G. C. KENNEDY.

CRYPT FOR MAUSOLEUMS.

APPLICATION FILED AUG. 17, 1912. RENEWED JULY 8, 1918.

1,300,173. Patented Apr. 8, 1919.

6 SHEETS—SHEET 1.

Fig. 1.

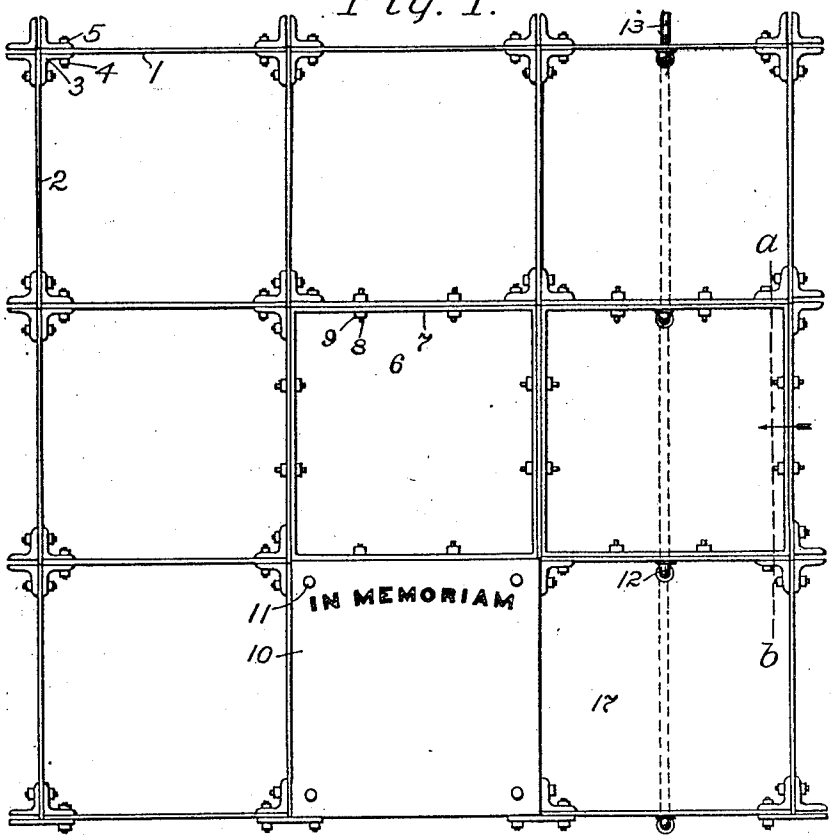


Fig. 2.

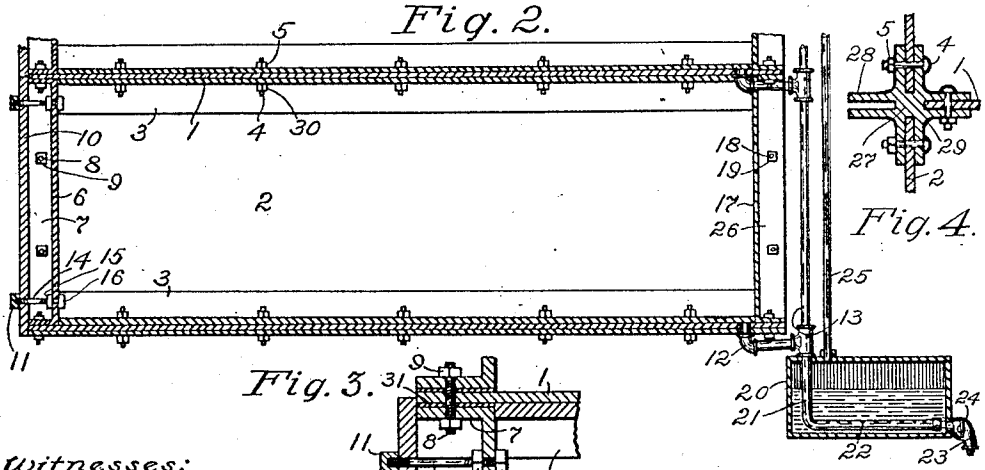


Fig. 3.

Fig. 4.

Witnesses:

A. C. Lindner

M. L. Jennings.

Inventor,

George C. Kennedy.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

G. C. KENNEDY.

CRYPT FOR MAUSOLEUMS.

APPLICATION FILED AUG. 17, 1912. RENEWED JULY 8, 1918.

1,300,173. Patented Apr. 8, 1919

6 SHEETS—SHEET 2.

Fig. 8.

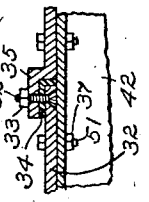


Fig. 2.

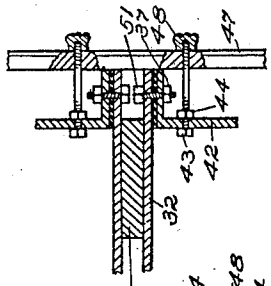


Fig. 6.

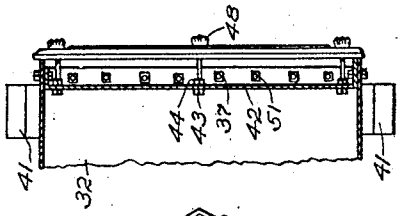


Fig. 9.

