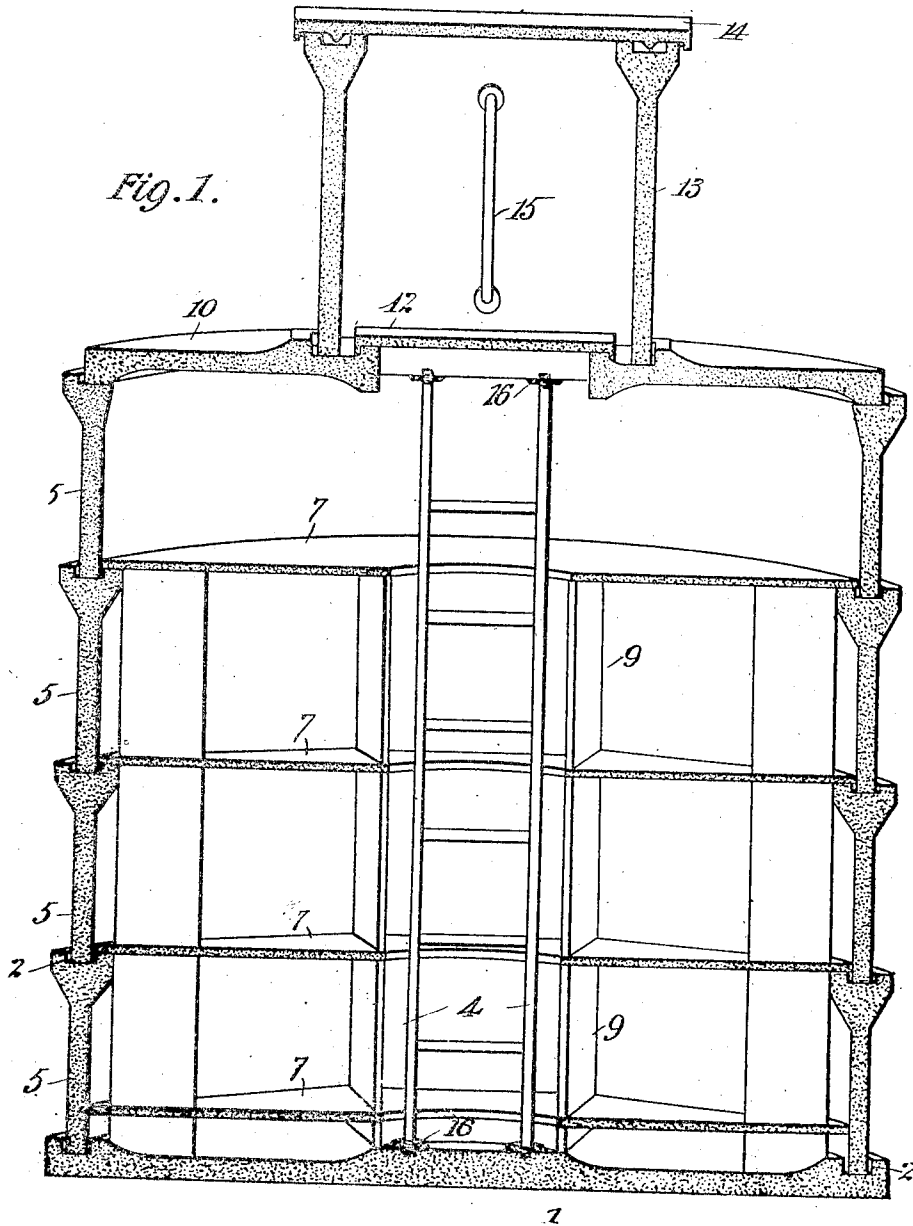


No. 871,977.

PATENTED NOV. 26, 1907.

E. J. WINSLOW.
SECTIONAL VAULT.
APPLICATION FILED OCT. 20, 1905.

4 SHEETS—SHEET 1.



WITNESSES:

