

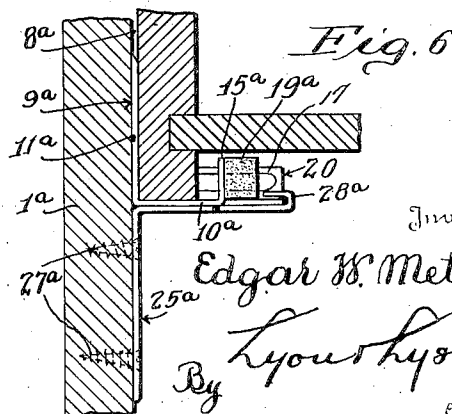
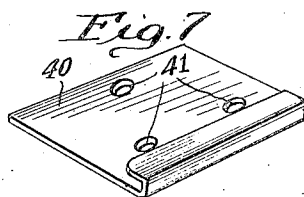
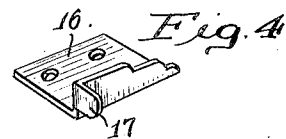
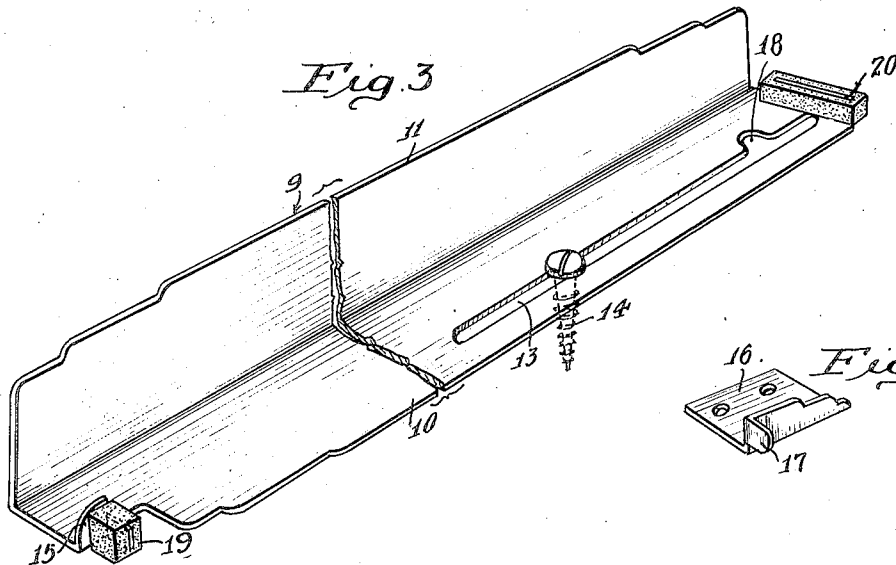
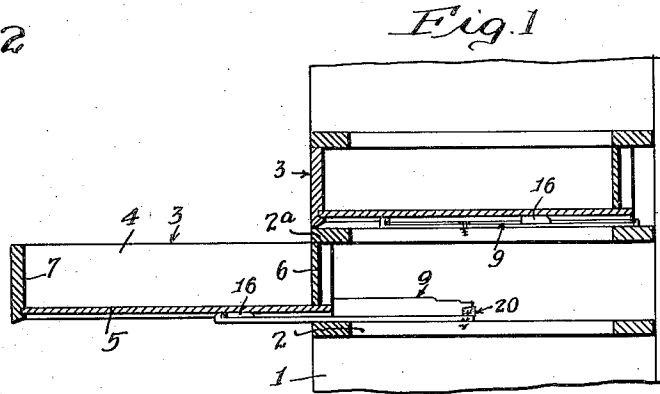
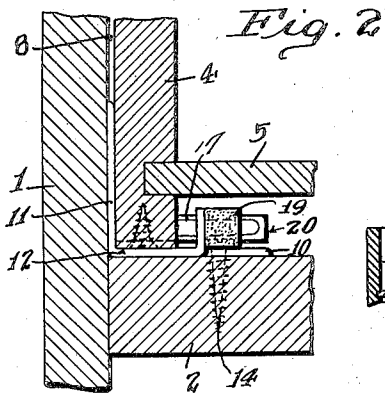
Oct. 6, 1936.

