

June 8, 1937.

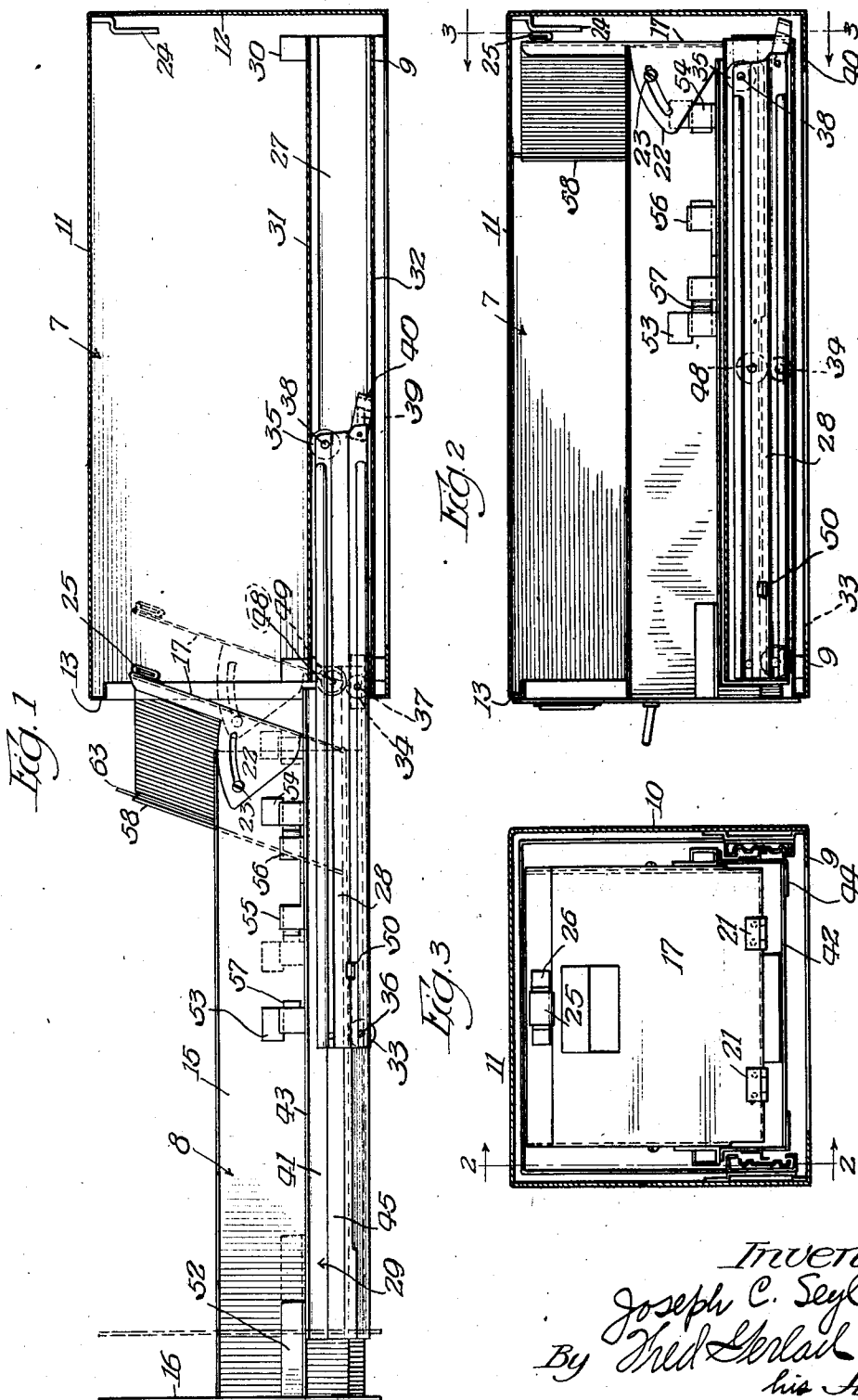
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2,083,349