Frank S. O'Connell
Edw. C. Barker

INVENTOR

E. J. Winslow

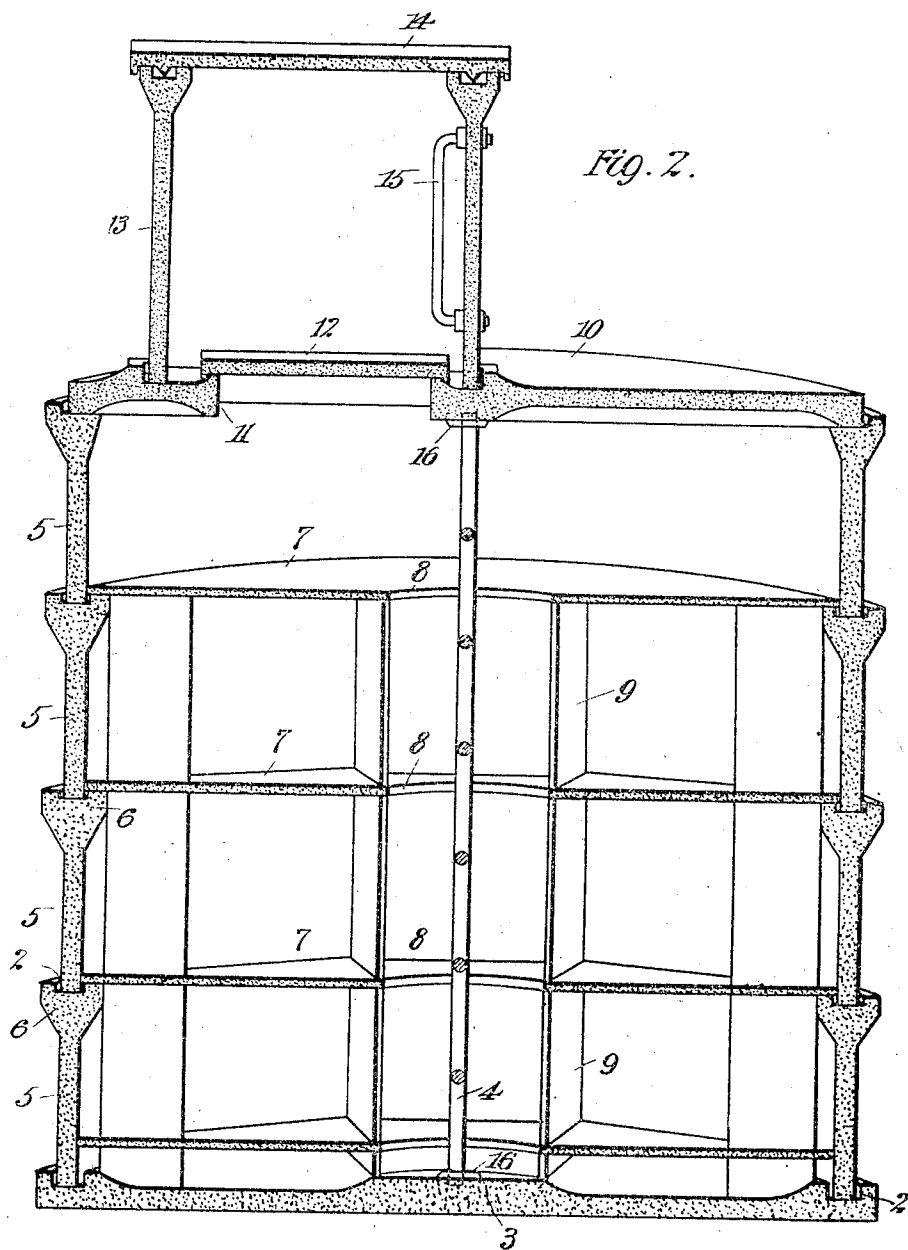
BY *Albert Nathan*
ATTORNEY

No. 871,977.

PATENTED NOV. 26, 1907.

E. J. WINSLOW.
SECTIONAL VAULT.
APPLICATION FILED OCT. 20, 1905.

4 SHEETS—SHEET 2



WITNESSES:

Francis S. Allen
Edwin Charles

INVENTOR

E. J. Winslow

BY

Albert Nathan

ATTORNEY

No. 871,977.

PATENTED NOV. 26, 1907.