E. W. METCALF
EXTENSION DRAWER SUPPORT

2,056,407

Filed Nov. 16, 1934

3 Sheets-Sheet 1



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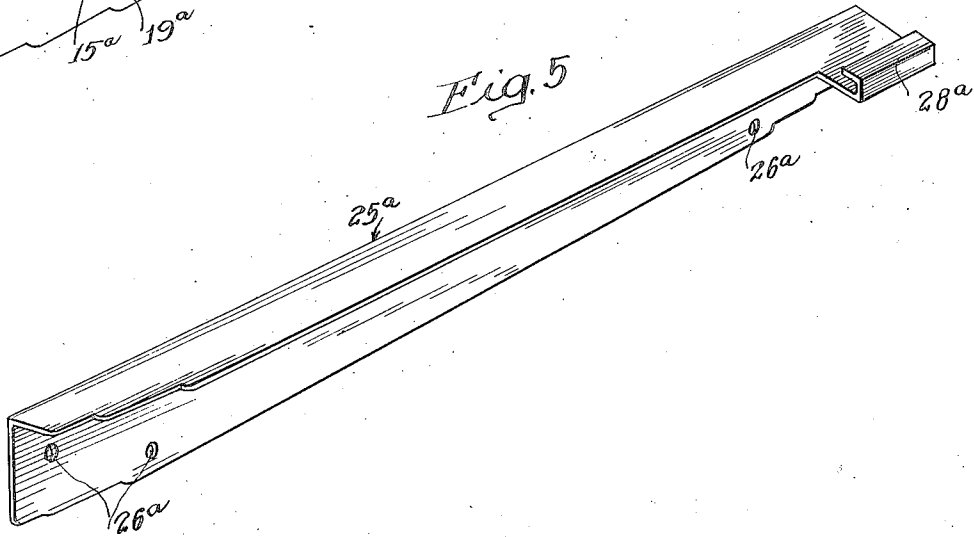
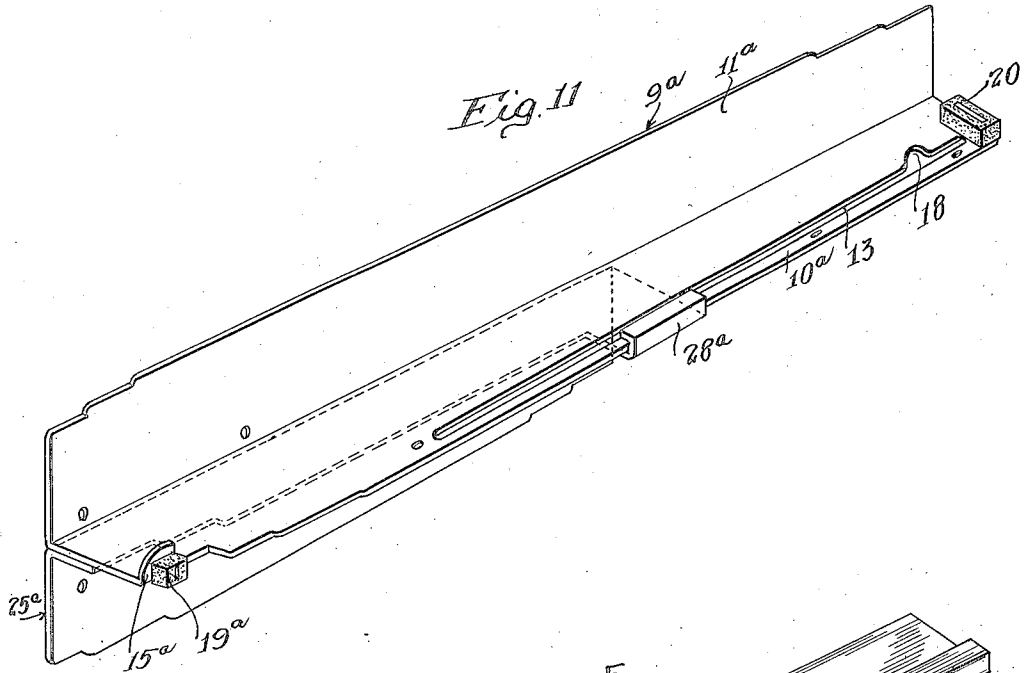
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3 Sheets-Sheet 2