FILING CABINET

Filed May 20, 1935

2 Sheets-Sheet 1



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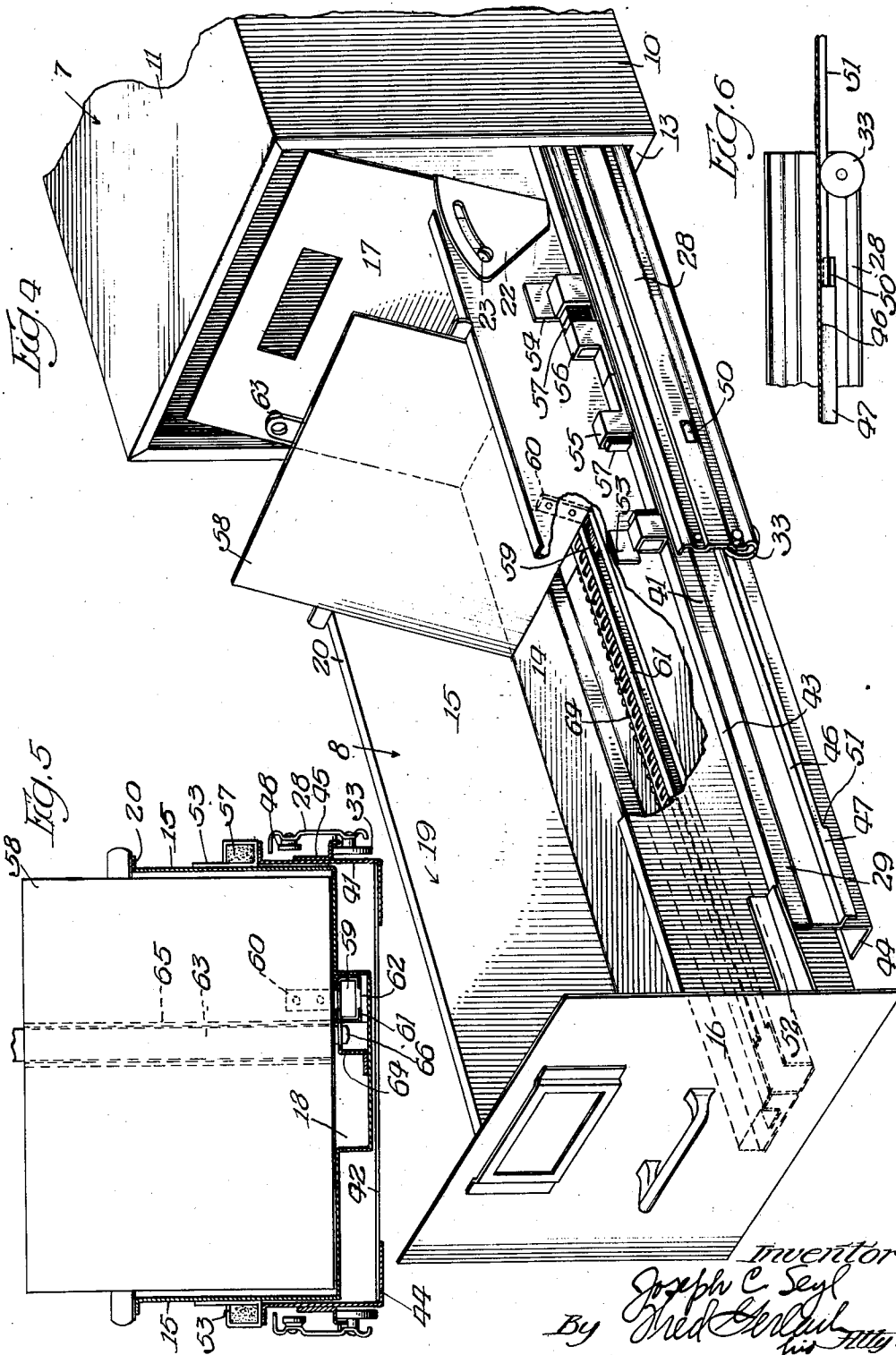
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UNITED STATES PATENT OFFICE

2,083,349

FILING CABINET

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Application May 20, 1935, Serial No. 22,373

