

Jan. 4, 1944.

C. F. WOLTERS ET AL

2,338,477

FILING CABINET

Filed June 24, 1941

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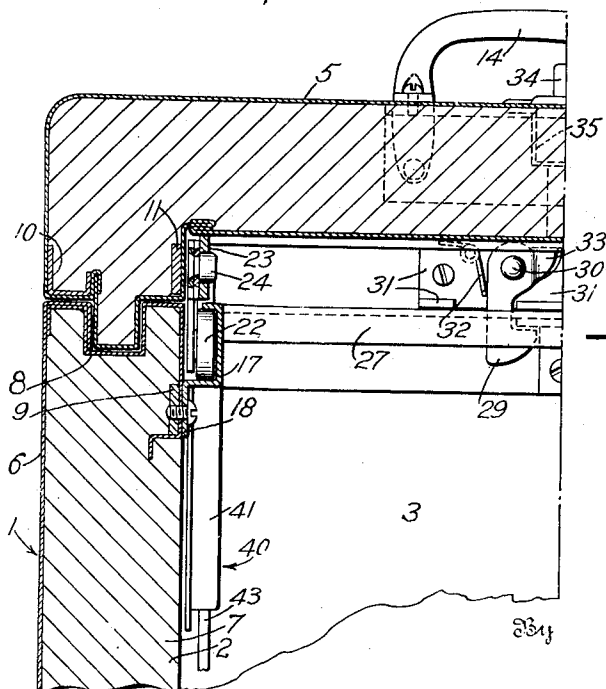
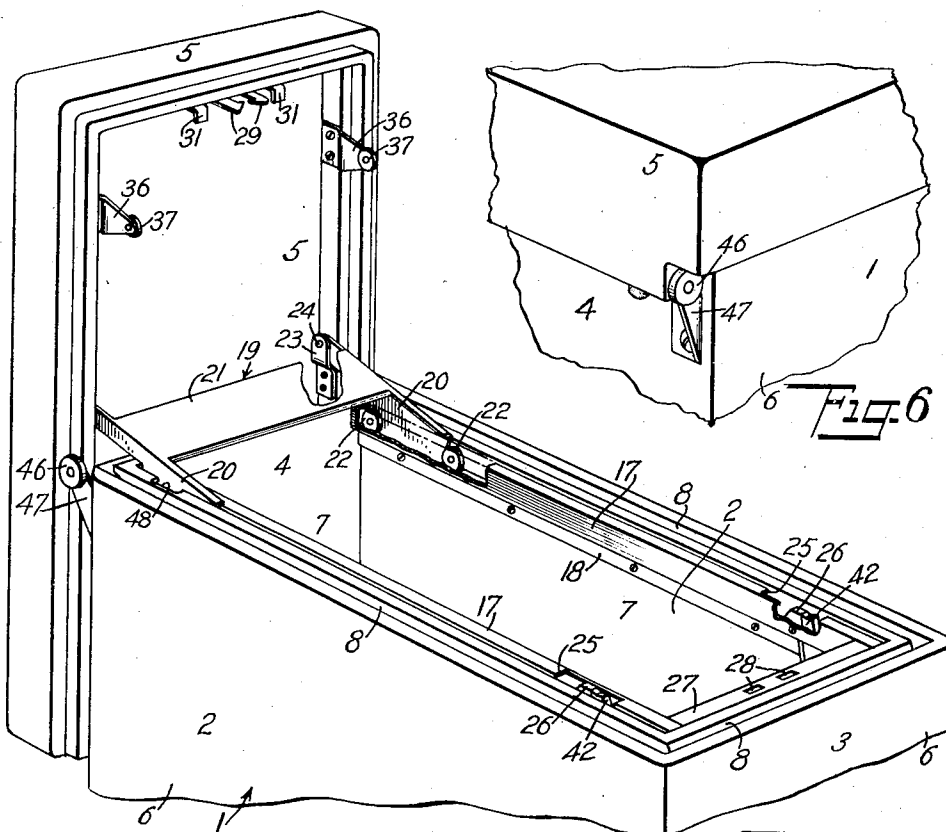