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Fig. 8

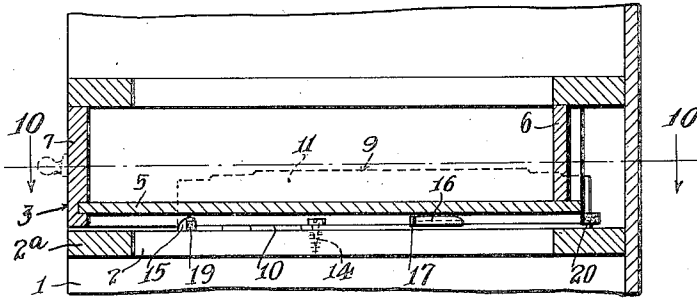


Fig. 9

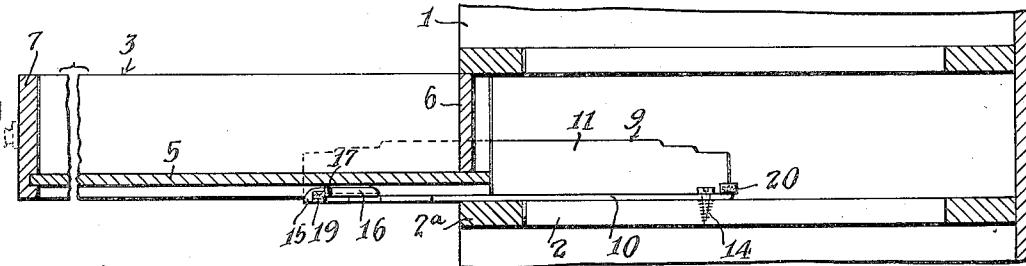
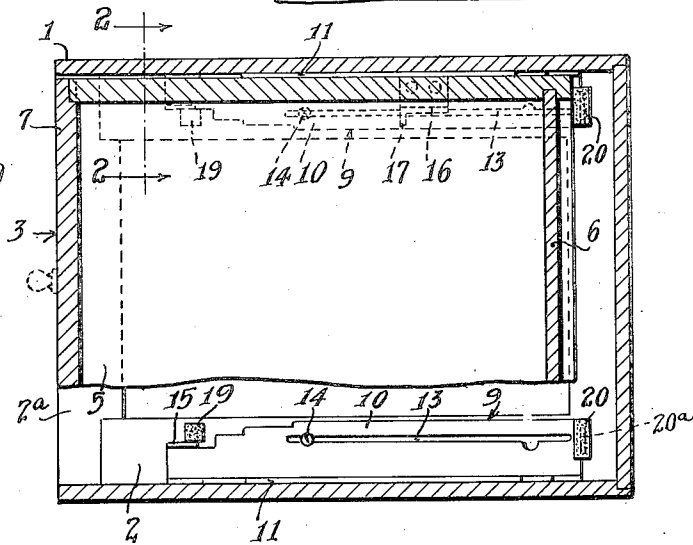


Fig. 10



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EXTENSION DRAWER SUPPORT

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Application November 16, 1934, Serial No. 753,286

7 Claims. (Cl. 45-77)

This invention relates to extension drawer supports, and more particularly to a means of supporting a drawer in extended position, and which means is of such construction and is so mounted as to make it unnecessary to reduce the dimensions of the drawer to provide for the support, and likewise unnecessary to cut or form channels in the drawer or in the cabinet in which the drawer is mounted in order to accommodate the extension supports.

