May 10, 1960 J. H. MANN, JR 2,935,955

WALL DEPOSITORY FOR BUILDING PLANS AND IMPORTANT PAPERS

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FIG. 1.

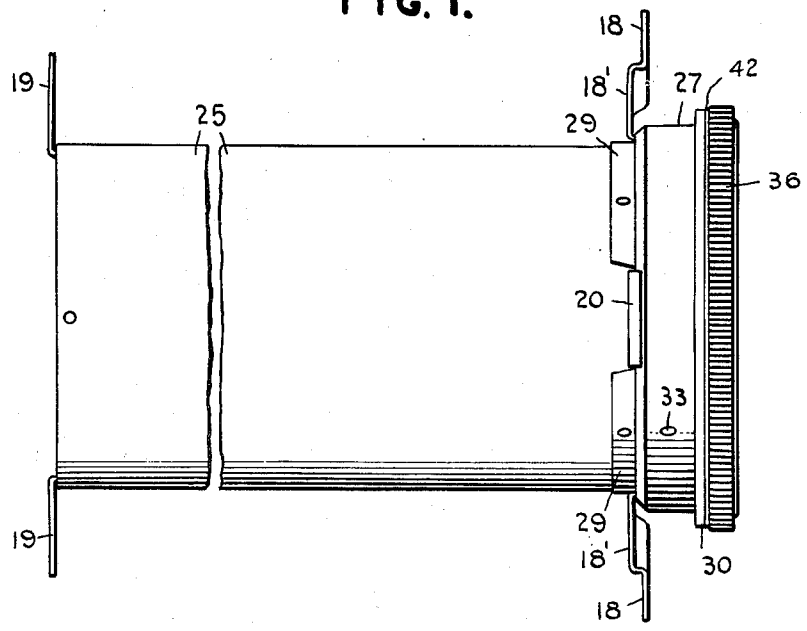


FIG. 2.

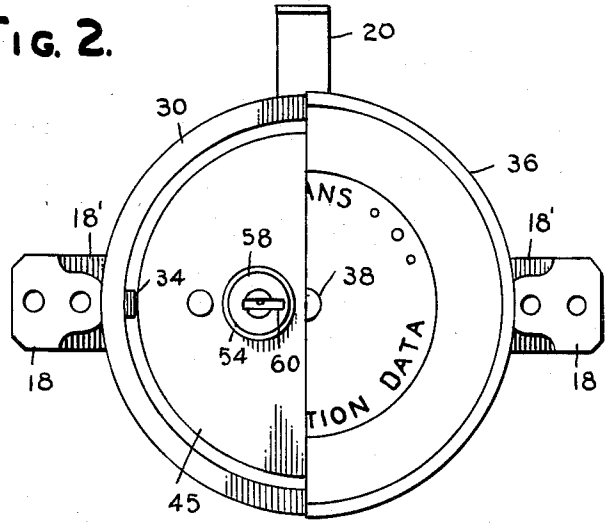
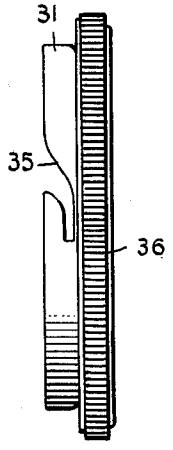


FIG. 3.



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FIG. 4.

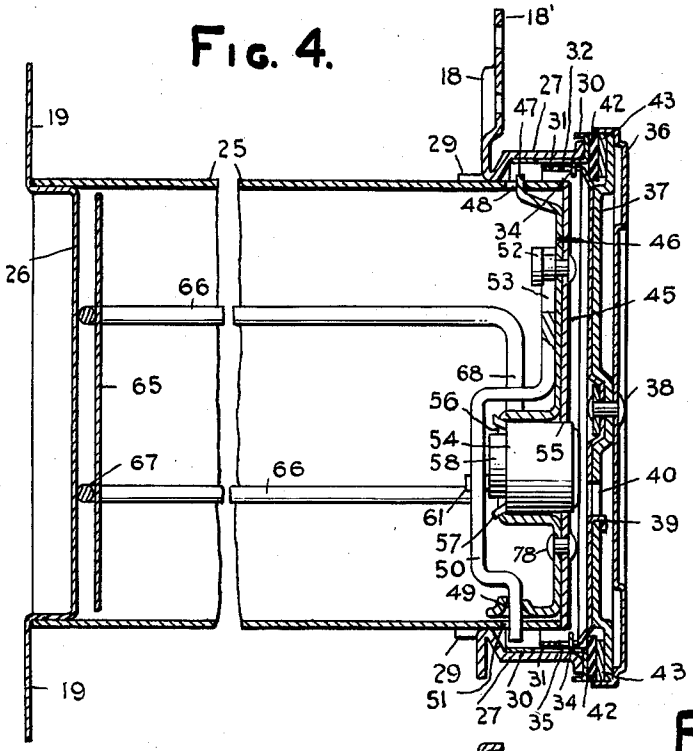


FIG. 6.