Fig. 5

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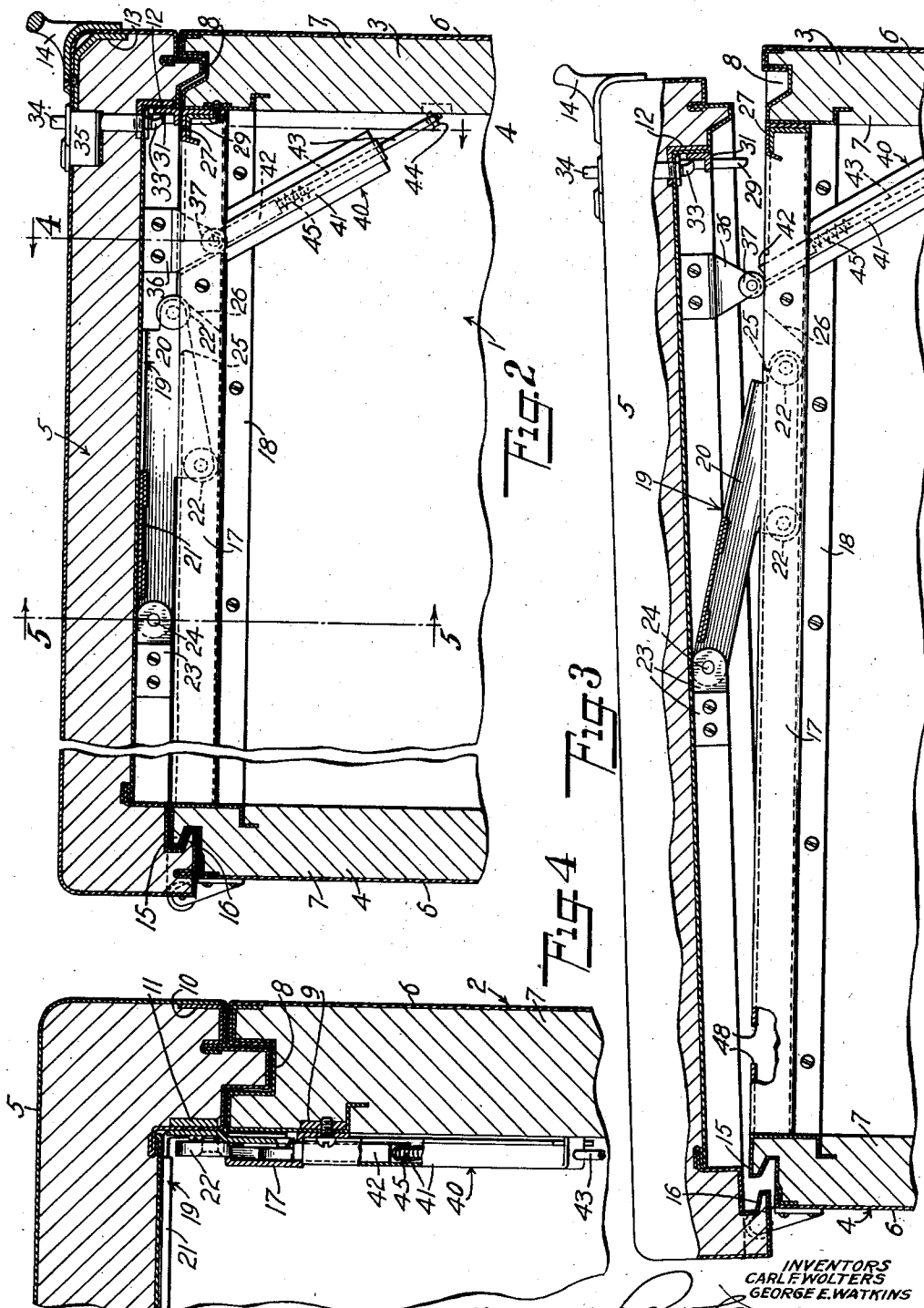
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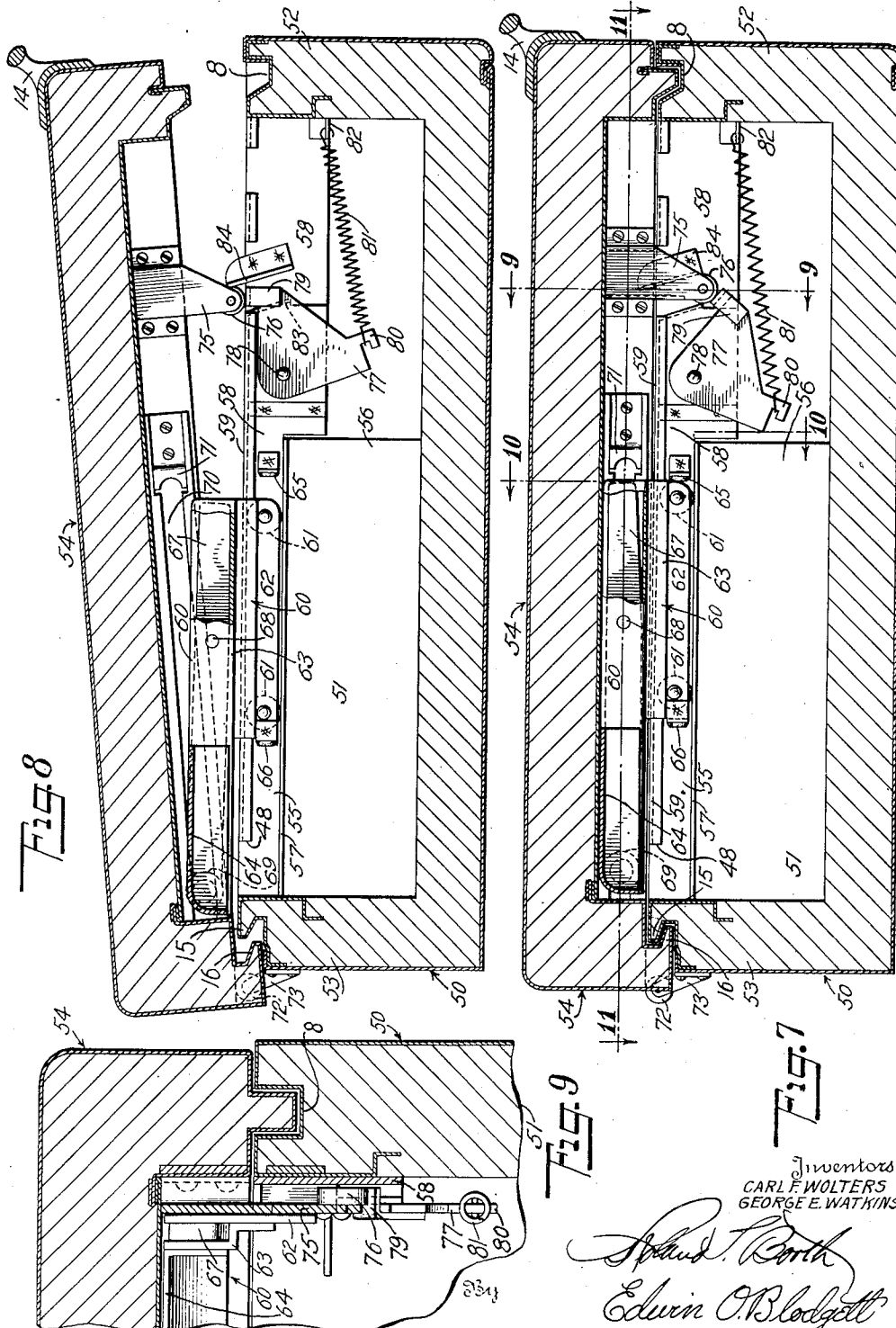
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Filed June 24, 1941