3 Claims. (Cl. 45—7)

The present invention relates generally to cabinets for use in filing records, papers, documents or like matter. More particularly the invention relates to that type of filing cabinet which includes a drawer for retaining or holding the records or like matter in a substantially vertical position and embodies as means for supporting the drawer so that it may be slid or moved horizontally into and out of the cabinet (1) a pair of horizontally extending, oppositely facing, tracks on the inner faces of the sides of the cabinet; (2) a pair of horizontally extending, roller type slides which are mounted on the tracks so that they are movable longitudinally thereof and are adapted when the drawer is pulled out of the cabinet for filing or other purposes to move outwardly from within the cabinet to an extended position wherein the rear ends thereof are supported on the front ends of the tracks and their front ends project outside of the cabinet; and (3) an extension frame which comprises a pair of side bars extending lengthwise of, and disposed adjacent to, the bottom portions of the sides of the drawer and has such side bars mounted slidably on the slides in such manner that when the drawer is pulled out of the cabinet the slides are moved outwardly into their extended position and at the same time the side bars travel outwardly along the slides to a position wherein the rear ends thereof are supported by the front ends of the slides and the drawer is disposed outside of the cabinet and with the front end thereof overhanging the front ends of the slides.

One object of the invention is to provide a filing cabinet of this type in which the back of the drawer is so hinged and connected to the drawer bottom and sides that when the drawer is pulled open it swings rearwardly to a limited extent and provides what may be termed or designated a V gap for facilitating insertion and withdrawal of the records or like matter.

Another object of the invention is to provide a filing cabinet of the type and character under consideration in which the back of the cabinet is provided with a bumper for swinging the back of the drawer upwards into a vertical position when the drawer is moved or slid into the cabinet, and the drawer is slidably mounted on the frame so that after outward movement of the frame with respect to the slides it, that is the drawer, may be moved outwardly relatively to the frame in order to bring the back substantially wholly outside of the cabinet and thus expose or render readily accessible the records

or papers immediately in front of the drawer back.

Another object of the invention is to provide a filing cabinet of the character and design last mentioned in which the drawer is not only slidably mounted with respect to the extension frame but is also capable of being removed bodily from the frame after it is moved or slid into its open position.

A further object of the invention is to provide a filing cabinet of the type and character under consideration in which the drawer and extension frame have coacting stops for limiting sliding movement of the drawer relatively to the frame.

A still further object of the invention is to provide a filing cabinet which is generally of new and improved construction and may be manufactured at a low and reasonable cost and in which the drawer is of the channeled bottom type and embodies an upstanding partition which is mounted in a novel manner so that it is free to swing forwards and backwards to a limited extent and is adjustable longitudinally of the drawer.

Other objects of the invention and the various advantages and characteristics of the present filing cabinet will be apparent from a consideration of the following detailed description.

The invention consists in the several novel features which are hereinafter set forth and are more particularly defined by claims at the conclusion hereof.

In the drawings which accompany and form a part of this specification or disclosure and in which like numerals of reference denote corresponding parts throughout the several views:

Figure 1 is a vertical longitudinal section of a filing cabinet embodying the invention, the drawer of the cabinet being shown in its open position and slid forwardly with respect to the extension frame so as to bring the pivoted or hinged back substantially wholly outside of the cabinet;

Figure 2 is a similar sectional view showing the drawer in its closed position with the back thereof swung upwardly into its vertical position as the result of the action of the bumper during closing of the drawer;

Figure 3 is a vertical transverse section taken on the line 3—3 of Figure 2 and showing in detail the construction of and the hinged mount for the back of the drawer;

Figure 4 is a perspective showing the drawer

in its open position and with parts thereof broken away for illustrative purposes;

Figure 5 is an enlarged vertical section of the drawer of the cabinet; and

Figure 6 is a detail section of one of the roller type sliding connections between the front ends of the horizontally extending slides and the extension frame.

The cabinet which forms the subject matter of the invention is designed for use in filing records, papers, documents, or like matter and comprises as the main or essential parts thereof a cabinet structure 7, a drawer 8, and means for supporting the drawer so that it may be slid or moved horizontally into and out of the cabinet.

