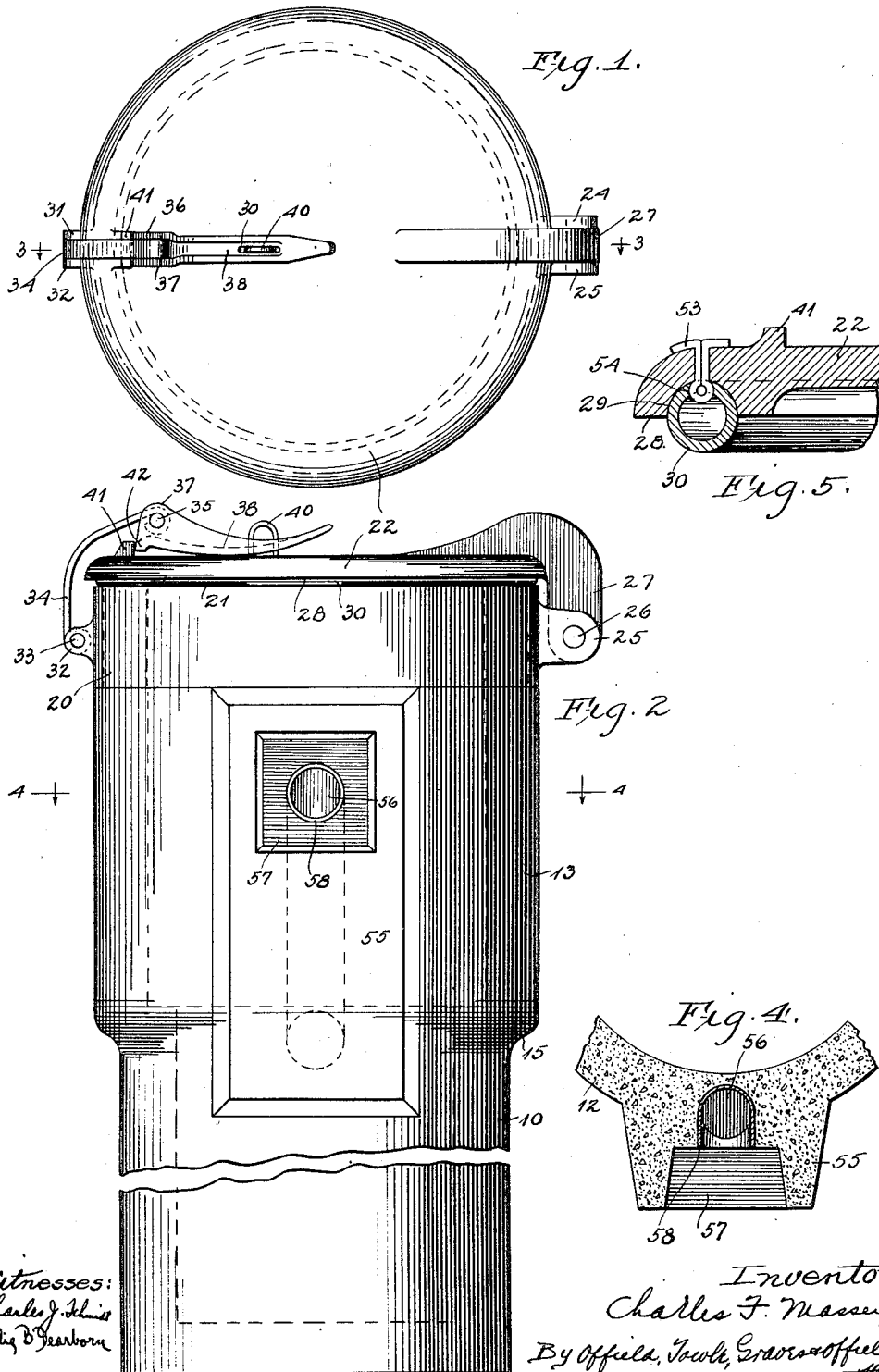


C. F. MASSEY.  
BATTERY WELL.  
APPLICATION FILED JAN. 6, 1911.

1,060,346.

- Patented Apr. 29, 1913.