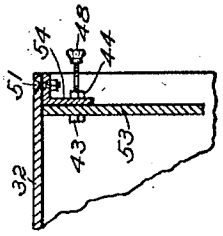
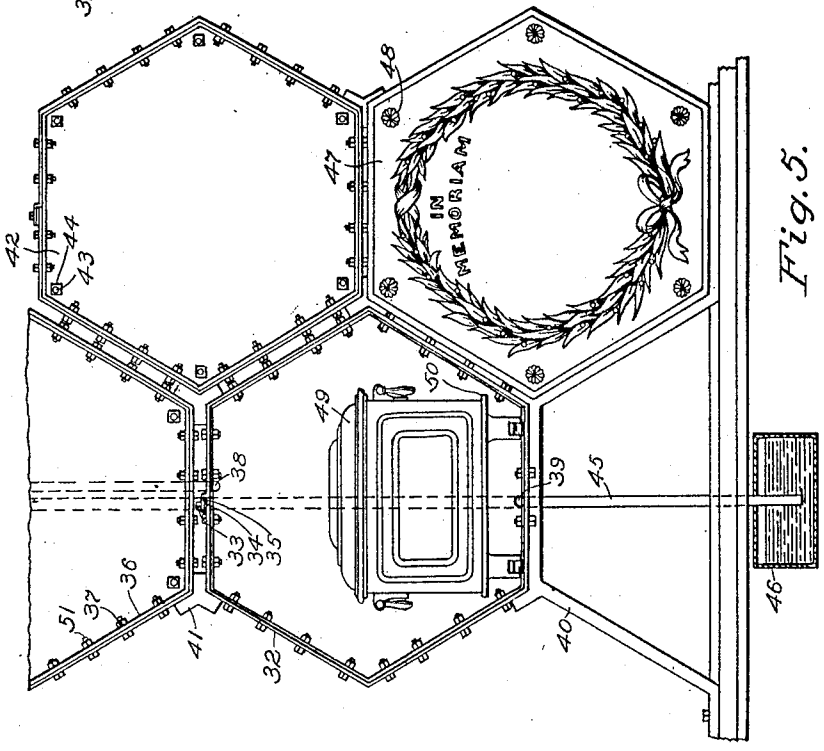


Fig. 5.



Witnesses:

W. H. Brunn

M. L. Jennings.

Inventor,

George C. Kennedy.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

G. C. KENNEDY.

CRYPT FOR MAUSOLEUMS.

APPLICATION FILED AUG. 17, 1912. RENEWED JULY 8, 1918.

1,300,173.

Patented Apr. 8, 1919.

6 SHEETS—SHEET 3.

Fig. 12.

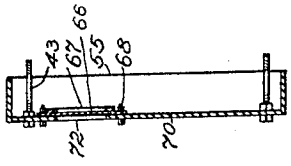


Fig. 11.

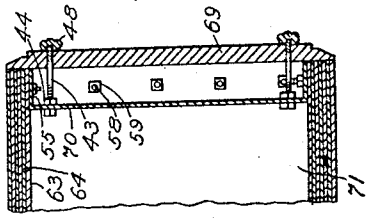


Fig. 13.

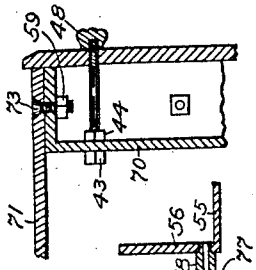


Fig. 14.

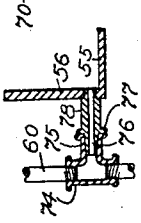
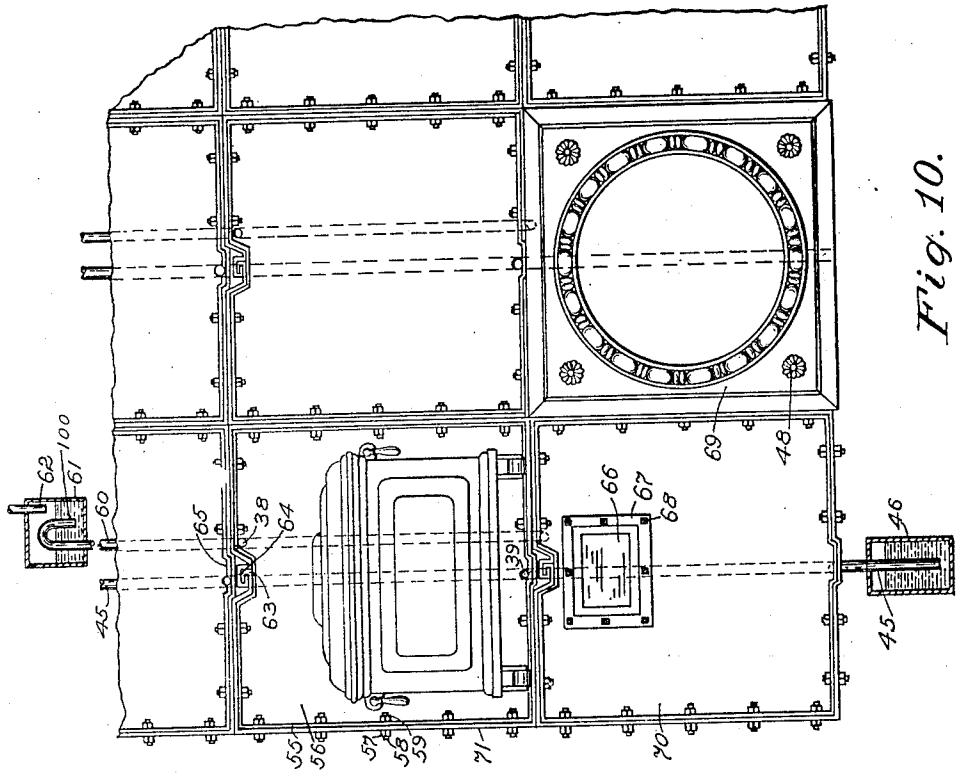