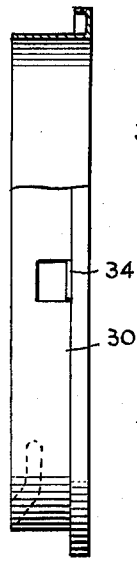


FIG. 7.

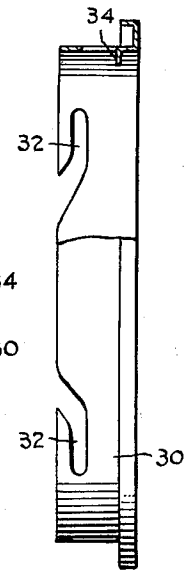


FIG. 5.

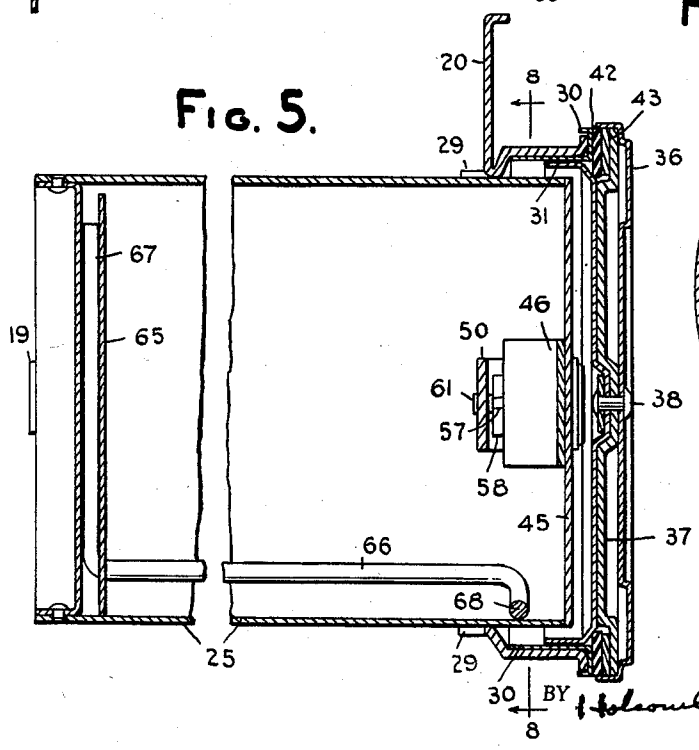
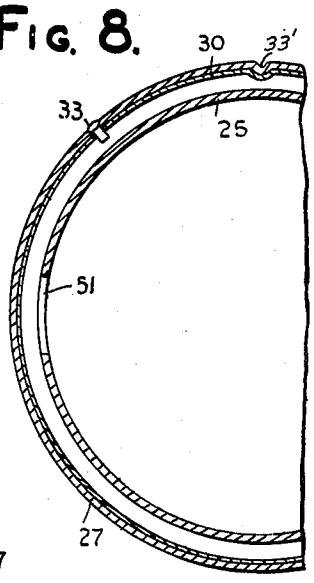


FIG. 8.



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FIG. 9.

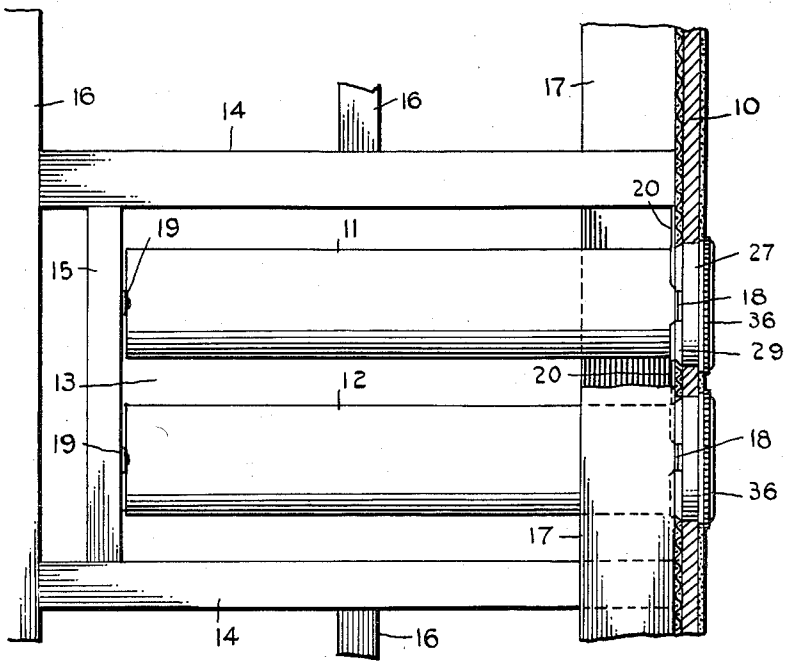


FIG. 10.

