Dec. 2, 1969 W. TELEKY 3,481,288

WALL SAFE

Filed April 5, 1968 3 Sheets-Sheet 1

FIG. 1

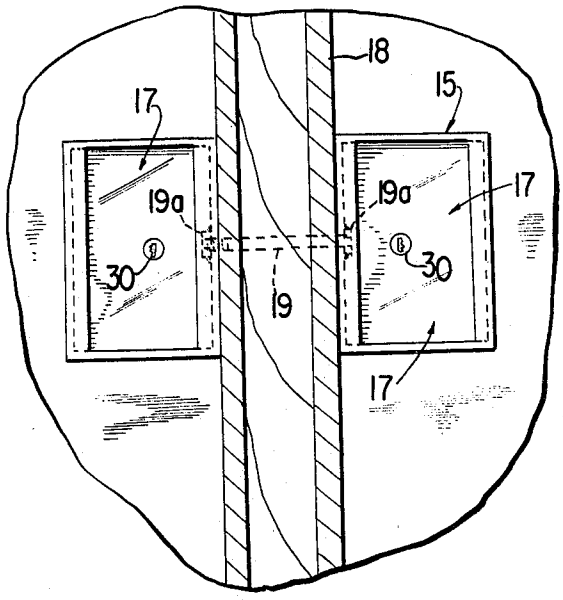

FIG. 2

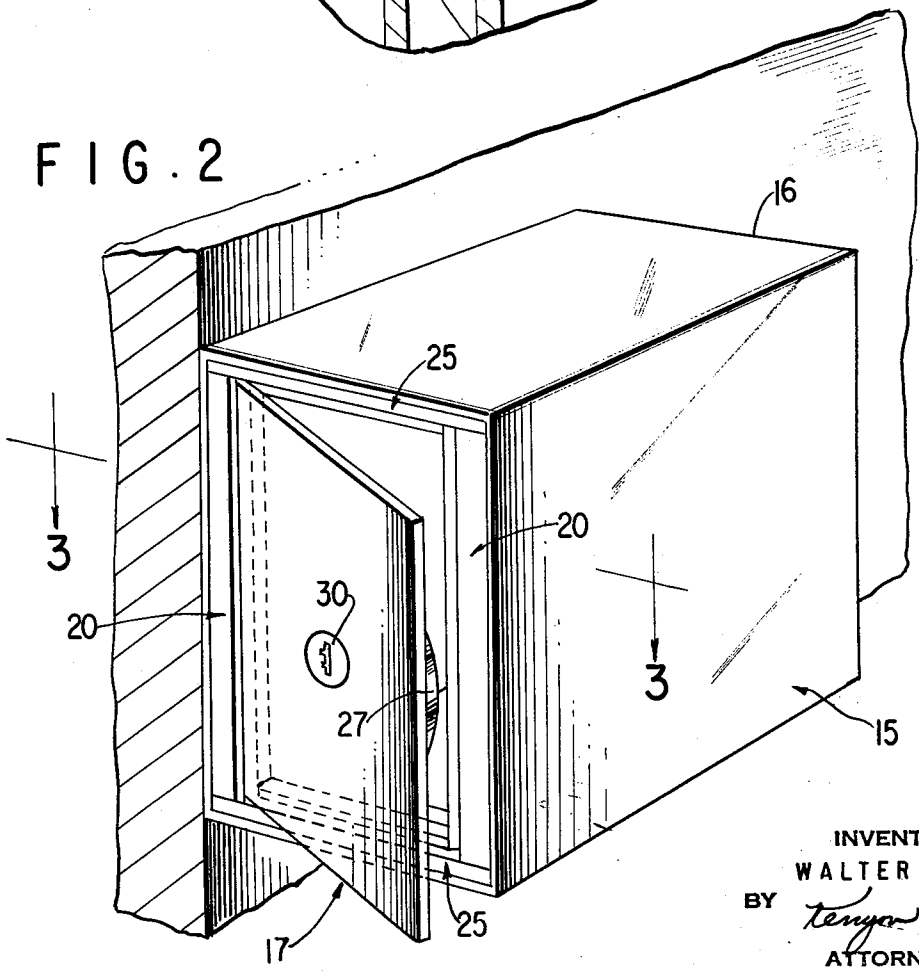

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FIG. 3

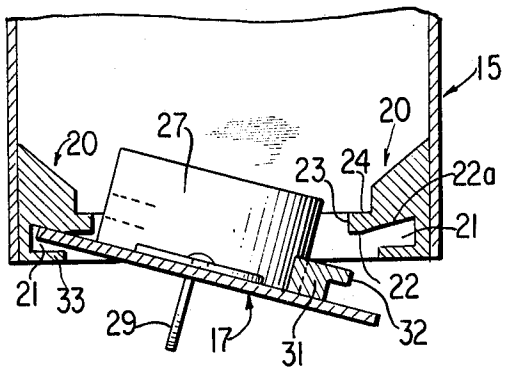
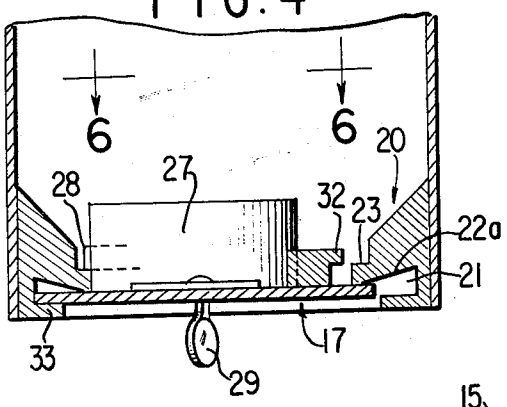