Fig. 10.



Witnesses:

W. H. Brumm

M. L. Jennings.

Inventor,

George C. Kennedy.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

G. C. KENNEDY.

CRYPT FOR MAUSOLEUMS.

APPLICATION FILED AUG. 17, 1912. RENEWED JULY 8, 1918.

1,300,173.

Patented Apr. 8, 1919.

6 SHEETS—SHEET 4.

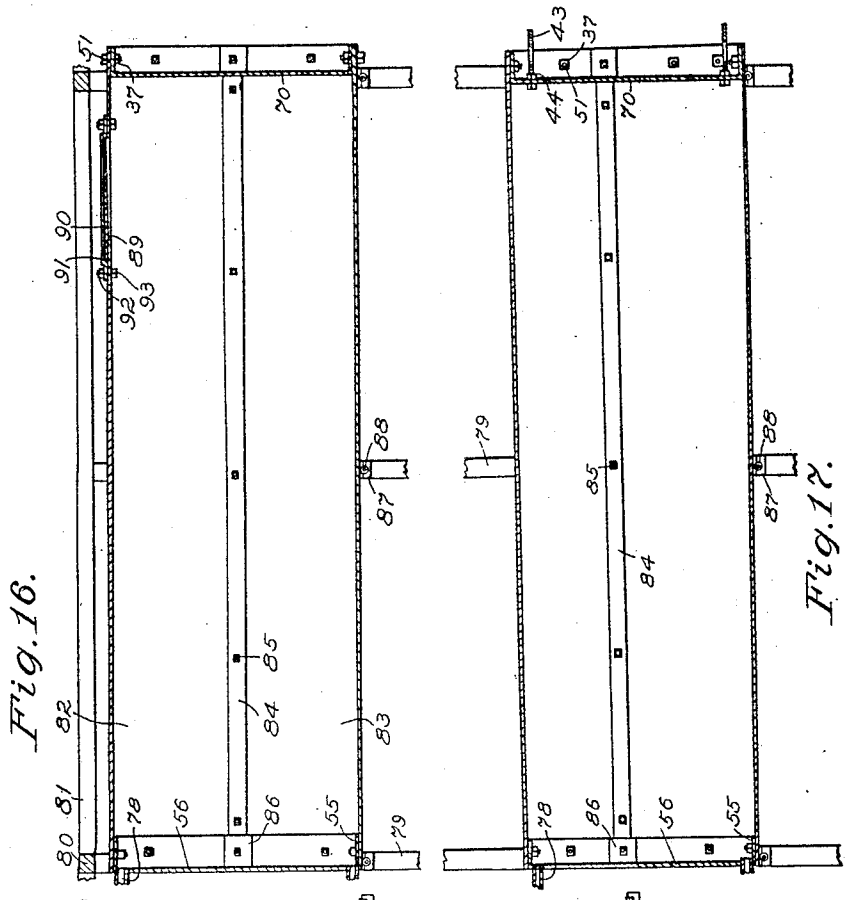


Fig. 16.

Fig. 17.

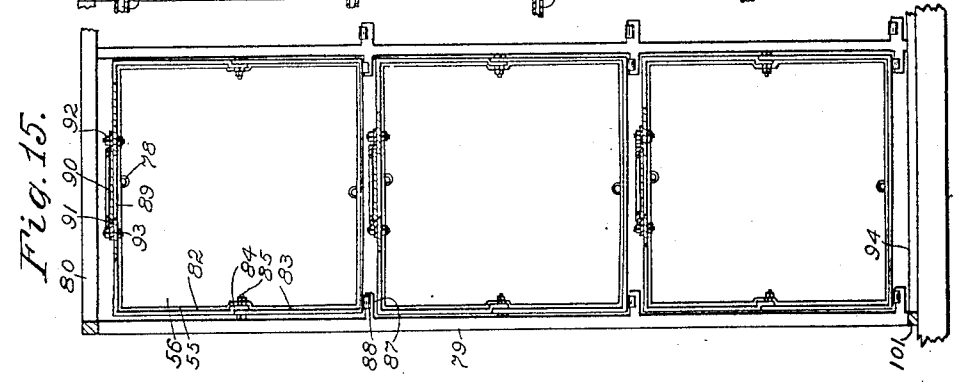


Fig. 15.

Witnesses:
W. H. Burnam
M. L. Jennings.