2 SHEETS-SHEET 1.



Witnesses:  
Charles J. Schmitt  
Telling D. Dearborn

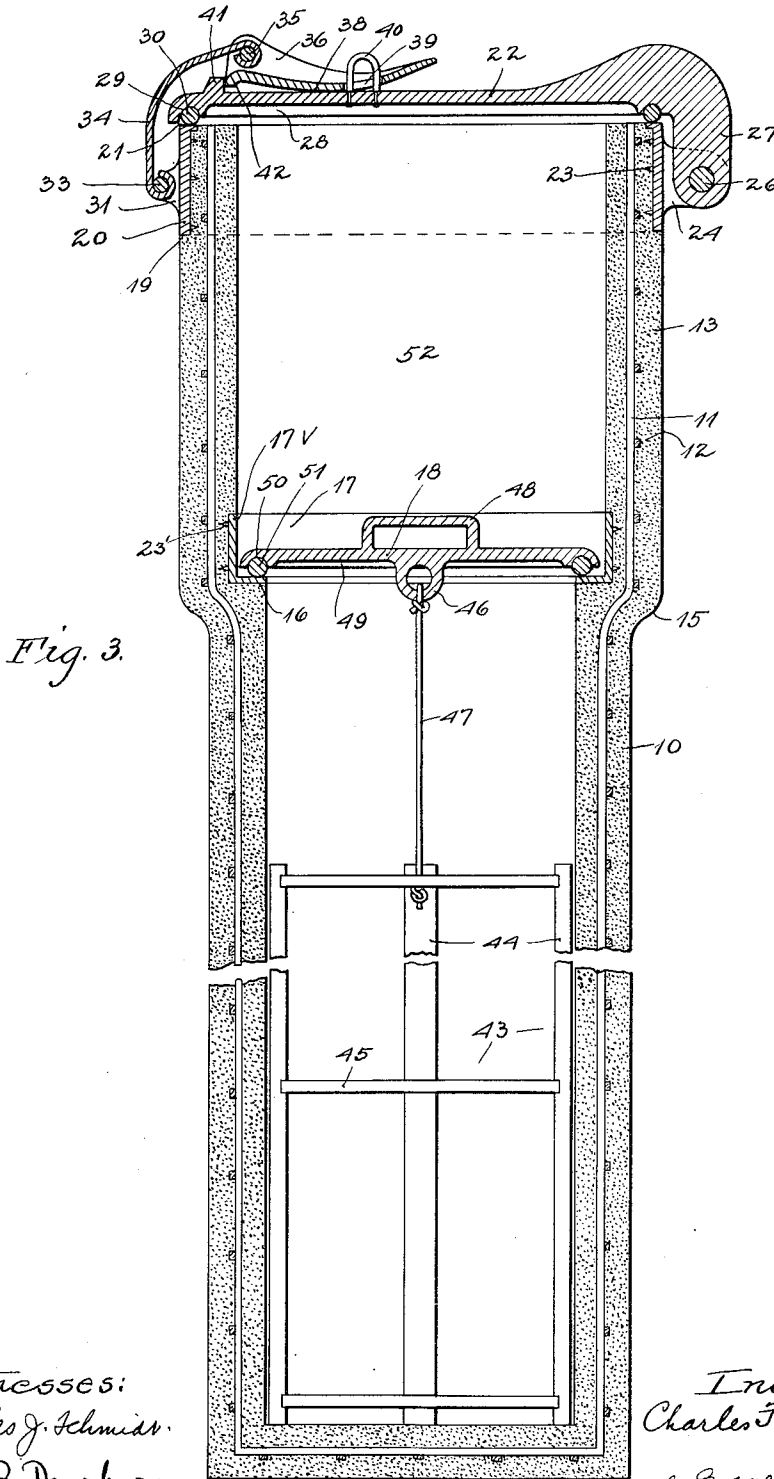
Inventor:  
Charles F. Massey  
By Offield, Towle, Graves & Offield,  
Attys.

C. F. MASSEY.  
BATTERY WELL.  
APPLICATION FILED JAN. 6, 1911.

1,060,346.

Patented Apr. 29, 1913.

2 SHEETS—SHEET 2.



Witnesses:  
Charles J. Schmidt.  
Ellie B. Dearborn.

Inventor:  
Charles F. Massey.

By Offield, Fowler, Graves & Offield  
Attys.

# UNITED STATES PATENT OFFICE.

CHARLES F. MASSEY, OF CHICAGO, ILLINOIS.

## BATTERY-WELL.

1,060,346.