The cabinet structure 7 is formed of sheet metal or a like material and consists of a bottom 9, a pair of sides 10, a top 11, and a back 12. These parts of the cabinet structure are rigidly connected together so that the structure as a whole is rigid. The front of the cabinet structure is open, as shown in Figure 1, and permits the drawer 8 to be slid or moved from a closed position within the structure to an open position outside of the structure. The front margins of the bottom, sides and top are bent inwardly and are then doubled back to form a continuous flange 13 around the open front of the cabinet structure. This flange is rectangular as far as its general shape or design is concerned, and serves to reinforce or brace the cabinet structure. The bottom and top are flat and are also parallel with one another in order that the cabinet may be placed on a flat surface such as a floor or arranged or stacked in a vertical series with like cabinets.

The drawer 8, like the cabinet structure 7, is formed of sheet metal. It operates to retain or hold in a substantially vertical position the records or papers which are filed in the cabinet, and consists of a bottom 14, a pair of sides 15, a front 16, and a back 17. The bottom is rectangular and is deflected or shaped so that it embodies a longitudinally extending, substantially central channel, 18. The sides 15 are formed integrally with and project upwardly from the side margins of the drawer bottom 14 and together with the bottom, front and back of the drawer form a filing compartment 19 for the records or like matter. The front 16 closes the front of this compartment. It is of greater height than the sides 15 and is connected to the front ends of the drawer sides by means of brackets (not shown). The top margins of the sides 15 are bent outwardly to form reinforcing flanges 20. The back 17 serves as a closure for the rear of the filing compartment 19 and is connected by hinges 21 to the rear edge of the drawer bottom 14 so that it may swing rearwards and downwards when the drawer is moved into its open position. The hinges 21 are of standard construction or design and are riveted or welded to the contiguous margins of the drawer bottom 14 and the back 17. Rearward and downward swinging of the back 17 with respect to the other parts of the drawer is limited by means of a pair of wings 22 and a pair of pin and slot connections 23 between the wings and the rear ends of the drawer sides 15. The wings 22 are formed integrally with and project forwardly from the side margins of the back 17 and as shown in Figures 1 and 4 of the drawings, lap the outer faces of the rear ends of the drawer sides 15. The slots of the pin and slot connections 23 are arcuate and are formed in the top portions of the wings 22. The pins of

the connections are carried by and project outwardly from the rear ends of the drawer sides 15 and extend through the slots. When the drawer 8 is pulled or moved forwardly into its open position the back 17 due to its inertia and the inertia of the filed contents of the drawer swings rearwards and downwards as far as permitted by the pin and slot connections between the wings 22 and the drawer sides 15 and provides a V gap in the filing compartment whereby access to the filed records within the compartment is facilitated and it is possible readily to remove records or papers from the compartment 19 or insert them into the compartment. A bumper 24 is secured to the back 12 of the cabinet structure 7 and is arranged so that when the drawer 8 is pushed rearwards into its closed position within the cabinet structure the back 17 strikes thereagainst and is shifted upwards and forwards into a vertical position. This bumper 24 is located adjacent to the upper portion of the back 12 of the cabinet structure and coacts with a rubber pad 25 on the upper margin of the drawer back 17. The pad is in the form of a loop or ring and is mounted on a bracket 26 on the rear face of the back 17.

The means for supporting the drawer so that it may be pushed into and pulled out of the cabinet structure in connection with filing operations consists of a pair of tracks 27, a pair of slides 28, and an extension frame 29.

The tracks 27 extend horizontally and are secured to the side walls 10 of the cabinet structure 7 by means of brackets 30. They are disposed adjacent to the bottom portions of the sides 10 and have inwardly extending flanges 31 along the top margins thereof and inwardly extending flanges 32 along their bottom margins. As shown in Figures 1 and 2 the tracks 27 are slightly smaller in length than the side walls of the cabinet structure and are arranged in opposed relation. The slides 28 are disposed opposite to the inner faces of the tracks 27, and are slidably mounted for horizontal movement lengthwise of the tracks by means of a pair of rollers 33, a pair of rollers 34, and a pair of rollers 35. The rollers 33 are mounted on pins 36 at the front ends of the slides and rest on the front ends of the flanges 32 when the slides are disposed within the cabinet structure as the result of the drawer being pushed rearwards into its closed position. When the drawer is pulled outwards into its open position the slides, as hereinafter pointed out, move outwards into an extended position wherein the front ends thereof project outside of the cabinet structure as shown in Figure 1, and the rollers 33 roll off the flanges 32 and serve as a slidable supporting medium for the extension frame 29. The rollers 34 are mounted on pins 37 on the central portions of the slides and travel on the flanges 32 of the tracks 27. The rollers 35 are mounted on pins 38 at the rear ends of the slide. As shown in Figure 1, they travel on the flanges 31 along the upper margins of the tracks 27 and coact with such flanges to prevent the slides from tilting with respect to the tracks when they are slid outwardly into their extended position during opening of the drawer. Outward movement of the slides during opening of the drawer is restricted by means of a pair of stops 39 on the tracks 27 and a pair of coacting stops 40 on the rear or inner ends of the slides 28. The stops 39, as shown in the drawings, are struck or punched inwardly from the tracks 27 and are