Inventor,
George C. Kennedy.

G. C. KENNEDY.

CRYPT FOR MAUSOLEUMS.

APPLICATION FILED AUG. 17, 1912. RENEWED JULY 8, 1918.

1,300,173. Patented Apr. 8, 1919.

6 SHEETS—SHEET 5.

Fig. 18.

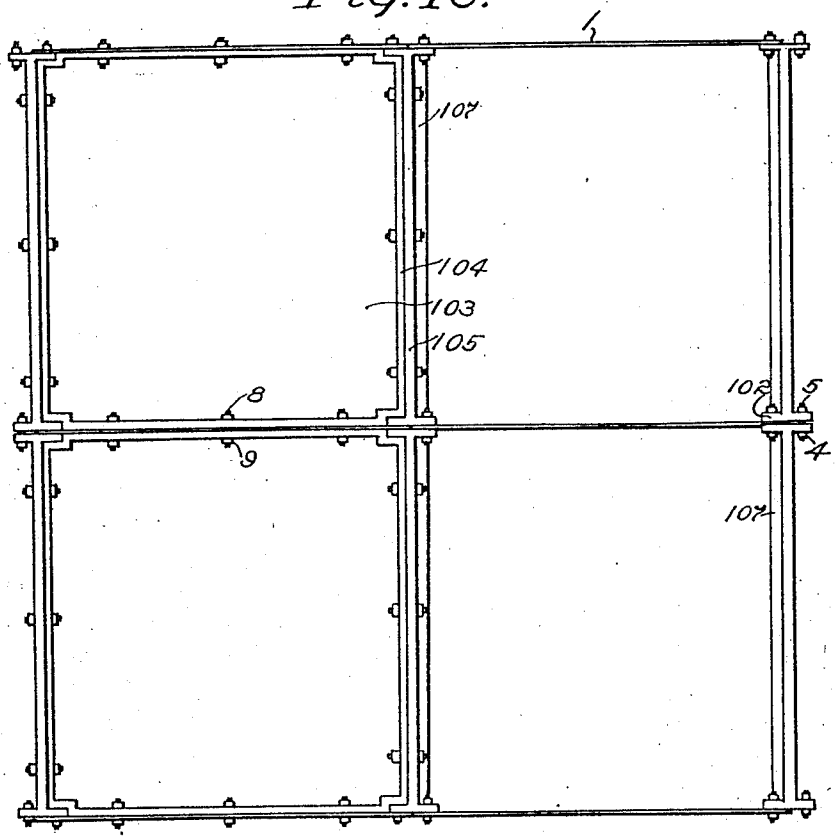


Fig. 19.

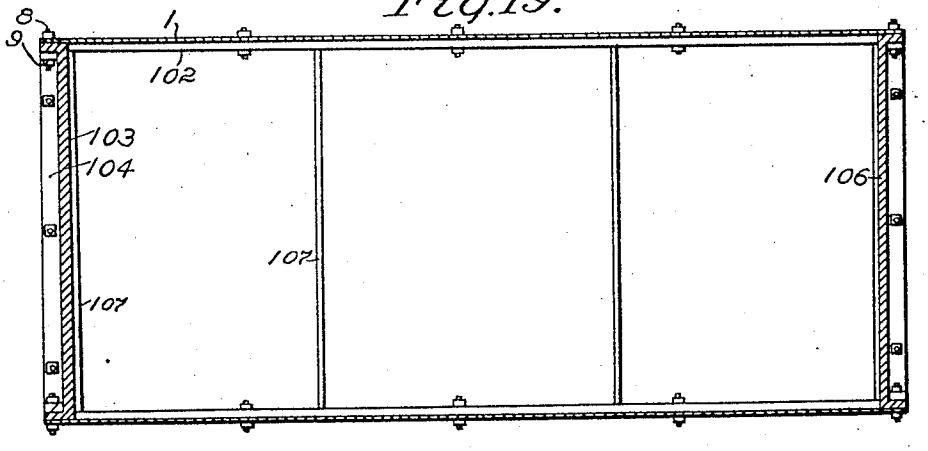
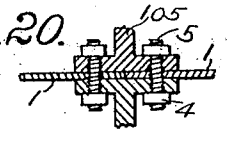


Fig. 20.



Witnesses:
H. B. Burr
M. L. Jennings.

Inventor;
George C. Kennedy.

... CO., PHOTO-LITHO., WASHINGTON, D. C.

G. C. KENNEDY.

CRYPT FOR MAUSOLEUMS.

APPLICATION FILED AUG. 17, 1912. RENEWED JULY 8, 1918.

1,300,173.

Patented Apr. 8, 1919.

