably sunk to a depth to have its top or upper surface practically flush with the surface of the ground. The top or cover portion of the tank is preferably composed of upper and lower sections E and F. With respect to the said lower section the upper portion of the tank-body is preferably formed with a supporting-shoulder a^2 . A layer of tarred paper a^3 is preferably secured around the inner surface of the upper portion of the tank and extends upwardly between the edges of the cover-section F and the inner surface of the tank-body. With this arrangement the lower flat cover-section is supported by the said shoulder a^2 , the tarred paper being interposed, as shown in Fig. 1. A sheet of tarred paper f is preferably laid flatwise upon the top of the cover-section F. The upper cover-section E can be mounted upon the upper edge of the tank-body, the location of the shoulder a^2 being preferably such as to, in effect, provide an air-space e between the flat upper and lower cover-sections. A sheet of galvanized iron or other suitable metal e' can be applied to the outer surface of the cover-section E and also to the outer surface of the upper portion of the tank-body. The built-up cover thus provided is provided at one side with an opening G, whereby an attendant may enter the tank and descend by the ladder to the floor upon which the battery-shelves are supported. A ridge or flange g is preferably provided around the edge of this opening or manhole G. A cap H can be arranged to fit over this flange or ridge, as shown in Figs. 1 and 2. Preferably this cap is provided on its under side with a layer of tarred paper h or other like material, and its outer surface can be protected by a sheet of galvanized iron h' or other like metallic covering. A metal bar h^2 preferably extends across the top of

the cap, one end of said bar being hinged by a staple h^3 to the cover of the tank and the other end of said bar being provided with an opening adapted to receive a similar staple h^4 . This staple h^4 is adapted to receive the shackle of a padlock, by which arrangement the cap can be securely locked in place. As a further precaution against freezing the under side of the cover can be provided with a sliding door I, adapted to slide back and forth in the ways i . With this sliding door adjusted into position to close the opening G an air-space is provided similar to the air-space e , it being observed, however, that this space e can be a permanently-sealed or dead-air space—that is to say, it can be a dead-air space when the cover is constructed as shown and described and when the manhole is walled up from top to bottom, as shown in the drawings. Thus constructed the cap and cover of the tank are adapted to effectually protect the batteries against freezing and is practically dust and water proof. In case the earth falls away from the upper portion of the tank the band or sheet of tarred paper a^3 prevents the entrance of frost or cold air. Tin caps a^4 or other suitable means may be employed for securing the paper in place. The batteries can be arranged upon the shelves C, it being understood that the electrical connections can be made in any suitable or desired manner.

I claim as my invention—

1. A tank provided at its top with a cover composed of upper and lower sections having an intervening dead-air space and having also a manhole provided with upper and lower doors with an intervening air-space between them.

2. A tank provided at its top with a fixed cover composed of upper and lower sections with an intervening dead-air space, and of suitable layers of sheet material applied to the upper surface of said sections.

3. A tank provided at its top with a shoulder, a lower cover-section resting on said shoulder, a layer of sheet material upon said cover-section, an upper cover-section, an air-space between the two cover-sections, suitable sheet material applied to the outer surface of said upper cover-section, a manhole extending through the two cover-sections, a cap arranged to cover the said manhole, and a sliding door mounted upon the under side of the lower cover-section and adapted to close the said manhole.

4. A tank provided with a cover composed of upper and lower sections with an intervening air-space, a manhole extending through the said cover, a sliding door for closing the under side of said manhole, a cap for covering the said manhole, there being an air-space between the said cap and sliding door, and sheets of tarred paper applied to said cover and tank.

5. A tank provided with a floor, circular shelves mounted at the bottom of said tank

upon said floor, a ladder leading from the top to the bottom of said tank, said shelves being cut away at one side to afford space for said ladder, a cover for said tank provided with a manhole arranged adjacent to the top of said ladder, a sliding door for closing the under side of said manhole, and a swinging cap for covering said manhole.

6. A tank provided with a floor, a plurality of shelves mounted upon said floor, each shelf being composed of a plurality of curved or semicircular sections, a cover composed of superimposed layers of sheet material and cover-sections, an intervening air-space between the cover-sections, a manhole in the cover, a door for closing the under side of said manhole, and a cap for covering said manhole, there being also an air-space between the said cap and door.

7. A tank-body constructed to inclose the batteries of electrical signaling systems and adapted to be sunk in the ground, a cover constructed with upper and lower walls having an intervening air-space, a manhole leading through said cover, a door for closing the under side of said manhole, and a cap for covering said manhole.

8. A tank constructed to inclose the batteries of electrical signaling systems and adapted to be sunk in the ground, said tank being provided with internally-arranged shelves adapted to support the said batteries, and the top of the tank being constructed with a thickened cover having a manhole, a door for closing the under side of said manhole, and a cap for covering the said manhole.

9. A hollow structure adapted to inclose batteries or the like, comprising a body portion, a floor and shelving for supporting batteries or the like, and a cover constructed with air-spaces and having a manhole closed by a plurality of adjustable closing members.

10. A tank having a cover composed of upper and lower sections with an intervening air-space, a manhole extending through said cover, a sliding door closing the under side of said manhole, and a cap for covering said manhole, there being also an air-space between said door and cap.

11. A tank having a cover composed of upper and lower sections, a manhole in the cover, a cap covering the manhole, a sliding door closing the under side of the manhole, a sheet of tarred paper on the upper surface of the lower cover-section, and a band of tarred paper extending around between the edges of the lower cover-section and the inner surface of the tank.

12. A tank provided at its top with a fixed cover composed of upper and lower sections having an intervening dead-air space and having also a sheet of galvanized iron applied to the upper surface of the upper section and a sheet of tarred paper applied to the upper surface of the lower section.

13. A tank constructed with a cover composed of upper and lower sections having an

intervening dead-air space, and having also
a sheet of galvanized iron applied to the outer
surface of the upper section and a sheet of
tarred paper applied to the upper surface of
5 the lower section together with a band of
tarred paper interposed between the lower
section and the inner surface of the tank.

Signed by me at 1460 Monadnock Block,
Chicago, Illinois, this 9th day of June, 1902.

HUGH BRADSHAW.

Witnesses:

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WM. A. HARDERS.