disposed adjacent to the central portions of the tracks. The coacting stops 40 are pivotally connected to the rear ends of the slides and are adapted to ride or slide on the flanges 32 into engagement or abutting relation with the stops 39 when the slides are shifted forwardly during opening of the drawer. By reason of the fact that they are pivotally connected to the rear ends of the slides the stops 40 may be swung upwardly out of the path of the stops 39 so as to permit the slides to be removed from the tracks in connection with dismantling of the cabinet. The extension frame 29 supports or serves as a cradle for the drawer 8. It is carried by the slides 28 and consists of a pair of side bars 41 and a pair of cross pieces 42. The side bars are formed of sheet metal or like material and fit against and extend lengthwise of the outer faces of the bottom portions of the drawer sides 15. The upper edges of the side bars of the extension frame are bent outwardly to form horizontally extending flanges 43 and the lower margins of the side bars are bent inwardly to form inwardly extending, horizontally disposed flanges 44. The cross pieces 42 extend between the side bars and have the ends thereof welded or otherwise fixedly secured to the inwardly extending flanges 44. In addition to the flanges 43 and 44 the side bars of the extension frame 29 have sheet metal rails 45. These rails, as shown in Figure 4, extend lengthwise of and are welded to the side bars and have the lower margins thereof bent outwardly and then downwardly to form horizontally extending flanges 46 and vertically extending flanges 47. The horizontally extending flanges 46 of the rails rest on the rollers 33 and 34 on the slides 28 so that the extension frame is free to slide lengthwise of the slides. In order to prevent the extension frame 29 together with the drawer 8 from tipping forwardly when the frame is slid outwardly with respect to the slides, the slides are provided with a pair of rollers 48. These rollers are mounted on pins 49 directly above the pins 37 for the rollers 34 and ride on the top face of the horizontally extending flanges 46 of the rails 45. Sliding of the extension frame 29 relatively to the slides 28 is limited by means of a pair of stops 50. The latter are in the nature of in-
 10 struck lugs on the front ends of the slides 28 and project into elongated notches 51 in the bottom edges of the vertically extending flanges 47 of the rails 45. The portions of the flanges 47 which define the ends of the notches 51 serve as coacting abutments for the stops 50 and limit inward as well as outward sliding movement of the extension frame with respect to the slides. The notches 51 are of such length that when the drawer is pulled outwards into its open position outward sliding movement of the extension frame 29 relatively to the slides is stopped, when the rear ends of the sides of the drawer are flush or aligned with the front of the cabinet structure 7 (see dotted line position of drawer in Figure 1). When the drawer 8 is opened the extension frame 29 moves outwardly with respect to the slides and the slides move outwards into their extended position. The sliding movement of the frame with respect to the slides and the sliding movement of the slides with respect to the tracks 27 is simultaneous by reason of the fact that the movement of the frame relatively to the slides causes the rollers 34 to rotate and these rollers in turn by reason of the fact that they are in engagement with the flanges

32 of the tracks move on the flanges and effect forward sliding movement of the slides. When outward movement of the slides is arrested by engagement of the stops 40 on the slides with the stops 39 on the tracks and outward sliding movement of the extension frame 29 is arrested as the result of the action of the stops 50 the drawer, with the exception of the back 17, is disposed wholly outside of the cabinet structure and the rear edges of the drawer sides 15 are flush with the open front of the cabinet structure as previously pointed out. When the drawer 8 is pushed inwards into its closed position the extension frame slides inward with respect to the slides and the slides slide inwardly relatively to the tracks 27 until both the frame and the slides are moved into the cabinet structure (see Figure 2).