6 SHEETS—SHEET 6.

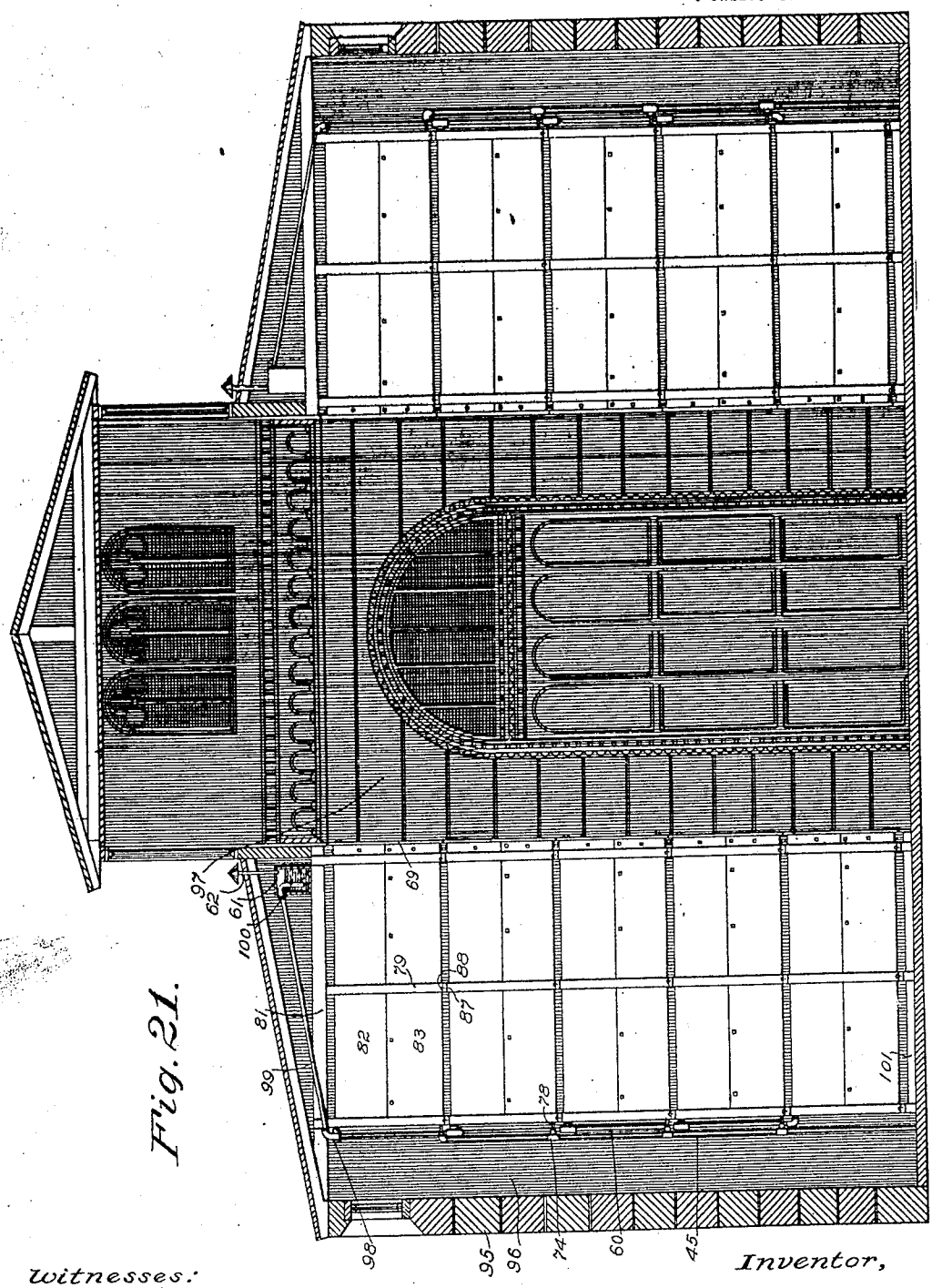


Fig. 21.

Witnesses:
W. H. Brown
M. L. Jennings.

Inventor,
George C. Kennedy.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE COLVIN KENNEDY, OF WATERLOO, IOWA.

CRYPT FOR MAUSOLEUMS.

1,300,173. Specification of Letters Patent. Patented Apr. 8, 1919.

Application filed August 17, 1912, Serial No. 715,617. Renewed July 8, 1918. Serial No. 243,944.

To all whom it may concern:

Be it known that I, GEORGE COLVIN KENNEDY, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Crypts for Mausoleums, of which the following is a specification.

My invention relates to improvements in burial crypts, and the objects of my improvements are: first, to provide crypts formed of parts adapted to be readily assembled or disassembled; second, to adapt such crypts for mutual aggregation and support; third, to furnish the individual crypts and an aggregation thereof with means permitting the addition of other crypts thereto at will; fourth, to so emplace the crypts in such an aggregation as to allow the withdrawal of a crypt without disturbing the arrangement or mutual supports of the rest, and finally, to supply such protective means as will prevent damages to such crypts by the actions of extraneous causes.

These objects I have accomplished by the means which are hereinafter fully described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a front elevation of an assemblage of crypts formed of assembled parts, and adapted for the connection and aggregation therewith of other crypts of the same kind.

Fig. 2 is a vertical longitudinal section of a crypt and parts of the adjoining crypts above and below it, taken on the line *a*—*b* of Fig. 1, and looking in the direction indicated therein by the arrow.

Fig. 3 is an enlarged detail vertical longitudinal section of a portion of the joint between the circumferential plates and the front head of a crypt, showing a method of detachably securing an inscription-plate to said front head.

Fig. 4 is an enlarged transverse section of a corner fitting for the circumferential plates of a crypt.

