Nov. 18, 1958 N. A. GUSSACK 2,860,929

DRAWER SLIDE ASSEMBLY

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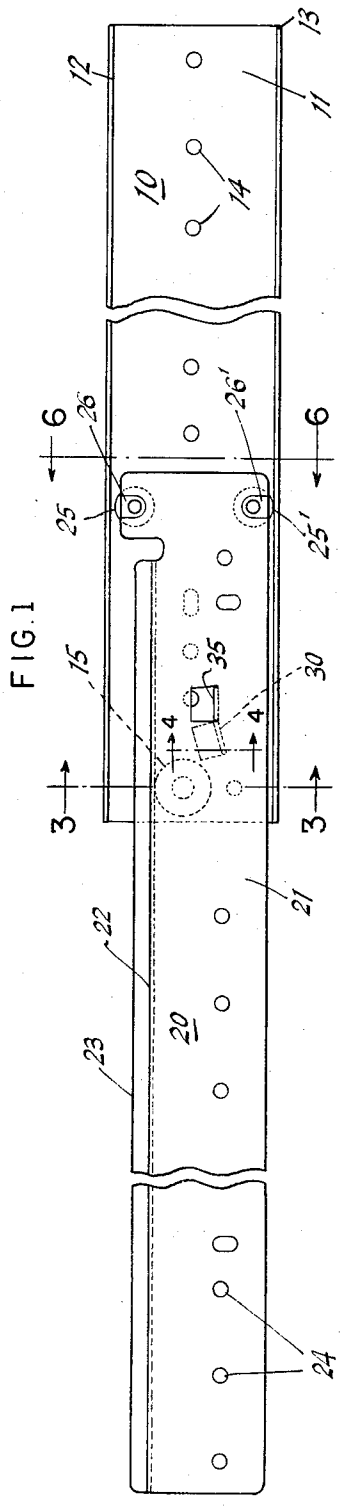


FIG. 1

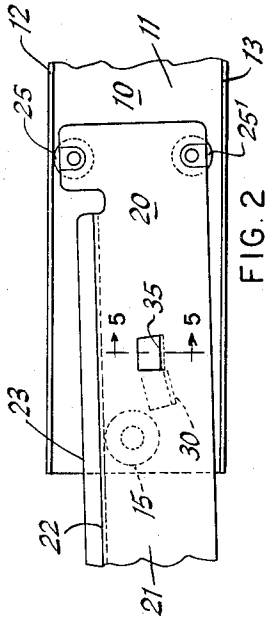


FIG. 2

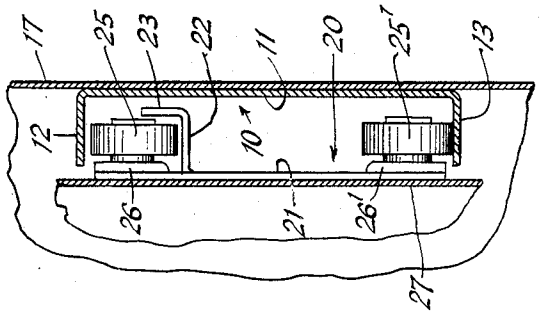


FIG. 6

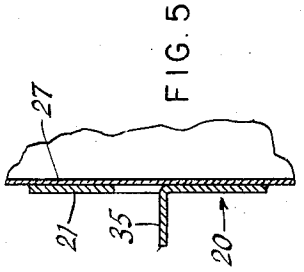


FIG. 5

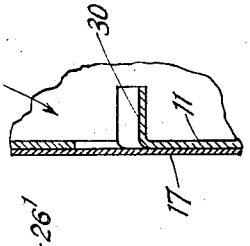


FIG. 4

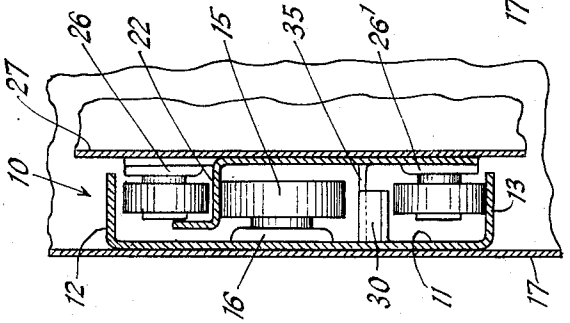


FIG. 3

INVENTOR.
Nathan A. Gussack
BY
Irving Seidman
ATTORNEY

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DRAWER SLIDE ASSEMBLY

Nathan A. Gussack, Manhasset, N. Y.