The drawer 8 is supported or mounted on the extension frame 29 by means of a pair of shoes 52, a pair of blocks 53, and a pair of blocks 54. The shoes and blocks rest on the outwardly extending horizontal flanges 43 of the side bars of the extension frame 29 and permit the drawer to slide lengthwise of the frame. By reason of the sliding connection between the drawer and the frame the drawer if it is pulled out as far as permitted by the frame and slides, may be slid outwards beyond the frame in order to bring the back portion thereof on the outside of the cabinet structure (see full line position of drawer in Figure 1). The shoes 52 are welded or otherwise fixedly secured to the outer faces of the front portions of the drawer sides 15. They are preferably in the form of angle bars and engage slidably the front ends of the flanges 43. The blocks 53 are welded against the central portions of the drawer sides 15 and the blocks 54 are welded or otherwise fixedly secured against the rear ends of the drawer sides. Both pairs of blocks rest loosely or slidably on the flanges 43 of the side bars 41, as hereinbefore pointed out. In order to limit sliding movement of the drawer relatively to the extension frame, a pair of stop blocks 55 and a pair of stop blocks 56 are provided. The blocks 55 are welded to the flanges 43 and coact with the blocks 53 to limit inward movement of the drawer relatively to the frame. The blocks 56 are welded to the flanges 43 at a point directly behind the blocks 55 and coact or cooperate with the blocks 54 to limit outward movement of the drawer relatively to the extension frame 29. The stop blocks 55 and 56 are preferably arranged with respect to the blocks 53 and 54 so that the sliding movement of the drawer is limited to a distance equal to the amount of swing-back of the drawer back 17. As a result of this arrangement the drawer 8 when pulled into its open position will roll outwards as the result of the action of the extension frame and then slides to a position wherein the rear ends of the sides 15 thereof are flush with the front of the cabinet structure 7 and will then slide outwardly with respect to the extension frame 29 until the back 17 thereof is disposed outside of the cabinet structure as shown in Figures 1 and 4. By providing for the limited sliding movement all records, files, or other matter in the drawer are accessible when the drawer is in its open position regardless of the extent of rearward swing of the swing type back 17. When the drawer 8 is pushed inwards into its closed position it travels with the extension frame 29 until the frame is brought within the cabinet structure and then slides rearwardly of

the frame until the front 16 thereof strikes against the continuous flange 13 at the front of the cabinet structure. The sliding connection between the drawer and the extension frame 29 is such that when the drawer is pulled forwardly it slides outwardly relatively to the frame by its own momentum after the frame has been arrested and no additional energy is necessary on the part of the operator. An advantage and characteristic of employing the sliding connection between the drawer and the extension frame 29 is that the rear end of the drawer including the swing type back 17 is accessible for filing purposes when the drawer is in its fully opened position. By having the drawer supported on the extension frame by way of the shoes 52 and the blocks 53 and 54 the drawer may be removed bodily from the extension frame merely by lifting it off the side bars 41 of the frame. If desired the blocks 53 and 54 and also the coating stop blocks 55 and 56 may have rubber pads 57 which serve as cushions or bumpers.