Fig. 5 is a front elevation of an assemblage of crypts in which the crypts are of a varied form and connection.

Fig. 6 is a detail vertical longitudinal section of the head, the inscription-plate and portions of the circumferential plate of such a crypt as is shown in Fig. 5, with their detachable connections.

Fig. 7 is an enlarged vertical longitudinal section in detail of the same parts as are shown in Fig. 6.

Fig. 8 is a vertical transverse section in detail, enlarged, of the joint between the overlapped edges of the circumferential plate of the crypt shown in Fig. 5, showing the connection of a head thereto.

Fig. 9 is a vertical longitudinal section, enlarged, of a portion of a front head and a circumferential plate, showing a different method of detachably securing them together.

Fig. 10 is a front elevation of another form of knock-down assembled crypts, with their drainage means shown in vertical transverse section, and parts being broken away.

Fig. 11 is a vertical longitudinal section of the circumferential plate, the forward head, and the inscription-plate of one of the crypts shown in Fig. 10, with their means for detachable connection.

Fig. 12 is a vertical longitudinal section of a forward head of the last-mentioned crypt, showing it provided with a window.

Fig. 13 is an enlarged vertical longitudinal section of the parts which are shown in said Fig. 11.

Fig. 14 is a vertical section, enlarged, of the detachable drainage means for a crypt as detachably placed in communication therewith.

Fig. 15 is a front elevation, with parts in section, of several superposed crypts arranged for separate withdrawal and support.

Fig. 16 is a vertical longitudinal section taken medially through one of the crypts shown in Fig. 15, with its roller-bearing supporting-means.

Fig. 17 is a like section of the same kind of crypt, showing the same tilted to the rear to facilitate drainage.

Fig. 18 is a front elevation of a congeries of crypts whose side-walls are of the I-beam type, and Fig. 19 is a vertical longitudinal section of one of the crypts in Fig. 18.

Fig. 20 is an enlarged vertical transverse

section taken through the connections of two of the superposed I-beam side-walls of the crypts shown in Fig. 18.

Fig. 21 is a vertical transverse section of a mausoleum building containing a congeries of crypts on each side of a central corridor, the crypts being so supported as to be separately adapted for withdrawal from the congeries.

Similar numerals of reference denote corresponding parts throughout the several views.

This invention embodies in several slightly variant forms the general idea of forming a congeries of crypts for a mausoleum, said crypts being separable, and each formed of knockdown sections.

In Figs. 1 to 4 inclusive, I have shown a congeries of crypts, each of which is formed of a plurality of sections detachably secured together to form hollow boxes, and the several crypts being detachably connected together into the congeries, so as to be separable from each other. In this arrangement, the whole congeries of crypts is so connected as to be self-supporting throughout as a whole.

The basic form of crypt of this kind, is formed of a plurality of plates of oblong form, of which the plates 1 are for the tops and bottoms, and the plates 2 for the sides of the crypts. These plates, which may be of iron, steel, or any other suitable material, are brought together to form cells of square section transversely, and their abutting edges are united by the following means, detachably.

The numeral 3 denotes an angle-bar which is seated in the inner angle where two of the abutting-edges of such plates come together, and is secured to said plates by means of the bolts 4 passed through marginal holes in the bar and the plates and secured detachably by means of nuts 5. Each interior angle of a crypt is thus furnished and connected by means of an angle-bar 3. In order to aggregate a number of such crypts, it is only requisite to place other angle-bars 3 opposite the other said angle-bars, but on the opposite sides of the said plates, in this case connecting the additional angle-bars by using the same bolts 4 and nuts 5 as are already employed. The longitudinal edges of similar plates 1 and 2 may then be fitted between the outwardly-located angle-bars and secured thereto by means of other bolts 4 and nuts 5, and so on indefinitely, to form a congeries of crypts in any desired number. It is obvious, that this is an economical method of installation for a mausoleum, since only such a number of crypts may be so set up as may be appropriate for momentary or prospective future needs, thus saving an investment in a large number of crypts which may not be required for use until a far-distant time, while other crypts may be at any time added to the aggregation as needed.

The crypts are provided with front and rear heads 6 and 17, respectively, which are detachably secured to the plates 1 and 2 in the following manner.

As shown in Fig. 3, the heads are plates having flanged rims 7 extending outwardly, although they may be placed to extend inwardly if desired, and fitted closely to the plates 1 and 2 over the ends of the angle-bars 3. The heads are secured to said plates by means of bolts 8 and nuts 9, the bolts passing through registering holes in said rim and the adjacent plate as also through the rim of the head in the adjoining crypt. To tightly seal the joint between the rim 7 and the abutting plate 1, or 2 as the case may be, I place a thin sheet of lead or some other compressible sealing substance 31 between said parts, whereby, when the parts are tightly bolted together, the interposed layer 31 is compressed and fills all irregularities between the parts making a good seal therebetween to prevent passage of any liquid or gas therebetween.

A face- or inscription-plate, which may be of any suitable material such as marble, or white bronze, and shown at 10, may be detachably secured over the front of each crypt in the following manner. The plates 10, which are formed so as to fit together at their edges to produce a uniform covering mask when in place, over the crypts, have orifices through which pass the outer ends of bolts 14, projected outwardly from the heads 6. Each bolt 14 is secured to the head 6 by means of nuts 15 and 16, while a cap-nut 11 on the outer end of the bolt serves to secure the plate 10 to said head 6 detachably.

