United States Patent

[11] **3,589,778**

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[54] **CABINET DRAWER SLIDE ASSEMBLY**
5 Claims, 6 Drawing Figs.

[52] **U.S. Cl.** **308/3.6,** 312/348
[51] **Int. Cl.** **F16c 29/00**
[50] **Field of Search** 308/3.6; 312/348, 334, 335

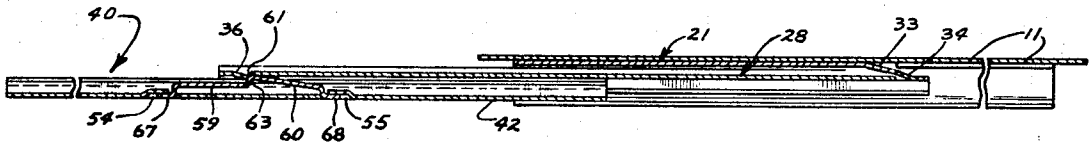
[56] **References Cited**

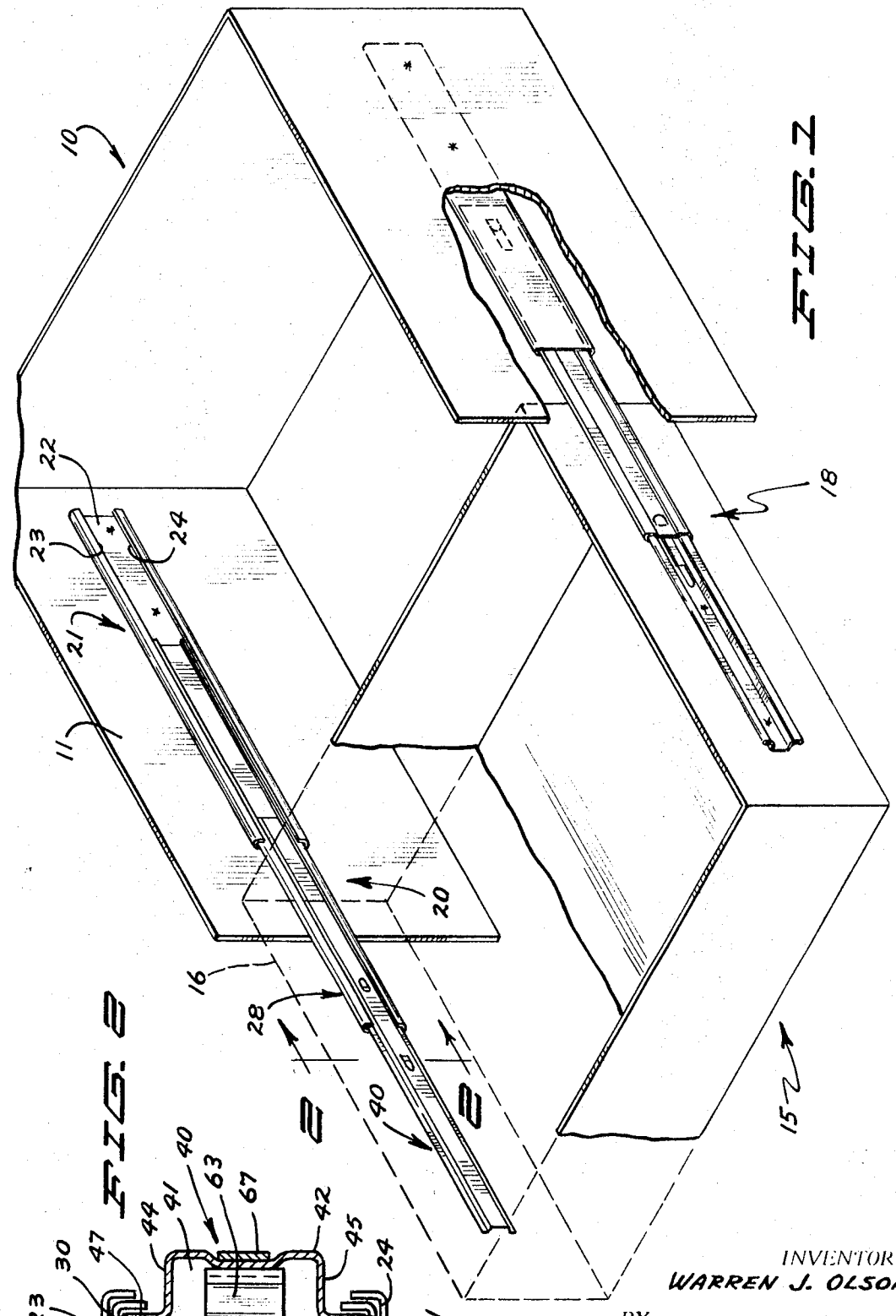
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ABSTRACT: A cabinet drawer slide assembly comprising a drawer slide member, a central slide member and a cabinet supported slide member, a plate spring carried by said drawer slide member adjacent said central slide member, said plate spring having a longitudinal angled portion projecting in the direction of said central slide member forming a stop abutment, said central slide member carrying a stop member extending in the direction of said drawer slide and engageable by said stop abutment, said plate spring having an unobstructed portion extending forwardly and outwardly of said central slide member yielding to finger pressure for disengagement thereof from said stop member.