E. J. WINSLOW.
SECTIONAL VAULT.
APPLICATION FILED OCT. 20, 1905.

4 SHEETS—SHEET 3.

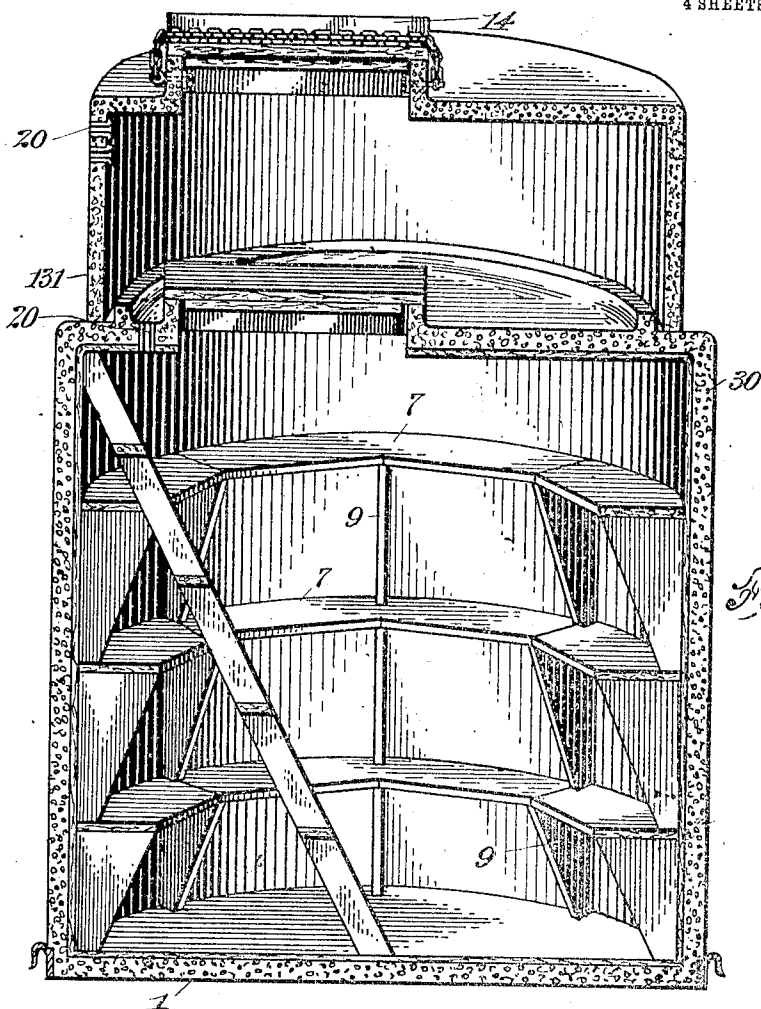


Fig. 3.

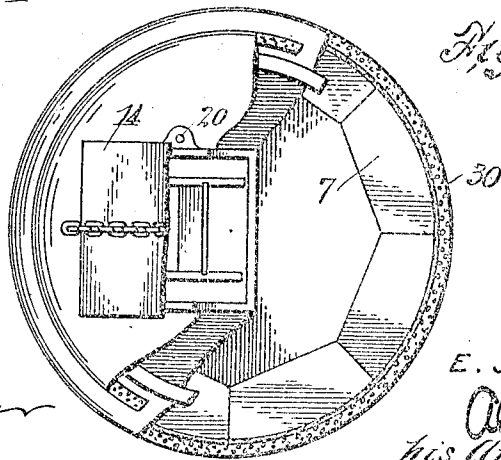


Fig. 4.

Witnesses:
C. A. Jarvis
Paul S. Ober

Inventor:
E. J. WINSLOW.
Albert T. Nelson
his Attorney.

No. 871,977.

PATENTED NOV. 26, 1907.