FIG. 4



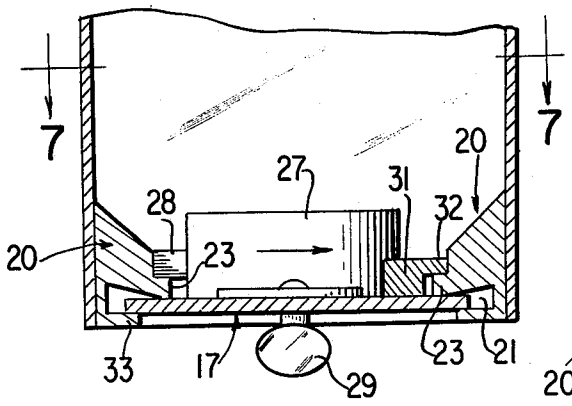


FIG. 5

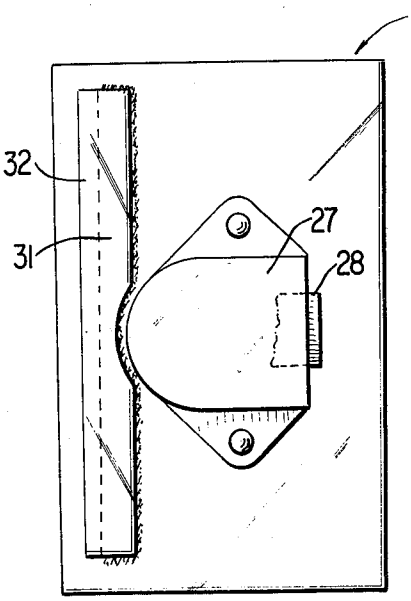


FIG. 6

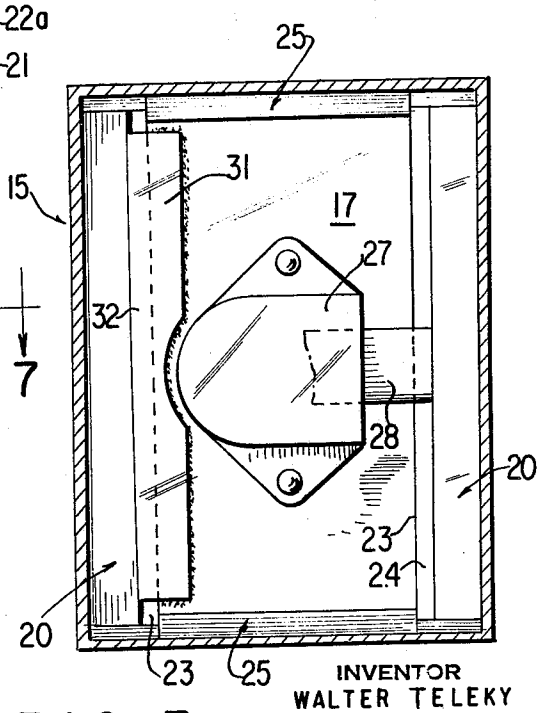


FIG. 7

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FIG. 8

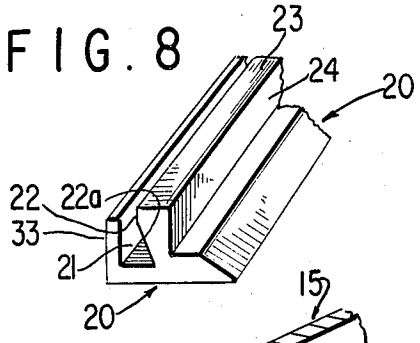


FIG. 9

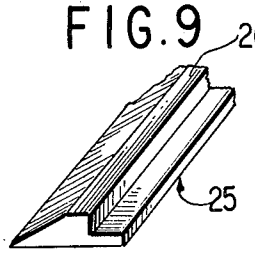


FIG. 10

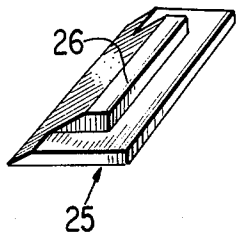
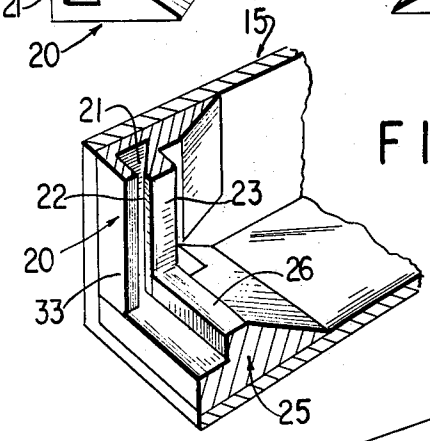


FIG. 11



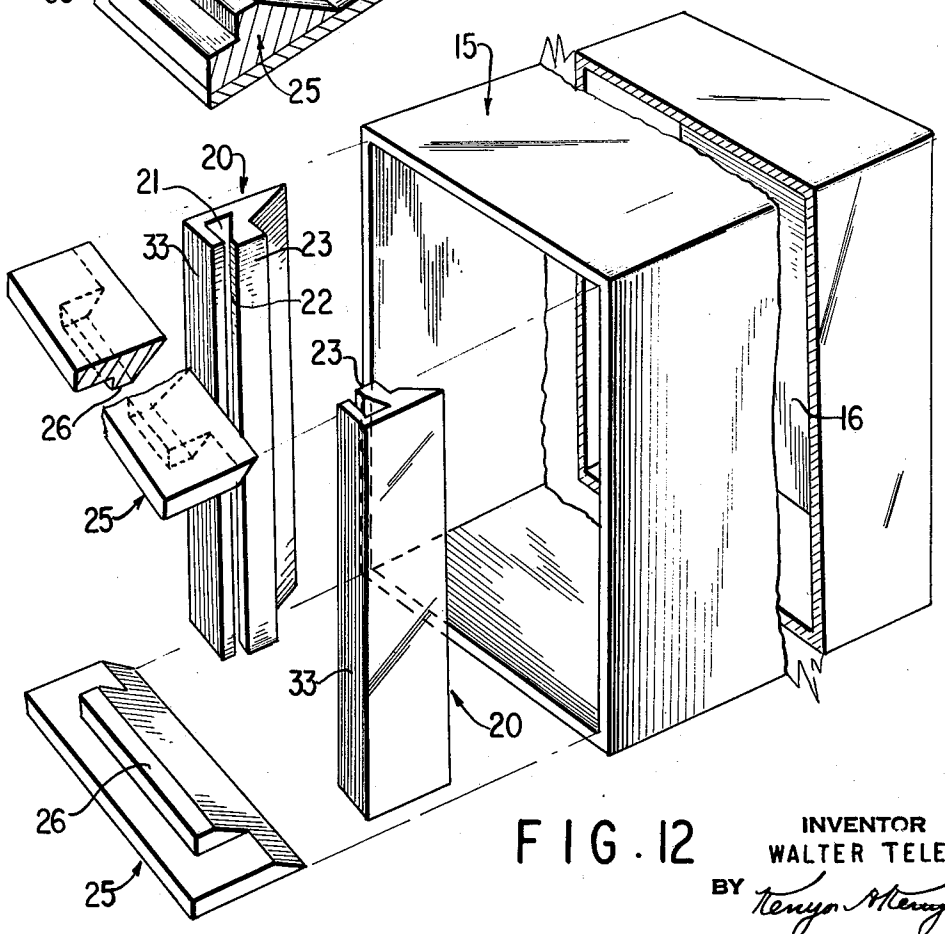


FIG. 12

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3,481,288

WALL SAFE

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Int. Cl. E06b 5/10
U.S. Cl. 109—58 10 Claims

ABSTRACT OF THE DISCLOSURE

For the protection of valuables such as money, jewelry, etc., against theft when stopping at a motel or hotel, for example, a wall safe is provided which is characterized by a bodily removably door that is of such size that it may be conveniently carried in a traveling bag and which is constituted so as to cooperate with the frame at the opening of a permanently installed container portion of the safe so as to be easily placed in position in the opening and then moved laterally, preferably responsive to manual actuation of a lock comprised in the door, into position with opposite margins of the door securely retained in recesses comprised in said frame and to be removed upon leaving and carried by the traveler and available for his personal use with other container portions of the safe that are installed in other locations and that have frames constructed and dimensioned for use with the door that the traveler carries in his possession. Preferably the door is reversible in that it is adapted for use as aforesaid when disposed at either of two rotational positions 180° apart in the plane of the door. Preferably, also, two container portions of the safe are provided as a pair disposed on opposite sides of a partition or other wall with securing means extending through the wall for permanently securing each of the container portions respectively to opposite sides of the wall.