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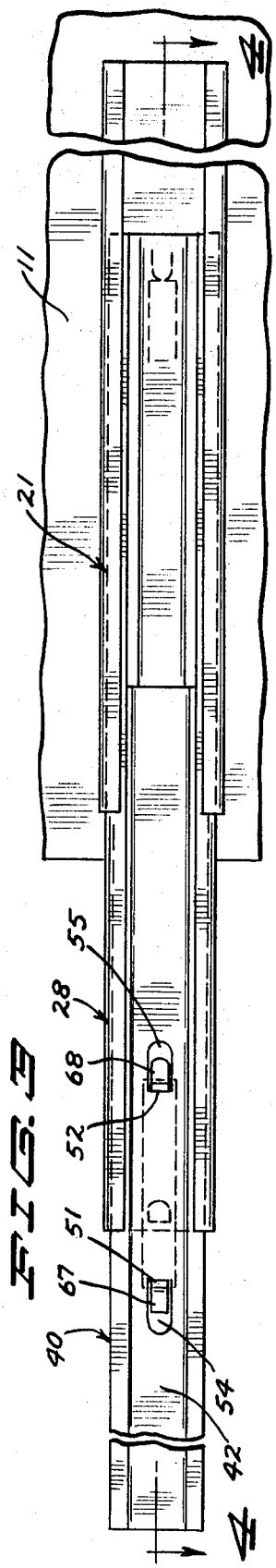


