C. H. HISER.

METALLIC GRAVE VAULT.

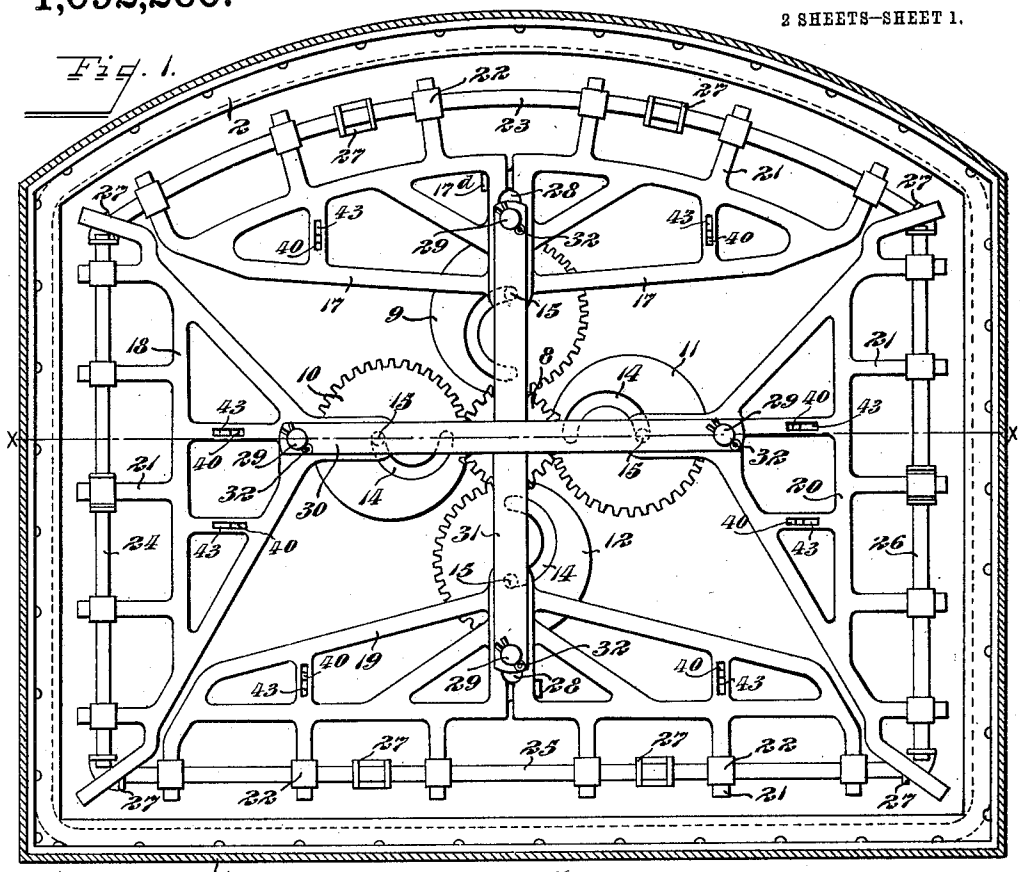
APPLICATION FILED AUG. 25, 1913.

1,092,260.

Patented Apr. 7, 1914.

2 SHEETS—SHEET 1.

Fig. 1.



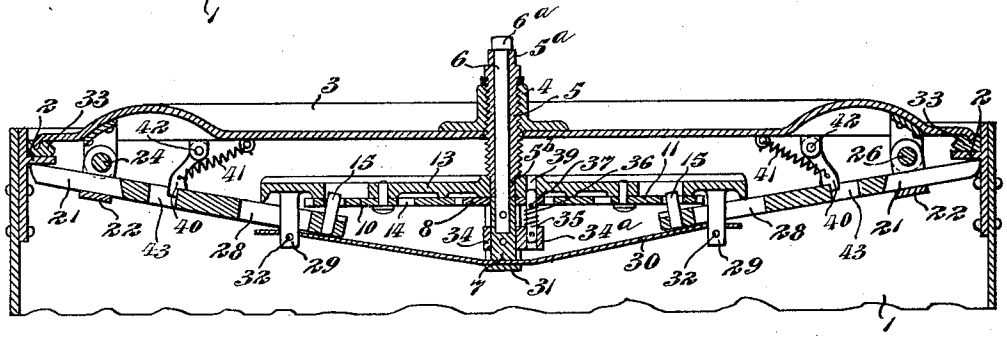


Fig. 2.

Inventor

Charles H Hiser

By Bailey & Bowman

Attorneys

Witnesses

Esther E. Pfeifer

Chas. J. Mech

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

C. H. HISER.

METALLIC GRAVE VAULT.

APPLICATION FILED AUG. 25, 1913.

1,092,260. Patented Apr. 7, 1914.

2 SHEETS—SHEET 2.

Fig. 3.

