June 21, 1955 M. P. GUSSACK 2,711,358

ADJUSTABLE DRAWER GUIDES

Filed Aug. 5, 1953 2 Sheets-Sheet 1

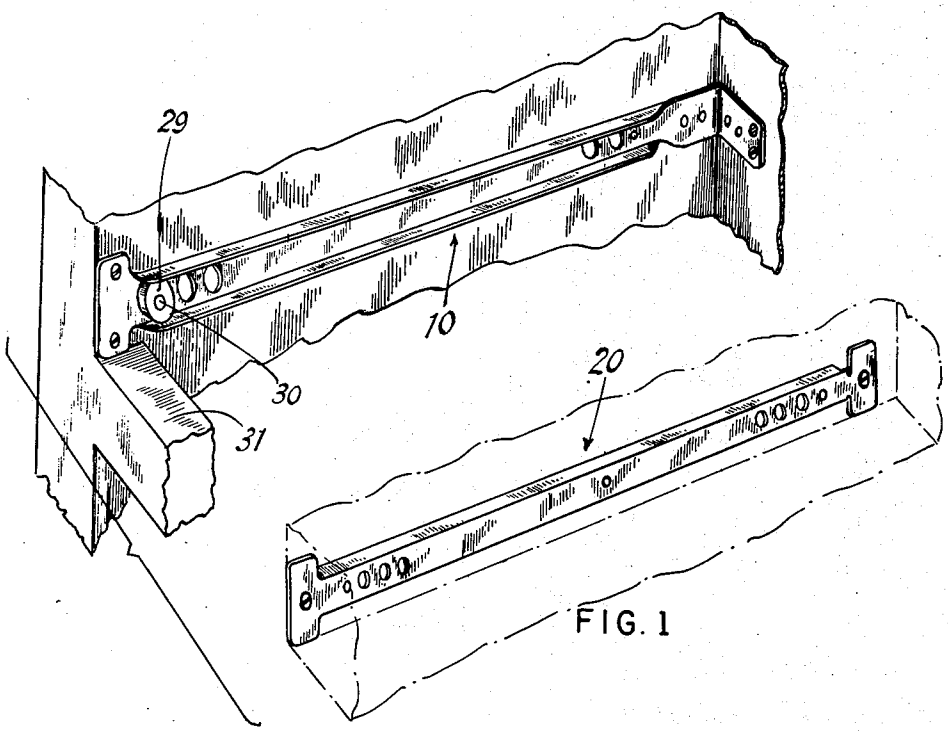


FIG. 1

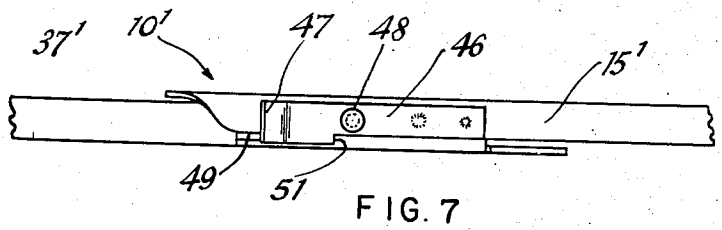


FIG. 7

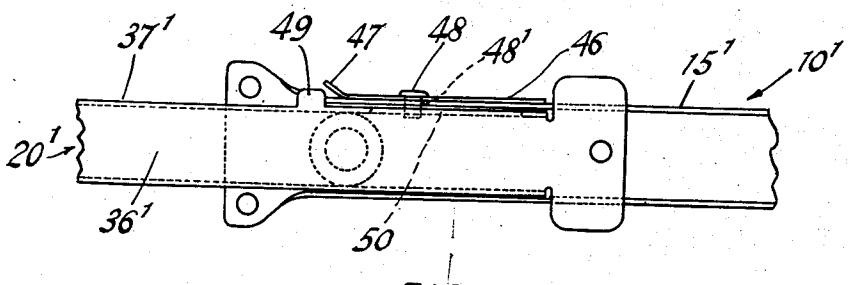


FIG. 8

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ADJUSTABLE DRAWER GUIDES

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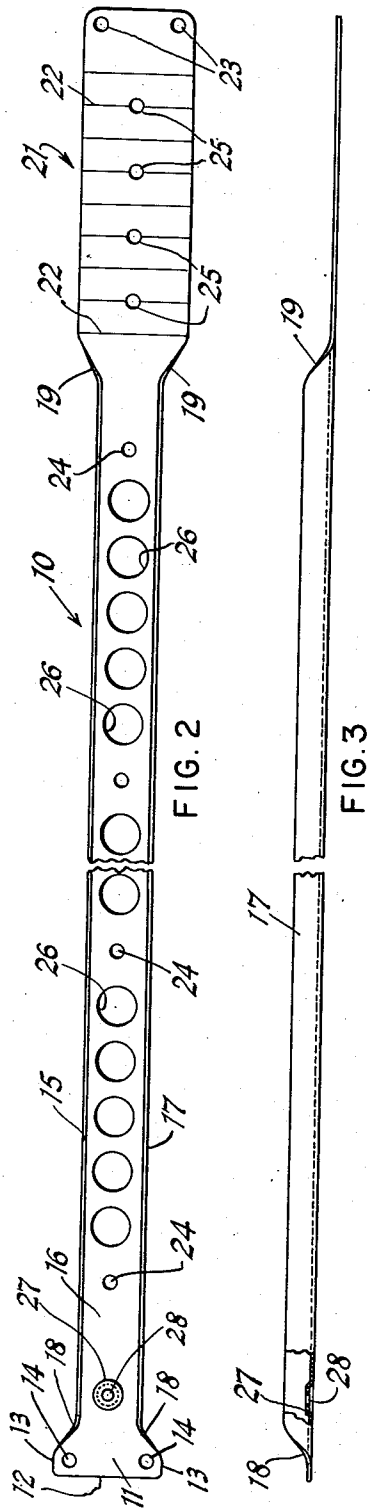


FIG. 2

FIG. 3

