July 31, 1951 V. A. SMITH 2,562,219

FILE CABINET DRAWER GUIDE

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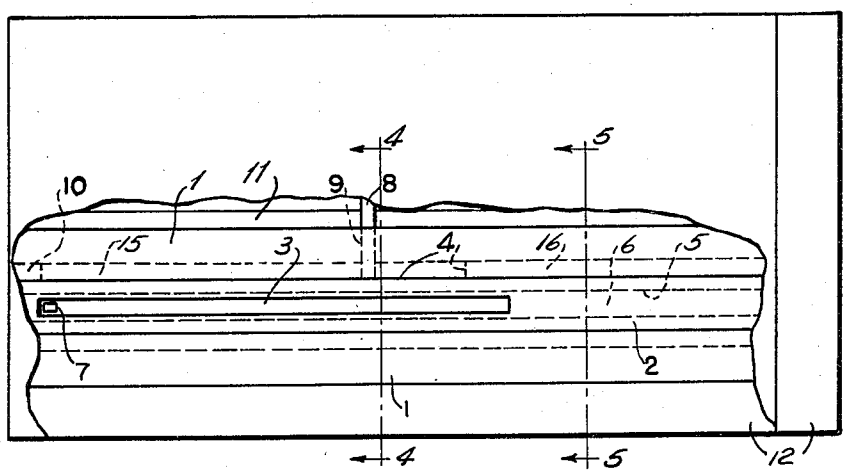


FIG. 2

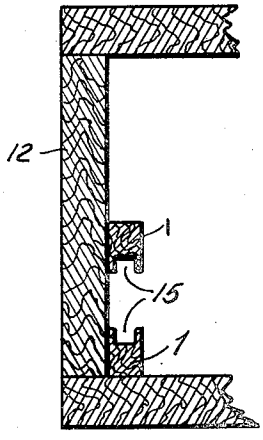


FIG. 1

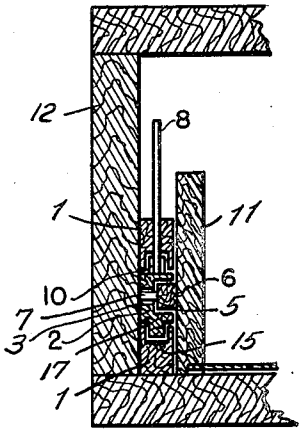


FIG. 4

INVENTOR.
VERNON A. SMITH
BY William D. Hall
Attorney

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FILE CABINET DRAWER GUIDE

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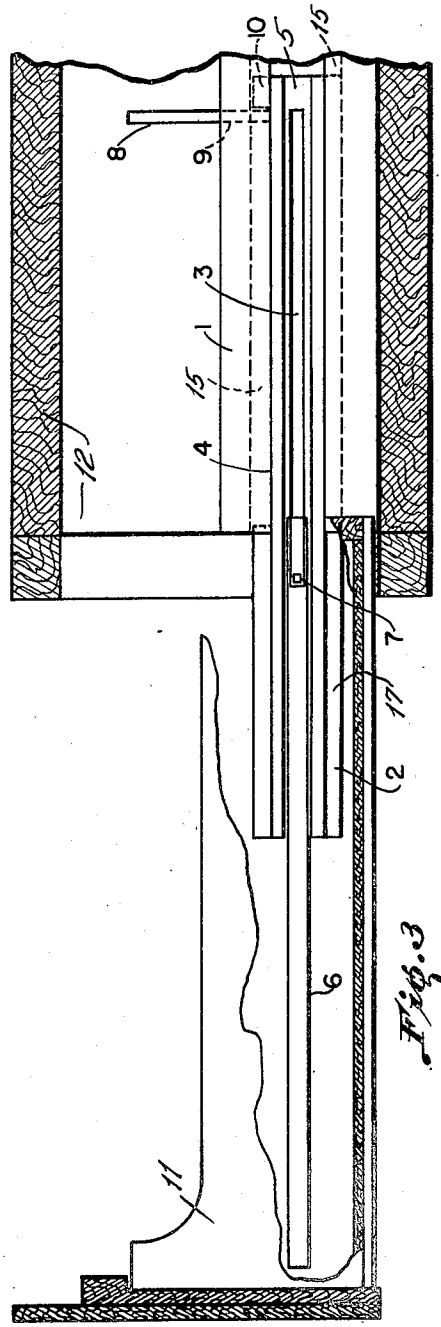


