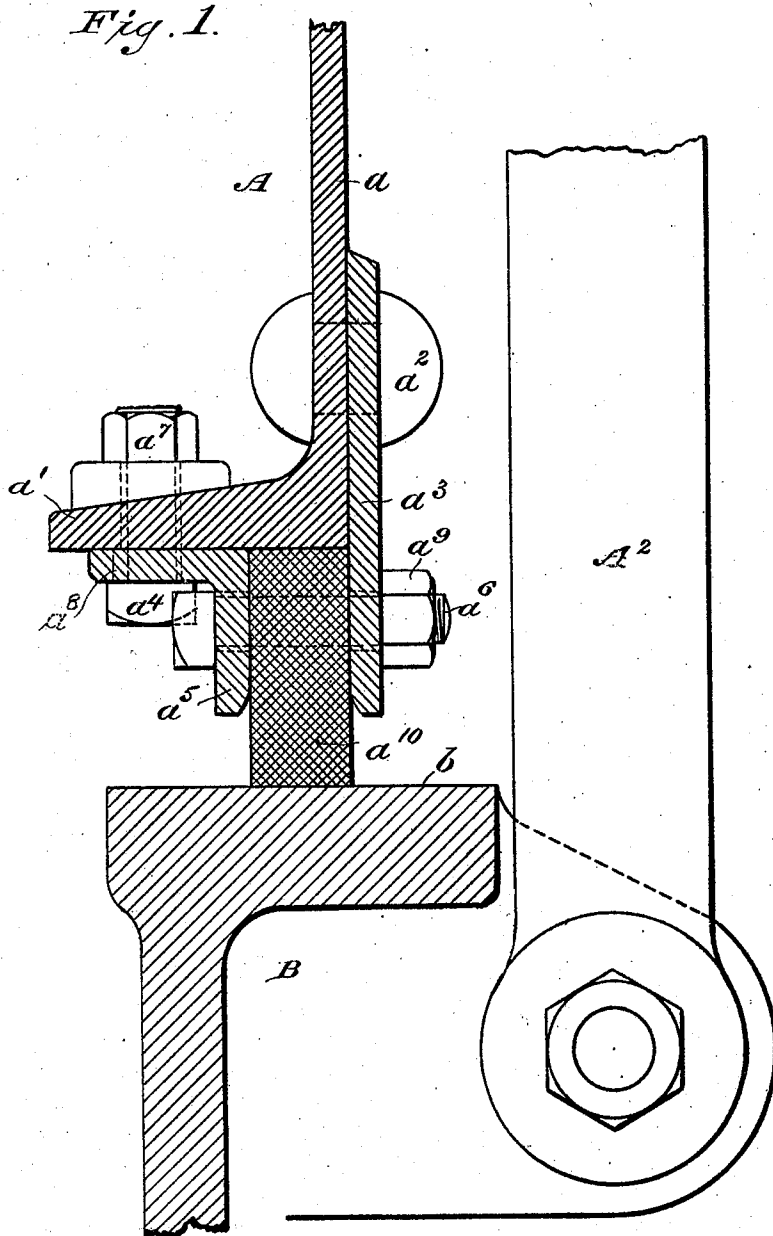


P. PLANTINGA.
CLOSURE FOR FLUID RECEPTACLES.

APPLICATION FILED JUNE 28, 1906.

3 SHEETS—SHEET 1.



WITNESSES:

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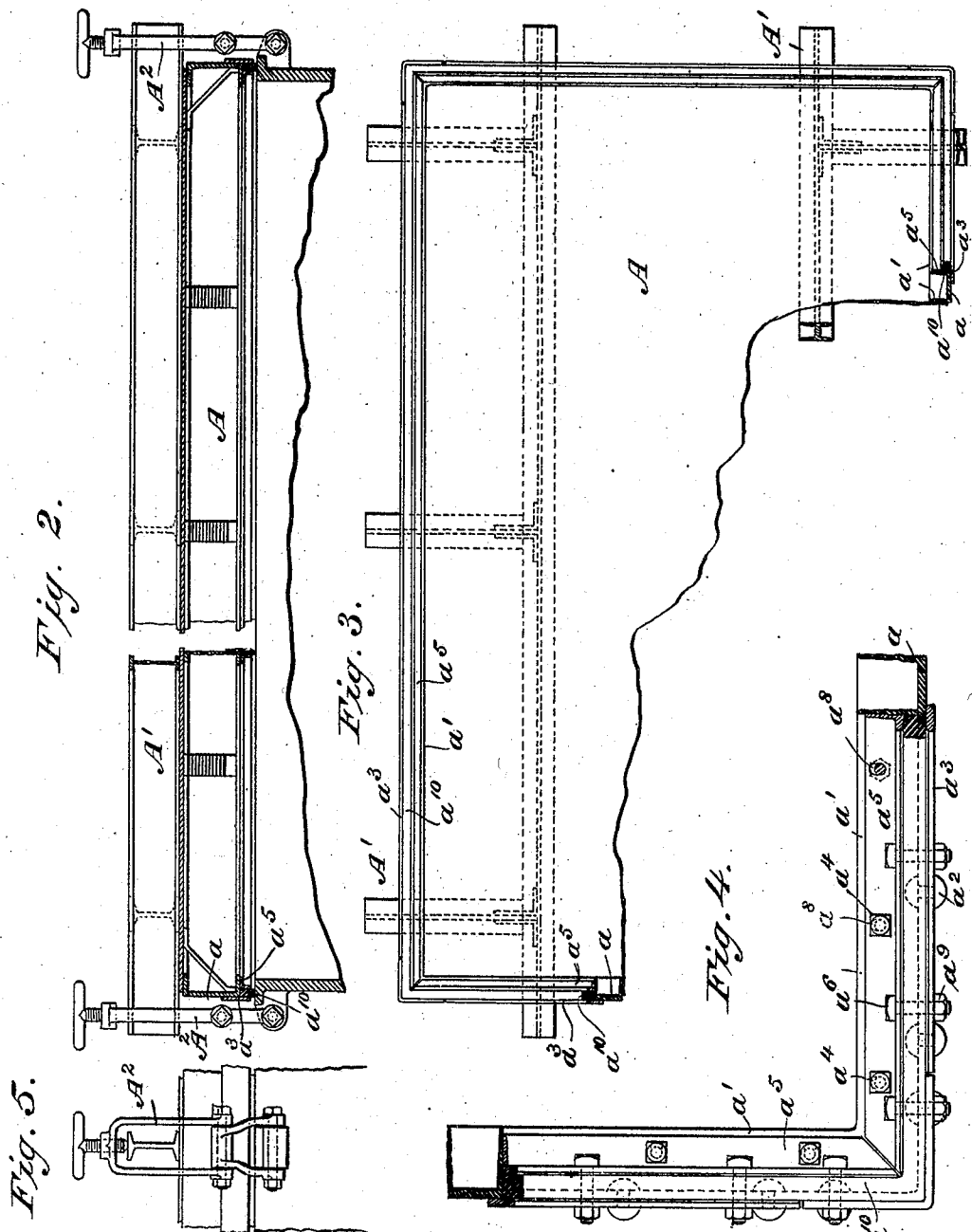


Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

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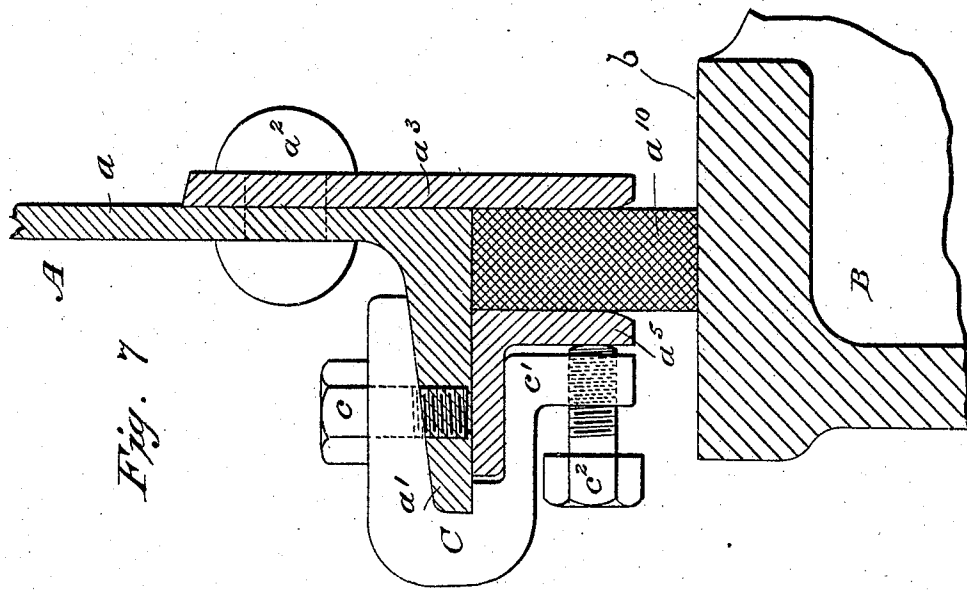