FIG. 3

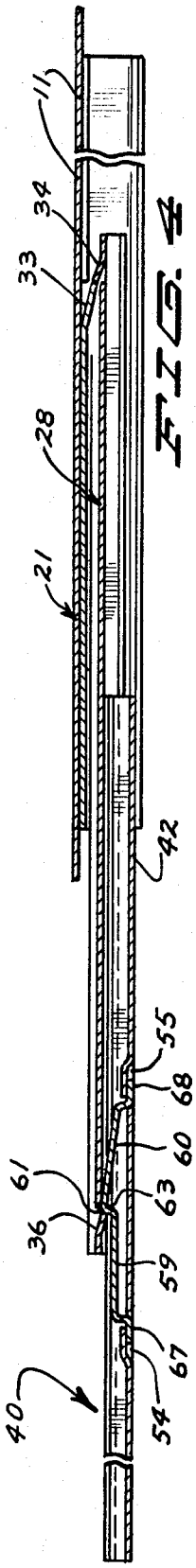


FIG. 4

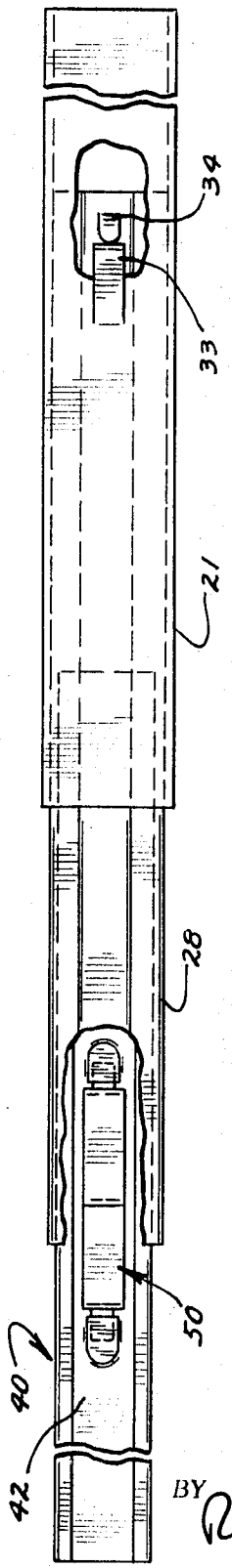


FIG. 5

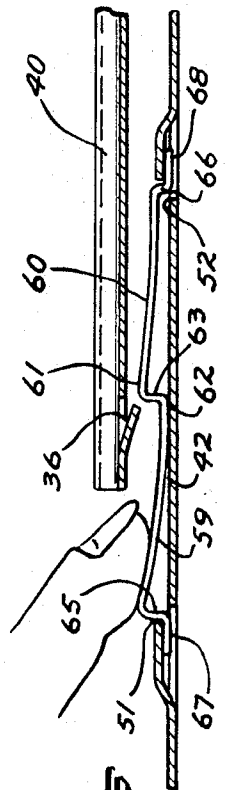


FIG. 6

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CABINET DRAWER SLIDE ASSEMBLY

BACKGROUND AND SUMMARY OF THE INVENTION

This invention relates to a drawer slide assembly. More particularly the invention herein relates to an easily operated quickly releasable locking or stop member for the complete removal of a drawer from the slide assembly and from the cabinet in connection therewith.

The invention herein represents a simplified disconnecting or release means. Representative of stop and release means known in the art are disclosed in the U.S. Pat. to Vogt, No. 3,278,250; Ward, No. 3,142,517; and Fall, No. 3,464,744. Vogt shows a spring-biased stop member requiring a plurality of pieces for its assembly. Ward shows a projecting tongue portion forming a friction stop which is not a positive stop, and is not particularly suitable for heavy laden drawers. Fall shows a spring carrying a button to engage a slot. The button must be raised and moved out of the slot for release of the drawer.

Generally stated the invention herein comprises a drawer slide member, a central slide member and a cabinet-supported slide member with said drawer slide member carrying a plate spring having a medial portion angled in the direction of said central slide member forming a projecting stop abutment to engage a stop member carried by said central slide member for positive engagement therewith, said spring member extending forwardly to have an unobstructed portion thereof readily accessible and yieldable to finger pressure for release of said drawer slide member when said drawer is pulled outwardly of said cabinet.

It is an object of this invention to provide a simply constructed release means for a drawer slide assembly which requires no tools for its operation.

It is another object of this invention to provide a readily accessible release means in a drawer slide assembly operable by finger pressure of the operator.

These and other objects and advantages of the invention will be set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to similar parts throughout the several views and in which

FIG. 1 is a view in perspective showing the structure embodying the invention herein in operating position and with some portions thereof being broken away;

FIG. 2 is a view on an enlarged scale in vertical cross section taken on line 2–2 of FIG. 1 as indicated;

FIG. 3 is a view in rear elevation showing a detail of the construction and portions thereof being shown in dotted line;

FIG. 4 is a view in horizontal section taken on line 4–4 of FIG. 3 as indicated and with portions thereof being broken away;

FIG. 5 is a view in front elevation with portions thereof being broken away and other portions being shown in dotted line; and

FIG. 6 is a broken view on an enlarged scale showing a detail of the invention herein in releasing position.

DESCRIPTION OF A PREFERRED EMBODIMENT

Referring to the drawings, a cabinet **10** is indicated generally by the broken view in FIG. 1 and in connection therewith there is indicated a drawer **15**. Slide assemblies supporting said drawer at either side thereof within said cabinet are indicated by the reference numerals **18** and **20**. Said slide assemblies are of identical structure in opposed operating relation. The slide assembly **20** will be described in detail.

Said slide assembly **20** comprises a fixed channel member **21** which will be secured to the cabinet wall **11** as by spot welding, which channel member is formed to have a central longitudinal web **22** having upper and lower inwardly curved flanges **23** and **24** which are U-shaped in cross section and which form supporting guides or rails. Said member is referred to as the cabinet slide member of the slide assembly.

Slidably disposed within said channel member **21** is a central channel or slide member **28** having a central longitudinal inwardly offset web portion **29** on the order of a wide rib and having upper and lower inwardly curved flange portions **30** and **31** forming U-shaped channels in cross section which serve as supporting guides or rails. Said member **28** slides very easily within said channel member **21** with the flange portions thereof respectively being received within said flange portions **23** and **24**.

Projecting rearwardly from the inner side of said slide member **21** and substantially centrally longitudinally thereof is a stop member **33** formed as a tongue. A stop member **34** is formed as a tongue projects forwardly from adjacent the rear end of the outer side of said central channel member **28** for engagement with said projecting tongue **33** to limit the forward extensible movement of said channel member **28**.

A stop member **36** is formed at the inward side adjacent the forward end of said member **28** and is shown here as a projecting tongue.