FIELD OF THE INVENTION

This invention relates to wall safes and more especially relates to wall safes for the storage of money, jewelry and other valuables. The wall safe is especially suitable for installation in motels and hotels for the temporary safekeeping of valuables against theft.

BACKGROUND OF THE INVENTION

While stopping at a motel or hotel the sakekeeping of valuables such as money, jewelry or papers is a constantly recurring problem. The theft of valuables left in a motel or in a hotel room is a matter of alarming frequency. Facilities for the sakekeeping of valuables are rarely provided by motels or hotels and, if provided at all it is a matter of great inconvenience to have a person qualified and entrusted to open a large safe for the reception or withdrawal of one's valuables. Usually the problems results in makeshift expedients such as hiding the valuables in luggage or in the bedding or in some out-of-the-way spot in the furniture. However, such hiding places provide little or no security. Wall safes such as have been used in residences are inconvenient and expensive for use in individual rooms of a motel or a hotel. Moreover, the provision of a key presents a problem inasmuch as a guest provided with a key so as to make the wall safe available for use would have an opportunity to have a duplicate key made or he might forget to turn in the key. Moreover, in all likelihood the motel or hotel would have at least one other key for the same wall safe.

SUMMARY OF THE INVENTION

It is an object of this invention to provide a wall safe which lends itself particularly to use in motels and hotels

whereby a very high degree of safety can be provided in an inexpensive and convenient manner. To this end, the wall safe of this invention comprises a strong container which has an opening therein adapted for the insertion and withdrawal of valuables therethrough and which is intended for permanent securement to a wall such as the wall of a room in a motel or a hotel. It also comprises a removable door which can be readily put in place in the opening for the container and then moved laterally to a position wherein opposite margins of the door are very securely retained in recesses in the frame located at the opening into the container and wherein it is locked against movement by manual actuation of lock means secured to the inside surface of the door. This lateral movement is preferably accomplished responsive to the manual actuation of the lock means. When it is desired to open the safe so as to have access to the container, the lock means is manually actuated to enable the door to be moved laterally to position at which it can be readily removed from the frame.

In commercial use it is contemplated to provide container portions of the safe which are of standard construction and dimensions as regards the frame for the container opening, with the result that a given door is adapted to be received by and locked in place in the frame of any of the container portions of the safe installed in other locations. For example, container portions having frames of standard construction and dimensions at the opening may be permanently installed in every room of a chain of hotels or motels or, for that matter, in all motels or hotels that may choose to install wall safe equipment in accordance with the present invention. When the container portions of the wall safe are thus installed and in widespread use the traveler who wishes to protect his valuables therein may purchase a door equipped with a key and/or combination-operated lock which is so constructed and made that it is capable of actuating no other lock except the lock permanently secured to the door which has been purchased. The traveler who has purchased the door then is enabled when stopping at a motel or hotel having the containers installed therein to place his valuables in the container in his room and then very easily and quickly place his door in the opening for the container and lock it in closed position with assurance that theft of the valuables would be very difficult indeed. The walls of the container may be of any desired thickness and strength and the door, while readily removable, is so held in locked position that it would present extreme difficulty even to an experienced criminal to gain access to the contents of the safe.

A further feature of this invention resides in the way the container portion of the safe is secured in place so as to reduce to a minimum the possibility of the entire wall safe being stolen. To this end, container portions are provided in pairs for securement to opposite sides of a partition or other wall with the securing means for the respective container portions passing through the wall and being permanently attached to the containers as by welding. When this feature is employed it is impossible to remove either one of the container portions without destroying a portion of the wall itself. Any such occurrence would be extremely unlikely.