Many and diverse forms of drawer supports have heretofore been suggested for the use of supporting drawers in their extended position. These drawer supports have for the most part required the construction of the drawers or cabinets to provide for either (1) a reduction in the cubicle contents of the drawer, or (2) the cutting or forming of special channels or guides in either the drawer members themselves or in the cabinets or other members providing the uprights upon which the drawers are supported, making the cost of installation of such supports high for their utilization, requiring a reduction in the cubicle contents of the drawer.

It is an object of this invention to provide a drawer support for supporting a drawer in extended position, which support may be installed without forming special grooves or slots in either the drawer members or in the means providing the uprights upon which the drawers are supported, and which might be installed with a minimum of labor and without necessitating the reduction of the cubicle contents of the drawer in order to permit the utilization of the supports between the drawers and the uprights supporting the drawers.

Other objects and advantages of this invention it is believed will be apparent from the following detailed description of a preferred embodiment thereof as illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a view partially in vertical section of a fragment of a cabinet illustrating the drawer supports embodying my invention as adapted therein.

Figure 2 is a fragmental front sectional view of the cabinet and drawer as illustrated in Figure 1 and illustrating the drawer support as embodying my invention as adapted thereto. This section is taken on the line 2-2 of Fig. 10.

Figure 3 is a perspective view broken away of a drawer support embodying my invention.

Figure 4 is a perspective view of a clip embodying my invention.

Figure 5 is a perspective view of a modified form of drawer support embodying my invention.

Figure 6 is a fragmental sectional end view of a cabinet and drawer illustrating the modified form of extension drawer support shown in Figure 5 as adapted thereto.

Figure 7 is a perspective view of a runner clip utilized in one modification of my invention.

Fig. 8 is a vertical section taken in the same plane as Fig. 1, but upon an enlarged scale, and showing a drawer in the closed position with certain parts of the cabinet broken away.

Fig. 9 is a view similar to Fig. 8, but showing the drawer completely extended, and with the outer portion of the drawer broken away.

Fig. 10 is a horizontal section through the cabinet upon an enlarged scale, showing the drawer in its closed position, and partially broken away so as to illustrate more fully the extension means for the drawer.

Fig. 11 is a perspective upon an enlarged scale illustrating the extension means illustrated in Fig. 6, and representing the same removed from the cabinet.

In the preferred embodiment of my invention as illustrated in the accompanying drawings, there is illustrated a cabinet which may be of any suitable or desirable construction and which includes uprights or side walls 1, cross members 2a, and horizontally extending drawer slides 2, connected between the spaced uprights 1 and providing divisions in the cabinet in which the drawers 3 are mounted. The drawers 3 are of any suitable or desirable construction with plain flat unobstructed outer side faces formed on the side walls or edge members 4, and having an elevated bottom 5, a rear member 6, and front boards 7. The drawers 3 are of such width as to approximately fit the space provided between the horizontally spaced uprights 1, leaving only a very slight clearance 8 between the edge members 4 and the uprights 1.

The drawer support embodying my invention as illustrated in Figures 1 to 4, inclusive, includes a supporting member or slide preferably in the form of an angle member 9 formed of relatively thin gauge metal, of angular cross-section having a horizontal flange 10 and a vertical flange 11. The relatively thin gauge metal of the vertical flange 11 consists of only one layer or thickness of the metal and fits in the clearance 8 provided between the edge member 4 of the drawer 3 and the upright 1, and this flange extends upwardly in the embodiment of my invention as illustrated in Figures 1 and 2 and the horizontal

flange 10 rests upon the cross member 2 below the lower edge of the edge member 4.

As the metal used in forming the angle member 9 is of relatively thin gauge, and is the only part between the side of the drawer and the side wall of the cabinet, it can be fitted within the clearance normally provided in practically any drawer construction in any cabinet construction without necessitating the cutting away of any of the material forming the edge member 4, either at the point of clearance 8 or under the lower edge 12 of the drawer, but by reason of its angular cross-section it provides for sufficient rigidity for an extension drawer support to support all loads normally carried in such drawers when the drawers are in their extended position as illustrated in Figure 1. The angle members 9 are formed to cooperate with relatively fixed means to limit their outward sliding movement and are preferably formed with slots 13 in the horizontal flanges 10, and fixed means such as a screw 14 is passed through the slots 13 and is secured in the guides 2 so as to permit the angle or support members 9 to slide back and forth with reference to the screws 14.