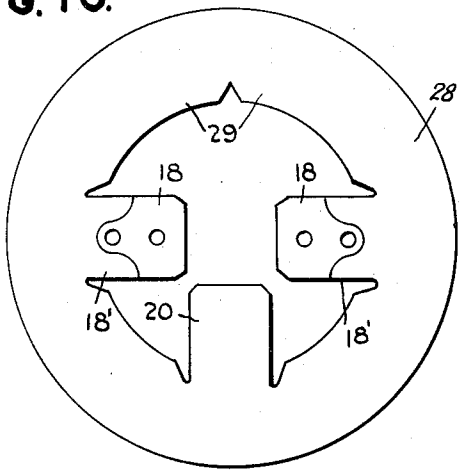


FIG. 12.

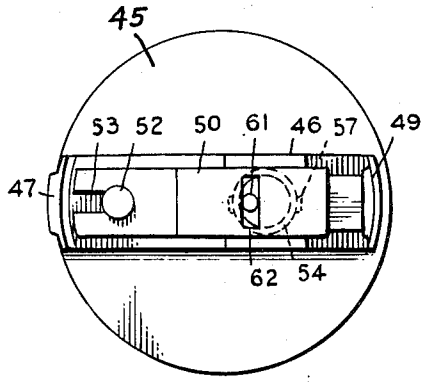
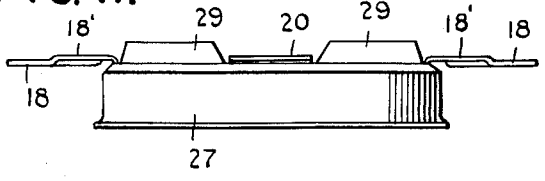


FIG. 11.



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FIG. 17.

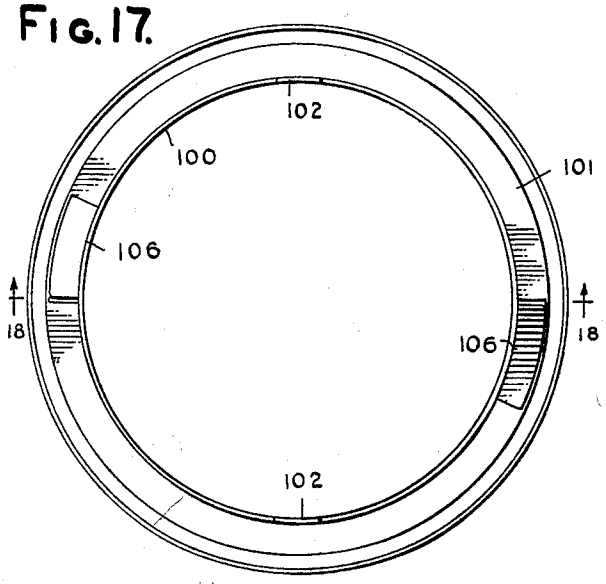


FIG. 18.

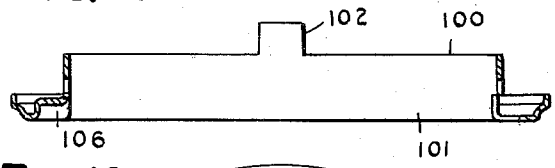


FIG. 19.

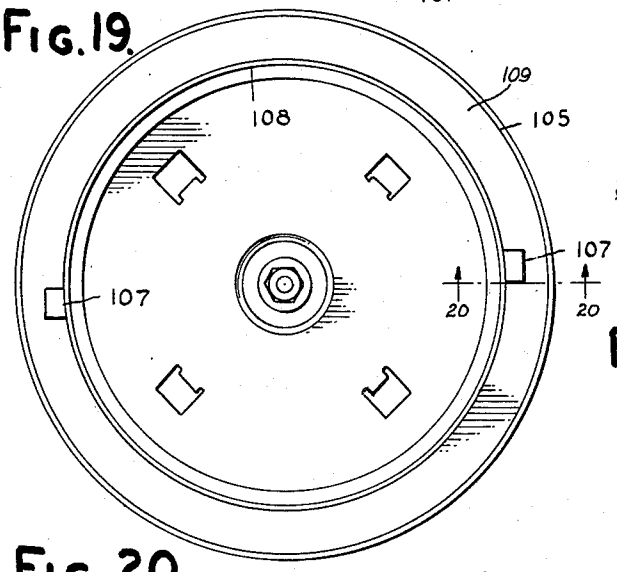


FIG. 20.

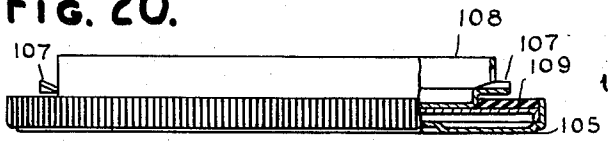


FIG. 13.

