Nov. 11, 1969 H. W. NIEMI 3,477,770

DRAWER GUIDE

Filed May 19, 1967

FIG. 1

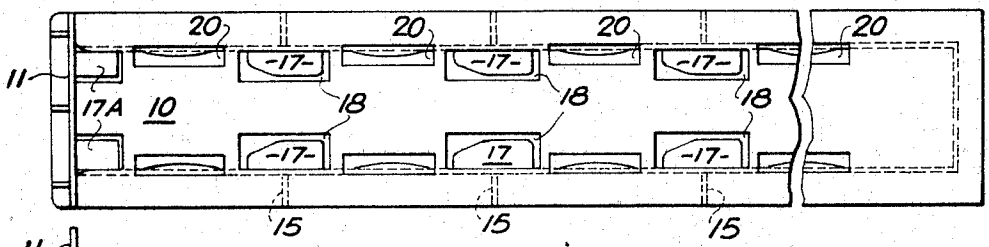


FIG. 2

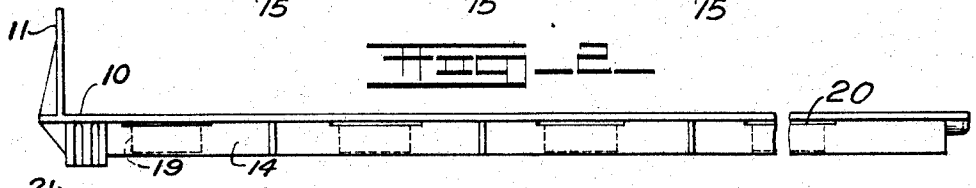


FIG. 3

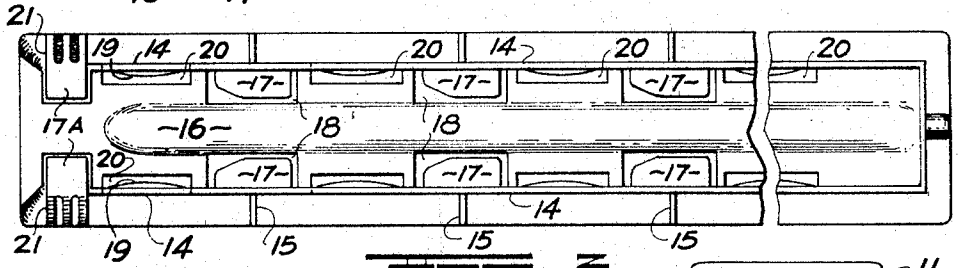


FIG. 4

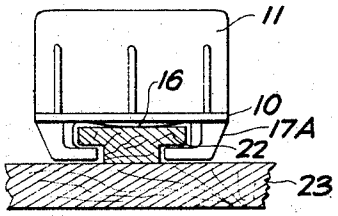


FIG. 5

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DRAWER GUIDE

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ABSTRACT OF THE DISCLOSURE

A drawer guide for attachment to the bottom of a drawer for cooperation with a track mounted on a furniture frame, the drawer guide comprising an elongated body member having integrally formed substantially perpendicular transversely spaced flanges depending therefrom, with a plurality of longitudinally spaced inturned guiding fingers on said flanges with intermediate portions of said flanges rounded inwardly in oppositely disposed configurations partially separated from said flanges so as to yieldingly engage the sides of a track on which the drawer guide is slidably engaged.

The present invention relates to drawer guides, and more particularly a self-lubricating drawer guide attachable to the bottom of a drawer for cooperation with a track mounted on a furniture frame.

It is well known that purchasers and users of furniture having drawers such as chests, desks, cabinets and the like, prefer furniture in which well-fitting drawers slide easily and positively within their apertures. The production of drawers which meet these requirements presents a difficult problem to cabinet makers and furniture manufacturers, and in the past drawer guiding systems have been devised which provide means on the drawer engageable with means in the furniture frame for attempting satisfactory guiding and sliding operation of the drawer. The devices of the prior art work well under conditions wherein the track on which the devices are engaged is held to close tolerances in manufacture and installation, but fail where the track is not held to close tolerances or the drawer itself is not accurately dimensioned with respect to the opening in the furniture cabinet, etc.

The principal object of the invention is therefore, the provision of a drawer guide that can be inexpensively fabricated and installed with a minimum of time and effort on a drawer so that the drawer upon being installed in a furniture frame with the drawer guide engaged on a track in the frame, will suitably guide and hold the drawer despite irregularities in the size or position or shape of the track.

A further object of the invention is the provision of a drawer guide that guides the drawer associated therewith for the entire length thereof.

A still further object of the invention is the provision of a drawer guide that restrains the drawer associated therewith from tipping as the drawer is withdrawn past its center of gravity.

A still further object of the invention is the provision of a drawer guide that may be molded by an injection molding process of a suitable self-lubricating plastic material possessing a degree of resiliency so that the drawer guide yieldingly but firmly engages the track in the furniture frame at all times and thus contributes to the satisfactory mounting and operation of the drawer in the furniture.

A still further object of the invention is the provision of a drawer guide including longitudinally extending means for continuously engaging a track in a furniture frame and a plurality of longitudinally spaced spring sections for continuously and yieldingly engaging the opposite sides of a track in a furniture frame, so that the drawer having

the drawer guide thereon is constantly held in desired relation in the furniture frame.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being the intention to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

The invention is illustrated in the accompanying drawing, wherein:

FIGURE 1 is a top plan view of the drawer guide with parts broken away.

FIGURE 2 is a side elevation of the drawer guide with parts broken away.

FIGURE 3 is a bottom elevation of the drawer guide with parts broken away.

FIGURE 4 is an end elevation of the drawer guide showing the same on a track in a furniture frame.