Fig. 3

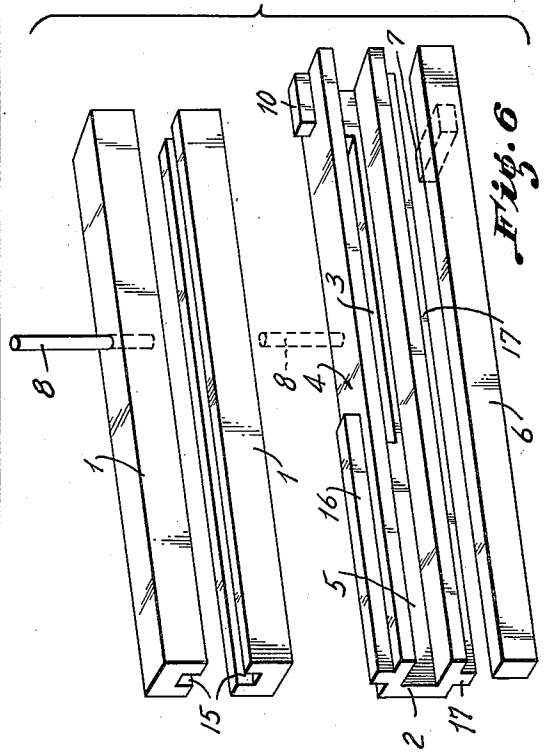


Fig. 6

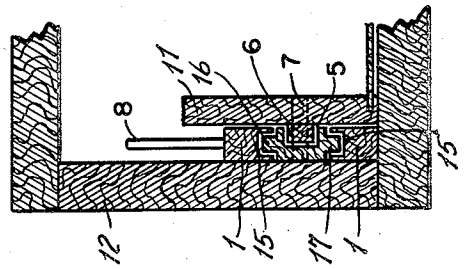


Fig. 5

INVENTOR.
VERNON A. SMITH
BY William A. Hall
Attorney

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UNITED STATES PATENT OFFICE

2,562,219

FILE CABINET DRAWER GUIDE

Vernon A. Smith, Winchester, Ky.

Application May 3, 1946, Serial No. 666,944

1 Claim. (Cl. 312—338)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

The invention to be hereinafter described relates to file cabinet drawers and particularly to slides therefor.

The universal use of filing cabinets of an extremely wide range of purpose and construction and in a considerable variety of materials has resulted in a corresponding development in the number and type of operational devices associated with them. Probably the type of cabinet in most general use is that employing horizontally sliding drawers and made either of wood or metal. It is common practice in such cabinets to have guide rails of some type, fixed on the inner side walls of the cabinet for each drawer, slides movable in such guide rails, movable connections between the drawers and slides and devices for limiting the movement of the drawer relative to the slide and of the slide relative to the cabinet. In most instances all of these various connections and limit stops have various weak points frequently out of order and requiring repair. They are often relatively complicated and easily put out of operative condition. Many are fragile and easily broken or damaged. A large proportion are inaccurate and unreliable in operation, failing to work at critical times.

The main objects of the present invention are to eliminate or greatly minimize the above and other objections and disadvantages and provide a very simple, compact, efficient, and durable sliding drawer and associated parts, at all times and under all conditions thoroughly reliable in operation, easily and quickly produced in quantity from readily obtainable materials particularly wood and one in which the drawer and some of the associated parts may be quickly and easily completely removed and as easily and quickly reassembled.

In order to more clearly disclose the construction, operation and use of the invention, reference should be had to the accompanying drawings forming part of this application.

In the drawings:

Figure 1 is a cross section through one pair of guide rails with a fragment of the supporting cabinet side wall;

Figure 2 is a side elevation of a cabinet case, partly broken away, showing the near slide in position in the guides, fully retracted and the supporting wall of the drawer being also broken away, the drawer rib location being dotted in;

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Figure 3 is a like view of the same guide, slide and rib parts, but from the opposite direction, with the parts fully extended, the rib 6 being shown in full, both drawer sides broken away and the guides broken off at the rear end of the case;

Figure 4 is a cross section on line 4—4 of Figure 2; and

Figure 5 is a cross section on line 5—5 of Figure 2.

Figure 6 is an exploded view of the parts of the guide detached from drawer and case.

For simplicity in illustrating the invention a single wooden drawer 11 and enclosing box-like cabinet case 12 as housing to receive the same have been shown, as the invention is equally applicable whether to one drawer in a housing or five or six drawers in the same housing.