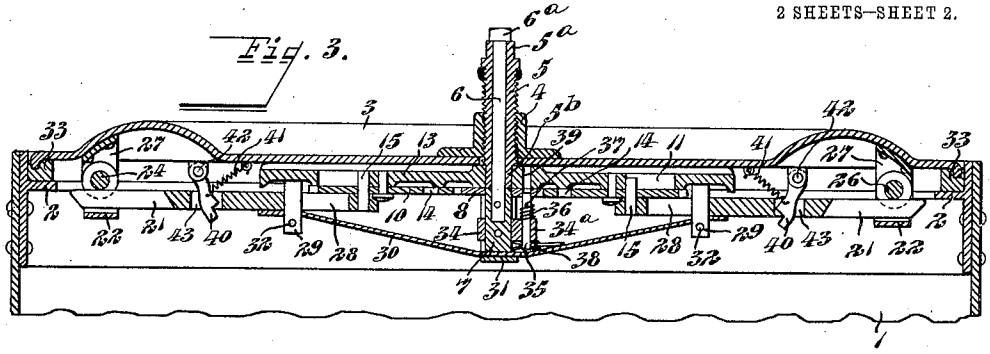
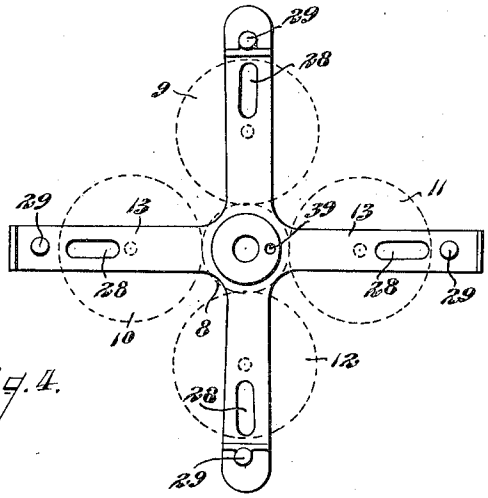


Fig. 4.



Witnesses

Esther E. Pfeifer

Inventor

Charles H. Hiser

By

Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES H. HISER, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE SPRINGFIELD METALLIC CASKET COMPANY, OF SPRINGFIELD, OHIO, A CORPORATION OF OHIO.

METALLIC GRAVE-VAULT.

1,092,260. Specification of Letters Patent. Patented Apr. 7, 1914.

Application filed August 25, 1913. Serial No. 786,576.

To all whom it may concern:

Be it known that I, CHARLES H. HISER, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Metallic Grave-Vaults, of which the following is a specification.

My invention relates to improvements in metallic grave vaults, and it especially relates to closures for such vaults.

The object of the invention is to provide a vault closure which will be simple and durable in construction and effective in operation.

In the accompanying drawings,—Figure 1 is a vertical section through the vault, showing the inner side of the door of the vault and the locking mechanism, the locking mechanism being in unlocking position. Fig. 2 is a transverse section on the line *x*—*x* of Fig. 1, showing the locking devices, however, in locking position. Fig. 3 is a section on the same line, *x*—*x* of Fig. 1, showing the locking devices in the same position as in Fig. 1. Fig. 4 is a detail of a portion of the locking mechanism.

Like parts are represented by similar characters of reference in the several views.

In the said drawings, 1 represents the casing forming the body of the vault, having near the open end thereof, an inturned flange 2.

The door of the vault is represented by 3, and may be of any usual construction and is adapted to close the open end of the structure.

Screw-threaded in a centrally arranged thimble 4 secured to the door 3, is a sleeve 5, having a squared outer end 5^a to receive a wrench or other tool. Journaled in the screw-threaded sleeve 5 is a shaft 6, also having a squared outer end 6^a to receive a wrench or other tool, and having secured to its inner end a collar 7 to which is made fast a pinion 8. The teeth of the pinion 8 are in mesh with the teeth of a series of four cam wheels 9, 10, 11 and 12, journaled to the arms of a spider 13, loosely mounted upon the unthreaded end 5^b of the screw-threaded sleeve 5. Each of these cam wheels has a cam groove 14 which receives projecting pins 15 on the inner ends of a series of four locking bolts or frames 17, 18, 19 and 20. The bolts proper 21 of these locking frames project through a series of clips or keepers 22, pivotally connected to rods 23, 24, 25 and 26, which rods are supported at their respective ends in ears 27 projecting from the door. Each of the locking bolts is provided at its inner end with a slot 28 into which projects a pin 29 on the outer end of each of the arms of the spider 13, and in order that the inner end of the locking frames may be held in position on these pins, there are provided two cross bars 30 and 31, of a resilient nature, each of which is perforated at its respective ends to receive the pins 29, and are held in position by cotter pins 32, the said bars crossing each other and bearing against the inner end of the collar 7; these cross bars also serving to brace the arms of the spider when the parts are operated in the manner hereinafter described.

The operation is as follows: The door having been placed in position against the vault, with a gasket or packing 33 between its edge and the flange 2, the shaft 6 is revolved, thus revolving the cam wheels 9, 10, 11 and 12 through the medium of the pinion 8. This projects all the locking bolts outwardly in line with the flange 2. The screw-threaded sleeve 5 is next revolved which forces all the parts to the position shown in Fig. 2, whereupon, the keepers 22, acting as fulcrums, the outer ends of the bolts will be caused to impinge against the inner side of the flange 2, thus clamping the door firmly in position against the packing.