One of the features of preferred embodiments of this invention resides in the cooperation between opposite margins of the door panel and oppositely disposed frame members at the opening of the container. A recess is provided in each of the frame members disposed oppositely to each other at the opening into the container. Each of these recesses is adapted to receive one of the margins of the door panel when the door panel is inclined relative to the plane of the opening of the container. The

frame members are dimensioned in relation to the dimensions of the door panel such that the door panel may be swung into position with the margin thereof opposite to the margin already received in one of the recesses in juxtaposed relation to the entrance of the recess in the oppositely disposed frame member. Upon then moving the plane of the door panel laterally both margins are brought into received relationship with the recess in each of the frame members and the lock means is such as to lock the door panel against lateral movement from this position. When the door panel is in this position both of the opposed margins of the door panel are retained very securely by the walls of the recesses which overlie the outside surface of the door panel along the opposite margins thereof. Preferably the lateral movement of the door panel is accomplished responsive to manual actuation of the lock secured to the inside surface of the door panel, as by moving a bolt laterally relative to the door panel in the direction of permitted lateral movement of the door panel until it initially contacts a fixed surface of the frame and then continuing the movement of the bolt relative to the door panel, thereby causing the door panel itself to be moved laterally.

It is a further feature of this invention that additional locking strength is provided by secondary holding means. Thus the frame member against which the movable bolt is propelled during locking is provided with a rib positioned to underlie the extremity of the bolt so as to prevent outward movement of the margin of the door that is adjacent the bolt. Adjacent the opposite margin of the door panel an abutment is secured which presents a ledge in general alignment with the bolt and which is spaced from the inside surface of the door panel so as to overlie a corresponding rib comprised in the other door frame when the door panel is moved laterally into locked position.

A further feature of this invention resides in the provision of similar frame members in opposed relation at the opening of the container and in providing locking means so disposed that the door may be inserted and locked in position in either of two rotational positions 180° apart in the plane of the door panel.

Further features of this invention relate to constructions which facilitate the use of the wall safe by the user. Thus in order to facilitate the initial entry of a margin of the door panel into the recess in one of the frame members, the surface of the recess which is in opposed relation with respect to the inside surface of the margin of the door panel is inclined so that the recess is wider at the base than at the entrance. By so constructing the recess, the entry of a margin of the door panel into the recess is facilitated and when the door panel is brought into position parallel with the plane of the recesses in both of the oppositely disposed frame members the door panel becomes tightly held in place so that the outside surface of the margin of the door panel becomes in immediate juxtaposition with the outer wall of the recess, thereby holding the door more firmly in position and minimizing the possibility of inserting a prying instrument.

Other features of preferred construction relate to guiding means for facilitating the placing of the door panel in position. Thus the surface of the recess which comes into contact with the inside surface of the door panel extends substantially further into the opening than the opposite surface of the recess, thereby providing a surface which facilitates the initial entry of one margin of the door panel into one of the recesses and also providing a stop against which the other margin of the door panel comes into contact when being moved into position for locking. Preferably also a rib is provided along one or the other, or both, of the other two walls of the opening so as to present a surface in substantial alignment with the inner extremity of the surface of the recesses in the frame members that is disposed in opposed relation to the inside surface of the door panel so that the door panel may be guided therealong into one or the other of the recesses.

Other features of this invention relate to the provision of a door wherein the panel and locking means is such that the door lends itself to utilization with wall safe containers provided with frame members of standard construction and dimensions. Other features of this invention relate to the provision of a multiplicity of the containers, each having door frame construction and dimensions adapted to receive any of a plurality of removable doors.

A further feature and advantage of this invention resides in providing a safe construction whereby the parts may be inexpensively produced on a quantity production basis utilizing inexpensive rolling or extrusion techniques and utilizing a conventional manually operable lock.

BRIEF DESCRIPTION OF THE DRAWINGS

Further objects, features and advantages of this invention will be apparent from the following description of certain preferred embodiments of this invention shown in the accompanying drawings, wherein:

FIG. 1 is an end elevation of a pair of wall safes embodying this invention permanently secured to opposite sides of a wall by securing means which passes through the wall;

FIG. 2 is a perspective view on a larger scale as compared with FIG. 1 of one of the wall safes showing the door in a position assumed when initially being moved into position in the opening in the container of the wall safe;

FIG. 3 is a sectional plan view of the line **3—3** of FIG. 2 of the portion of the wall safe in the region of the opening, the removable door being shown in the position also shown in FIG. 2 with one margin of the door panel received into the recess in one of the frame members at the opening into the container portion of the safe;

FIG. 4 is similar to FIG. 3 except that the door has been moved into position in alignment with the recesses in the frame members on opposite sides of the opening into the container;

FIG. 5 is similar to FIGS. 3 and 4 except that it shows the door after it has been moved laterally into locked position;

FIG. 6 is an elevation showing the inside surface of the door when viewed from the direction indicated by **6—6** of FIG. 4, the bolt of the lock being in retracted position;

FIG. 7 is an elevation taken on the line **7—7** of FIG. 5 showing the inside surface of the door panel and the frame elements, the parts being shown in locking position and the bolt being extended;