I have provided means for draining each crypt. This is effected by placing an orifice in the lower plate of each crypt near its rear end, and inserting the threaded end of a conduit 12 therein securely but removably. The conduit may be placed in communication by means of a T-coupling with a vertical pipe 13 which delivers into a tank 20 having a quantity of disinfectant therein, the lower end of said pipe being capped, but provided with small orifices 22, whereby any fluid or gases passing downward from the crypts may bubble out into the disinfectant, into which said orificed end dips. A faucet 23 with its cock 24 permits of the draining of superfluous fluid from the tank.

I have shown in Fig. 4, an alternative means for securing the edges of the plates 1 and 2 together, and which consists of a single cast fitting 27 having four oppositely-projecting pairs 28 of spaced-apart flanges.

The interspaces of said flanges are adapted to receive the longitudinal edges of said plates therebetween in a snug fit, and the plates are secured to the flanges by means of bolts 4 and nuts 5 as described above for the angle-bars 3. In order to make seepage of fluid or gas impossible between the parts 28 and the plates 1 and 2, I place a small quantity of cement in the interspaces which seals the connections with the plates 1 and 2, or else paint the surfaces of said fitting 27 with a layer of viscous and impermeable substance 29, which sticks together the fitted parts described, and seals their joints. The same methods are adopted for sealing any joints between the angle-bars 3 and their abutting plates 1 and 2. In order to prevent corrosion of the plates of the crypt by gases or fluids, I cover them all over before or after assembling with a thick coat of impermeable paint, resistant to such corrosive influences as well as to the effects of moisture, heat or cold. The crypts when thus assembled and treated, are both strong and light, mutually supporting, and proof to corrosion from elements within or without them.

In Figs. 5 to 8 inclusive, is shown a knock-down crypt of somewhat different form and arrangement, both in its parts as well as in the relations which the crypts sustain to each other. The crypt is of hexagonal cross-section and its circumferential periphery is formed from a single plate 32, but the said peripheral wall may be formed of a number of connected parts if desired.

As shown in Fig. 8, the longitudinal edges of the plate 32 are arranged so that the edge 35 of one plate is offset to overlap the other edge and said overlapped edges are detachably secured together by means of bolts 52 and nuts 33. The joint between said edges is sealed by inserting therebetween a sheet of lead or other compressible sealing substance 34. In case the wall is made of a plurality of parts, each joint may be sealed, although the use of the lead may be dispensed with, since there is little danger of seepage of gas or liquid through such joints, because of the drainage-means provided similar to that above-described and which is shown in Fig. 5, where a pipe 45 in communication with the crypts' bottoms at 39 carries away fluids to a disinfecting-tank 46, while a separate pipe in communication with a vent 38 in the top of each crypt carries off the gases generated in the crypt. The heads 42 of each crypt are secured to the wall 32 thereof in the same way as already described, by bolts 51 and nuts 37, while the hexagonal face-plates 47 are likewise secured to the head 42 by bolts having nuts 43 and 44, with a cap-nut on each at 48. Fig. 9 shows a varied form of head 53 consisting of an unflanged plate formed to fit the wall 32, and secured by means of angle-brackets 54 secured thereon by the said bolts which secure the face-plate 47, the bolts 51 then detachably securing said angle-brackets to the wall 32.

The said hexagonal crypts may be built up into a self-supporting aggregation in the following manner. The crypts may be superposed directly upon one another, but as shown, I have adopted spacing-devices 41, which are blocks having three projected members, and said blocks are placed at the outer angles of the crypts where the angles of three crypts come together, to space them apart to afford space between them for bolt-heads or nuts, and for projecting overlapped joints as shown. Then, too, as thus placed, the said blocks afford a species of engaging and supporting device, which helps to retain the crypts together and equally transmit pressures in different directions to hold them aggregrated securely together.

In Figs. 10, 11 and 12, I have shown a variant form of crypt of square cross-section, also having side-walls formed of a single plate 71 bent rectangularly, with its longitudinal edges 63 and 64 rolled about each other to produce a tight joint. The joint is placed at the top of the crypt and depressed, and the middle longitudinal portion of the crypt above is depressed to dip down into the other depression, to supply a shallow trough 65, which serves to collect and drain to the vent-opening 39 any fluids of dissolution produced in the crypt, while the vent-opening 38 at the top of each crypt serves to convey away any gases generated in the crypt. The liquid seepage is drained into a disinfecting tank 46, while the gases pass through pipes 60 into a tank 61 above the crypts, the downturned end 100 of the pipe 60 dipping within the disinfecting fluid in the tank to bubble therethrough, and then escape by the vent-pipe 62 into the atmosphere. The last-mentioned crypts are superposed upon each other, closely, and afford mutual support both horizontally and vertically.