In order to provide stop members to prevent the drawer from being withdrawn too far from the cabinet or off from the support, the support 9 is provided with a limit stop 15 which is formed of the metal forming the flange 10 by bending the metal upward and at right angles to form the horizontally extended stop 15. Secured in proper position to the under edge of the edge member 4 of the drawer 3 is a clip 16 which is likewise formed to provide a horizontally extending limit stop 17 which, when the drawer 3 is in extended position, will engage the limit stop 15 to prevent accidental withdrawal of the drawer 3 from the cabinet.

Formed at a point near its rear, the slot 13 is enlarged as indicated at 18 to permit withdrawal of the support or angle member 9 with the drawer when the drawer is tilted upon being withdrawn from the cabinet. The enlargement 18 permits the head of the screw 14 to pass therethrough in withdrawing the support 9 from the cabinet. In order to provide for noiseless operation of the drawer, a small block 19 of rubber may be mounted upon a horizontally extending portion of either the stops 15 or 17, as desired.

In order to provide means for retracting the slides 9, a stop 20a is formed at the rear of each slide preferably by bending up a stout tongue of the metal at this point, and this tongue or stop 20a preferably carries a cushion of soft material such as a block 20 of rubber, fiber, or other suitable material. When the drawer is pushed back into the cabinet, the rear end of the drawer engages these blocks and retracts the slides.

It will be observed from the foregoing that it is only required in the installing of the extension drawer support embodying my invention to mount the clip 16 upon the lower edge of the edge member 4 and to properly position the screw 14 in the guide 2 of the drawer, and that this entire installation may be performed without cutting away any material portion of the wood forming the drawer structure or without reducing the volumetric contents of the drawer 3 and without cutting any grooves or slots or channels in either the uprights 1 or the edge members 4 of the drawers.

In order to provide the drawer support embodying my invention in a drawer structure for

a cabinet which does not include the guides 2 or the transverse members 2a, a modified form of my invention as illustrated in Figures 5 and 6 is provided. In this structure similar parts have been indicated with similar numerals and the structure 5 differs from that as heretofore described principally in that there is provided a second angle member 25a provided with a plurality of holes 26a through which screws 27a may be passed in securing the angle member 25a in position upon the uprights 1a. Thus the second angle member 25a forms the guide and support upon which the member 9a is mounted. In this form of construction the support 9a is positioned upon the upper face of the angle member 25a with its edge within the channel 20a formed by bending a portion of the material of the angle member 25a upon itself, as indicated in Figure 5. In other respects the assembly is entirely the same as that heretofore described in connection with the modification of my invention as illustrated in Figures 1 to 4, inclusive. A clip like the clip 16 would be secured to the drawer in the same position as the clip 16 in Fig. 1.

In Figure 7 I have illustrated a runner stop adapted to be employed when the runner slide 2 is of insufficient width to accommodate the screw 14. This runner clip 40 is secured to the frame member 2a by passing screws through the holes 41 and when so used acts in the same manner as does the angle support 25a illustrated in Figures 5 and 6.

Having fully described my invention, it is to be understood that I do not wish to be limited to the details herein set forth, but my invention is of the full scope of the appended claims.

I claim:

1. In combination with a drawer and a frame with reference to which the drawer is adapted to slide in substantially horizontal position, of a drawer support, consisting of an angled member having a single horizontal flange and a single vertical flange, and in which drawer support there is formed a slot which extends longitudinally thereof, said vertical flange being a flat plate with unobstructed side faces and being the only part between the side of the drawer and the frame and means passing through the slot for securing the support member to a portion of the frame.