Specification of Letters Patent.

Patented Apr. 29, 1913.

Application filed January 6, 1911 Serial No. 601,159.

*To all whom it may concern:*

Be it known that I, CHARLES F. MASSEY, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Battery-Well, of which the following is a specification.

My invention relates to battery wells, particularly to that class known as battery chutes, and the general object is to provide improved closure and sealing mechanism therefor to protect the contents against the weather and particularly against frost.

More in detail, the salient objects of the invention are to provide an all-metallic main cover and a metallic seat therefor securely anchored to the concrete body of the well; to provide improved gasket arrangement and improved locking mechanism for clamping the cover to its seat; to provide an all-metallic removable frost partition and a metallic seat therefor securely anchored to the concrete well body; to provide improved means for suspending the battery rack or elevator from the inner side of the frost partition; to provide improved sealing engagement of the frost partition with its seat; and in general to provide an improved and more efficient construction in a device of the character referred to.

In the accompanying drawings, which clearly show the various features of the invention, Figure 1 is a top view of a battery chute, Fig. 2 is a side elevational view thereof, Fig. 3 is a sectional view taken on plane 3—3, Fig. 1, Fig. 4 is a sectional view taken from plane 4—4, Fig. 2, and Fig. 5 is a sectional view of part of the cover, showing improved arrangement for the gasket mechanism.

The well body 10 is of substantially cylindrical form and comprises a skeleton metallic reinforcing structure 11 about which is molded the concrete 12. The top part 13 is of slightly larger diameter to form an external shoulder 15 and an internal annular ledge 16. This ledge supports the seat frame 17 for a frost cover or partition 18, the seat frame being annular and of L-shaped cross-section, as shown, the vertical flange 17<sup>v</sup> being embedded in the concrete of the supporting wall so that the inner faces of the flange and wall are flush. The upper end of the part 13 is of slightly reduced diameter to leave the annular ledge 19 for seating the metallic band 20, whose up-

per edge 21 forms a seat for the main cover 22. The band 20 has prongs 23 extending inwardly to become embedded in the concrete, to thus secure the band against rotation. Likewise the seat frame 17 has outwardly extending prongs 23' embedded in the concrete to securely anchor the seat frame in place. At one side of the band 20 parallel bearing ears or projections 24 and 25 are provided for journaling a pivot pin 26 which receives the downwardly extending bearing lug 27 on the door 22, the door being thus hinged to the band. The door has an annular flange 28 in whose under side is provided the annular pocket 29 for seating a gasket 30, the gasket engaging the seat 21 when the door is closed. Diametrically opposite the ears 24 and 25 the band 22 has parallel ears 31 and 32 supporting the pin 33 to which is pivoted one end of the spring link 34, this link being formed from a piece of steel band and its ends bent into circular form, as indicated. At its other end the link pivotally receives the pin 35 extending between the ears 36 and 37 on the hasp tongue 38. At its front end this hasp tongue has a slot 39 for receiving a staple 40 extending upwardly from the cover 22, this staple being adapted to receive a suitable lock for locking the front end of the tongue against the cover, the rear end of the tongue being forced against the cover by the spring link 34. To hold the tongue in position on the door against the force of the spring the door is provided with an abutment extension 41 for receiving the abutment extension 42 at the end of the tongue below the pin 35 thereon. When the cover is to be opened the lock is removed and the tongue swung to clear the staple, and the tongue can then be bodily swung downwardly with the link 34 and about pivot 33 to hang adjacent the upper part of the well body. When the top of the well is to be sealed the cover is swung into closed position and the tongue moved to bring its extension 42 in front of the abutment extension 41 on the cover, and then the tongue is swung downwardly against the cover and to receive the staple to which the lock is then applied. This movement of the tongue will increase the distance between the pivots 33 and 35 to expand the spring, and after locking of the tongue to the cover the spring will then tend to contract and will force the cover

downwardly to compress the gasket and thus to seal the entrance end of the well against the weather, particularly against dust and dirt and moisture.