E. J. WINSLOW.
SECTIONAL VAULT.
APPLICATION FILED OCT. 20, 1005.

4 SHEETS—SHEET 4.

Fig. 5

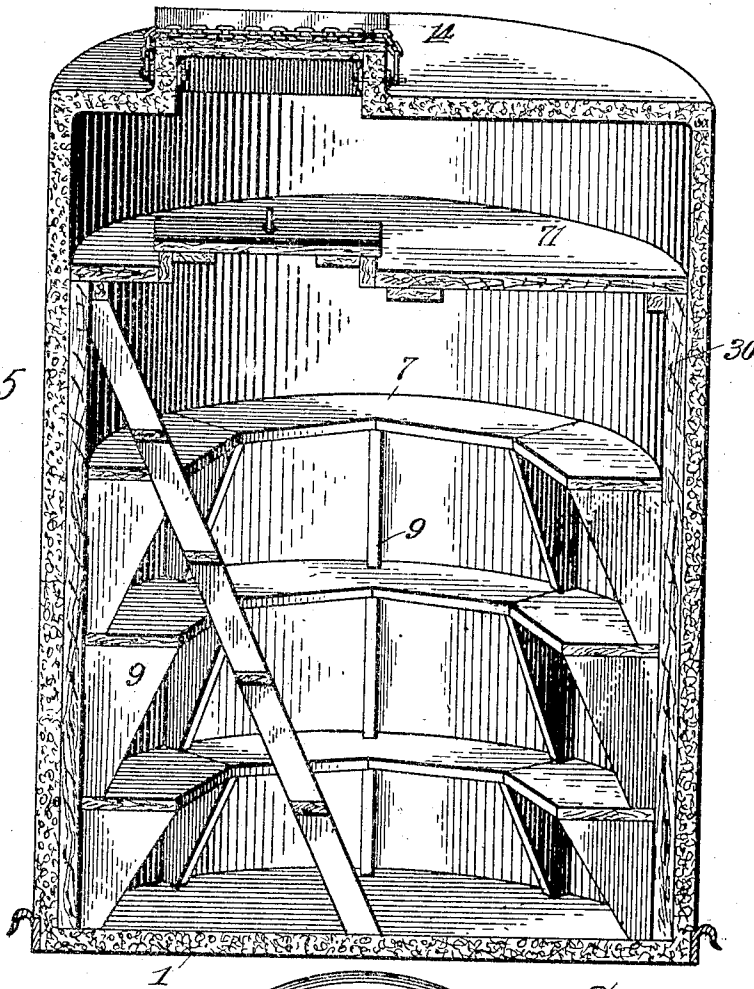
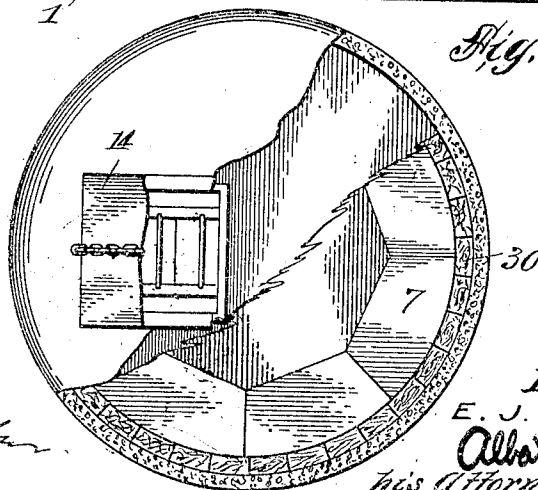


Fig. 6



Witnesses:
C. A. Jarvis.
Frank S. Ober.

Inventor:
E. J. WINSLOW,
Albion Nathan,
his Attorney,

UNITED STATES PATENT OFFICE.

EDWARD JARVIS WINSLOW, OF CHICAGO, ILLINOIS.

SECTIONAL VAULT.

No. 871,977.

Specification of Letters Patent.

Patented Nov. 26, 1867.

Application filed October 20, 1865. Serial No. 223,525.

To all whom it may concern:

Be it known that EDWARD JARVIS WINSLOW, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, has invented certain new and useful Improvements in Sectional Vaults, of which the following is a specification.

This invention relates to water-proof vaults and, among other things, it more particularly concerns certain improvements in the construction of such vessels, whereby all the component parts thereof may be manufactured in one locality and subsequently assembled in another so as to form a well made durable vault.

The invention refers furthermore to vaults of cementitious or plastic material characterized by the aforesaid features.

Heretofore, when it has been desired to construct a water-proof vault in any distant locality, much expense has been involved in transporting the materials of construction to such locality and a great deal of annoyance and delay has been occasioned by the difficulty of readily securing the skilled labor requisite for the performance of such work within the particular locality. Moreover it is usual in practice to construct such water-proof vaults of plastic material, such as cement, and it is not easy to obtain help sufficiently skilled to handle such material in an entirely satisfactory manner. When vaults are not of undue size and are properly constructed, it is possible to transport bodily and subsequently set in place a completely built up vault.

My invention, however, contemplates a sectional vault having the various features constituting the same so devised that they may be manufactured in one locality and subsequently assembled in another, so as to form a highly satisfactory structure.

A further object of my invention lies in a structure in which the individual parts thereof are not of too great dimensions for being transported and otherwise handled with facility.

A still further and important object of my invention is to devise a system of cooperating unitary elements in such manner and form that by the use thereof vaults may be made of any size and proportions without having recourse to a stock of supplies merely adapted for the particular configuration selected.