FIG. 8 is a perspective view of a portion of an extrusion suitable for each of the oppositely disposed recessed frame members disposed along the vertical walls of the opening into the container;

FIG. 9 is a perspective view of an extrusion suitable for making each of the frame members secured to the other two walls of the opening of the container;

FIG. 10 is similar to FIG. 9 except that end portions of the upstanding rib have been milled away in order to permit assembly with the recessed frame members;

FIG. 11 is a fragmentary perspective view showing the interrelation of the frame members at one of the corners of the opening into the container utilizing frame member extrusions as shown in FIGS. 8 and 10; and

FIG. 12 is an exploded view of the container and of the frame members adapted to be secured in place at the opening into the container portion of the safe.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

A preferred embodiment of this invention as shown in the drawings comprises a container portion **15** which is completely enclosed by walls except for an opening for the introduction and withdrawal of valuables. The container may be composed of a metal such as steel, the thickness of which may be selected according to the strength characteristics that are desired. The container may, for example, comprise a rectangular extrusion of steel about 3/16 inch in thickness which is closed at the end opposite the opening by a steel plate **16** of like thickness that is permanently secured to the extrusion as by welding. If desired, it may be of double wall construction with interposed heat insulation for providing fire resistance. The opening into the container portion **15** is provided with a door which is indicated generally by the reference character **17**.

In FIG. 1 two wall safes are shown disposed on opposite surfaces of the wall **18**. The container portion of each safe is secured in place by one or more bolts **19** which pass through the wall and which are permanently secured to the side walls of the container portions which, respectively, are in contact with the opposite sides of the wall **18**. For example, the securing means may comprise a plurality of bolts **19** which pass through the side wall of each of the container portions and is threaded at each end for cooperation with threaded securing means such as a nut **19***a* that can be tightened down. Moreover, the ends of the bolts and the securing means therefor preferably are adapted to be integrated with respect to said side walls of the respective container portions as by welding so as to effectively prevent the detachment of one or the other of the wall safes.

Frame members **20** are provided at the open end of the container portion **15**, which opening in the embodiment shown is rectangular, with the longer sides of the rectangle disposed vertically, said frame members being disposed therealong. The frame members **20** may be readily produced in the form of a continuous extrusion such as that shown in FIG. 8 and by cutting the extrusion into desired lengths for providing the vertically disposed frame members at the opening in the container **15**.

Each of the frame members **20** comprises a longitudinally disposed recess **21**. The wall **22** of the recess **21** which is in opposed relation to the inside surface of the door panel extends substantially further into the opening than the other wall. Moreover, the portion **22***a* of the wall **22** is formed with an inclined surface so that the recess **21** becomes substantially wider at the base than it is at its mouth. The portion of the surface **22** of the recess **21** which extends the furthest into the opening is presented by the rib **23** which on the other side thereof facing the interior of the container presents the locking surface **24**. The frame members **20** may be secured permanently to the side walls of the container **15** as by welding.

The frame at the opening of the container is completed by oppositely disposed frame members **25** which can be economically produced as an extrusion, as shown in FIG. 9, which extrusion is severed to produce pieces of desired length. The frame members **25** have a rib **26** protruding therefrom which presents a surface substantially in alignment with the extremities of the surfaces **22** of the recesses **21** at their point of maximum extent into the opening. After the extrusion for the frame members **25** has been cut into pieces of desired length, the end portions of the rib **26** are milled away so that when the frame members **20** and **25** are installed at the frame corners as shown in FIG. 11, the surface at the end of the rib **23** will be in alignment with and flush with the surface of the rib **26**. The frame members **25** likewise are permanently secured in place, e.g., by welding.

The lock **27** is secured to the inside surface of the panel of the door **17**. The lock comprises a bolt member **28** which is movably mounted in the lock **27** in a plane substantially parallel with the door panel and in the direction of permitted lateral movement of the door panel and with the bolt disposed in spaced relation to the inside surface of the door panel by a distance slightly greater than the width of the rib **23** of the frame member **20**. Suitable mechanism of any known type is comprised in the lock whereby bolt **28** may be moved between position protruding laterally from the lock to position retracted toward the lock. This movement of the bolt **28** is responsive to manual actuation from the outside surface of the door panel as by the insertion of a key **29** in the key-receiving slot **30** and turning the key. The particular type of lock mechanism that is employed is a matter of choice and many suitable lock mechanisms may be used in the practice of this invention. It is preferable to employ a key of the type which cooperates with a plurality of spring-loaded pins which can be brought to release position only by a key having a given marginal contour unlike that of all other keys for lock mechanisms used with other doors. It is not essential to use a key for operating the lock mechanism. Thus the locking mechanism may be one whose release is responsive to manipulation of a combination which is a permanent part of the lock so as to make it possible to move the bolt by manual actuation of a part available at the outside surface of the door.

