United States Patent

Gutner

[15] **3,658,394**

[45] **Apr. 25, 1972**

[54] DRAWER SLIDE AND GUIDE ASSEMBLY

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[52] **U.S. Cl.** **308/3.6,** 312/348

[51] **Int. Cl.** **F16c 29/00**

[58] **Field of Search** 308/3.6, 3.8; 312/348, 347, 312/346, 345, 342; 74/527

[56] **References Cited**

UNITED STATES PATENTS

3,142,517	7/1964	Ward	308/3.6
3,185,530	5/1965	Reiss, Sr. et al.	308/3.6
3,363,960	1/1968	Reiss et al.	308/3.6
2,548,533	4/1951	Hendricks	312/348
3,365,261	1/1968	Gutner	312/347
3,185,530	5/1965	Reiss, Sr. et al.	308/3.6
3,039,838	6/1962	Koch, Jr. et al.	312/348
3,328,107	6/1967	Gutner	312/347
2,294,749	9/1942	Harbison	312/348

FOREIGN PATENTS OR APPLICATIONS

682,774	7/1937	Germany	312/346

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[57] **ABSTRACT**

A sliding assembly for a dresser drawer which is particularly adapted to make use of a metal slide in combination with a wooden guide, the slide being equipped with detent means while the guide is equipped with spring clip means to provide an overcomeable stop against drawer removal from an associated dresser.

10 Claims, 5 Drawing Figures

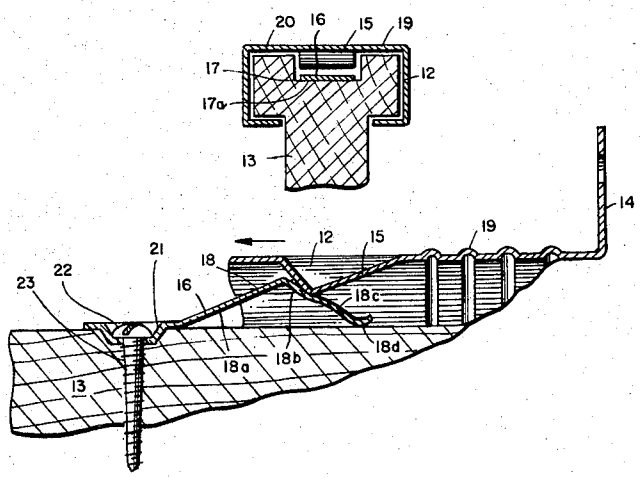


FIG. 1

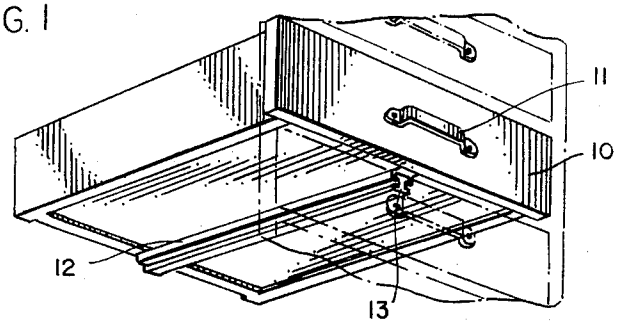
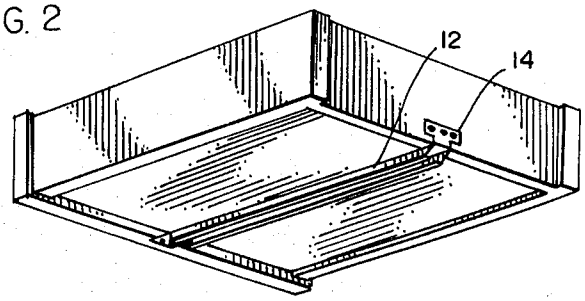