On the left and right walls 13 of the case 12 there are mounted in any well known manner pairs of vertically spaced guide rails 1. They may be either U-shaped or L-shaped in cross section, those shown being U-shaped, with their channels 15 opposed. Preferably, they extend the full depth or front-to-back inside dimension of the case. Freely slidable in each pair of the guide rails there is a slide 2, having top and bottom ribs 16—17 engaged in respective guides, a side channel 5 being formed on its inner side throughout its length; and it is provided with a longitudinal slot 3 extending from near the rear end of the rail forwardly for nearly two-thirds of the length of the slide, or more or less. The upper rib 16 of each slide is notched or cut away lengthwise as at 4. This notch is above and of substantially the length of slot 3. It stops short of the rear end of the slide so as to leave stop lug 10 at the rear end just beyond the rear end of slot 3. The forward end of notch 4, when the parts are fully extended, falls substantially in alignment with the rear end of the drawer.

Slides 2 have the channels 5 at their inner sides, each channel freely, slidably and snugly receiving a rib 6 rigidly secured to the respective side wall of the respective drawer. The rear end of each rib 6 is provided with a lateral limit pin 7 which, in assembled relation, rides freely back and forth in slot 3. The pin 7 may be permanently fixed on the rib 6 and drawer since it does not require removal in order to separate the parts after the drawer is taken out. With the parts in the relative positions shown in Figure 2 and drawer closed, limit pin 7 is at the rear end of slot 3. As the drawer is pulled open rib 6 slides freely along channel 5 until the pin 7 engages the for-

ward end of slot 3. At that point pin 7 picks up slide 2 and carries that forward with the drawer. Slide 2 is free to continue with the drawer in its opening travel for the full length of notch 4 until the removable vertical dowel pin 8, projecting through a bore 9 in the top of the upper guide 1 and into the notch 4, is engaged by lug or limit stop 10 on the slide 2 at the rear end of the notch 4. Thus pins 7 draw slides 2 forward until they reach full extended position where they are stopped by pins 8 engaging lugs 10.

The bores for pins 8 are disposed a distance from the inside rear of the housing that will permit slide 2 to be carried back inwardly to initial position by pin 7, in drawer closing movement, before pin 8 is engaged by the rib 16. That, it is will be noticed, will be ample to completely withdraw slide 2 from its fully extended position of Figure 3. And, of course, in this retracting movement, pin 7 returns to its first mentioned position.

The approximate one-third projection of the slides 2 beyond the housing with corresponding length of seating of rib 6 therein, at both sides of the drawer, gives very adequate support for the drawer when completely open and fully loaded.

For repairs, renewals or any other reason desired the whole assembly may be quickly and easily taken apart. It is only necessary to partly open the drawer, reach back and lift out the dowel pins 8 and then draw out the drawer. Along with it will come the slides 2 which may be easily lifted off of the ribs 6. To reassemble it is only necessary to reverse this procedure, being sure that lugs 10 have passed rearwardly beyond the bores 9 before the pins 8 are inserted. Neither drawer nor slides can get out of alignment horizontally or vertically, before the drawer is disconnected from the case.

While the invention has been described with particular reference to a wood construction, it is equally applicable to a sheet metal construction. It is only necessary to form or shape the parts in well known manner to correspond with those described. Where metal construction is used antifriction bearings may be put in at proper points to provide easy free sliding. Preferably, though not necessarily, these could be ball bearings so seated as to project just far enough to give the desired antifriction action.

The construction, arrangement and disposition of the various parts may be changed within the scope of the appended claim, without departing from the field of the invention and it is meant to include all such changes within this application wherein only one preferred form has been illustrated purely by way of example and with

no thought or intent to, in any degree, limit the invention thereby.

Having thus described my invention what I claim and desire to protect by Letters Patent is:

In the combination comprising a case and a drawer slidable through the front of the case and having sides of sufficiently less height than the drawer-receiving space over the drawer side to afford space for access of the hand, separate vertically spaced parallel guides fixed on the side of the case and having opposed longitudinal channels, a slide between said guides having rib parts at top and bottom fitted in respective said channels and having a longitudinal channel throughout its length and open on its ends in its side next the drawer, a rail rectangular in cross section fixed on the drawer slidable in the last named channel, slots being formed in certain of the members named and stops on others to limit sliding movement of the drawer relative to the slide, and to limit sliding movement of the slide relative to the case; characterized by an interruption of the top rib of the slide in its rear part to form a notch extending over the major rear part of the slide stopping short near the rear end of the slide, a vertical pin removably engaged through the upper guide and extended into said notch intermediately of the length of the guide and further extended above the guide and above the side of the drawer for manipulation in said space by a hand inserted from the front of the case when the drawer is partly open, said slide having a longitudinal slot along its major part intermediately of the height of the slide midway of said channel in the slide and stopping short near the rear end of the slide, and a permanent rear lateral stop fixed on the rear part of said rail engaged slidably in said slot to limit movement of the drawer on the slide.

VERNON A. SMITH.

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