There likewise is secured to the inside surface of the panel of the door **17** an abutment **31** which extends longitudinally along the margin of the door disposed oppositely with respect to the margin which is adjacent the bolt **28**. The abutment **31** has a ledge **32** protruding therefrom which is adapted to overlie the surface **24** of the rib **23** when the door is in locked position but which is so positioned as to be out of registration with the surface **24** of the rib **23** when the door is being put in place or is being removed.

The operations required to put the door in position and lock it are illustrated in connection with FIGS. 4 to 7. The vertical margin of the door **17** which is adjacent the bolt **28** is first introduced into one of the recesses **21**, as shown in FIGS. 2 and 3. The inclination of the surface **22***a* of the recess **21** facilitates the entry of the margin of the door panel into the recess **21** when the door is at an angle with respect to the plane of the opening into the container as illustrated in FIG. 3. The lateral extent of the door **17** is such that the margin of the door adjacent the abutment **31** just clears the outer wall **33** of the recess **21** in the frame member **20** on the opposite side of the opening. As shown in FIG. 4, the margin of the door panel is then in juxtaposed position with respect to the mouth of the recess **21** in the frame member on the other side of the opening. It also is to be noted that the ledge **32** on the abutment **31** just clears the surface **24** of the rib **23** of the same frame member **20**.

The locking of the door is completed by moving the door panel **17** laterally so that both of the margins of the door panel fall respectively within the recesses **21** in the frame members **20**. In preferred embodiments of this invention this movement is effected by the manual actuation of the key **29** or other manually actuatable member so as to cause the bolt **28** to project from the lock **27**, this motion of the bolt **28** after having initially made contact with the frame member adjacent thereto serving to move the lock and in turn the door panel laterally. It is to be noted that when this lateral movement occurs the ledge **32** moves into position overlying the surface **24** of the rib **23**. If the key **29** is now removed, the door **17** is locked in place so that any attempt to remove it is rendered very difficult indeed. Since the bolt **28** is in contact with one of the frame members **20** and since the ledge **32** is in contact with the opposite frame member **20**, the door cannot be moved laterally in

either direction. The opposite margins of the door are thus retained all along the length thereof by the outer walls **33** of the recesses **21**. Moreover, secondary securement is provided by the fact that the bolt **28** overlies the surface of the rib **23** of one of the frame members **20** while the ledge **32** overlies the surface **24** of the rib **23** of the other frame member **20**. While such secondary retaining means is not essential to the practice of this invention, it is preferable to the end that the door may be maintained in locked position with maximum security against efforts to pry it open. It is to be noted in connection with FIGS. 4 and 5 that by providing the inclined surface **22***a* the entry of the margin of the door panel is facilitated but that when the door has been moved into parallel relation with respect to the opening in the container there is very little play between the margins of the door panel and the inner surface of the wall **33** on one side thereof and the surface of the rib **23** on the other side thereof.

It is to be noted that the contours of the frame members on opposite sides of the opening into the container portion are essentially the same and that in FIGS. 3, 4 and 5 the bolt **28** is shown adjacent the left margin of the door panel. It also is to be noted that the location of the bolt **28** and of the abutment **32** and ledge **33** is such that the door can be rotated 180° in the plane of the door panel until the bolt **28** becomes positioned adjacent the right margin of the door panel. When the door is in this latter position the right-hand margin of the door would be inserted into the recess in the frame member **20** at the right-hand side of the opening. The closing of the door would be completed by swinging the door panel into the plane of the recesses in the frame members **20** and lateral movement of the door panel into locked position would be to the left instead of to the right. When the container portions of the wall safe are secured to opposite surfaces of a wall, as shown in FIG. 1, it is usually convenient to initially insert a margin of the door into the recess in the door frame that is in closest proximity to the surface of the wall. This is made possible by the fact that as between the containers on opposite sides of the wall **18** one of the doors **17** may be in inverted position with respect to the other door by a rotation of 180° in the plane of the door.

When it is desired to remove the door all that is required is to reinsert the key **29** and retract the bolt **28**. Then the door can be easily moved laterally so that the margin of the door adjacent the abutment **31** becomes free to be swung outwardly accompanied by bodily removal of the door.