Another object is to so arrange the inter-

nal features of a water-proof vault as to greatly augment its utility as a storing device, particularly when employed for storing a multiplicity of small objects, such for example as electrical batteries or the like.

With the aforesaid and other ends in view my invention accordingly consists in the combination and arrangement of elements more explicitly shown to denote an exemplification of the manner in which my invention may be embodied into a structure of a highly satisfactory nature and capable of being produced at small cost.

That this invention may be more fully understood and made comprehensible to those skilled in its relating arts, I have appended drawings of a preferred embodiment thereof, and now upon making reference thereto through the instrumentality of reference letters, it will be noted that such like letters denote corresponding parts throughout all of the views of which,

Figure 1 is a vertical section of a vault embodying my invention and showing in detail perspective views of certain features characteristic of my invention. Fig. 2 is a vertical section taken transversely through the embodiment exemplified by Fig. 1. Fig. 3 is a sectional perspective of an adaptation of this invention showing certain variations in the arrangement between the dome and the underlying chamber and also showing certain modifications with respect to the internal features of construction. Fig. 4 is a plan view of the structure exemplified by Fig. 3, certain parts being broken away to more clearly illustrate certain details of the same. Fig. 5 is a sectional perspective of a further deviation in the embodiment of my invention, showing a structure of vault in which the dome is of the same perimeter as the underlying vault and in which certain advantages of the foregoing structures, with respect to the dome, have been preserved through certain peculiarities with respect to the internal fittings of the vault. Fig. 6 is a plan view of Fig. 5, parts being broken away to show further details.

Referring now to the drawings more particularly by means of reference letters, it will be seen that by 1, I have designated the base member of my vault. Such base is preferably designed to circumferentially conform with the side wall of the vault, and this in ordinary circumstances will be of a cylin-

drical shape, including within this term any curvilinear configuration of wall such as elliptical or the like. Such shape will obviously be varied in conformity with the particular space available for the vault. If the same is to be located between narrow walls, either a corresponding elliptical or rectangular shape of vault will be employed; if to be employed in a polygonal space, a like form will be employed for the vault contour. Such base will usually be constructed of an impervious material, generally of a plastic nature such as cement, and may be strengthened or otherwise braced by the use of members specially adapted for the purpose, such as the embedded elements of high tensional strength which I have shown, described and claimed in a companion application, filed October 16th, 1905, Ser. No. 283,114. As this base is best arranged to afford facilities for firmly affixing it to the hereinafter described superposed sectional wall, I provide as a means for attaining this end, a tongue and groove joint as illustrated in the drawings. Such joint consists of a groove 2 within which the over-lying body section rests, though other forms of joint may be resorted to within the scope of this invention. In the form here shown, such joint conforms in shape to the periphery of the base, which at a desired point, preferably adjacent the center, is thickened and otherwise strengthened as shown by 3. The hereinafter referred to brace and ladder may terminate within such thickened portion if desired.

In the form designated by Figs. 4, *et seq.*, the central enlargement is dispensed with and the floor or base is made integral with the side wall arising therefrom. This form will be employed under conditions not demanding the aforesaid construction.

When it is desired to readily obtain any predetermined height of the vault, a plurality of like wall sections 5 will preferably be resorted to. These are so devised as to be capable of being brought into a superposed interlocking relationship by means of any suitable interlocking joint, though in ordinary practice I prefer that herein shown, as it is simple, inexpensive and meets all ordinary requirements. Preferably, such union comprises an enlargement 6 having its vertical end provided with a groove 2 corresponding in size and shape to the lower end of each section so that the latter may be received therein in a manner similar to the union with the base.

Preferably such union comprises an internal enlargement or shoulder, so as to afford an interiorly disposed peripheral rim which I utilize in supporting a series of floors or shelves 7, which may be of wood or any other preferred material. Such floors serve to divide the interior of the vault into a number of stories and, in order that access may

be had to these, I provide such floors with perforations or man-holes 8, the latter preferably being in registry and centrally located as shown, although it lies well within the invention to so enlarge such man-holes that the shelves are comparatively narrow as illustrated in Figs. 4, *et seq.* that is, the shelvings provide a central space which enables access to be had to the same through the instrumentality of a ladder extending within said central space. A series of partitions 9 serve to further support the floors or shelves and divide the whole into a multiplicity of small compartments especially adapted for the storing of any desired objects, such as batteries or the like. As will be understood, these partitions will extend in a radial direction from the central space so as to provide a better opportunity for access to and inspection of the stored article. The partitions will usually be omitted from the uppermost story, so that persons may more readily enter the vault.