FIG. 2



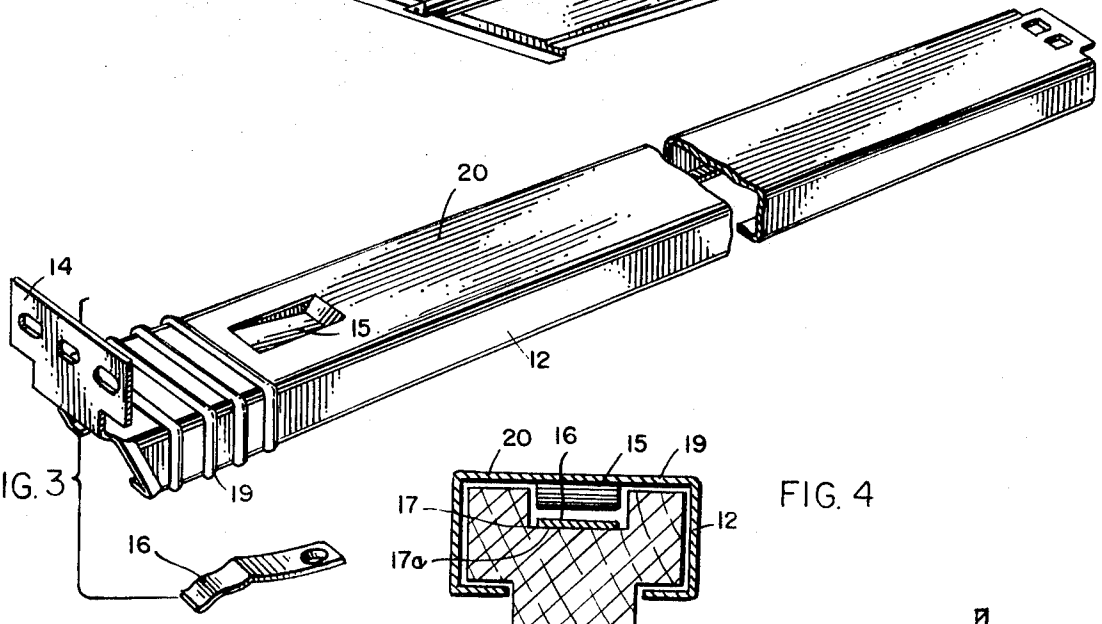


FIG. 3

FIG. 4

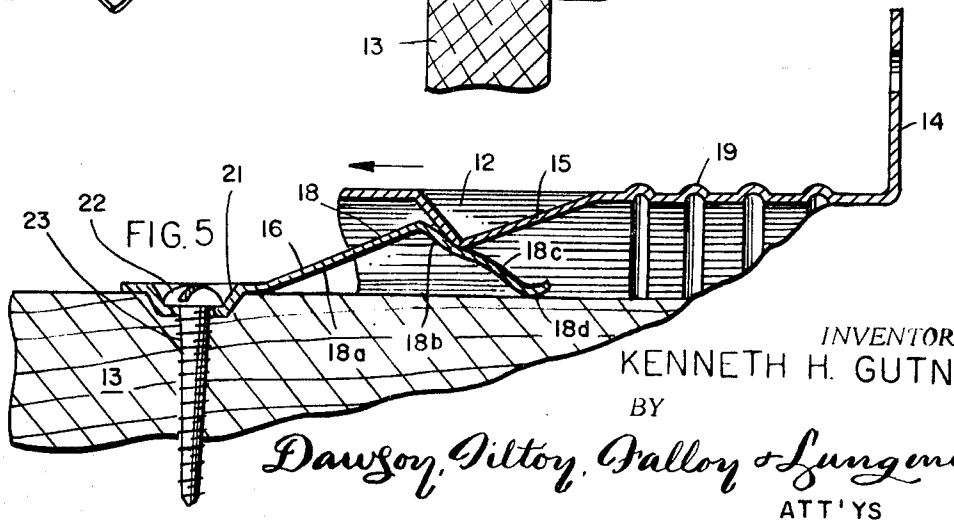


FIG. 5

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DRAWER SLIDE AND GUIDE ASSEMBLY

This invention is an improvement on my prior U.S. Pat. No. 3,365,261.

BACKGROUND AND SUMMARY OF INVENTION

Although quite sophisticated and complicated guide and slide means are provided for dresser drawers, it is desirable to have inexpensive and rugged assemblies available for low cost, durable furniture. Very frequently, the furniture itself will last well beyond the life of the moving parts, and this disadvantage of the prior art is overcome through the practice of the instant invention.