While the wall safe may be made so as to be of any desired dimension, it is ample for most purposes encountered when using a room in a motel or a hotel if the container is approximately 6½ inches high and 4¾ inches wide. The length can be anything which is desired, for example, 9 inches. For a wall safe having the dimensions just mentioned, the door for use therewith may advantageously measure approximately 5¾ inches by 3¾ inches. A door such as this is small in size, lies flat and is light in weight. The door and the key with which to operate it can be conveniently carried when traveling, in luggage or even in a handbag. When arriving at a motel or a hotel equipped with the permanently installed container portions of the safe, valuables such as money or jewelry may be placed in the container and the door, which can be locked and unlocked only by a key carried by the traveler or by a combination known to him, is put in place and brought to locked position. Because the container portion of the wall safe is so firmly and permanently secured and because both the door and the parts providing the lock are so strong any valuables left in the safe are effectively secured against theft.

I claim:

1. A wall safe comprising a container for the reception of valuables which has an opening therein adapted for the insertion and withdrawal of valuables therethrough, said container being completely enclosed by walls except for said opening,

first and second frame members presented respectively by and along oppositely disposed walls of said opening, each frame member having a longitudinally disposed recess therein,

a readily removable door for said opening which has a margin thereof adapted to be received in the recess of said first frame member and which is adapted while said margin is so received to be swung into position with the opposite margin thereof in juxtaposed relation with respect to the recess in said second frame member and then moved laterally to effect penetration of said other margin into said recess in said second frame member while said first-mentioned margin remains to a substantial extent within the recess in said first frame member, and

lock means, secured to the inside surface and said door which is manually actuatable from outside said door to lock said door against lateral movement when said door is disposed in position with said margins thereof received respectively within said recesses in said first and second frame members.

2. A wall safe according to claim **1** wherein said lock means comprises means responsive to manual actuation of said lock means for moving said door laterally from position with said other margin in juxtaposed relation with respect to said recess in said second member to position with said other margin received by said recess in said second member.

3. A wall safe according to claim **1** wherein either of said margins of said door is adapted to be received in the recess in either of said frame members whereby said door is operable to be inserted and removed when in either of two positions of rotation through 180° in the plane of the door.

4. A wall safe according to claim **1** wherein the surface of the wall of each said recess that is in opposed relation to the inside surface of the door when said opening is closed by said door is inclined inwardly extending from adjacent the mouth of the recess to the base thereof so that said recess is wider at the base than at the mouth thereof thereby facilitating entry of one of the said margins of the door therein while the plane of the door is correspondingly inclined relative to the plane of the door when the door is in a closed position.

5. A wall safe according to claim **1** wherein the surface of the wall of each said recess that is in opposed relation to the inside surface of the door when said door is closed extends substantially further into said opening than the other wall of said recess, thereby providing a stop for facilitating the reception and positioning of the door in closed position.

6. A wall safe according to claim **1** wherein said opening is substantially rectangular, and said first and second frame members are disposed along the longer side of the rectangle and are substantially vertically disposed.

7. A wall safe according to claim **6** which comprises frame members disposed along the upper and lower walls of the opening each of which presents a rib presenting a surface substantially flush with the terminal surface of the walls of each of said recesses in said first and second frame members that is opposed to the inside surface of the door when the door is closed.

8. A wall safe according to claim **1** wherein each of said first and second frame members comprises a rib disposed along at least part of its longitudinal extent, a member in secured relation to the inside surface of said door having a protruding ledge that is adjacent one of the margins of the door and that is disposed in opposed locking relation with respect to the rib presented by one of said frame members when said door is moved into locked position and that is moved out of said locked position with respect to said rib when the adjacent margin of the

door is moved out of locking position with respect to the recess in which it is disposed when the door is in locked position, and a bolt that is movable toward and away from the opposite frame member responsive to manual actuation of the lock and that is disposed so as to overlie the rib presented by the opposite frame member in locked engagement therewith when said bolt is disposed in extended position while said door is in its locked position.

9. A wall safe installation which comprises in combination with a building wall,

a pair of wall safes each of which comprises a container for the reception of valuables that has an opening therein adapted for the insertion and withdrawal of valuables therethrough, said containers being disposed in substantially opposed registration with respect to each other on opposite sides of said wall with portions of said containers respectively abutting opposite surfaces of said wall;

securing means passing through said wall and permanently secured adjacent each end thereof to each of said portions of said containers, respectively, so that said containers are permanently tied together with said building wall interposed between them;

a readily removable door for the opening in each of said containers, the door for each of said containers being readily removable from and exchangeably replaceable in the opening in either of said containers; said

lock means associated with each of said doors and actuatable from the exterior surface thereof for locking each of said doors, respectively, against removal when placed in position to close the opening in either of said containers.

10. A wall safe installation according to claim **9** in which the door of each of said containers is adapted to be readily secured to and removed from the opening in each of said containers when in each of two positions of rotation through 180° in the plane of the door.

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