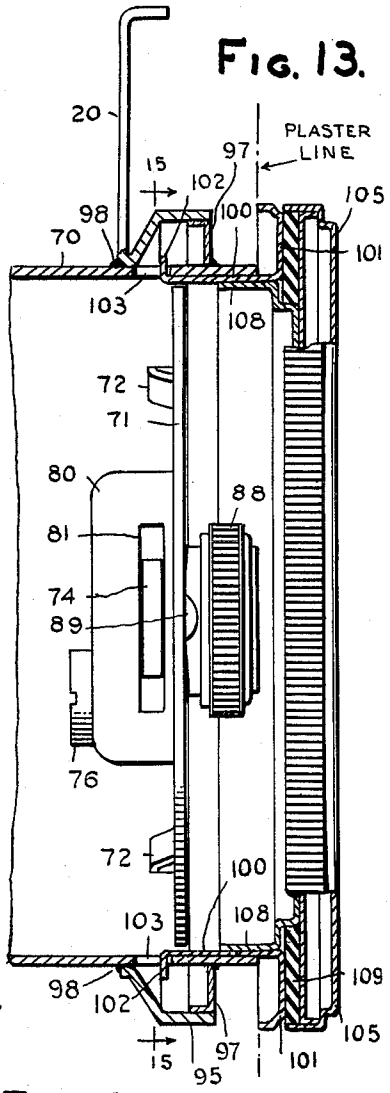
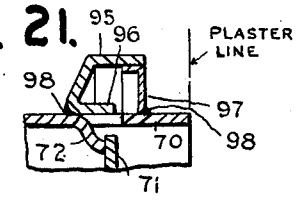


FIG. 21.



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FIG. 14.

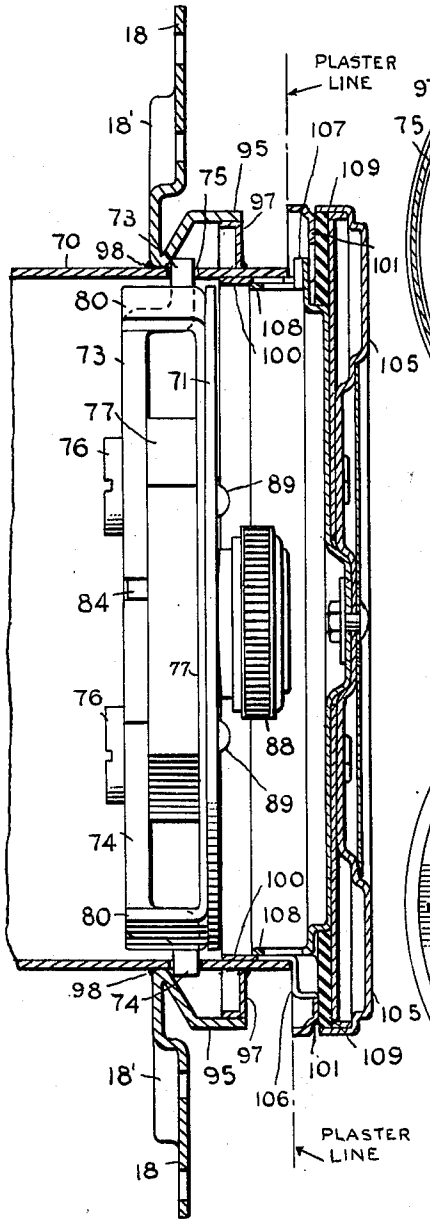


FIG. 15.

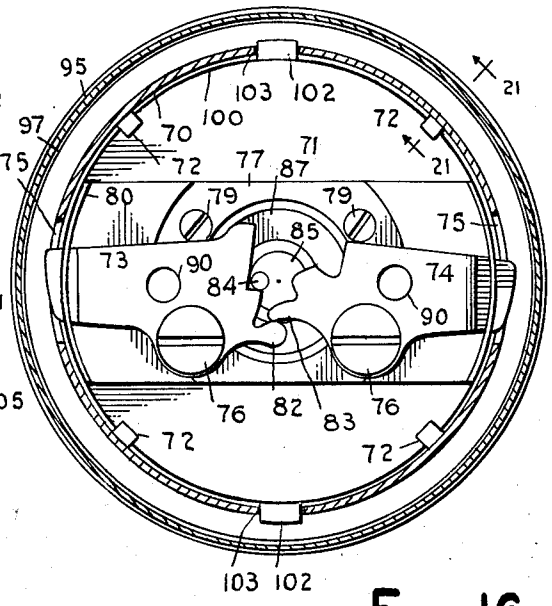
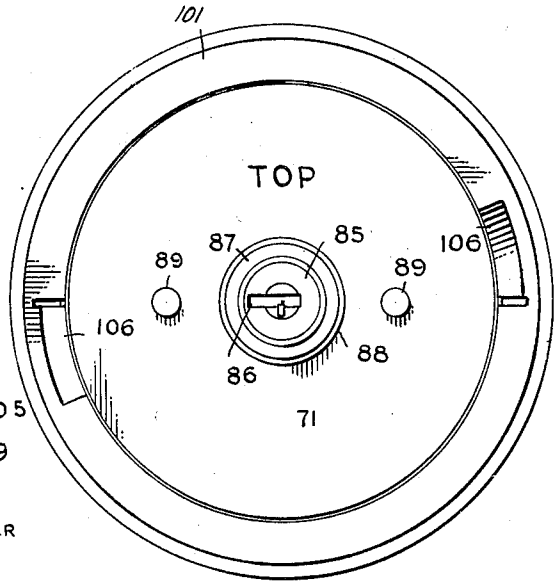