FIGURE 5 is a perspective view showing the drawer guide with broken lines showing the back and bottom portions of a drawer on which the guide is installed.

By referring to the drawings, and FIGURE 5 in particular, it will be seen that a broken line representation of a portion of a bottom **10** of a drawer and the back **11** thereof have been illustrated, and that the drawer guide is shown in position on the same. The drawer guide comprises a longitudinally extending flat body member **12** having an upstanding end portion **13**. The opposite or right end of the drawer guide as seen in FIGURE 5 is positioned adjacent the front of the drawer (not shown), and the drawer guide is affixed to the bottom **10** and the back **11** of the drawer as by stapling the same thereto, or by suitable fastening means, as will occur to those skilled in the art.

The drawer guide body member **10** has a pair of integrally molded substantially perpendicular transversely spaced flanges **14** on its lower surface in depending relation thereto, and extending throughout its length. A plurality of integrally molded braces **15** are positioned along the outer sides of the flanges **14** and serve to hold the flanges **14** in perpendicular relation to the body member **10**. The body member **10** between the flanges **14** is provided with a longitudinally extending transversely arcuate raised section **16**, as best seen in FIGURES 3 and 4 of the drawings, and each of the flanges **14** have a plurality of longitudinally spaced inturned fingers **17**. The area of the body member **10** immediately above each of the inturned fingers **17** is cut away as at **18**, which is necessary to permit the mold parts to be separated when the article is molded. Each of the flanges **14** is also provided with a plurality of longitudinally spaced inwardly bowed sections **19**, which are positioned intermediate the inturned fingers **17**, and the portions of the body member **10** immediately above each of the inwardly bowed sections **19** of the flanges **14** are cut away, as at **20**. The cut away areas **20** permit the molds to be separated when the article is molded, but more importantly, they separate the upper portions of the flanges **14** from the body member **10**, so that the portions of the flanges **14** having the inwardly bowed sections **19** thereon may move relative to the body member **10** in a spring-like manner.

By referring again to FIGURE 5 of the drawings, it will be seen that the inturned fingers **17** at the extreme left end of the drawer guide are of heavier configuration than the remainder of the fingers **17**, and that these heavier fingers **17** are indicated by the numerals **17–A**. These heavier fingers are integrally formed with buttresses **21** which join the flanges **14** as well as the body member **10** of the drawer guide, and these heavier fingers **17–A** being located adjacent the back **11** of the drawer when the

drawer guide is installed, provide a positive means of preventing the drawer from tipping when it is extended out of the furniture frame in which it is normally installed. The fingers **17** and **17–A** engaged a T-shaped track **22** as best seen in FIGURE 4 of the drawings, which is secured to a frame member **23** of the furniture frame.

The track **22** is usually formed of wood and is generally nailed or otherwise affixed to the frame **23**, and provides oppositely disposed outturned flanges by reason of its T-formation which are particularly suitable for engagement by the fingers **17** and **17–A** of the drawer guide, as hereinbefore described.

Those skilled in the art will observe that the drawer guide construction is such that it can also register with a track comprising a cross sectionally rectangular member having longitudinally extending channels in its opposite sides, as is sometimes alternately used in furniture construction. In either situation the drawer guide disclosed herein operates effectively for its intended purpose in accordance with the objects of this invention, primarily by reason of its snug fit against the tract **22** under all conditions including variance of size of the track **22** itself, as frequently occurs.

The self-conforming characteristics of the drawer guide disclosed herein occur by reason of the longitudinally extending transversely arcuate raised section **16** which always engages the upper portion of the track **22**, as best seen in FIGURE 4 of the drawings, and more importantly, by reason of the inwardly bowed sections **19** of the spaced flanges **14**, which sections **19** are themselves free of the remainder of the drawer guide by reason of the cut away area **20** hereinbefore described. Thus these inwardly bowed sections **19** act as spring tensioning members, always engaging the sides of the track **22** regardless of the actual size, shape or variations thereof, as will occur in furniture constructions. It has been determined that when the inwardly bowed sections **19** first engage a track **22** in a furniture construction, the sections **19** move by reason of the flexibility of the flanges **14** to a position suitable for the particular track engaged, and that thereafter they retain this position so that the drawer always slides in a smooth, even, sliding motion having all of the desired characteristics of fine furniture construction.

It will thus be seen that the principal point of novelty in the present disclosure is the provision of the drawer guide with the means providing constant tension engagement with the track in the furniture frame, and that these means comprise the longitudinally extending transversely arcuate raised bottom portion **16** of the member **10** of the drawer guide, and the longitudinally spaced partially separate sections of the depending flanges **14** which carry the inwardly bowed sections **19** integrally therewith.

The drawer guide itself being formed of resilient plastic material, possesses the necessary inherent resilience making these parts workable in the manner described in connection with the continuous sliding engagement with the track in the furniture frame, and the drawer guide thus disclosed meets the several objects of the invention. Having thus described my invention, what I claim is:

1. A drawer guide for attachment to a drawer and engagement with a track member in a furniture frame, said drawer guide comprising a self-lubricating molded plate-like plastic member having two integrally molded substantially perpendicular transversely spaced flanges depending therefrom, a plurality of longitudinally spaced inturned fingers on said flanges and a plurality of inwardly bowed sections on said flanges in longitudinally and alternately spaced relation to said fingers, with portions of the flanges above the inwardlly bowed sections being separated by a slot from the plastic plate-like member to permit the same to move relative thereto when engaged on said track.

2. The drawer guide set forth in claim **1** and wherein said plastic plate-like member is provided with an integrally molded longitudinally and medially extending transversely arcuate depending configuration, the lower surface of which slidably engages said track when said drawer guide is positioned thereon.

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U.S. Cl. X.R.

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