4 Sheets-Sheet 3



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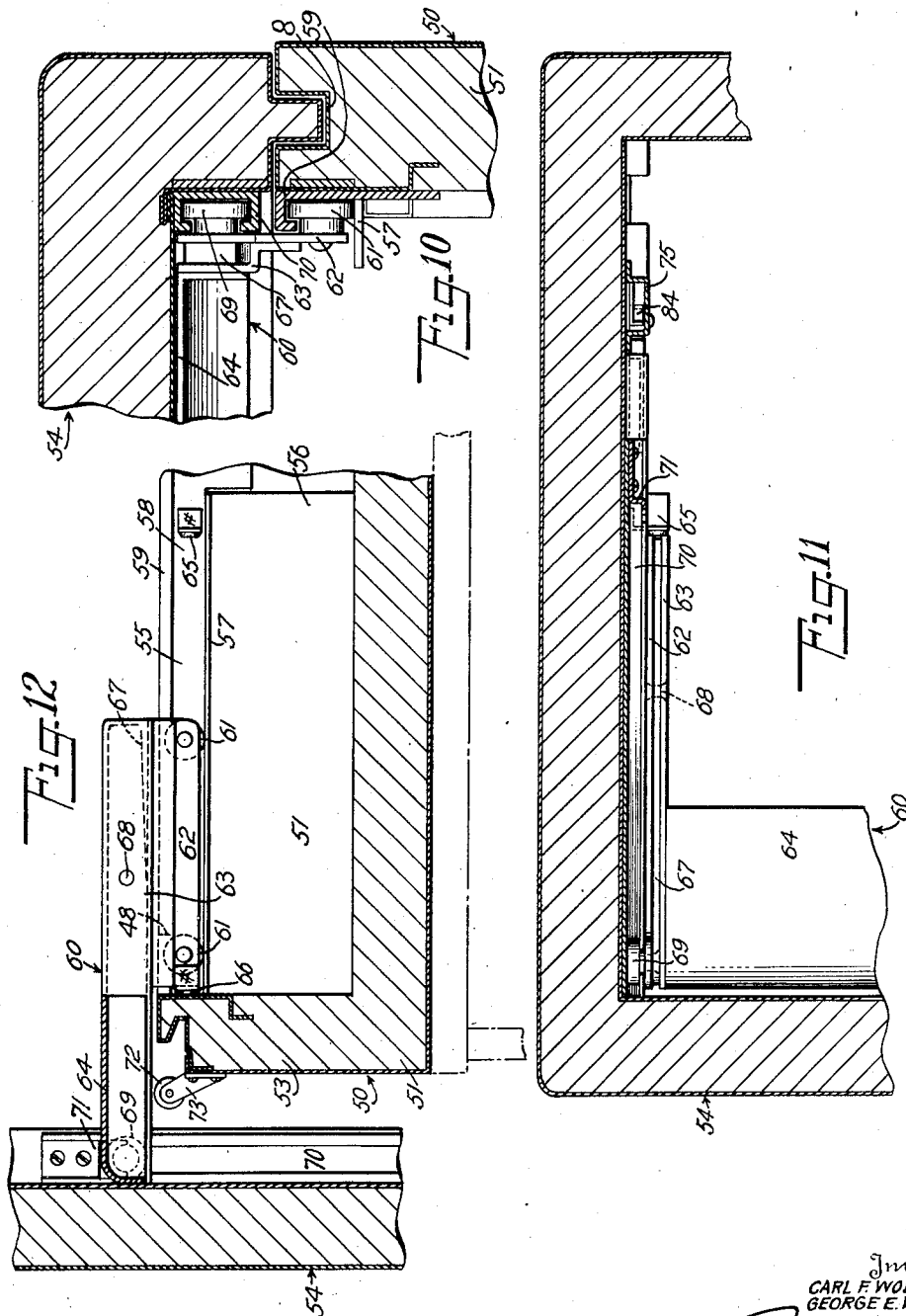
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4 Sheets-Sheet 4



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## UNITED STATES PATENT OFFICE

2,338,477

## FILING CABINET

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Application June 24, 1941, Serial No. 399,458

16 Claims. (Cl. 312—189)

This invention relates to file cabinets.

The invention comprehends the provision of a file cabinet having a compartment open at one side and arranged to contain indexed files, trays or cards that have portions projecting beyond the open side of the cabinet in order to be readily visible when the closure is moved into the open position. The closure has a compartment for receiving the projecting portions of the files.

The invention provides a structure for mounting a closure on a cabinet where the files project above the open end of the cabinet, constructed so that the closure may be elevated or spaced from the cabinet a sufficient distance to have the edges of the closure clear the projecting portions of the files during movement into open position.

The invention facilitates the construction of the cabinet and closure from fire resistant material for protecting the records contained in the cabinet from destruction by fire in the closed position of the closure, while the records at the same time may project beyond the upper end of the cabinet in position for convenient use in the open position of the closure. Provision is made by the invention for mounting the closure to counterbalance its weight during movement between open and closed positions.

Means are provided by the invention for not only spacing the closure in the initial opening movement from the open side of the cabinet, but also for retaining the closure in said spaced relation during its movement between open and closed positions. The means providing for the initial movement of the closure away from the cabinet also operates to cushion the closing movement and aids in counter-balancing the weight of the closure with the other supporting means so that the heavy closures of insulated cabinets will be easy to manually operate between the open and closed positions.

The invention provides latch means for retaining the closure in closed position together with means for normally projecting the closure outwardly into spaced relation to the cabinet operable upon release of the latch means, while a suitable carriage supports the closure for sliding movement in the outwardly spaced position to open position and for subsequent swinging movement to lie adjacent a side wall of the cabinet.

In the drawings:

Figure 1 shows the open top portion of a cabinet in perspective with the closure in open position beside a side wall of the cabinet and illus-

trates the open position of the mounting mechanism.

Figure 2 is a vertical longitudinal cross section through the cabinet with the closure in closed position, portions being omitted and the scale being enlarged for convenience in illustrating the invention.

Figure 3 is a vertical longitudinal cross section similar to Fig. 2 showing the closure in the initial spaced relation obtained at the beginning of its opening movement prior to sliding movement into open position.

Figure 4 is a cross section taken on line 4—4 of Fig. 2, the scale being enlarged.

Figure 5 is a cross section on an enlarged scale taken on line 5—5 of Fig. 2.

Figure 6 is an enlarged detailed perspective showing one of the closure bearing rollers mounted on the rear end of the cabinet.

Figure 7 is a vertical longitudinal cross section through a cabinet and closure construction utilizing a modified form of closure supporting and guiding mechanism.