FIG. 16.



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Patented May 10, 1960

2,933,955

WALL DEPOSITORY FOR BUILDING PLANS AND IMPORTANT PAPERS

James H. Mann, Jr., St. Petersburg, Fla.

Application September 16, 1955, Serial No. 534,785

11 Claims. (Cl. 109—59)

This invention relates to depositories for the safekeeping of plans and other documents relating to buildings, and for filing important papers generally, and comprises essentially a tube of sufficient length to receive a roll of drawings or blueprints, and which can be built into a wall or partition during the construction of the building and provided with a closure and lock.

The invention has for a principal object the provision of means for safekeeping in one place in a building of not only the original plans, but also all the drawings, diagrams and layouts needed for repairs, extensions or changes in the building at any time after its completion, so as to have available in a convenient and safe place all the information about the design of the building, the location of all buried pipes and tanks on the premises, and all appliance guarantees and other papers desirable to preserve.

Modern buildings, including residences and multi-family dwellings, hotels, offices and factory buildings, are equipped with electrical conduits and outlets, water and steam lines, sewer and drain pipes, heating ducts and other facilities which are built into the walls, floors and interior spaces, being embedded in the masonry, brick or concrete work or frame structure, depending on the type of construction of the building, the location of which it is not always easy to ascertain after the building is finished except from the plans.

Wall safes of the usual type for receiving money, jewelry and valuable papers are entirely inadequate for large plans and plats and as commonly made are provided with heavy walls, locks and fittings to protect them from fire and burglary and are too cumbersome and expensive for widespread general use.

I aim to simplify and cheapen the cost of constructing a suitable depository for plans and the like to the extent that all buildings may be provided with one or more such depositories at the time of erection, and furnished with a complete set of plans, as a regular item of construction cost, for the benefit of the owner, the fire and building department inspectors, insurance adjustors and persons having to do extensive repairs to the structure.

Further aims and advantages of my invention appear in connection with the following description of two illustrative embodiments thereof suitable for many types of buildings as shown in the accompanying drawings, wherein;

Figure 1 is a plan view of a preferred form of plan depository with an intermediate portion broken away to shorten the overall length of the device;

Figure 2 is a front end view of the same with one half of the cap broken away to disclose the inner end closure and lock;

Figure 3 is an edge view of the cap by itself;

Figures 4 and 5 are respectively a horizontal mid-section and a vertical midsection axially of the complete device drawn to a larger scale than Figs. 1 to 3, part of the intermediate length being broken away;

Figures 6 and 7 are each a part side view and part

cross-section of the finish ring shown in Figures 4 and 5, the section in Fig. 6 being taken in the same plane as Fig. 5, and the section in Fig. 7 being taken in the same plane as Fig. 4;

Figure 8 is a transverse cross-section of the tube, front supporting ring and finish ring on the line 8—8 of Fig. 5, looking in the direction of the arrows;

Figure 9 is a side elevation of two plan depositories or wall safes framed in an interior partition of a typical frame building;

Figure 10 is a plan view of a blank suitable for forming the front supporting ring;

Figure 11 is a side view of the front supporting ring by itself;

Figure 12 is an inside view of the inner end closure showing a simple form of lock;

Figures 13 and 14 are large scale cross-sections similar to Figs. 5 and 4, respectively, showing the outer end and closure construction of another form of the invention, the inner closure and lock assembly being shown in side elevation;

Figure 15 is a cross section taken along the line 15—15 of Figure 13, drawn to a smaller scale, showing the inner side of the pivotal bolts and locking plate of this form of the invention in elevation;

Figure 16 is an outside end view with the cap removed of the end construction shown in Figures 13 and 14;

Figure 17 is a face view of a finish ring suitable for the device shown in Figs. 13 and 14, and Fig.18 is an axial cross-section thereof on the line 18—18 in Fig. 17;

Figure 19 is an inside view of the cap shown in Figs. 13 and 14, and Fig. 20 is a part side view and part cross-section on the line 20—20 in Fig. 19 of the same; and

Figure 21 is a cross-section of the end of the tube and its front supporting ring on the line 21—21 in Fig. 15, drawn to the same scale as Figs. 13 and 14.