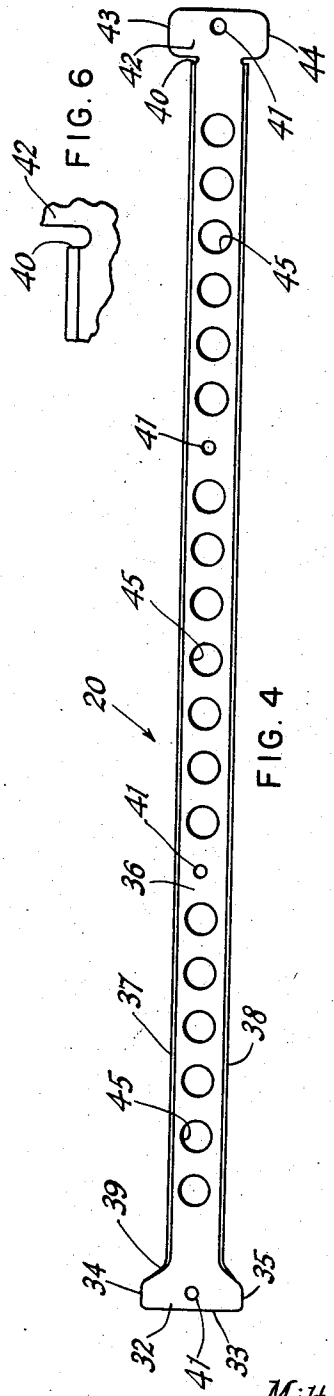


FIG. 4

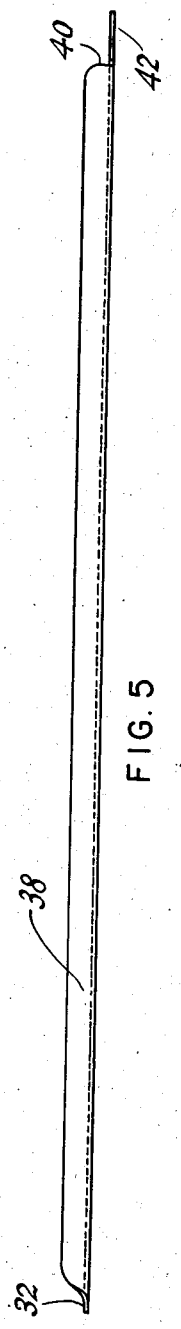


FIG. 5

FIG. 6

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ADJUSTABLE DRAWER GUIDES

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3 Claims. (Cl. 312—333)

This invention relates to slide suspensions for drawers and the like which are slidably mounted in a supporting structure, such as a cabinet, chest, desk or similar article.