Figure 8 is a view similar to Fig. 7 showing the closure in its initial spaced relation relative to the cabinet obtained at the beginning of the opening movement of the closure prior to its sliding movement toward open position.

Figure 9 is an enlarged cross section taken on line 9—9 of Fig. 7.

Figure 10 is an enlarged cross section taken on line 10—10 of Fig. 7.

Figure 11 is a horizontal cross section taken on line 11—11 of Fig. 7.

Figure 12 is a vertical longitudinal cross section similar to Fig. 7 with portions broken away and omitted, and illustrating the closure in the open position adjacent a side wall of the cabinet.

The invention is adapted to be employed in connection with filing cabinets of any suitable type, but is particularly adapted for filing cabinets wherein the files project above the upper edges of the cabinet and wherein the closure is provided with depending side portions to form a compartment for enclosing the upper ends of the files when the closure is in closed position. The invention is also particularly adapted for file cabinets of this character that are constructed of fire resistant material embodying rather thick and heavy wall construction.

The invention is illustrated in connection with a cabinet of fire insulating material in which the cabinet generally indicated at 1 has side walls 2, front wall 3 and rear wall 4. The closure

5 is provided with depending edge portions forming a compartment therein.

The cabinet has an outer sheet metal cover 6 and an inner fire resistant lining 7 providing a composite construction forming the side and end walls 2, 3 and 4. The upper edges of the side walls 2 and end walls 3 are formed to provide a central sealing groove extending lengthwise of the walls, as indicated at 8. The sheet metal casing is extended around the upper edges of the side and end walls, as shown in the drawings, and in a manner well known in the art, to encase and protect the insulating material. The inner edges of the sheet metal covering extend downwardly on the inside faces of the side and end walls in a manner illustrated in Figs. 2 and 5 for example, for a short distance, where it is offset and embedded in the insulating material. Reinforcing bars 9 are mounted in side walls 2 as shown in Figs. 4 and 5, under the metal casing structure for providing a suitable means for attaching and anchoring the closure supporting structure to be described.

Closure 5 is constructed of a body of insulating material enclosed by a sheet metal casing having the depending edges of the closure reinforced by angle members 10 and frame bars 11 extending along the side portions, while angle member 12 connects bars 11 and extends across the front portion of the closure at the inner top portion. An angle member 13 reinforces the outer upper front edge of closure 5 and has handle 14 attached thereto.

The depending edges of closure 5 are formed to provide a sealing projection extending around the side and front edge portions arranged to seat in grooves 8 in the side and front end walls of the cabinet for sealing cooperation in the closed position of the closure.

Rear wall 4 and the rear free edge of closure 5 are formed to provide rearwardly and forwardly extending sealing projections 15 and 16 respectively, as shown in Figs. 2 and 3, adapted for sealing cooperation with the grooves between the projections and the adjacent portions of the respective parts of the cabinet and closure as the closure moves into closed position in its sliding movement.

The mechanism for mounting the closure has a pair of track members 17 in the form of channel-shaped sections having securing flanges 18 extending from one edge of the channels and connected to bars 9 by means of a plurality of securing screws. Track members 17 extend between the front and rear end walls 3 and 4 on the upper inner faces of side walls 2, the channels therein facing outwardly toward the inner faces of the side walls.

A carriage 19 is formed of a pair of side members 20 and a connecting bar 21. Each side member 20 carries a pair of spaced bearing and supporting rollers 22 on one end portion having rolling engagement in the channel portions of track members 17 while the opposite end portion of each side member extends through the slot or space between the upper edge of track member 17 and the inner face of the side wall to a position above the track members and the cabinet side walls, as shown clearly in Figs. 1, 2 and 3. Portions of side members 20 above the track members are connected to the free ends of connecting bar 21 to provide a rigid carriage, while pivot pin 24 mounted in the free ends pivotally mounts supporting brackets 23 on the inner side portions of closure 5. The weight of

closure 5 is substantially counter-balanced through the positioning of brackets 23 at the center portion near the center of gravity. Bracket 23 is secured in any suitable manner to frame bars 11 on closure 5.

The upper flanges on track bars 17 have cut-out sections indicated at 25 to provide an opening through which the front rollers 22 on carriage 19 may move upwardly above the track bars into the position shown in Fig. 2. A stop and guide block 26 is mounted on the portion of track bar 17 provided with cut-out section 25, as shown in Fig. 2, to provide an inclined face on which the front bearing roller 22 on side member 20 engages to limit the forward motion of the carriage and for moving forward roller 22 upwardly for securing a rocking movement of carriage 19 about rear roller 22. This provides for control of the movement of the closure so that when both forward and rear rollers 22 on side members 20 are engaged in the channels to the rear of cut-out sections 25, carriage 19 is maintained in sliding and traveling movement on the track bars for carrying closure 5 into projected position beyond the upper free edges of the cabinet.

When all rollers 22 on the carriage are engaged in track members 17 the weight of the closure is supported by the carriage so that rear rollers 22 will ride on the bottom flange of track members 17 and forward rollers 22 will engage the top flange due to the cover weight being applied to carriage 19 in the rear of rear rollers 22.

A keeper formed by a pair of angle members 27 is mounted at the front end of the cabinet extending across the inner upper edge of front wall 3 between the forward ends of track members 17, as clearly shown in Figs. 2 and 3. This keeper has a pair of slots 28 as shown in Fig. 1 for receiving the ends of latches 29 provided with shoulders for latching engagement under the bar after passage through slots 28. Each latch 29 is formed in an opposite manner, one of the latches being shown in Fig. 5 and the other being a duplicate but oppositely formed. These latches are pivoted at 30 to latch supporting bracket 31 secured to angle member 12 on the forward inner depending edge of closure 5. An actuating spring 32 for each latch is mounted on latch supporting bracket 31 and has a pair of oppositely extending arms, one engaging the inner face of closure 5 and the other engaging latch 29 for normal operation to resiliently project latch 29 so the shoulder thereon will engage under the keeper 27 carried by the cabinet, in the manner shown in Fig. 5.