Referring to Fig. 9 of the drawings, two plan depositories 11, 12 are shown therein arranged one above the other in a recess 13 in a partition wall extending at right angles to a corridor wall 10. The recess is formed by horizontal and vertical frame members 14, 15, supported by the studs 16 in the partition, and a pair of vertical studs or posts 17 set in the front wall on each side of the recess, the depositories being secured to the vertical frame member 15 at their inner or rear ends and to the front faces of the posts 17 at their front ends by nails or screws passing through suitable lugs 18, 19 with which the ends of the depositories are provided, as hereinafter described. At their front ends, the depositories are separated by spacers 20.

The space 13 within the frame members 14, 15, which is closed by the posts 17 and side wall 10 of the corridor, preferably is filled with mineral wool or other insulating material, or otherwise protected from any but a large fire in the building.

Referring to Figs. 1 to 8, inclusive, which show the construction of one of the plan depositories as furnished to the building contractor for installation in a building, the main body of the receptacle consists of a seamless tube 25, preferably made of aluminum of about four inches in outside diameter and from thirty to forty inches in length, its inner or rear end being closed by a flanged disc 26, the periphery of which fits within and is welded, riveted, or deformed to engage the tube to secure it in place. The end lugs 19 are formed integral with the blank from which the closure 26 is stamped, and are bent outwards following the flanging operation to project laterally at each side of the end of the tube when the closure is assembled therein.

The outer front end of the tube 25 is provided with a tube supporting and cap receiving ring 27, stamped and

drawn from a flat sheet or disc 28 (see Fig. 10) of malleable metal, preferably aluminum, as hereinafter described. This ring 27 is secured around the open end of the tube 25 by means of flanges 29, welded or deformed to grip the tube securely. The lugs 18 and spacer 20 are formed integrally with the ring 27, being bent out from the interior portion of the stamped sheet 28. The body of the ring 27 is cupped or drawn to a larger size than the tube 25 to leave a space between the two when assembled, as shown in Figs. 4, 5 and 8, for receiving the finish ring 30 and the inner flange 31 of the outer cap member. The finish ring is a close fit in the supporting ring 27, and its inner flange is provided with two diametrically opposed bayonet slots 32 which engage with inwardly projecting studs or lugs 33 in the ring 27 at opposite points in its periphery as indicated in Fig. 8. This finish ring is prevented from turning in the direction to remove it once it is assembled in the ring 27 by a screw, or by deforming the two members as shown at 33' in Figure 8.

The finish ring is provided with inwardly bent lugs 34 punched from its inner flange at diametrically opposite points, which engage in corresponding bayonet slots 35 in the flange 31 of the outer cap member to hold the outer cap member in place. The outer cover 36 of the cap member is knurled around its periphery, which is flanged to provide a rim which may be grasped by hand to rotate the cap member sufficiently for removal and replacement after the depository is built into the structure. This outer cover 36 is preferably made of metal which will take a polish, and may be etched or embossed to display the character of the contents of the depository, as "Plans," "Construction Data," and the manufacturer's name or trademark.

The outer cover 36 and inner flanged member 31 of the cap member are secured on opposite sides of a middle disc 37 by means of a rivet 38 or other fastening means, and one or more lugs 39 formed in the inner member 31 and projecting through suitably positioned openings 40 in the disc 37 prevent the inner member and disc 37 from rotating one with respect to the other. At the rim of the outer cap member space is provided between the disc 37 and the inner member 31 for a gasket or ring 42, preferably made of tough rubber, the exposed edge of which engages against the exposed edge of the finish ring 30 when the cap is in place. A backing ring 43 of springy metal may be used to support the gasket.

An inner locking plate 45 is provided for preventing access to the contents of the depository by unauthorized persons. This locking plate is preferably made in the form of a disc 45 which fits against the open end of the tube 25 and is held in place by a cross member 46 or strip, riveted or otherwise secured to the plate 45, and provided at one end with a flanged projection 47 which is adapted to engage in a slot 48 in the side wall of the tube 25, and at the opposite end with an arm having a flanged opening 49 for receiving and guiding the outer end of the locking bar or bolt 50, the bolt end of which engages in a slot 51 in the side wall of the tube 25 as shown in Figure 4. The locking bar is slidably held and guided at the inner end by a flanged stud 52 which engages between and overlaps the parallel arms of the bifurcation 53 formed at the inner end of the locking bar. This stud also secures the cross member 46 to the locking plate 45 and assists in holding together the entire locking plate assembly.

The lock is preferably of the well known cylinder type, the barrel 54 of which is secured at one end in an opening 55 in the locking plate 45 and at the other end in an opening 56 in the middle part of the cross member 46, which is bent to embrace it. Studs 57 hold the barrel against rotation. The rotatable cylinder 58 containing the locking pawls is of the usual construction, having a keyway 60 in its outer end and a bolt engaging pin 61 on its inner end which works in a cross slot 62 in the bolt 50 to shift the bolt into and out of engagement with the opening 51 in the side wall of the tube 25 diametrically opposite the opening 48.