Fig. 7

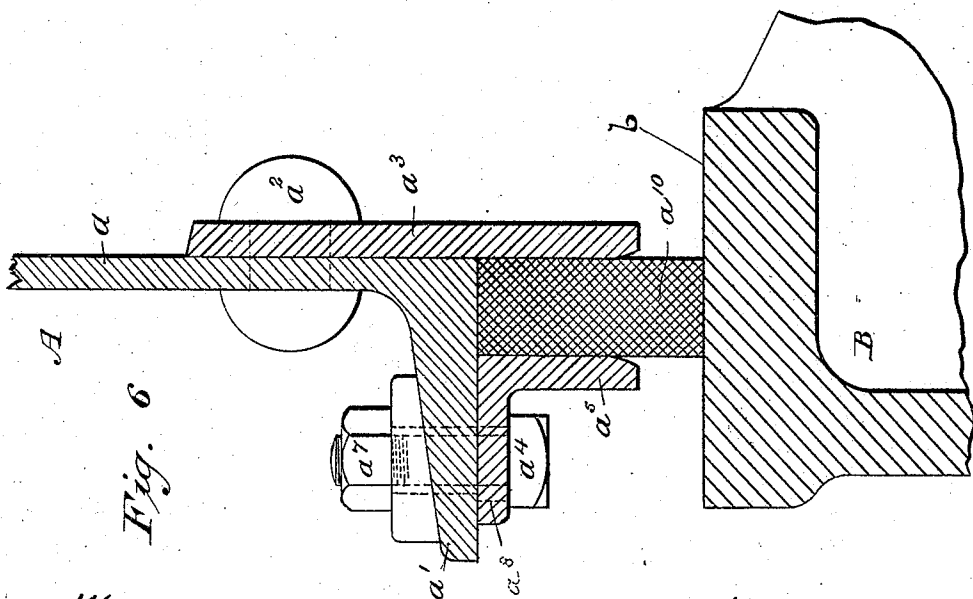


Fig. 6

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UNITED STATES PATENT OFFICE.

PIERRE PLANTINGA, OF CLEVELAND, OHIO.

CLOSURE FOR FLUID-RECEPTACLES.

No. 806,285.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed June 28, 1905. Serial No. 267,348.

To all whom it may concern:

Be it known that I, PIERRE PLANTINGA, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Closures for Fluid-Receptacles, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle so as to distinguish it from other inventions.

My invention relates to closures for fluid-receptacles or the like, and particularly to closures for what are known as "purifying-boxes" used in the process of purifying illuminating-gas.

The invention relates specifically to the construction of that part of the cover of a purifying-box which forms the joint between the cover and the flat top surface of the box; and its object is to provide a construction of said parts such as will be economical and durable.

The said invention consists of means hereinafter fully described, and specifically set forth in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure 1 represents a vertical section of a part of the upper edge portion of a rectangular purifying-box and a part of the lower edge portion of a rectangular cover therefor. Fig. 2 represents a broken vertical section of the upper end of the box and cover. Fig. 3 represents a broken bottom plan of said cover. Fig. 4 represents a broken bottom plan of the edge portion of said cover, showing the construction in detail. Fig. 5 represents a partial end elevation of said cover and box. Figs. 6 and 7 represent modified forms of my said invention.

The main side members a of the cover A consist of channel-bars which, as shown, have their flanges a' parallel with the upper flat contact-surface b of the body of the receptacle or box B. The flanges of the channel-bars a extend inwardly, and upon the outside of the bars are fixedly secured on all four sides of the cover by means of rivets a^2 flat strips a^3 , which, as shown, extend beyond the under surface of lower flanges a' . Se-

cured by means of bolts a^4 to said under surface are four angle-bars a^5 , forming a rectangle, as will be understood, the four bars being, however, disconnected from each other and beveled, as shown in Fig. 4.