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3 Claims. (Cl. 308—3.8)

This invention relates to drawer slides and, more particularly, to improved, selectively operable, and simplified stop means for limiting outward movement of a drawer slide relative to its supporting track.

Drawers in cabinets or the like are provided with slides engageable with tracks in the cabinet to permit the drawer to be fully extended without losing its support by the cabinet. In the case of file cabinets and similar cabinets, cooperating rollers or wheels are provided on the slide, the track, or both to facilitate easy movement of the drawer. To prevent inadvertent disengagement of the drawer from its cabinet when the drawer is pulled out, interengageable stop means are provided on the slide and the track.

As such stop means must not only limit outward movement of the drawer but also provide for intentional removal of the drawer from the cabinet and re-insertion of the drawer thereinto, stop means hitherto provided have been relatively complicated and consequently relatively expensive. As the overall cost of the drawer and cabinet assembly is thereby increased, these factors have somewhat limited the general adoption of roller mounted drawers.

In accordance with the present invention, a drawer slide and its supporting track are provided with selectively operable stop means in a novel and simple manner, substantially reducing the cost of the combination while functioning fully as effectively as prior art stop means.

More specifically, a supporting track is provided in the form of a channel, of pressed metal or the like, having a roller rotatably mounted adjacent the outer end of its web. This roller engages an angular flange on the upper edge of an otherwise substantially flat metal slide. At its flat inner end, the slide rotatably supports a pair of rollers engageable with the flanges of the track. The vertical distance between the outer peripheries of these rollers is somewhat less than the distance between the inner surfaces of the track flanges.

In normal operation, when the drawer is extended less than half its length, the drawer is supported by the lower rollers on the slides engaging the lower flanges of the tracks, and by the angular flanges of the slides riding on the track rollers, the upper rollers of the slides being out of contact with the upper flanges of the tracks. As the drawer is extended further, its outer end tips downwardly, the position at which this occurs being determined by the weight and disposition of the contents of the drawer. The upper slide rollers now engage the upper track flanges with the slide flanges riding on the track rollers.

The stop means comprise tongues struck, respectively, inwardly from the web of each track and outwardly from the web of each slide. The tongue on each track lies in a plane extending inwardly and upwardly at an angle. The tongue on each slide is in a plane parallel to the longer edges of the slide and so located that, at the maximum stop-limited extension of the drawer, the slide tongue will abut the track tongue. Thus, when the drawer tilts downwardly, in moving toward full extension, to engage the upper rollers of the slides with the upper flanges of the tracks, the track and slide tongues will abut each other at the limit of outward movement of the drawer, thus preventing inadvertent disengagement of the slides from the tracks.

However, by lifting the outer end of the drawer, the plane of the slide tongues is brought above the inner ends of the track tongues so that the drawer may be purposely withdrawn from the cabinet. In re-inserting the drawer, the slide tongues ride up and over the track tongues and then drop behind them to "lock" the slides to the tracks.

For an understanding of the invention principles, reference is made to the following description of a typical embodiment thereof as illustrated in the accompanying drawing. In the drawing:

Fig. 1 is an inside elevation view of a track and slide assembly embodying the invention, the slide being shown in its horizontal, non-tilted position;

Fig. 2 is a partial elevation view illustrating the relation of the stops with the slide tilted downwardly at its outer end; and

Figs. 3–6 are sectional views on the correspondingly numbered lines of Figs. 1 and 2.