In the instant invention, I provide a uniquely coacting spring clip means on one member and a detent on the other member which make it possible to use wood in combination with metal for the slide-guide assembly, yet at the same time provide a positive stop against inadvertent pulling out of a dresser drawer.

DETAILED DESCRIPTION

The invention is described in conjunction with the accompanying drawing, in which:

FIG. 1 is a fragmentary perspective view, partially in phantom, of a section of a dresser employing the inventive sliding assembly;

FIG. 2 is a perspective view of a dresser drawer of the type seen in FIG. 1, but from the rear so as to further illustrate the character of the slide assembly;

FIG. 3 is a fragmentary perspective view, partially in exploded form, showing the cooperating portions of the drawer stop;

FIG. 4 is an enlarged transverse sectional view of the slide and guide assembly of the invention; and

FIG. 5 is a longitudinal sectional view on an enlarged scale of the parts seen in FIGS. 3 and 4.

In the illustration given, and with particular reference to FIG. 1, the numeral 10 designates a dresser drawer which is equipped with a front handle, as at 11, and a slide element 12 adapted to move on a stationary guide 13 (compare FIG. 4). In FIG. 2, the same drawer is seen, but from the rear, wherein the slide 12 is seen to be equipped with an upturned portion 14 which can be seen in greater detail in my previously mentioned earlier U.S. Pat. No. 3,365,261, and another related U.S. Pat. No. 3,328,107.

The guide member 13 is of generally T shape, while the slide member is generally channel shaped. In the metal channel 12, I provide a detent 15 which projects downwardly from the top wall of the channel. Thus, the detent 15 can be moved into selective engagement with a spring clip member 16 provided on the interior upstanding face of the guide 13. Most advantageously, a slot 17 is provided in the top surface of the guide 13 to accommodate the mounting of the spring clip 16.

The spring clip 16 is seen to have an intermediate raised portion 18 which coacts with the detent 15 in limiting withdrawal of the drawer 10 from its associated cabinet. However, it is possible to overcome the resilient resistance of the spring clip 16 so that the drawer can be completely withdrawn, as by having the detent 15 force the upwardly projecting portion 18 downwardly and pass thereover — as seen in FIG. 5 when the guide 12 is moving to the left as indicated by the arrow.

It will be seen, particularly from a consideration of FIG. 5, that the spring clip member 16 is provided adjacent the forward end of the guide member 13, while the detent 15 is provided adjacent the rear end of the slide member 12. It will also be noted that the detent 15 is provided in the portion of the slide 12 which is bolstered by transverse ribs 19. Thus, the sides of the slide 12 are rigidified against spreading or other distortion which might limit the effectiveness of the detent 15 in engaging the spring clip 16. By this means, I am able to achieve a satisfactory stop through using a relatively minor upset portion on the bight 20 of the slide member 12. It will be appreciated that the creation of a substantial sized detent in

place of that pictured at 15 could materially weaken the slide 12 and interfere with its desired sliding action on the guide 13.

In contrast to the foregoing, the spring clip 16 is of substantial length and size so as to provide an effective temporary stop when initially engaged by the detent 15. The size and shape of the spring clip 16 insures that the interfering action attendant on complete removal of the drawer does not unduly stress the spring clip 16. In particular, the spring clip 16 has a straight V portion, as at 18*a* and 18*b* (see FIG. 5) which projects above the slot bottom wall 17*a* about 0.1 inch. Thereafter the length of the clip 16 is made up of an S shaped portion as at 18*c* and 18*d*. This provides an advantageous combination of a straight stop and a curved bias spring, permitting the detent 15 to normally engage the clip defined by 18*b* and 18*c*, but, upon the application of greater force, to overcome the clip bias and permit the drawer to be removed. The upturned portion 18*d* prevents the clip from biting into the wood when stressed. Merely by locating (or relocating) the detent 15 at different positions along the slide 12, the extent to which the drawer can be initially withdrawn can be changed.