Broadly, it is an object of the invention to provide an adjustable drawer guide or slide suspension which is inexpensive and reversible to fit either side of the drawer.

More particularly, it is an object of the invention to provide an adjustable drawer guide which has depressed lines and numbers designating inches and fractional parts of an inch to automatically indicate the cabinet depth so that the rear end of the case member can be rapidly bent at the cabinet depth and attached to the back of the case or cabinet.

A further object is to provide a drawer channel member with flared ends for easy insertion into the cabinet channel member.

Still a further object of the invention is to provide lightweight cabinet and drawer channel members which may be readily attached to the drawer or cabinet and be automatically aligned.

Another object is to provide cabinet and drawer guides or channel members which have sufficient traction and enough friction to permit the drawer to roll easily but with enough friction to prevent excessive movement.

Another object is to provide a locking mechanism to prevent the drawer from being completely withdrawn from the cabinet in normal operation. The drawer may be withdrawn from the cabinet, if desired.

For a fuller understanding of the nature and objects of the invention, reference is had to the following detailed description in connection with the accompanying drawings, in which:

Fig. 1 is an exploded perspective view of the cabinet and drawer guides showing the same attached to portions of the cabinet and drawer.

Fig. 2 is a plan view of the cabinet guide or member.

Fig. 3 is an edge view of the guide shown in Fig. 2.

Fig. 4 is a plan view of the drawer guide or member.

Fig. 5 is an edge view of the guide shown in Fig. 4.

Fig. 6 is an enlarged fragmentary portion of the end of the drawer guide.

Fig. 7 is a fragmentary top view of the spring locking mechanism of a modified cabinet and drawer guide.

Fig. 8 is a fragmentary plan or side view of the locking member shown in Fig. 7.

Referring to the drawings, numeral **10** represents a cabinet channel or case member formed of an elongated strip of sheet metal to provide a supporting section **16** and having a front end **11**, the leading edge **12** of which is straight and at right angles to the longitudinal medial line of the cabinet channel member. The upper and lower edges **13** are straight and at right angles to the leading edge **12**, the corners being rounded. Screw holes **14** are adjacent the edges at each end for attaching the front end into the front corner of the cabinet. Narrow opposed upper and lower flanges or rails **15** and **17**, respectively are bent at right angles, the front and back edges **18** and **19**, respectively being dished for ease in receiving the drawer channel member **20** as will hereinafter be described. The rear end **21** of the cabinet channel member **10** is formed in a flat elongated tab which has a series of depressed lines **22** spaced ½ inch apart at right angles to the longitudinal medial line of member **10** for bending inwardly if the cabinet member

10 is longer than the depth of the cabinet as hereinafter described. Lines **22** may have depressed numbers representing inches from the leading edge **12** so that the man making the installation need not measure the bending point if he knows the depth of the cabinet. Adjacent the corners of the rear end or tab **21** are screw holes **23** for attaching the rear end or tab **21** to the side or back of the cabinet. A series of screw holes **24** are spaced apart along the medial line of the supporting section **16** for further attaching the cabinet channel member to the side of the cabinet. Screw holes **25** are spaced along the longitudinal medial line of the tab or rear end **21** for further attaching the rear end to either the side or rear of the cabinet. A series of enlarged holes **26** are punched along the supporting section **16** to lighten the weight of the cabinet channel member, however, without materially reducing the strength of the said member. A deep dimple **27** is depressed from the outer side along the longitudinal medial line, the said dimple having a central opening **28** for attachment of a bearing roller **29** by pin **30** which passes through the opening **28**.