In the construction shown by Fig. 5, a floor 71 is provided with a closable man hole so as to afford a tight partition between the top of the dome and the underlying storage vault. The structure shown by Fig. 3 dispenses with this arrangement of floor by making a corresponding partition out of the top of the underlying vault. Usually, such top 10 will be arranged in an interlocking connection with the walls of the underlying chamber and will be provided as aforesaid with a suitable man-hole 11 for the entry of inspectors, which man-hole is closed when desired, by a suitable lid or hatch-way 12. Ordinarily this vault will be buried underground and, to afford convenient entrance thereto, a superposed dome 13 may be permanently affixed to such top so as to inclose the aforesaid hatchway. While frequently convenient to have this dome of a small diameter, it may, if desired, be made of a diameter substantially co-extensive with that of the underlying chambers such as I have illustrated by 131 in Fig. 3. A removable cover 14, provides for entry to the dome and the latter may furthermore have a hand bar 15 to serve as a support in aiding the movements of the inspector. While such hatchway and covering dome may be placed in any location on the top, I prefer to position it intermediate the center and circumference in order that such top may be better braced by means of a centrally located ladder, 4, though, depending upon circumstances attending the use of the same, such brace may be dispensed with as shown by Figs. 3 *et seq.* and the ladder may be arranged slant-wise within the central space provided by the shelvings. In case such ladder 4 is employed, I prefer to arrange it with its ends affixed to the top and bottom, and provided with washers 16 securely fastened thereto

to serve as an abutment in resisting any thrust brought thereon by a movement of the vault ends.

To provide conduits through which electric cables may lead out of the vault from the contained batteries, I may arrange orifices 20 provided with porcelain insulators through all interfering walls in the dome and underlying main chamber as shown in 10 Figs. 3 and 4.

It is not essential that the preferred form hereinbefore described for supporting the shelves be resorted to, as the same end may be attained by lining the vault with wooden 15 walls 30 and to these walls may be affixed shelving in any preferred manner.

All permanent joints leading to the exterior of the vault will be thoroughly bonded together by the use of any suitable 20 hermetic cement such as grouting.

From the foregoing, it will be seen that I have provided a well braced structure of a water-proof nature and that such structure may be rapidly assembled from a number 25 of units each of an exceedingly simple nature. The internal arrangements, as illustrated by Figs. 3 *et seq.* may be employed in connection with the sectional vault and other rearrangements of elements may be 30 made as desired.

By inspecting the following claims, such various modifications as may be resorted to within the scope of my invention will be otherwise made apparent.

35 1. A water-proof vault comprising in combination, an imperforate main chamber of plastic material having substantially the shape of a right cylinder with horizontal plane top and bottom, a plurality of annular 40 shelvings spaced vertically apart around the inner periphery of said main chamber, said shelvings being divided into a plurality of cells by radially disposed vertical partitions, a ladder extending from top to bot-

tom of said chamber in the central space 45 provided by said shelvings, said chamber top having a manhole eccentrically positioned with its perimeter adjacent the upper termination of said ladder, and a relatively large dome rising from said top and 50 covering said manhole, said dome being provided with a manhole and removable cover in the rise thereof.

2. A water-proof vault comprising a plurality of similar annular sections superposed 55 and lapjointed together, a plurality of floors resting upon and supported by said lap-joints, a cover for said sections, and a dome closing a man-hole in said cover.

3. A water-proof vault comprising a bot- 60 tom, a plurality of superposed lap-jointed sections, each lap-joint forming an annular interior rim, a plurality of shelvings resting upon and supported by said rims, a top 65 thereover, and a dome located over a man-hole through said top.

4. A water-proof vault comprising a plurality of similar sections, a top therefor, a dome covering a man-hole extending there- 70 through, and a cellular structure within said vault consisting of a plurality of ring-like shelvings and intermediate partitions therefor.

5. A water-proof vault comprising a plu- 75 rality of similar sections, a corresponding series of shelvings therein, the latter comprising centrally perforated disks spaced above one another with radially extending 80 wings vertically positioned between said disks to form a multiplicity of compartments, and a perforate top over said section with a dome covering said perforation.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD JARVIS WINSLOW.

Witnesses:

EDITH C. SEARLES,
ALBERT F. NATHAN.