Referring to Fig. 3, the lower part of the well or chute accommodates the battery supporting frame or elevator 43 of the usual construction, comprising the side walls 44 which support the shelves 45. In practice the battery supporting frame is attached to the frost cover or partition so that upon lifting of said partition the supporting frame can be withdrawn from the well. As a preferred construction and arrangement the cover or partition 18 is provided on its lower side and centrally with a hook or eye 46, to which may be fastened the upper end of a rope 47 whose lower end is secured to the battery supporting frame, and on the upper side of the cover 18 a handle 48 is provided directly beside the eye 46, the cover being preferably in the form of a casting with the eye and handle integral therewith. The cover has also a peripheral flange 49 at its lower side which has the annular pocket 50 for accommodating a gasket 51, and the length of the rope 47 between the cover and supporting frame is preferably such that the supporting frame will be suspended from the cover 18 when the cover is seated, so that the weight of the frame and batteries will draw the cover toward its seat to compress the gasket and to thus cause effective sealing of the well at this point. Between this frost cover or partition and the main cover when closed the air compartment 52 will serve as an effective barrier against temperature changes in the battery well and particularly to protect the battery compartment of the well against the entrance of frost.

Fig. 5 is an enlarged section of a part of the main cover to show a preferred construction and arrangement of the gasket mechanism. The gasket 30 is preferably in the form of canvas covered rubber tubing of sufficient stiffness, and is held in place in its pocket 29 by means of cotter pins 53, the heads of these pins being inside the tubing and the pin legs passing through the openings 54 in the cover and the ends thereof spread and deflected against the cover, as shown. With this arrangement a worn gasket can readily be removed and a new gasket applied. The same arrangement of gasket mechanism is also used on the frost cover 18.

In order to provide exit from the battery compartment for the conducting wires a lug or enlargement 55 is provided at one side of the upper part 13 of the well, and a passageway 56 through this enlargement deflects inwardly and terminates in the well below the frost cover 18 and at its upper end deflects outwardly and terminates in the pocket 56

provided in the enlargement. After the wires pass through the passageway suitable sealing means can be applied in the pocket 57 to seal the outer end of the passageway. The passageway is also preferably lined with a fiber bushing or conduit 58, as shown.

With the construction and arrangement as above described the battery apartment of the well is well sealed and protected at all times against the weather, and the batteries are kept clean and prevented from freezing. The weight of the batteries and their supporting frame on the frost cover hold this cover down against the gasket to form an effective seal, and upon raising of the cover the battery supporting frame with the batteries therein can be withdrawn from the well. Likewise the main cover at the top of the well is securely clamped in place and the outlet of the well sealed, the spring link always exerting pressure on the cover to keep the gasket under compression. By removing the lock from the staple the hasp and link can be readily thrown back and the cover opened. The air space between the covers will prevent sudden changes in exterior temperature from being communicated to the well compartment, and the well compartment is maintained at a uniform temperature. The metallic seat frames for the covers assist greatly in strengthening the well, particularly at the upper end thereof, which in practice is above the ground.

I do not, of course, desire to be limited to the precise constructions and arrangements disclosed herein, as changes and modifications are possible which would still come within the scope of my invention, and I therefore claim the following:

1. In a battery well, the combination of a body part open at its upper end, a band surrounding said body part adjacent said upper end, a door hinged to said band to be swung against said band to close said open end, a spring plate hinged at one end to said band, a hasp hinged to the other end of said spring plate, a staple on said cover for receiving said hasp, an abutment lug on said cover, and an abutment extension on said hasp for engaging with said abutment lug when the hasp is brought into engagement with said staple, the engagement of the hasp with the abutment lug and staple causing said spring to be expanded to press said hasp against the cover to thereby lock the cover firmly in closed position.

2. In a battery well, the combination of a body part open at its upper end, a band surrounding said body part adjacent said upper end, a door hinged to said band to be swung against said band to close said open end, a spring plate hinged at one end to said band, a hasp hinged to the other end of said spring plate, a staple on said cover for receiving said hasp, an abutment lug on said

cover, an abutment extension on said hasp  
for engaging with said abutment lug when  
the hasp is brought into engagement with  
said staple, the engagement of the hasp with  
5 the abutment lug and staple causing said  
spring to be expanded to press said hasp  
against the cover to thereby lock the cover  
firmly in closed position, and a gasket car-  
ried by the cover to be interposed between

the cover and said band when the cover is in 10  
closed position.

In witness whereof, I hereunto subscribe  
my name this 30th day of December, A. D.,  
1910.

CHARLES F. MASSEY.

Witnesses:

CHARLES J. SCHMIDT,  
NELLIE B. DEARBORN.