Each latch 29 is provided with a lateral projection 33, the projection on each latch extending toward the other to extend under plunger 34 slidably mounted in plunger and lock casing 35 having one end secured to angle member 12 and the opposite end projecting through the top side of closure 5. Plunger 34 is normally moved into its uppermost position by the spring actuation of latches 29 and upon being manually depressed will move latches 29 about their pivots against the action of springs 32 into a position to disengage keeper 27 and allow closure 5 to be moved from the closed position of Fig. 2 to the initial position in spaced relation to the cabinet shown in Fig. 3.

A conventional key actuated lock is contained in casing 35 for locking plunger 34 against manual operation to retain closure 5 in locked posi-

tion against unauthorized opening. The latches are provided with cam faces on the free ends for engaging keeper 27 at the edges of slots 28 and cam latches 29 into slots 28 as the closure is moved into closed position when the shoulders thereon will drop below keeper bar 27 to engage under portions of said bar adjacent to slots 28 for locking the closure in closed sealing position.

Guide brackets 36, see Figs. 1-3, are mounted on the inner depending side edges of closure 5 near the front end and have portions projecting below the lower edges of closure 5, in the manner illustrated in the drawings. The lower ends of guide brackets 36 carry bearing rollers 37. Guide brackets 36 are formed to position bearing rollers 37 in line with track members 17 so they will engage the top surface of the top flange of track members 17 for rolling engagement thereon in supporting the closure in spaced relation above the upper edge of cabinet 1 in the manner shown in Fig. 3 during its sliding opening movement.

A closure projecting and cushioning unit is indicated at 40. Two projector units 40 are used each being oppositely formed so that one will be mounted on each side wall 2 of the cabinet for engaging the roller 37 on supporting and guide bracket 36 at the respective side of the closure. Each unit comprises a housing 41 mounted on the inner face of a side wall 2 of the cabinet in the inclined relation illustrated in Fig. 2, the upper end terminating at the bottom face of the bottom flange of channel 17 and registering with an opening in said bottom flange immediately in advance of guide block 26. The inclination of housing 41 is the same as the front face of guide block 26, as clearly shown in Figs. 2 and 3. The inclination of projector units 40 serves to provide a slight rearward movement of closure 5 in the upward projection thereof to space closure 5 from the cabinet and disengage all the sealing projections from the corresponding grooves. Casing 41 has an elongated passage therein slidably mounting a plunger 42 carrying a guide rod 43 on the lower end thereof slidably engaged in an opening in the lower end of the housing. An adjustable nut 44 is threaded on rod 43 beyond the end of casing 41 to control the extent to which plunger 42 is projected upwardly in the housing. A compression coil spring 45 mounted on guide rod 43 engages between the bottom end of housing 41 and the lower end of plunger 42 for normally moving the plunger upwardly in the housing to the position shown in Fig. 2. Bracket 36 and bearing roller 37 are positioned to engage the upper end of plunger 42 for moving and holding the plunger downwardly in casing 41 against the tension of spring 45 when the closure is fully closed and latched in closed position as shown in Fig. 2. Bearing roller 37 and bracket 36 transmit the motion of spring pressed plunger 42 at each side of the cabinet to closure 5 so that upon release of latch members 29, spring 45 will aid in projecting the plungers upwardly for elevating closure 5 into spaced relation relative to the upper end of the cabinet as shown in Fig. 3.

Guide rollers 46 carried on guide brackets 47 are mounted on the rear wall of the cabinet and extend rearwardly therefrom at the upper end for engaging the under faces of the side edges of closure 5 as shown in Figs. 1, 3 and 6. These rear guide rollers 46 limit the pivotal movement of closure 5 on carriage 19 during its sliding opening movement so that the rear end portion of the closure may not be brought into rubbing contact with upper rear end portions of the cab-

inet. These rear supporting rollers 46 guide the closure in its opening and closing movement so as to provide for its free and easy operation.

With this construction, when it is desired to move the closure from the closed position shown in Fig. 2 to the open position shown in Fig. 1 where the closure lies beside the rear side wall, plunger 34 is first pushed downwardly by manual operation to release latches 29 from keeper 27. Spring pressed plungers 42 will then operate to resiliently project closure 5 upwardly into spaced relation above the upper end of cabinet 1 with a slight rearward movement into the position shown in Fig. 3. Springs 45 may have sufficient tension to fully support the weight of the closure and provide enough additional force to fully project the closure into the initial spaced relation of Fig. 3. If desired, springs 45 with less tension may be used so that they will substantially counter-balance the weight of the closure and require slight manual operation to move the closure into said initial spaced relation. When the closure reaches the position shown in Fig. 3 plungers 42 have the ends positioned in alignment with the upper flanges of guide tracks 17 so guide rollers 37 on guide brackets 36 are in a position to roll along the top faces of the upper flanges of track members 17 upon leaving the upper ends of plunger 42. They will first roll across the upper end of cam blocks 26 and then upon leaving these blocks pass over the cut-out sections 25 and then roll along the flanges of track members 17.

In further rearward movement, the closure slides rearwardly with bearing rollers 37 rolling on the top faces of the top flanges of track members 17 while the weight of the closure is substantially all supported by carriage 19 having rollers 22 rolling in track member 17 between the upper and lower flanges, in the manner above described. This sliding movement of the closure to an open position relative to the cabinet continues until the rear rollers 22 of carriage 19 reach the rear end of track members 17, as shown in Fig. 1. During this rearward sliding movement closure 5 may not be pivoted except to a limited extent on its pivotal mounting on carriage 19, due to the fact, that its pivotal motion is limited by guide rollers 46 and bearing rollers 37. However, when carriage 19 reaches the position shown in Fig. 1 closure 5 may then be swung about its pivotal mounting on pins 24 into the position shown in Fig. 1 where the closure lies beside the rear wall 4 of the cabinet.

The closure is closed by reversing the operation above described. When the closure reaches the position of Fig. 3 in the closing operation, slightly additional forward motion, causes the forward rollers 22 at opposite sides of carriage 19 to move into cut-out sections 25 of track members 17 for pivotal movement of carriages 19 on rear rollers 22 allowing the movement of closure 5 toward the cabinet into closed position. As the forward rollers 22 move upwardly through cut-out sections 25, the closure moves downwardly toward the cabinet, rollers 37 ride down the front faces of guide blocks 26 and move plungers 42 downwardly against the tension of spring 45 until latches 29 extend through slots 28 and have the shoulders thereon engage under keeper 27.