To permit an inspection of the contents of a crypt, it may be provided with a window 66 in its forward end, the same being a transparent plate seated and sealed in a frame 67 secured about an opening 72 in the head 70, as shown in Fig. 12, by bolts 68. The heads 56 and 70 are of similar form to those described, and also secured to the side-walls by bolts 73 passed through their flanged rims 55, the latter bolts being provided with conical heads to fit reamed out seats, as shown in Fig. 13, to not project outwardly beyond said side-walls. However, bolts 58 and nuts 57 may be used, of the usual type. The face-plates 69, of square form, are secured by means as described to the forward heads of the crypts, and the

cap-nuts 48 may be formed so as to become an ornamental accessory to the other ornamental features of the face-plates.

In Figs. 15, 16 and 17 are shown crypts and supporting-means therefor, the latter being adapted to support the crypts to permit of their separate withdrawal as desired. As shown, each crypt is formed of two side-plates 82 and 83, having overlapped seams 84 secured by bolts 85. The flanges of the heads are sunk in at the places 86 to fit over the overlapped edges of said plates.

The crypts are supported on rollers 88 seated in short brackets 87 on the standards 79, the latter being cross-connected by means of cross-beams 80, 81 and 101. It will be seen that each crypt may be easily seated or removed, as desired. The crypt may also be inclined rearwardly as shown in Fig. 17, to facilitate drainage toward the rear, as also to hold it more securely in its seat, and hold its detachable connections with the drainage pipes in place.

For use especially with the forms of crypts as mounted removably shown in Fig. 15, I have adopted the means shown in Fig. 14 for detachably connecting the T-couplings 74 of the drainage pipes 60 to the conduits 78 in communication with the drainage vents of the crypts. The outer end of each conduit 78 is coned outwardly and has an annulus or flange 77 spaced apart from its end. The opening of the T-coupling 74 in its part 75 is inwardly coned to fit over the coned end 76 of the conduit 78, and the end of the part 75 is thus seated against the flange 77 which latter acts as a stop and sealing-means. The crypt may be moved forwardly, which detaches it from the T-coupling 74, and the latter and the conduit 78 then plugged, when it is desired to take the crypt apart from the other crypts associated therewith.

In Figs. 18 and 19 is shown a crypt whose side-walls 105 are formed of cast-iron or other metal in the form of an elongated I-beam, with vertical stiffening ribs 107, and with the horizontal plates 1 of sheet-iron or steel having their longitudinal edges secured between flanges 102 of abutting beams 105 by the headless bolts 4 and nuts 5. The cast-iron side-walls are used for greater vertical compressive strength, as they carry the added weights of the superposed crypts and contents, and the horizontal plates 1 need only, in this case to be of comparatively light weight, since each carries only the weight of a single casket. The heads 103 and 106 are to be formed of cast-iron or other metal fitted to close the ends of the crypt in a similar manner to that previously described, and having outwardly-directed flanges 104 secured to the walls 105 and 1 by means of headless bolts 8 and nuts 9.

This type of crypt is very rigid and strong, and suitable for permanent installation in mausoleums, and where a considerable number of crypts must be superposed upon one another.

In Fig. 21, is shown in a mausoleum, two congeries of crypts arranged to face each other on either side of a medial corridor 97, with narrower corridors 96 provided in the rear of each congeries. The crypts are equipped with drainage and disinfecting means projected into the said corridors 96 where they will be accessible.

My improved crypts are strong and durable but inexpensive; any number may be ordered as required and shipped knocked-down, and may be put up by unskilled labor; they are more saving of space than are masonry or concrete constructions and not so heavy nor require so substantial and permanent foundations; the sections may be shipped or transported in vessels, or vehicles of light draft, or on animals over mountainous districts; the crypts may be transported knocked down to field-hospitals or battle-fields, for temporary use, or built up in cities in ordinary buildings for use in times of pestilence or after great disasters, and in no case require skilled labor to put them together or disassemble them.

In villages, mausoleums may be built, and but a necessary number of crypts ordered in knock-down form, to be added to from time to time, and thus preventing advance outlays in expenditure. The congeries of crypts will be indispensable in countries or districts subject to fires or earthquakes, since their durable and elastic construction will resist both, as well as high-winds, better than masonry or concrete constructions.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. The combination of a plurality of crypts, separated by single top, bottom and side plates detachably connected together at their meeting edges by detachable securing devices, heads fitted in the ends of said crypts and secured thereto detachably by detachable securing devices, additional securing devices mounted detachably at or near the meeting edges of the outer top, bottom and side plates of the said connected crypts adapted for use in detachably securing like plates thereto to build thereon additional like crypts, and face-plates mounted over heads of said crypts.

2. The combination of a plurality of crypts, separated by single top, bottom and side plates detachably connected together at their meeting edges by detachable securing devices, heads fitted in the ends of said crypts and secured thereto by detachable securing devices, and additional securing devices mounted detachably at or near the meeting edges of the outer top, bottom and side

plates of the said connected crypts adapted for use in detachably securing other like plates thereto to build thereon additional like crypts.

3. The combination of single top, bottom and side plates detachably connected together at their meeting edges by detachable securing devices, and additional securing devices mounted detachably at or near the meeting edges of the said plates adapted for use in securing other plates thereon to build thereon other hollow structures.

Signed at Waterloo, Iowa, this 29th day of July, 1912.

GEORGE COLVIN KENNEDY.

Witnesses:

W. H. BRUNN,

M. L. JENNINGS.

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