In attaching the cabinet channel member **10** to the cabinet the leading edge **12** is aligned flush with the cabinet face and the lower edge **13** rests upon the upper face of the cross member or rail **31** and the supporting section **16** is positioned parallel or level with the top of the cabinet or at right angles to the cabinet face. The rear end **21** is attached to the side of the cabinet if the depth of the cabinet is greater in length than the entire cabinet channel member **10**. In this event screws are placed in the screw holes **23**, **14**, **24** and **25**. However, if the cabinet channel member **10** is longer than the depth of the cabinet the rear end or tab **21** is bent inwardly along one of the depressed lines **22** and at right angles to the supporting section **16** and screws are placed through the screw holes **23** into the back of the cabinet. Screws may likewise be inserted through the screw holes **25** to attach the tab **21** either to the back or side of the cabinet.

Referring to Figs. 1, 4, 5 and 6, the drawer channel member **20** formed of an elongated strip of sheet metal to provide a supporting section **36** and comprising a front end **32** having a leading edge **33** and upper and lower edges **34** and **35** respectively. Narrow opposed upper and lower flanges or rails **37** and **38** respectively are bent at right angles, the front edges **39** being dished and rear edges **40** terminating abruptly for the purpose as will be hereinafter described. The upper and lower edges **34** and **35** are straight and at right angles to the leading edge **33**, the corners being rounded. Screw holes **41** are spaced apart along the longitudinal medial line of the drawer channel member for attaching to the side of the drawer. The rear end or tab **42** is flat and on the same plane as the supporting section **36** and the upper and lower edges **43** and **44** respectively are aligned with the upper and lower edges **34** and **35**. The rear edge **40** is at right angles to the supporting section **36** so that such edges can easily pass between the upper and lower flanges **15** and **17** and permit the periphery of the bearing roller **29** to roll along the lower face of the upper flange **37**. A series of enlarged holes **45** are punched along the supporting section **36** to lighten the weight of the drawer channel member **20**, however, without materially reducing the strength of the said member.

In attaching the drawer channel member **20** to the outer sides of the drawer, the leading edge **33** is placed against the back of the drawer front with the bottom edge of the drawer aligned with the lower edges **35** and **44** of the front end **32** and the rear end **42**, respectively. Screws are then placed through the holes **41** thus attaching the member **20** with the flanges **37**, **38** projecting

outwardly from the drawer side. The heights of the front ends 11 and 32 and the rear ends 21 and 42 are such that when the channel members 10 and 20 are attached as herein described, the flanges 37, 38 will fit between the flanges 15, 17 when the drawer is inserted in the drawer opening. The distance between the flanges 37, 38 is slightly less than the distance between the inner facings of flanges 15, 17 and the diameter of the bearing roller 29 is slightly less than the distance between the inner facings of the flanges 37, 38 so that when the drawer with the member 20, attached thereto as hereinbefore described, is inserted into the drawer opening containing the attached member 10, the drawer and the cabinet and drawer members will be automatically and perfectly aligned so that the drawer will roll easily in the drawer opening yet with sufficient friction between the two channel members to provide enough resistance so that the drawer will not roll so freely as to be pulled entirely out of the drawer opening. The dish portion 18 of the cabinet channel member 10 acts to guide and to ease the rear edges 40 of the flanges 37, 38 into their proper positions between flanges 15, 17.

It will be noted that the channel members 10, 20 are reversible and may be used either on the right or left hand side of the drawer or cabinet. Of course, sufficient clearance must be left for the width of the channel members 10, 20 and their flanges 15, 17, 37 and 38 between the outer facings of the drawer sides and the width of the drawer opening.