Passing through the angle-bars a^5 and strips a^3 are bolts a^6 . Intermediately of said angle-bars and strips is located and clamped a continuous strip of elastic material, such as rubber or a compound thereof, forming a dry lute a^{10} and provided with holes for receiving the passage of said bolts a^6 . The latter extends below the angle-bars and strips, as shown, and makes direct contact with the surface b . The nuts a^7 on bolts a^4 are tightened just sufficiently to hold the angle-bars snug against the bottom of the flange a' , and said bars are provided with elongated holes a^8 , Figs. 1 and 4, through which bolts a^4 pass. It will therefore be seen that the nuts a^9 in bolts a^6 may be tightened up and caused to draw the angle-bars toward strips a^3 to clamp the dry lute, the bars slipping between the flange a' and the heads of bolts a^4 . The ends of the latter are riveted over the nuts, so as to prevent loosening of the bolts and so as to render the bars irremovable from the side channel-bars a .

Upon the top of the cover are secured beams A' , which project over the edges and in connection with clamping members A^2 , pivoted upon the body of the box, secure the cover tightly in place.

In Fig. 6 I have illustrated a structure embodying a modification of my invention and which is identical with that above described with the exception of the presence of bolts a^6 and the corresponding holes in the strips a^3 , lute a^{10} , and angle-bars a^5 . In the modification these bolts and corresponding holes are omitted. In assembling this structure the nuts a^7 on bolts a^4 are tightened up quite securely after the lute a^{10} has been placed between strips a^3 and angle-bars a^5 . By means of a hammer the bars may be jammed over against the lute to securely clamp same against the strips, the frictional resistance of the bolt-heads causing the bars to maintain the position given them. After having been properly set the bars are firmly secured in place by further tightening nuts a^7 .

In Fig. 7 I have illustrated a second modification of my invention in which I have also dispensed with the bolts a^6 and corresponding holes and at the same time provide positive means for drawing the angle-bars and

strips together to clamp the lute. In this structure I have provided a plurality of dogs C, which are cast in a form such as to fit over the flanges a' and the angle-bars, as shown. 5 These dogs are secured to the flanges by cap-screws c , screwed into the flanges. Each dog is provided with a lower extension c' , in which is seated a set-screw c^2 , whose inner end bears against the lower member of the angle-bar. 10 It will therefore be seen that by screwing up the set-screws the lute may be clamped firmly against the strips. In this last-described form it will be seen that the elongated holes in the angle-bars are also dispensed with, as well as the bolts passing 15 through the lute and corresponding holes in the strips, lute, and angle-bars.

Other modes of applying the principle of my invention may be employed instead of 20 the one explained, change being made as regards the means herein disclosed, provided the means stated by any one of the following claims or the equivalent of such stated means be employed.

25 I therefore particularly point out and distinctly claim as my invention—

1. In a receptacle for fluids, the combination with a main or body portion provided with a contact-surface; of a cover including 30 channel-bars forming its sides and having its flanges parallel with said contact-surface, strips secured to the outside of said bars and projecting below said bars, angle-bars secured to the bottom of said bars, and a contact member or dry lute secured between 35 said angle-bars and strips.

2. In a receptacle for fluids, the combination with a main or body portion provided with a contact-surface; of a cover including 40 a lateral member having a flat surface parallel with said contact-surface, a fixed wall located transversely relatively thereto, a second wall secured to said flat surface and adjustable relatively to said fixed wall, and a con-

tact member or dry lute secured between said 45 fixed and adjustable walls.

3. In a receptacle-cover, the combination of a lateral supporting member provided with a flat surface and a wall having a face located transversely relatively to said surface; a second wall secured to said supporting 50 member and seated upon said surface, said second wall being adjustable in a direction parallel with the latter; means for securing said second wall to said surface; a contact member located between said two walls; 55 and means independent of said fixing means for clamping said walls and contact member together.

4. In a receptacle-cover, the combination 60 of a main cover structure, having a bottom flat surface and provided with a projecting strip adjacent to said surface and perpendicular thereto; an angle-bar bolted to said surface and provided with elongated bolt- 65 holes; a contact member intermediate of said strip and said angle-bar; and bolts passing through said strip member and bar, whereby the latter may be drawn toward said strip to clamp said contact member. 70

5. In a receptacle-cover, the combination of lateral channel-bars having their lower flanges parallel with the contact-surface of the main body of the receptacle; strips fixed 75 to the side of said channel-bars and projecting beyond said flanges; angle-bars seated upon the outer surfaces of the latter and provided with elongated bolt-holes; bolts passing through said holes and angle-bars; contact members seated between said strips and 80 angle-bars; and bolts passing through said strips, contact members and angle-bars.

Signed by me this 18th day of April, 1905.

PIERRE PLANTINGA.

Attest:

JNO. F. OBERLIN,
A. E. MERKEL.