Guide blocks 26 draw the closure forward in final closing movement to hold sealing projections 15 and 16 in sealed relation. This downward motion requires slight manual pushing of

the closure into closed position to obtain the latching thereof in the closed position. More or less manual force may be required to move the closure into closed latched position according to the tension of springs 45 which may be made to meet desired conditions. The downward movement of the closure into closed position is aided by having the forward rollers 22 engage and ride up the inclined rear faces of guide blocks 26 for camming the carriage to produce its rocking motion from the position shown in Fig. 3 to that shown in Fig. 2. The weight of closure 5 on carriage 19 is reduced and transferred to projecting and cushioning units 40 for absorption thereby and application in compressing springs 45 in the closure's final closing movement.

When it is desired to remove carriage 19 from the track members, it may be positioned slightly in advance of its rearmost position where rear rollers 22 may be lifted upwardly with the carriage through slots 48 in the top flanges of the track members. The front rollers may then be removed through the same slots.

It will be noted from the drawings that this closure mounting and actuating mechanism is located on the inside of the cabinet within the insulating lining of the cabinet and closure so that it is at all times insulated from outside heat when the closure is shut. The mechanism is so constructed that it occupies only a small portion of the space in the cabinet adjacent the inner side walls at the top, and does not unduly restrict the compartment space for housing index trays, cards, and the like.

The compartment formed in the closure by the depending edge portions receive the upper ends of trays or files placed in the cabinet when it is in the closed position. The initial upper movement of the closure by the operation of plungers 42 to lift the closure from the position shown in Fig. 1 to that illustrated in Fig. 3 obtains the initial movement of the closure into spaced relation from the cabinet for spacing the front end of closure 5 a sufficient distance beyond the end of the cabinet that it will clear the projecting portions of the files extending a slight distance above the upper end of the cabinet.

The cabinet and closure construction shown in Figs. 7 to 12 inclusive is the same as that above described, with a carriage structure and closure projecting mechanism of similar but modified construction.

The cabinet 50 has side walls 51, front end wall 52, and rear end wall 53 that are constructed in the same manner as the cabinet previously described and shown. The closure 54 is constructed in a manner like the one above described including the structure of the sealing projections having complementary cooperation with the grooves in the cabinet.

Track members 55 of channel shape in cross section are mounted on the upper inner faces of side walls 51 and extend between the front and rear ends of the cabinet in the same manner as track members 17. Each track member 55 may be formed of sheet metal in any suitable manner. As illustrated, these track members are each formed from a plate member 56 having a laterally extending flange 57 forming the bottom flange of the channel-shaped construction of the track member. The remainder of this channel-shaped construction is formed by a sheet metal strip 58 having a laterally projecting top flange 59 in spaced parallel relation above flange

57. Flanges 57 and 59 cooperate to form the channel-shaped track member in cross section and provide guide flanges for slidably mounting carriage 60.

Carriage 60 has a pair of rollers 61 on each side member engaged in each track member. Rollers 61 are carried by outer side plate 62. Inner side plates 63 have the lower edges secured to the inner faces of outer side plates 62 and the upper edge portions offset inwardly in spaced parallel relation to the upper portions of outer side plates 62 to form upwardly opening grooves, see Fig. 9. These outer and inner plates 62 and 63 respectively form side members on the carriage, are constructed in opposite relation, and are connected together by means of cross member 64 joining the rear ends of the offset upper edge portions of inner plates 63. Cross member 64 is arranged to lie in close proximity to the under face of closure 54 at the rear end of the compartment therein when the closure is in closed position, as shown in Fig. 7.

The forward travel of carriage 60 is limited by stops 65, shown in Fig. 7, in which position the rear end of the carriage is located just inside the inner face of the rear end wall of the cabinet and the closure. Stops 65 are mounted on strips 58 by spot welding or the like. The rearward movement of carriage 60 is limited by bumpers 66 on the rear end portions of the lower edges of outer side plates 62. The rear position of movement of carriage 60 is shown in Fig. 12, where the rear end of the side members and cross member 64 extend beyond the rear face of the cabinet. Bars 67 are positioned in the grooves between the upper edges of outer and inner side plates 62 and 63 as shown in Figs. 9, 10 and 11. Cross pins 68 extending between each of the outer and inner side plates pivotally mount bars 67 in the grooves intermediate their ends as shown in Figs. 7 and 8. The rear ends of bars 67 carry pivot rollers 69, one on the rear outer face of each bar, beyond the rear end of outer side plates 62 and in a plane beyond the outer end of carriage 60 as clearly shown in Figs. 10 and 11, for slidably and pivotally mounting closure supporting channels 70.

Closure supporting channels 70 are mounted on the inner side edges of the depending portions of closure 54, as clearly shown in Figs. 7 to 12 inclusive, and extend throughout the rear portion of the closure. Pivot brackets 71 limit the relative movement of closure 54 on rollers 69 at the forward end of channels 70. The forward under face of each pivot bar 67 is beveled or inclined from cross pin 68 toward one end in order to provide for limited pivotal movement of bars 67 on cross pins 68 to provide for the lifting movement of the closure from the position shown in Fig. 7 to that shown in Fig. 8 in initial opening movement of the closure. The remaining portion of the carriage travels rearwardly from the position shown in Fig. 7 as the opening of the closure progresses.

Rear guide rollers 72 are mounted in brackets 73 on the rear outer face of cabinet 51 for engaging the lower edges of the side portions on closure 54 at the rear end of the cabinet for guiding the closure in its opening movement.

Closure 54 is initially projected or moved into spaced relation beyond the open end of the cabinet at the beginning of its opening movement from the position shown in Fig. 7 to that shown in Fig. 8. A suitable projecting mechanism of modified form from that described in connection

with the structure of Figs. 1 to 6 is used and will now be described.