Secured to the collar 7 is a second collar 34, having a perforated enlargement 34^a in which is located a plunger 35, having thereon a coil spring 36 interposed between the enlargement and a small pin 37; this plunger being normally held in retracted position by a cotter pin 38, placed in a perforation in the flange on the inner side of the enlargement. Before the door is placed in position, this cotter pin 38 is removed, the outer end of the plunger extending into a

perforation in the pinion 8. Located at a suitable point in the spider is a perforation 39, and so soon as the plunger coincides with this perforation 39, it will be forced into same and thus lock the shaft 6 against revolution to prevent the withdrawal of the bolts. Means are also provided for locking the bolts in their tilted position so as to prevent the unclamping of the same, which, while not permitting access to the vault, would nevertheless result in destroying the water-tight joint.

Pivoted at 42 to inwardly-extending ears on the door, is a series of shouldered-locking fingers 40, one for each locking frame, which fingers normally project through perforations 43 in the frames as shown in Fig. 3. As the frames are tilted to their clamping position, these fingers will be drawn by springs 41 to cause the shouldered portions thereof to engage the frames and thus lock them from return movement, as shown in Fig. 2.

In constructing grave vaults, it is usual to have the same provided with a rounded or curved top, in consequence of which as the locking frame 17 is tilted to cause the bolts to impinge against the flange 2, the inner bolts will contact the flange first. The result of this is that if the frame is a rigid one, the outer bolts would be prevented from coming in contact at all with the said flange. To overcome this difficulty, I have constructed the locking frame 17 in two parts, 17^a and 17^b, pivoted together by the pin 15, the respective members of the frame being provided with perforated ears for the purpose. The member 17^b also preferably has a projecting guide 17^d to assist in holding the parts together. The result of this construction is that as the frame is tilted, the contact of the inner bolts proper with the flange 2, will cause the frame to bow sufficiently to permit the outer bolts to also have a tight contact with the flange and thus cause the bolts of the locking frame 17 to clamp the door to the flange 2 uniformly across the entire width of the top.

Having thus described my invention I claim:—

1. In a device of the character described, the combination, with a door and a casing having an inwardly extending flange, a screw-threaded sleeve carried by said door, a revoluble shaft in said sleeve, a series of cam gears, a support for said gears loosely mounted on said sleeve but movable bodily therewith, a pinion connected with said shaft and meshing with said gears, and a series of locking bolts operatively connected with said gears and fulcrumed at their outer ends.

2. In a device of the character described, in combination with a door and a casing having an inwardly extending rim or flange, of a series of slidable locking bolts carried by said door, a revoluble sleeve screw-threaded in said door, a shaft revolubly mounted in said sleeve, a series of gears carried by said door operatively connected to said bolts, said bolts being capable of a sliding movement relatively thereto, and a pinion connected with said shaft and in mesh with said gears, whereby a movement thereof projects said bolts to locking position and the turning of said sleeve tilts said bolts against said flange.

3. In a device of the character described, in combination with a door and a casing having an inwardly extending rim or flange, a support carried by said door, a series of gears carried by said support, a pinion carried by said door and common to all of said gears, a series of locking bolts operatively connected with said gears, said bolts being also connected with said support but capable of a movement relatively thereto together with springs for holding said bolts yieldably to said support, means extending on the outside of said door for operating said pinion to cause said gears to throw said bolts to locking position with respect to said flange, and means for moving said support inwardly away from said door to tilt said bolts.

4. In a device of the character described, in combination with a door and a casing having an inwardly extending flange, a revoluble sleeve screw-threaded in said door, a shaft revolubly mounted in said sleeve, a support loosely mounted on said sleeve, a series of gears carried by said support, a series of bolts operatively connected with said gears, a pinion connected with said shaft and common to all of said gears, whereby the turning of said shaft will cause said gears to throw said bolts to operative position and the turning of said screw causes the tilting of said bolts.

5. In a device of the character described, in combination with a door and a casing having an inwardly-extending rim or flange, a series of locking members mounted on said door, locking mechanism carried by said door, means for movably connecting said locking members with said locking mechanism, means for operating said locking mechanism to project said locking members to locking position and also for tilting said locking members with respect to said mechanism, and resilient cross-bar members carried by said locking mechanism and exerting a pressure upon said locking members to hold said locking members in operative relation with said mechanism but permitting the tilting of the same.

6. In a device of the character described, in combination with a door and a casing having an inwardly-extending rim, a series

of locking members carried by said door, devices also carried by said door operatively connected with said locking members to project the same to locking position and for tilting the same to clamping position, means for locking said operating devices against return movement, and pivoted latches carried by said door for engagement with said locking members after they have been thrown to clamping position.

In testimony whereof, I have hereunto set my hand this 22nd day of August, 1913.

CHARLES H. HISER.

Witnesses:
CHAS. L. SNIDER,
CHAS. I. WELCH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."