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PATENTED AUG. 27, 1907.

H. W. BLAISDELL.
CLOSURE FOR VATS.
APPLICATION FILED JULY 2, 1906.

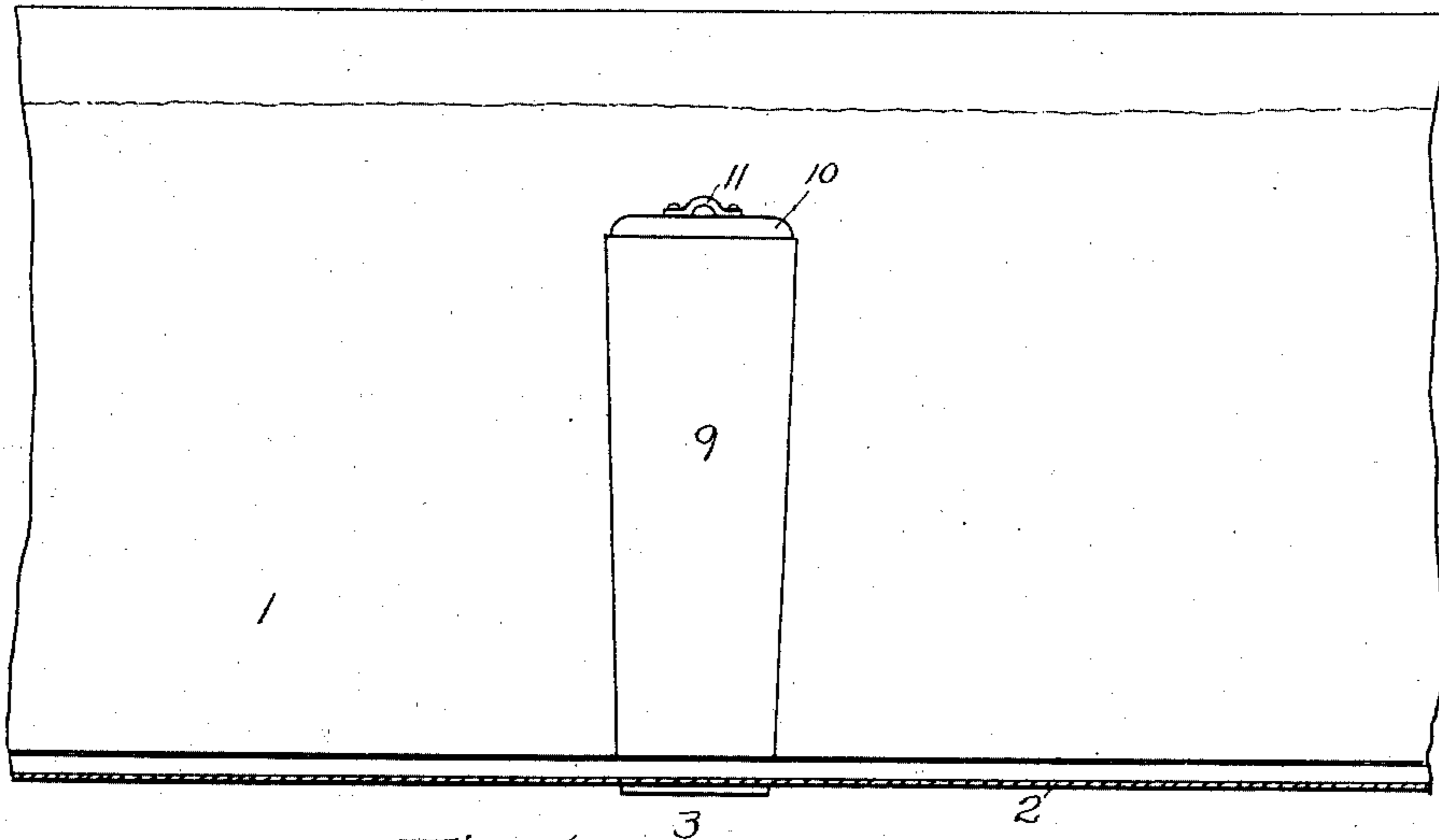


Fig. 1

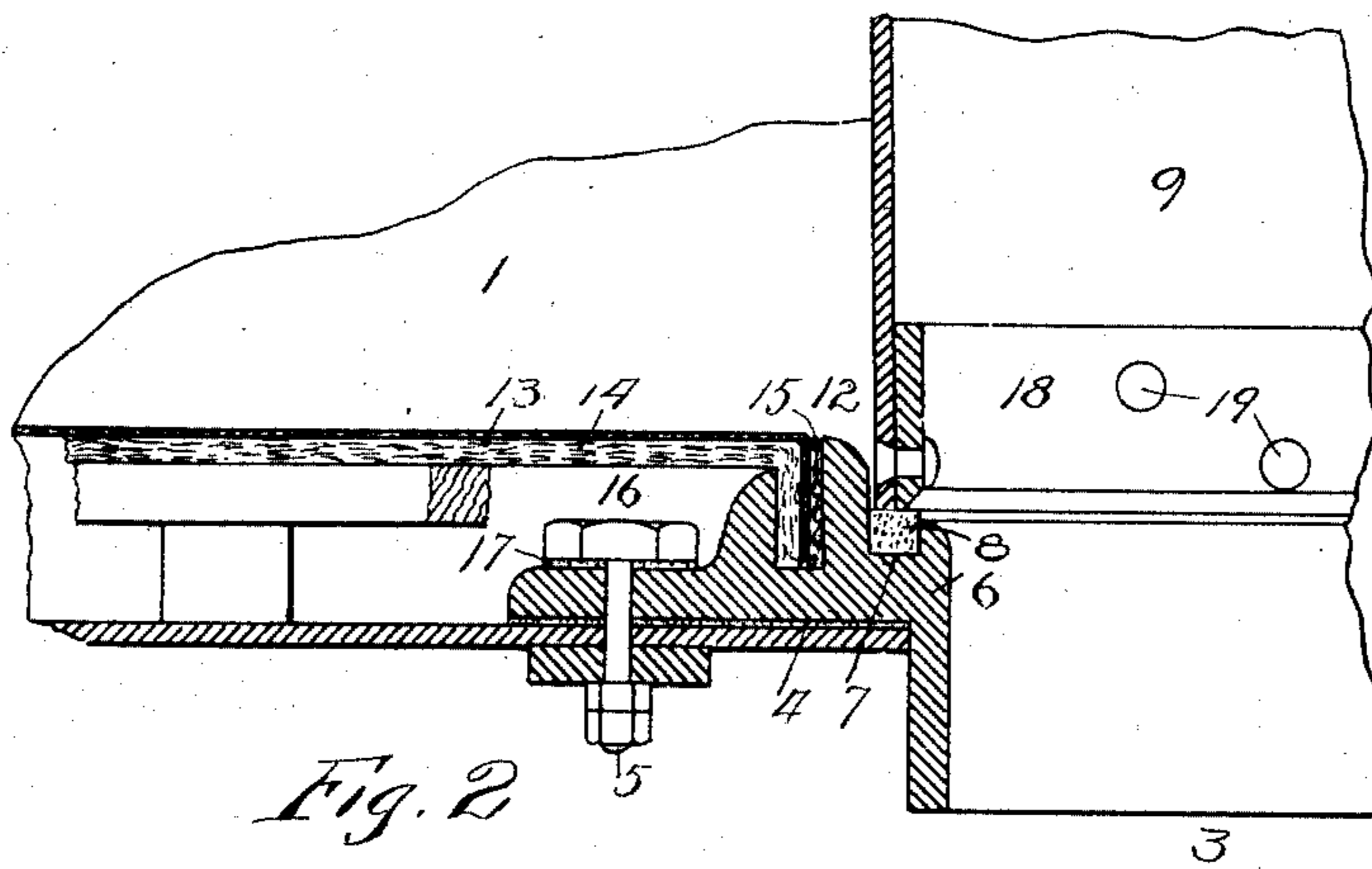


Fig. 2

Witnesses
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UNITED STATES PATENT OFFICE.

HIRAM W. BLAISDELL, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO BLAISDELL COMPANY,
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CLOSURE FOR VATS.

No. 864,764.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed July 2, 1906. Serial No. 324,504.

To all whom it may concern:

Be it known that I, HIRAM W. BLAISDELL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have

invented certain new and useful Improvements in Closures for Vats; 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 appertains to make and use the same.