Guide and supporting brackets 75 are mounted on the forward inner side faces of the depending side portions of closure 54. The lower end of each guide bracket carries a bearing roller 76 formed to ride on the top face of top flange 59 of track members 55 at each side of the cabinet. Each roller 76 is supported in a spaced position below the lower edges of closure 54, the length of bracket 75 being determined by the amount of space desired between the closure and the cabinet in the initial opening movement.

The projecting mechanism for moving the closure into spaced relation in the initial opening movement thereof includes lever 77 pivotally mounted at 78 on the forward end portion of strip member 58 below top flange 59 thereon, in the manner shown in Figs. 7 and 8. Lever 77 has a laterally projecting bracket 79 on one end thereof for engaging bearing roller 76 of bracket 75. A portion of lever 77 spaced from bracket 79 is provided with a hook projection 80 having one end of tension spring 81 attached thereto while the opposite end is secured at 82 to the lateral projection on the forward end of strip member 58.

Strip member 58 is also provided with guide projection 83 in spaced parallel relation with cooperating guide member 84 arranged in inclined relation, as shown in Figs. 7 and 8, for receiving and guiding roller 76 on bracket 75 in the movement of the closure between the closed position and the initially projected spaced position relative to the cabinet obtained in the initial opening movement. This initial opening movement is obtained by the tension on spring 81 being sufficient to overcome the weight of the closure and lift it from the position shown in Fig. 7 to that shown in Fig. 8. This lifting operation however requires manual starting movement with the construction shown in Figs. 7 and 8 due to the variation in leverage which takes place between the position of lever 77 in Fig. 8 and its position as shown in Fig. 7. In Fig. 7 the weight of the closure overcomes the tension of spring 81 to a slight extent, sufficient to maintain the closure shut in the position of Fig. 7. This is due to the relation of leverage between the spring mounting, the lever position and the position of bracket 79 in the position of these parts shown in Fig. 7. Slight upward manual movement however is aided by the tension of spring 81 to change the leverage ratio so that little effort is required to project the closure upwardly as the spring immediately overcomes the weight of the closure with slight upward movement so that it lifts the closure into the projected position of Fig. 8.

In the position of Fig. 8, the cover is in its projected spaced relation and ready for rearward sliding movement on the cabinet. During this rearward sliding movement roller 76 on each bracket 75 rides on the top flange of each track member 55 until carriage 60 reaches the rear position shown in Fig. 12. The closure may then be swung about pivot roller 69 on pivot bracket 71 in channel 70 into a position where it lies adjacent the rear side wall of the cabinet.

In the opening movement from the position shown in Fig. 7 to that shown in Fig. 8, the closure will have its rear end engage and be supported on rollers 72 and thus will secure a slight pivotal movement of bars 67 of the carriage. As the carriage moves rearwardly in the sliding movement of the closure on the cabinet, bars 67

will have their rear ends moved downwardly for support on the portion of inner end plates 63 that connect said plates with end plates 62 so that the carriage will fully support closure 54 for the remainder of its opening movement into the position shown in Fig. 12.

It is to be understood that closure 54 may if desired be provided with a retaining latch and lock mechanism of the character disclosed in Figs. 1 to 6 inclusive, which has been omitted for convenience in illustrating the modified form of construction.

The mechanism for mounting and operating closure 54 is duplicated at each side of the cabinet, the drawings illustrating the mechanism on one side only, it being understood that the mechanism for the opposite side is reversed in construction, but otherwise of duplicate form and therefore unnecessary of illustration in this application for the purpose of fully disclosing the invention.

It will be understood that with the cabinet construction and closure mounting above described and shown in the several figures of the drawings, that the parts may be proportioned to provide for the movement of the closure in its initially projected position to space the closure, particularly the front end thereof, at any desired distance beyond the free edge of the cabinet. This will provide for the construction of the cabinet and the closure so that the depending side portions on the closure may be of greater or less length in order to provide a convenient construction for housing files of any desired character that have the upper end portions projecting above the upper edges of the cabinet for housing within the compartment formed by the closure when the closure is mounted in the closed position.

This housing of the contents also provides fire resistant protection for the records contained therein through the sealing of the closure on the cabinet. The weight of the closure in each case is counter-balanced to secure convenient and easy manual operation of the closure from the closed to the open position, and vice versa.

The constructions illustrated in the several figures also show how an efficient sealing construction can be made between the meeting edges of the closure and the cabinet for the purpose of eliminating objectional projections on the cabinet into the space needed for operation of files contained in the cabinet, since the projecting portions of the files in the cabinet will project uniformly above the upper edge thereof and be readily visible for manual operation. This type of cabinet construction provides a very convenient construction for housing records at their point of use and at the same time providing them with protection against destruction by fire.

The carriage mechanism of either form of the invention illustrated, may be used in place of the other, with either form of projector mechanism for initially projecting the closure into spaced relation from the cabinet as the opening movement starts. It is believed that the manner of using either projector mechanism with either carriage structure will be fully clear to one skilled in the art.

The invention claimed is:

1. A cabinet formed with a compartment open at one side, a closure for the open side of said compartment, means within the cabinet automatically operable for initially moving said closure into spaced relation from the open side of

said cabinet in opening movement thereof, and means carrying said closure for slidable movement on said cabinet in said initially spaced relation into open position and subsequent movement on said last-mentioned means to a position adjacent a side of said cabinet.

2. A cabinet formed with a compartment open at one side, a closure for the open side of said compartment, means housed in said compartment for initially moving said closure into spaced relation from the open side of said cabinet in opening movement thereof, means carrying said closure for slidable movement on said cabinet in said initially spaced relation into open position and subsequent movement on said last-mentioned means to lie adjacent a side of said cabinet, and means for guiding and retaining said closure in said initially spaced relation during the sliding movement thereof.

3. A cabinet formed with a compartment open at one side, a closure for the open side of said compartment, latch means for retaining said closure in closed position, means normally operative upon release of said latch means to initially project said closure into spaced relation from said cabinet, and means carrying said closure for slidable movement on said cabinet in said initially spaced relation into open position and subsequent movement on said carrying means to lie adjacent a side of said cabinet.