In order to divide the filing compartment 19 in the drawer to facilitate filing, a partition 58 is provided. This partition is formed of sheet metal and is substantially the same in width as the bottom 14 of the drawer. The top margin of the partition is extended so as to project upwardly of the drawer sides 15. In order to facilitate access to the papers in front of and behind the partition and to provide for an adjustment of the front and rear spaces of the filing compartment the partition 58 is mounted so that it is free to swing backwards and forwards in the drawer to a limited extent and so that it is bodily shiftable throughout substantially the entire length of the drawer. The mount whereby the partition is supported in this manner comprises what may be termed a foot 59 which is secured to the lower part of the partition by a leg 60 and fits between a pair of oppositely facing channel bars 61 at one side of the channel 18. As shown in Figure 5, the bars 61 are cross-connected by metal strips 62 and are secured in place within the channel by the aforesaid strips. The foot 59 extends at substantially right angles to the partition and fits loosely between the channel bars and is of such length that the sides thereof coast with the top and bottom flanges of the channel bars to limit fore and aft tilting or swinging of the partition relatively to the drawer. The leg 60 projects upwardly from the foot between the top flanges of the channel bars 61 and fits against and is welded or riveted to the back face of the partition. The partition is held in its different adjusted positions by means of a dog 63 and a rack 64. The dog is vertically slidable in a sheet metal sheath 65 at the back of the partition and has a tooth 66 at its lower end for insertion within the slots or notches in the rack. The rack is in the form of a Z bar which is welded to the portion of the drawer bottom 14 which defines the bottom of the channel 18. When it is desired to shift the partition lengthwise of the drawer the dog 63 is raised so as to withdraw the tooth 66 from the subjacent slot or notch in the rack and then the partition is shifted as desired. When the desired position is reached the dog is released so that it drops downwardly and the tooth at the lower end thereof becomes inserted in the subjacent slot of the rack and locks the partition in place. The slots or notches in the rack are sufficiently wide so that limited pivotal or swinging movement of the partition is permitted. The

front ends of the top flanges of the channel bars 61 are cut away, as shown by dotted lines in Figure 4, in order that the foot 59 may be inserted into the space between the two bars 61.

In using the filing cabinet the partition 58 is set in the desired position and the spaces in front and behind the partition are filled with the records or papers to be filed. When the drawer is in its open position the back 17 extends rearwardly and downwardly as well as the partition 58 and the records and papers are thus readily accessible due to the V gap resulting from the inclination of the back and partition relatively to the vertical front 16 of the drawer. When the drawer is pushed inwardly into its closed position the slides and extension frame collapse or move inwards into the position shown in Figure 2 of the drawings and then the drawer slides inwards on the extension frame until the front 16 thereof abuts against the front of the cabinet structure. During inward sliding of the drawer with respect to the extension frame the back 17 strikes against the bumper 24 and is swung forwardly and upwards into a vertical position. As soon as the drawer is opened by pulling it outwards the back 17 swings backwards. Due to the sliding connection between the drawer and the extension frame the drawer may be pulled outwards from the cabinet structure 7 to bring the back 17 outside of the structure.

The herein described filing cabinet may be manufactured at a low and reasonable cost and is extremely efficient in operation.

The invention is not to be understood as restricted to the details set forth, since these may be modified within the scope of the appended claims, without departing from the spirit and scope of the invention.

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

1. In a filing cabinet of the character described, the combination of a cabinet structure having an open front, and a drawer for holding in an upstanding position the material to be filed, mounted to slide from a closed position within the cabinet structure into an open position outside of said structure and vice versa and comprising a bottom, front and sides all rigidly secured together and a back with a hinge between the bottom margin thereof and the rear margin of the bottom whereby upon sliding of the drawer into its open position it is free to swing rearwardly and downwardly and form a V gap within the drawer facilitating access to the filed material.

2. In a filing cabinet of the character described, the combination of a cabinet structure having an open front, and a drawer for holding in an upstanding position the material to be filed, mounted to slide from a closed position within the cabinet structure into an open position outside of said structure and vice versa and comprising a bottom, front and sides all rigidly secured together and a back hinged to the bottom and having wings lapping the rear ends of the sides and pin and slot connections between its wings and said rear ends of the sides whereby upon sliding of the drawer into its open position it is permitted to swing rearwardly and downwardly to a limited extent and form a V gap within the drawer whereby access to the filed material is facilitated.

3. In a filing cabinet of the character de-

scribed, the combination of a cabinet structure having an open front, a drawer for holding in an upstanding position the material to be filed, disposed normally within the cabinet structure
5 and comprising a bottom, front and sides all rigidly secured together and a hinged back normally extending vertically and connected to the drawer so that it is free to swing rearwardly and downwardly to a limited extent and form a
10 V-shaped gap within the drawer whereby access to the filed material is facilitated, and

means for supporting the drawer so that it may be slid rectilinearly from a closed position within the cabinet structure out through said open front into an open position wherein it is disposed wholly outside of the cabinet structure
5 and the rear ends of the sides thereof are spaced in front of said structure a distance substantially equal to the extent of rearward and downward swing of the hinged back.

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