The locking plate 45 engages tightly against the open end of the tube 25 when locked in position, and the crack between them is well within the recess provided by the supporting ring 27 and protected thereby from being pried off by a screwdriver or other implement in the hands of a curious person or thief, who might remove the outer cover but would then be unable to unlock the cylinder lock. In case of loss of the key, the exposed end of the stud 52 and rivet 78 can be sheared off with a hammer and cold chisel and the body of the stud punched into the interior of the receptacle, thereby releasing the locking bar 50, whereupon the locking plate 45 can be removed.

Within the depository is a removable bottom or shelf 65, in the shape of a disc, provided with a long bail or handle 66 formed of stiff wire, the ends 67 of which project through openings in the disc and are bent to engage its rear side, where they are welded or brazed thereto; and the middle portion of the wire is formed into a loop 68 affording means for manually grasping the bail for removing the device together with the entire contents of the depository.

In the form of the invention shown in Figs. 13 to 21, inclusive, the main tube 70 is slightly larger than the tube 25, so the locking plate 71 fits within its open end against four stops 72 preferably formed by lugs pressed inwards from the side wall of the tube, as shown in Figs. 13 and 15, being held in place when locked by a pair of pivoted bolts 73, 74, the free ends of which project through slotted openings 75 in the side wall of the tube.

The locking bolts are mounted on spaced studs 76, screwed or otherwise secured to the inner face of a removable cross member 77 to the outer face of which the lock assembly is attached by screws 79 or in any secure manner. The outer radial extremities of the cross member are provided with flanges 80 which fit loosely in the tube 70 and have slots 81 in which the ends of the bolts 73, 74 are held and guided. The inner ends of the bolts are provided with interengaging teeth 82, 83, which cause the bolts to swing together in opposite directions when moved by the pin 84 on the inner end of the cylinder 85 upon turning the key (see Fig. 16) 86 in the outer end of the lock cylinder.

The barrel 87 of the lock is removably supported at its inner end by the cross member 77 and is secured in any suitable manner to the plate 71 through which its outer end protrudes with its principal axis in line with the axis of the tube 70. A knurled knob 88 is fixed upon the outer end of the lock barrel for convenience in manipulating the locking plate 71 and to assist in securing the barrel and plate together. Rivets or screws 89 secure the plate 71 and cross member 77 to each other. Holes 90 (see Fig. 15) are left in the bolts permitting access to these screws or rivets from the inside, thereby enabling them to be sheared off and punched through and dislodged from the outside so as to disconnect the plate 71 and barrel 87 from the cross-member 77 in case it is necessary to open the depository without a key when the locking plate is locked in place.

The front supporting ring 95 in the form of the invention shown in Figs. 13, 14 and 21, is pressed from a flat blank similarly to the front supporting ring 27 shown in Figs. 10 and 11, but differs from the ring 27 in that the flanges or tabs 96 which position it on the tube 70 are bent to the front instead of to the rear, and a flanged ring 97 is provided for closing the open space at the front between the supporting ring 95 and the tube 70, as best shown in Fig. 21. This construction permits a continuous line of brazing or welding metal 98 or other filling to be laid in the joints or space between the rings 95, 97 and tube 70 to prevent entrance of plaster or moisture into the annu-

lar space between them and from there into the tube through the openings therein which are covered by the ring.

The inner flange **100** of the thin metal finish ring **101** fits tightly within the open end of the tube **70**, and after the plaster or other wall finish has been put in place, the finish ring is secured in position with the circumferential edge of its outer flange tight against the face of the wall by deformable lugs or tabs **102** which are bent to engage through diametrically spaced openings **103** in the side wall of the tube, as shown in Figs. 13, 17 and 18, thereby covering the joint between the tube and the wall irrespective of slight irregularities in the setting of the tube or placing of the plaster.

The cap **105** is secured to the finish ring by a pair of diametrically opposed lugs **107** projecting outwards from the inner flange **108** of the cap as shown in Figures 19 and 20, which lugs are adapted to engage beneath the face of the finish ring when the cap is turned clockwise after inserting the lugs in diametrically spaced depressed openings **106** provided in the inner margin and edge of said face as shown in Figures 16, 17 and 18. The inner flange of the cap fits within the finish ring, and the rubber ring **109** engages the face of the finish ring to prevent moisture or dirt from entering the mouth of the tube from the outside. The cap **105** otherwise is much the same in its construction as the cap shown in Figs. 1 to 5.