Slidably disposed within said central slide member **28** is a slide member **40** suitably secured as by welding to the adjacent wall **16** of said drawer **15** and is referred to as the drawer slide member. Said member **40** comprises a central longitudinal channel **41** having a web **42** forming its outer wall having upper and lower sidewalls **44** and **45** disposed at right angles thereto. Respectively extending upwardly and downwardly of said sidewalls **44** and **45** are vertically disposed flanges **47** and **48** here shown formed of double thickness by reverse folding. Said flanges are respectively disposed within and ride in said channels **30** and **31**.

The members **21**, **28** and **40** and the various portions thereof are formed to be used at either side of said cabinet and drawer.

The particular novelty of the invention herein is present in the structure of the release member **50**. Said release member is carried by said web or wall **42** and although shown substantially centrally longitudinally thereof, it may be otherwise positioned as may be desired.

In connection with said release member **50** are longitudinally spaced slots **51** and **52** formed in said web **42** to retain said release member and are spaced sufficiently apart for longitudinal growth of said release member as will be described. Extending oppositely from the remote sides of said slots **51** and **52** are shallow recesses **54** and **55** offset inwardly of said web.

Comprising said release member **50** as shown in the embodiment herein is an elongated plate steel spring member which is disposed at the inner side of said web **42** and is formed having its body portion displaced longitudinally vertically away from the plane of its base and is shown here having a shallow longitudinally V-angled profile formed of body portions **59** and **60**, the same coming to an apex which defines a vertical projection which as shown here forms a vertical face portion **63** for positive engagement as a stop member with said stop member **36**. Said plate member is of a greater width than the width of said slots **51** and **52**.

At each end of said member **50** are small depending step portions **65** and **66** and angled outwardly therefrom at substantially right angles thereto are projecting end portions or ears **67** and **68**. Said projecting end portions are of a reduced width as to be respectively disposed through the slots **51** and **52** and the depending portions **65** and **66** will rest upon the inner surface of said web **42**. Said projecting portions **67** and **68** will be disposed within the recesses **54** and **55**. With said stop portion **63** in engagement with the stop member **36**, the angled body portion **59** will extend unobstructed forwardly the slide member **28**.

OPERATION

In operation, the slide member **28** is forwardly or outwardly extensible within said slide member **21** to the point of engagement of the stop member **34** with the stop member **33**. The

slide member **40** is further extensible within the slide member **28** to the point of engagement of the release member **50** with the stop member **36**.

At this point the stop portion **63** of the release member **50** extends outwardly of the web **42** sufficiently to fully engage said stop member **36**. The angles at which the portions **59** and **60** are inclined are sufficient so that when the portion **59** is depressed by finger pressure against the web **42** that the stop **63** is moved away from the stop **36** to be clear thereof and to pass thereby.

Thus when the slide **40** is extended, the portion **59** will be readily accessible for finger operation.

By finger pressure alone upon the portion **59** and its corresponding opposite portions, the drawer **15** is easily removed from the cabinet **10**. To be reinserted, the slide **40** is merely inserted into the slide **28** and the member **50** will yield to the stop member **36** in passing by.

It is seen that there has been provided a simply constructed and easily operated release member which forms a positive lock yet yields readily to finger pressure for release.

What I claim is:

1. A drawer slide assembly having in combination;

a cabinet-supported slide member having a central slide member slidable therein and a drawer slide member slidable within said central slide member,

stopping means carried by said central slide member adjacent its outward end portion and facing said drawer slide member,

a releaseable stop member carried by said drawer slide member at the side thereof facing said stopping means and having stopping engagement therewith,

said releaseable stop member comprising

an elongated plate spring member having its body portion displaced longitudinally vertically away from the plane of its base and having a portion thereof defining a vertical projection for engagement with said stopping means,

tongue portions of reduced width extending outwardly of both ends of said plate member,

means carried by said drawer slide member to receive said tongue portions,

said spring plate member being positioned to have a forward portion thereof unobstructed when said drawer is in opened position, and

said unobstructed portion of said spring plate member yielding to finger pressure to move clear of said stopping means.

2. The structure set forth in claim **1**, wherein

said displaced body portion comprises a longitudinally V-angled profile.

3. The structure set forth in claim **1**, wherein

said displaced body portion comprises a longitudinally V-angled profile and said vertical projection comprises a vertically disposed face portion.

4. The structure set forth in claim **1**, wherein

said last mentioned means comprises a pair of longitudinally spaced slots.

5. The structure set forth in claim **1**, wherein

said displaced body portion comprises an apex portion having a configuration to provide a vertical face.