Referring to Figs. 7 and 8, these drawings represent a modification of the channel members hereinbefore described and show a spring locking mechanism comprising a flat spring 46 which is spot welded near its rear end to the upper flange 15' adjacent the front end of the cabinet channel member 10'. The front end 47 of spring 46 is bent upwardly and is wider than the width of flange 15', as best shown in Fig. 7. A short stop pin 48 is attached to the spring 46 nearer its front end so that there is sufficient resiliency of the spring and pressure of the free end of the pin upon the upper flange 37', as will be hereinafter described. The shank of pin 48 passes through opening 48' in the upper rail 15'. The drawer channel member 20' has an upwardly projecting cam 49 preferably bent upward from the upper flange 37' and spaced from the free edge of flange 37' so that it rides along the free edge of flange 15' to exert an upward pressure upon the forward end of spring 46. The cam has its upper edges rounded, the said cam being spaced apart from the rear end of the member 20' a predetermined distance so that it can act upon the front end 47 of spring 46. The flange 37' has an elongated slot 50 near its rear end. As the drawer channel member 20 is in a closed position, the stop pin 48 rides in an open position upon the upper face of the upper flange 37' applying a load on the spring 46. When the drawer channel member 20' is withdrawn a few inches from its extended position, the stop pin 48 falls into the elongated slot 50 in the drawer channel member flange 37' and locks the entire assembly. When closing the drawer a fraction of an inch the elongated slot has sufficient play to permit the spring release to cam up thus allowing the drawer to close. In other words, the upper edge of cam 49 rides along the angular lower face of the front end 47 and the lower face of the portion of the spring 46 extending beyond the edge of the upper flange 15' raising the spring 46 a sufficient height to release the stop pin 48 from the slot 50. When the cam 49 passes the back edge 51 of the front end of the spring 46, the stop pin 48 rides upon the upper surface of the flange 37'. If it is desired to remove the drawer from the cabinet, the drawer is withdrawn until the stop pin 48 falls into the elongated slot 50 and an upward pressure is then applied to the front end 47 releasing the pin 48 from the slot 50 while pulling the drawer outwardly.

It is obvious that various changes and modifications may be made in the details of construction and arrangement of parts without departing from the spirit of the invention.

I claim:

1. In a drawer suspension for cabinets having cross members and drawers, each of said drawers having sides and a front, in combination, a stationary cabinet slide and a drawer slide, each having a supporting section and upper and lower spaced parallel rails, said drawer slide rails spaced apart slightly less in height than said cabinet slide rails, said drawer slide rails loosely fitting between said cabinet slide rails, a bearing roller mounted on a pin between said cabinet slide rails adjacent to the front of said cabinet slide for supporting and rolling engagement of said drawer slide rails, said slides having flat front and rear ends on the same plane as said supporting sections, the leading front edges of said ends being straight and at right angles to the longitudinal medial lines of said slides, the upper and lower edges of said front and rear ends being parallel to the longitudinal medial lines of said slides, the front edges of said rails being dished for easy entrance of said slides into one another, the rear edges of said drawer slide rails being straight and at right angles to the supporting section of said drawer slide, the rear end of said cabinet slide having depressed bending lines at right angles to the longitudinal medial line of said rear end and spaced apart at a uniform distance from each other for bending said rear end inwardly at right angles to said cabinet slide supporting section, the rails of said slides being spaced in relation to the upper and lower edges of said front ends, whereby when said cabinet slide is attached to the cabinet with its leading edge of the front end aligned with the face of the cabinet and its lower edge resting upon the cabinet crossmember, and the drawer slide is attached to the drawer with its leading edge of the front end against the back of the drawer front and its lower edge aligned with the bottom of the drawer side, the rails of the slides are automatically aligned for the drawer rails to enter and slide between the cabinet rails.

2. The drawer suspension in accordance with claim 1 wherein said cabinet slide has an enlarged dimple with a central opening depressed inwardly from the outer edge of said supporting section for receiving said pin of said roller bearing.

3. The drawer suspension in accordance with claim 1 wherein the end of said upper rail of said drawer slide has an elongated slot and an upwardly projecting cam and the front end of said upper rail of said cabinet slide has a leaf spring attached at its rear end with an upwardly bent leading front free end, said front end being wider than the width of the upper rail of said cabinet slide permitting said cam to exert an upward pressure upon said leaf spring, a short stop pin adjacent to said upwardly bent front end, the lower end of said stop pin falling through said upper rail of said cabinet slide and into said elongated slot of said upper rail of said drawer slide when said drawer is moved to an extended position to lock said drawer against complete withdrawal of said drawer from said cabinet, the lower end of said pin riding in open position upon the upper face of the upper rail of said drawer slide and exerting an upward pressure against said spring when said drawer is moved to its closed position.

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