Referring to the drawings, track **10** is a metal channel having a vertical web **11** and inwardly directed flanges **12** and **13**, web **11** having holes **14** for mounting track **10** on the wall **17** of a cabinet or the like. A roller **15** is rotatably mounted on web **11** adjacent the outer end of track **10**, the axis of the roller being somewhat above the horizontal center line of the track and the roller being mounted on a boss **16** projecting inwardly from web **11**, as best seen in Fig. 3.

Slide **20** is a generally flat metal plate having a vertical web **21** and an outwardly projecting flange **22** extending from the slide front end to a point short of its rear end. Flange **22** is angular, with a vertical leg **23** which may be omitted, if desired. Web **21** has mounting holes **24** for securing slide **20** to the side wall **27** of a drawer.

Rollers **25**, **25'** are rotatably mounted in substantial vertical alignment at the inner end of slide **20**, each roller being mounted on an outwardly projecting boss **26**, **26'** struck from web **21**. At this end of slide **20**, web **21** extends above the upper edge of leg **23** of angular-flange **22**. It will be noted that the vertical distance between the outer track-engaging surfaces of rollers **25**, **25'** is somewhat less than the vertical distance between the inner surfaces of flanges **12**, **13**.

In the inner, or non-tilted, position of slide **20**, roller **25** is out of engagement with upper flange **12**, roller **25'** engages lower flange **13**, and slide flange **22** rides on roller **15**. As the drawer is pulled out, the drawer and slide tilt about roller **15**, so that roller **25** engages upper flange **12** and roller **25'** is disengaged from lower flange **13**.

In accordance with the invention, the drawer-movement-limiting stop means comprise a tongue **30** stuck inwardly from web **11** of track **10**, and a tongue **35** stuck outwardly from web **21** of slide **20**. Tongue **30** lies at an angle whereas tongue **35** is parallel to the longer edges of slide **20** and so located that, at the limit of outward movement and tilt of slide **20**, it will abut the inner edge of tongue **30**.

To fully remove the drawer, it is merely necessary to lift the front end and pull the drawer out. As the drawer is thus lifted, roller **25'** engages flange **13** and tongue **35** is at a higher level than the inner-end of tongue **30**, so as to clear tongue **30** as the drawer is drawn out. In re-inserting the drawer, tongue **35** rides up along tongue **30** and then drops behind the latter.

Manufacture of the slide and track is greatly simplified as the stops are formed simply by punching or pressing tongues **30** and **35** out of the webs.

While a specific embodiment of the invention has

been shown and described in detail to illustrate the application of the invention principles, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. A drawer slide assembly comprising, in combination, a track having a substantially upright web; a slide having a substantially upright web in laterally spaced substantially parallel relation to the track web; interengageable supporting means on said track and slide providing for relative longitudinal movement thereof; a first tongue extending laterally from the track web toward the slide web adjacent the outer end of the track and lying in a plane sloping downwardly and outwardly; a second tongue extending laterally from the slide web toward the track web adjacent the inner end of the slide and lying in a substantially horizontal plane; said tongues being relatively positioned for interengagement upon outward movement of said slide relative to said track and movable out of engagement, for extraction of the slide from the track, by tilting of the partly extended slide relative to the track; said second tongue, upon reinsertion of the slide into the track, sliding up the upper surface of said first tongue and dropping behind the latter; said track being a channel, and said supporting means comprising a pair of vertically spaced elements on the slide web at the inner end of the slide engageable with the track flanges; and an element on the track web at the outer end of the track engageable with an elongated horizontal flange on the slide web.

2. A drawer slide assembly as claimed in claim 1 in which the distance between the flange engaging surfaces of said vertically spaced elements is substantially the distance between the inner surfaces of the track flanges; and, when the slide is partly extended, it may be tilted about the third mentioned element.

3. A drawer slide assembly as claimed in claim 2 in which said elements are rollers rotatably mounted on the facing sides of the associated webs.

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