4. A cabinet formed with a compartment open at one side, a closure for the open side of said compartment, latch means for retaining said closure in closed position, means operable upon release of said latch means to normally move said closure outwardly into spaced relation from said cabinet, means carrying said closure for slidable movement on said cabinet in said spaced relation into open position and subsequent movement on said carrying means to lie adjacent a side of said cabinet, and means for guiding and retaining said closure in said spaced relation during said sliding movement into open position.

5. A cabinet formed with a compartment open at one side, a closure for the open side of said compartment, means for initially moving said closure into spaced relation from the open side of said cabinet in opening movement thereof, means carrying said closure for slidable movement on said cabinet in said spaced relation to open position and subsequent movement on said carrying means to lie adjacent a side of said cabinet, means on said closure cooperating with said first-mentioned means in obtaining said initial movement and cooperating with means on said cabinet during said sliding movement of said closure for guiding and retaining said closure in said spaced relation.

6. A cabinet formed with a compartment open at the top, a closure for the open top of said compartment, means for initially lifting the front end of said closure upwardly into spaced relation above said cabinet, means carrying said closure for slidable movement on said cabinet in said spaced relation to open position and subsequent movement on said carrying means to lie adjacent a side of said cabinet, means for supporting and guiding the rear end of said closure in its movement, and means for guiding the front end of said closure during its sliding movement to retain it in said spaced relation to said cabinet.

7. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet, a carriage mounted to

travel on said track members, a closure for the open side of said compartment mounted on said carriage, means for initially moving said closure into spaced relation from closed position on the open side of said cabinet in initial opening movement thereof while supported by said carriage, said closure being slidable into open position with said carriage moving on said track members, said closure being movable on said carriage in open position to lie adjacent a side wall of said cabinet, and guiding means for cooperation with said track members to retain said closure in spaced relation to said cabinet during said sliding movement.

8. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along said side walls at said open side, a carriage mounted to travel across said open side on said track members, a closure for the open side of said compartment, cooperating parts on said closure and carriage mounting said closure on said carriage for relative movement into spaced relation to said cabinet, means for initially projecting said closure into spaced relation to said cabinet, said carriage traveling in the same direction as said closure in sliding movement toward open position on said track members, said closure being swingable on said carriage in open position to lie adjacent a side wall of said cabinet, and guide means on said closure engaging said track members during opening movement of said closure for retaining said closure in said spaced relation.

9. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along said side walls at said open side, a closure for the open side of said compartment, a carriage carrying said closure mounted to travel on said track members across said open side in sliding movement of said closure toward open position, and means for rocking said carriage on said track members to move portions thereof into an outwardly projecting position for supporting said closure in spaced relation beyond the open end of said cabinet during opening movement thereof, said carriage being formed for supporting said closure in open position for swinging movement to lie adjacent a side wall of said cabinet.

10. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along said side walls at said open side, a carriage mounted to travel across said open side on said track members, a closure for the open side of said compartment mounted for swinging movement on said carriage, means for normally retaining said closure in closed position, a plunger slidably mounted on said cabinet for engaging portions on said closure, and means for normally moving said plunger toward said closure operable to move said closure outwardly into spaced relation relative to said cabinet upon release of said closure retaining means, said carriage being adapted to support said closure for sliding and swinging movement into open position in the spaced relation of said closure relative to said cabinet.

11. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along said side walls at said open side, a carriage mounted to travel across said open side on said

track members, a closure mounted on said carriage for swinging movement, a casing mounted on said cabinet having a channel therein extending laterally to said closure, a plunger slidably mounted in the channel in said casing, resilient means in said casing for normally moving said plunger in one direction to project said plunger outwardly in said casing to engage said closure for normally moving said closure into spaced relation beyond the end of said cabinet, means for limiting the projection of said plunger, and means for retaining the closure in closed position against the tension of said resilient means.

12. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along the side walls at said open side, a carriage mounted to travel across said open side on said track members, a closure mounted on said carriage for swinging movement, a lever pivoted on said cabinet, resilient means for normally moving said lever in one direction, said lever having a portion thereof engaging said closure for normally operating said closure to move it into spaced relation beyond the end of said cabinet, and means for normally retaining the closure in closed position against operation by said lever, said closure being movable with said carriage while supported in said spaced relation to open position to uncover the compartment in said cabinet.

13. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along said walls at said open side, a carriage having a pair of side members, a connecting member joining said side members at one end of said side members, the opposite ends of said side members being guided in the track members on said cabinet, a closure mounted on one end of said carriage for swinging movement, and means on said trackways operable upon manual operation of said closure toward open position for rocking said carriage and initially moving said closure into spaced relation beyond the end of said cabinet for subsequent sliding and swinging movement in said spaced relation into open position.

14. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along said side walls at said open side, a carriage having side members and a connecting member joining said side members, rollers on said side mem-

bers having bearing engagement on said track members, a closure pivotally mounted on said side members for swinging movement, and cam means on said track members for engaging said rollers in manual operation of said closure and causing said carriage to be rocked on said track members in the initial opening and final closing movement of said closure to space said closure from said cabinet in initial opening movement for subsequent sliding and swinging movement in said spaced relation into open position.

15. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along said side walls at said open side, a carriage comprising side members and a connecting member joining said side members and retaining them in spaced parallel relation, said side members being mounted in said track members for sliding movement across the open end of said cabinet, a closure for the open side of said compartment, channel members carried by said closure, pivots on the side members of said carriage engaged in the channel members on said closure for mounting said closure on said carriage for sliding and swinging movement, and means mounting said pivots on said carriage for lateral movement relative to said track members whereby said closure may be moved and supported in spaced relation beyond the end of said cabinet for subsequent sliding and swinging movement in said spaced relation with and relative to said carriage into open position.

16. A cabinet formed with a compartment open at one side, track members mounted on the side walls of said cabinet and extending along said side walls at said open side, a carriage having a pair of side members and a connecting member mounting said side members in spaced parallel relation, said side members having bearing means slidably engaging said track members for longitudinal movement in said track members, levers pivoted on said side members, and a closure secured to said levers in spaced relation to the pivotal mounting thereof on the side members for outward movement of the closure on said carriage into spaced relation beyond the end of said cabinet, said carriage mounting said closure for sliding and swinging movement in said relation between open and closed positions.

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