Both of my improved devices are adapted for plaster or composition board covered walls of either ⅜" or ⅝" thickness, the lugs **18** having two surfaces formed for engagement with the studs or posts **17** when being installed, the inner ones **18'** of these surfaces being spaced ¼" further from the face of the finish ring **30** than the outer ones **18**, as shown in Figure 14. By chipping the corners of the posts **17** to receive the inner portions **18'** of these lugs **18**, the main tube can be set with the outer end surfaces of the lugs flush against the corner posts, thereby accommodating a thinner wall than with the inner portions **18'** flush against the outer faces of the corner posts because of the offset between the two portions of the lugs.

My improved design of receptacle, utilizing a seamless tube for the body and stampings for the bottom and front end construction, which can be assembled and secured in place by simple slots and lugs or bayonet joints without screw threads, and with a minimum of rivets and small parts, is comparatively inexpensive to manufacture, and is readily installed by workers in the building construction industry without special tools or instructions.

The invention is not restricted to the illustrative embodiments, but it may be modified to adopt it to masonry buildings for installation in concrete block partitions or for embedding in brick or concrete walls, and is useful wherever the receptacle can be surrounded and protected by the structure.

I claim:

1. A wall receptacle of the character described comprising a seamless tube and a plurality of annular sheet metal stampings, said stampings including a deformable finish ring and a relatively stiff supporting ring, the former being formed with inner protuberances engaging the side wall of the receptacle near an end thereof and self-secured thereto by deforming portions of said side wall and ring to inter-engage and prevent relative displacement thereof, and the latter being formed with a hollow outer ring portion encircling and spaced from the outer periphery of the tube at said end of the receptacle and having inner lug portions extending radially outwards beyond said outer ring portion constituting integral spacing and supporting members for positioning said end of the receptacle with respect to a building wall.

2. A wall receptacle as set forth in claim 1 wherein the supporting ring is a one piece stamping and is provided with lugs projecting outwards from its inner edge for supporting the outer end of said tube in relation to a wall structure.

3. A wall receptacle as set forth in claim 2 wherein each supporting lug has two supporting faces offset from each other in the axial direction of said tube and either of which may be secured against an adjacent wall member to locate the outer end of said tube flush with respect to the outer face of later applied wall finish of different thickness.

4. A wall receptacle body as set forth in claim 1 wherein there are at least two outbent supporting lugs each having offset bearing faces in adjacent transverse planes.

5. A wall safe receptacle as set forth in claim 1 wherein the open end of the tube is provided with a finish ring having a flange fitting within the main body portion of the supporting ring, bayonet joint connections between said supporting ring and finish ring, and interengaging means for securing said finish ring against turning with respect to said supporting ring.

6. A wall safe receptacle as set forth in claim 5 wherein the open end of the tube is also provided with a cap having a flange fitting loosely against said finish ring and circumferentially spaced bayonet joints on said finish ring and cap for securing said cap in place over the open end of said tube.

7. A wall receptacle for interior building walls having an after applied exterior finish, said receptacle comprising an elongated tube adapted to be enclosed in such a wall before placement of said finish and provided with a lockable closure at its outer end and a removable cover therefor, said tube having circumferentially spaced openings in its side wall adjacent to its outer end, a locking device for said closure secured to the inner face thereof and provided with locking members respectively engaging in said tube side wall openings when in locked position, at least one of said locking members being movable to disengage it from said side wall, said locking device comprising actuating means extending through and accessible for operation from the exterior of said closure, a tube supporting ring encircling the outer end of said tube and secured thereto to cover said side wall openings, a finish ring encompassing the open end of said tube and covering the joint between it and the wall, said finish ring having the inner wall provided with securing means engaging at least some of the openings in the side wall of said tube to retain it in position after placement of said wall exterior finish, said finish ring also having spaced attaching means on an exposed wall in engagement with attaching means on the inner side of said cover for removably securing the latter upon the open end of said tube, and sealing means on the inner side of said cover engaging said finish ring and sealing the outer end opening into said tube.

8. A wall receptacle as set forth in claim 7 wherein the finish ring is provided with a flange on its inner side fitting tightly into said tube and having deformable portions engaging openings in the side wall of said tube for securing and retaining it in place after the tube is set in a wall.

9. A wall safe as set forth in claim 7 wherein the tube supporting ring is provided with inturned portions on its inner end wall for positioning it on the outer side of the tube near its open end with said inturned portions covered by said ring, and an unbroken line of filling in the joint between said ring and tube completely encircling said tube.

10. A wall safe as set forth in claim 7 wherein the tube is provided with diametrically opposed slots in its wall near the open end, and the locking plate supports two interconnected locking bars the outer end of which are movable in opposite directions for engaging in said slots, a cylinder type lock having a key rotated element carried by said locking plate, and means carried by the key rotated element engaging said interconnected locking bars for moving them simultaneously to engage or disengage said slots upon turning the key.

11. A wall safe as set forth in claim 10 wherein the locking bars are mounted on a removable cross member which is secured to the locking plate by fastening means extending through said plate to the front side thereof and

having exposed portions readily sheared off to permit said cross member and locking plate to separate and give access to the interior of the safe when the locking bars are in locked position.

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