This invention relates to hydro-metallurgical apparatus, and more particularly to a closure for the central opening in cyanid vats.

One of the objects of this invention is to provide a closure of such a character that the surface of the sand or other material in the vat may be operated upon by any desirable apparatus, and yet, at the same time, to provide a closure that may be readily withdrawn from its position.

Another object of this invention is to provide a device of this character, the junction of which with the cyanid vat can be readily rendered water tight.

A further object of the invention is to provide means whereby the filtering fabric surrounding the opening closed by this device may be readily fastened in position and rendered water tight around said opening.

With these, and other, objects in view the invention consists essentially in the construction and combination of parts herein described and illustrated in the accompanying drawings, in which

Figure 1 is an elevation of the invention, shown in position in a vat; and Fig. 2 is a sectional detail of the joint between said closure and the vat.

Reference numeral 1 designates a tank or vat such as is used in hydro-metallurgical processes, in the central portion of the bottom 2 of which is an opening 3, surrounding which is a gasket 4 upon which is secured by means of bolts 5, an annular member 6 having a seat 7, in which is laid a gasket 8, adapted to receive the lower end of a plug 9. The upper end of plug 9 is closed by a head 10, flanged in the upper part thereof. The central part of head 10 has a ring, bail or other device 11, whereby the plug 9 may be withdrawn from its position when desired.

Member 6 is provided with a groove 12 which is preferably formed wider at the bottom, into which the edge of the filtering fabric 13 and underlying porous fabric 14, forming the filter of the tank, may be inserted and a water-tight joint formed by inserting suitable calking material 15.

The heads 16 of bolts 5 are preferably formed larger than common for bolts of that diameter and are seated upon gaskets 17, whereby leakage past bolts 5 is avoided.

The plug 9 is made somewhat shorter than the depth of the material in the vat in which it is used, as shown in Fig. 1. The bottom of the plug is preferably reinforced with a ring 18, held in place therein by rivets 19.

The method of operation of this invention is as follows: Plug 9 being in position, material is distributed in that one by any suitable means until it rises above the level of the top of plug 9. Should it be desired to work upon the surface of the material for leveling or other purposes, suitable apparatus can be operated without at all interfering with the plug 9, as will be readily understood. When it is desired to discharge the contents of the vat 1, the material immediately above the plug may be removed and the plug withdrawn, by means of the bail 11.

Claims

1. A closure for vats comprising a frusto-conical plug largest at its upper end, said upper end being closed, a ring, and an annular groove in said ring to receive and hold the edge of the filtering material.

2. A closure for vats comprising a frusto-conical plug largest at its upper end, said upper end being closed, a ring, and an annular dove-tail groove in said ring to receive and hold the edge of filtering material.

3. A closure for vats comprising a frusto-conical plug largest at its upper end, said upper end being closed, a ring, an annular groove in said ring to receive the lower edge of the removable part of said closure and a groove to receive the edge of the filtering fabric.

4. A closure for vats comprising a frusto-conical plug largest at its upper end, said upper end being closed, a ring, an annular groove in said ring to receive the lower edge of the removable part of said closure, a groove to receive the edge of the filtering fabric and a gasket between said ring and bottom of the vat.

5. A closure for vats frusto-conical in form, the upper end being largest in diameter and closed at its upper end, a device on said upper end whereby said closure may be lifted, a ring, an annular groove in said ring and a gasket in said groove.

6. A closure for vats frusto-conical in form, the upper end being largest in diameter and closed at its upper end, a device on said upper end whereby said closure may be lifted, a ring, an annular groove in said ring, a gasket in said groove, and a second annular groove in said ring to receive and hold the edge of the filtering material.

7. A closure for vats comprising a frusto-conical plug largest at its upper end, said upper end being closed, a ring, an annular groove in said ring to receive the lower edge of the filtering fabric, a gasket between said ring and bottom of the vat, bolts for holding said ring to the bottom of said vat and gaskets under the heads of said bolts.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses at Los Angeles in the county of Los Angeles, State of California, this 13th. day of June A. D. 1906.

HIRAM W. BLAISDELL.

Witnesses:

E. FREEMAN MOULD,
OWEN RICE.