From the foregoing, it will be seen that the drawer can be inserted easily, yet is restricted against withdrawal. This is accomplished by the shape of the clip and the angle of contact, as well as the angle of the detent itself. Both the angle of contact on the clip 16 and the angle provided within the detent 15 are steeper in the direction of drawer extraction than the angle encountered when the drawer is being inserted. The clip is advantageously constructed of spring steel, but, in certain instances, may also equally advantageously be constructed of resilient plastic material. The provision of the steeper angle, as at 18*b*, than that encountered as at 18*a* facilitates insertion while distinctly hindering to a greater extent drawer withdrawal, yet in a fashion that can be readily overcome if consciously desired on the part of a user.

It will be noted that there is a pronounced arch at 18*c*, and, in the operation, the detent 15 (at its lowest point) engages the arched portion 18*c*, tending to deflect the spring clip 16. Optimally, the gauges of metal used in the spring clip 16 and the slide 12 are of the same order (about 0.025 inch). This results in a slight deformation or deflection of the detent 15 (as well as the spring clip 18), should the tolerances in the engaging parts be such as to otherwise make the withdrawal difficult.

In the preferred version of the invention (see FIG. 5), the spring clip 16 is equipped with a countersunk portion 21 which serves a dual purpose. First, it permits a substantial portion of the clip to lie flush with the bottom 17*a* of the slot 17, thereby insuring good resilient action during attempted withdrawal. Secondly, the countersunk portion 21 insures that the head 22 of the wood screw 23 is suitably recessed so as to avoid any possible inadvertent engagement therewith by the detent 15. It will be seen that a realtively elongated woodscrew 23 is employed, and advantageously this length is such as to extend through the entire depth of the guide 13 into the parting rail (not shown) of the dresser. Thus, by a single screw installation, both the spring clip 16 is fixed to the guide 13, and the guide 13 is secured to the basic structure, i.e., the parting rail, of the dresser.

I claim:

1. A sliding assembly for a drawer and the like comprising an elongated moving piece having a generally channel-shaped cross section and an elongated stationary piece having a generally T-shaped cross section on which the moving piece is slidingly mounted, a longitudinally extending slot in said stationary piece, a detent on said moving piece projecting into the channel cross section, and spring clip means in said stationary piece slot for resilient engagement with said detent.

2. The structure of claim 1 in which said detent is adjacent one end of said moving member, and said spring clip means is adjacent the other end of said stationary member whereby the said detent and stationary clip means serve to restrict withdrawal of a drawer from a dresser.

3. The structure of claim 1 in which said spring clip means includes an elongated, generally flat, resilient unitary element secured at one end to said stationary member, said spring clip means having a longitudinally arched portion intermediate the ends thereof.

4. The structure of claim 1 in which said spring clip has an angled projection intermediate the ends and integral and adjacent to said projecting portion an S-shaped portion whereby the portions cooperate to provide a resilient overcomeable stop for said detent.

5. The structure of claim 1 in which said spring clip means is constructed and arranged to have a steeper angle in the direction of drawer extraction than the angle encountered during drawer insertion.

6. The structure of claim 1 in which said moving piece is equipped with transversely extending ribbing adjacent said detent.

7. In a method of operating a drawer, the steps of interengaging slide and guide members, providing a detent on the slide member and a spring clip on the guide member, moving the slide and guide members relative to each other so as to engage the detent with said spring clip, and selectively moving said members further relative to each other to cause said detent to overcome bias in said spring clip.

8. The method of claim 7 in which said detent is located at a predetermined position to fix the extent to which the drawer can be initially withdrawn.

9. The structure of claim 1 in which said spring clip means includes an elongated resilient strip having an end secured to the stationary piece, an unsecured end engageable with the stationary piece, and an intermediate raised portion comprising upwardly converging first and second portions extending, respectively, from the secured end and the unsecured end, the second portion of the intermediate portion being engageable by the detent as the drawer is withdrawn and the first portion of the intermediate portion being engageable by the detent as the drawer is inserted.

10. The structure of claim 9 in which the detent includes forward and rearward downwardly converging portions, the forward portion of the detent being engageable with the second portion of the intermediate portion of the spring clip as the drawer is withdrawn and the rearward portion of the detent being engageable with the first portion of the intermediate portion of the spring clip when the drawer is inserted.

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