2. A cabinet drawer structure comprising means providing a drawer receiving compartment having uprights at its sides, and guides for the drawer, an extension support including an angle member providing a horizontal flange and a vertical flange, with a slot in the horizontal flange, a screw passed through the slot, the extension support being formed to provide a limit stop, and a clip member adapted to cooperate with the limit stop of the extension member to limit the extent to which the drawer may be withdrawn from the cabinet, said vertical flange being the only part received between the side of the drawer and the side of the drawer compartment.

3. A cabinet drawer structure comprising means providing spaced uprights defining a drawer receiving compartment, a drawer mounted in the compartment between the uprights, with the sides of the drawer lying against the uprights, an extension support of angular cross-section with a vertical flange consisting of a flat plate having unobstructed faces received between the drawer and one of the uprights, the extension member being slotted longitudinally of one of its angle portions, a fastener secured in a portion of the cabinet

and passing through the slot, a clip secured to the drawer, and a stop formed on the angle member to cooperate with the clip to limit the withdrawal of the drawer from the cabinet.

5 4. In combination, a drawer, uprights past which the drawer slides, the drawer having a side wall with a plain flat unobstructed outer face, a drawer support having a substantially vertical flange fitting in the clearance space at the
10 side of the drawer and being the only part received between the drawer side and the upright, said drawer support having a horizontal flange adapted to fit under the lower edge of the side wall, said horizontal flange having a slot therein,
15 a screw secured through the slot for slidably securing the support in position with reference to said upright, and a clip secured to the drawer and constituting a stop, and a stop formed on the support to cooperate with the clip stop to limit the
20 extent to which the drawer may slide outwardly.

5 5. In an extension drawer support, a side wall for the drawer compartment having a plain flat unobstructed inner side face, a drawer with a side wall having a plain flat unobstructed outer
25 side face lying adjacent to the said inner side face of the side wall of the cabinet, a thin metal supporting angle member having a vertical flange lying in the clearance space between said adjacent faces, said vertical flange being the only part
30 located between said adjacent faces, said drawer having an elevated bottom connected to the inner face of the side wall of the drawer above the lower edge thereof, said supporting member having a horizontal flange projecting under the lower
35 edge of the side wall of the drawer and under the said elevated bottom, a stop carried by the drawer below its bottom, said horizontal flange having means in the path of the stop when the drawer is pulled out, enabling the drawer to slide
40 the supporting member forwardly and project its forward end out of the drawer compartment; and relatively fixed means for limiting the outward sliding movement of the supporting member.

45 6. In a drawer support construction for a cabinet, the combination of a drawer compartment

having a side wall, a drawer having a side wall lying substantially against the first-named side wall, a drawer bottom elevated above the lower edge of the side wall of the drawer, an extension support having a vertical flange consisting of a
5 single flat plate, all parts whereof are located in the clearance space between said side walls, said single flat plate being the only part received in said clearance space, said extension support having a horizontal flange extending under the
10 lower edge of the side wall of the drawer and projecting under the elevated bottom, means connecting the drawer and the extension support to pull out the support when the drawer is pulled open, and stop means for limiting the outward
15 movement of the extension support.

7. In an extension drawer support, a side wall for the drawer compartment having a plain flat unobstructed inner side face, a drawer with a side wall having a plain flat unobstructed outer side
20 face lying adjacent to the said inner side face of the side wall of the cabinet, a thin metal movable supporting angle member having a vertical flange lying in the clearance space between said adjacent faces, said vertical flange being the only
25 part located between said adjacent faces, said drawer having an elevated bottom connected to the inner face of the side wall of the drawer above the lower edge thereof, said supporting member having a horizontal flange projecting under the
30 lower edge of the side wall of the drawer and under the said elevated bottom, a stop carried by the drawer below its bottom, said horizontal flange having means in the path of the stop when the drawer is pulled out, enabling the drawer to
35 slide the supporting member forwardly and project its forward end out of the drawer compartment; and a fixed angle member having a vertical flange attached to the inner face of said side wall, and a horizontal flange extending under the first-named horizontal flange and supporting the same
40 and the drawer, said relatively fixed member having means for limiting the outward sliding movement of the movable supporting member.

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