



(21) 申请号 202320796620.5

(22) 申请日 2023.04.12

(73) 专利权人 张家港鸿盛电子科技股份有限公司

地址 215600 江苏省苏州市张家港市塘桥镇鹿苑巨桥村

(72) 发明人 包丽艳 成钢 刘海宁

(74) 专利代理机构 安徽研质知识产权代理有限公司 34229

专利代理师 贾宇锋

(51) Int.Cl.

A47B 88/40 (2017.01)

A47B 88/90 (2017.01)

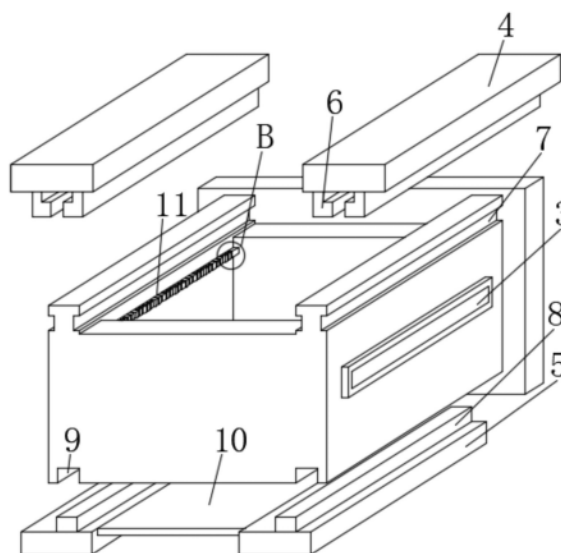
权利要求书1页 说明书3页 附图4页

(54) 实用新型名称

一种平直度高的抽屉

(57) 摘要

本实用新型涉及一种平直度高的抽屉,包括抽屉和柜体,抽屉相反两侧外壁和柜体内槽相对位置均设有滑轨组件,且滑轨组件适配滑动,柜体靠近抽屉上下内槽分别固定连接有两个上平直板和两个下平直板,抽屉滑动设于上平直板和下平直板之间,上平直板底部固定连接有上滑条,抽屉相对上滑条的侧壁位置开设有上滑槽,上滑条与上滑槽适配滑动,本实用新型通过抽屉上方设置限位结构,使得抽屉在长期盛放物品后,侧板被限位,防止滑轨侧的侧板不会出现平直度倾斜的情况出现,进而保证抽屉平直,保证抽屉的滑轨保持平直状态,进而保证抽屉的抽拉推入稳定顺畅。



1. 一种平直度高的抽屉,包括抽屉和柜体,所述抽屉相反两侧外壁和柜体内槽相对位置均设有滑轨组件,且滑轨组件适配滑动,其特征在于:所述柜体靠近抽屉上下内槽分别固定连接有两个上平直板和两个下平直板,所述抽屉滑动设于上平直板和下平直板之间,所述上平直板底部固定连接有上滑条,所述抽屉相对上滑条的侧壁位置开设有上滑槽,所述上滑条与上滑槽适配滑动。

2. 如权利要求1所述的一种平直度高的抽屉,其特征在于:所述下平直板顶部固定连接有一下滑条,所述抽屉底部靠近下滑条的位置开设有一下滑槽,所述下滑条与下滑槽适配滑动。

3. 如权利要求1所述的一种平直度高的抽屉,其特征在于:两个所述下平直板之间固定连接有一辅助支撑板,所述辅助支撑板与抽屉底部活动贴合。

4. 如权利要求1所述的一种平直度高的抽屉,其特征在于:所述抽屉内槽相对两侧内壁固定连接有一安装条,两个所述安装条相对一侧均均匀开设有若干安装槽口。

5. 如权利要求4所述的一种平直度高的抽屉,其特征在于:所述安装槽口适配插接连接有隔板,所述隔板的高度低于抽屉的内槽高度。

6. 如权利要求1所述的一种平直度高的抽屉,其特征在于:所述抽屉靠外一侧设有装饰板,且装饰板外侧设有把手。

一种平直度高的抽屉

【技术领域】

[0001] 本实用新型涉及抽屉技术领域,具体是一种平直度高的抽屉。

【背景技术】

[0002] 抽屉是指桌子、柜子等家具中存放物品用的可抽动匣子,有底无盖,可以自由推拉,用于盛放物品,是生活中常见的家具部件。

[0003] 经检索专利公开号为:CN203555383U的“一种抽屉”,其中包括侧板、底板、支承轨以及用于开闭抽屉的滑轨组件,支承轨由金属一体成型或至少由二件金属型材分体设置后固为一体,支承轨的上部一侧向下折弯、且于其上设置有连接前面板的前连接件、连接后背板的后连接件;侧板设置于支承轨上部、且置于前连接件与后连接件之间;前连接件和或后连接件上设置有装饰盖;底板设置于支承轨上;前面板或连接座与前连接件和支承轨相互抵靠。本实用新型通过上述结构的改良,使侧板、前面板、后面板以及底板的选材不受抽屉装配构件的影响,可以根据用户的需求量身订做,使本结构的抽屉市场竞争力更强,更适合消费者使用,美观且实用;抽屉通过滑轨结构进行抽出推入,因为抽屉长时间盛放物品,加上家具抽屉一般为木质,因此长时间的载重,会造成抽屉下垂,使得两侧的侧板出现倾斜,进而使得滑轨出现倾斜平直度下降,之后在抽屉抽拉使用时,滑轨因为倾斜平直度降低,因此滑轨的滑动会出现不顺畅的情况出现,影响抽屉的使用顺畅和体验感。

【实用新型内容】

[0004] 为解决上述问题,本实用新型的目的在于提供一种的一种平直度高的抽屉。

[0005] 为实现上述目的,本实用新型采取的技术方案为:一种平直度高的抽屉,包括抽屉和柜体,所述抽屉相反两侧外壁和柜体内槽相对位置均设有滑轨组件,且滑轨组件适配滑动,所述柜体靠近抽屉上下内槽分别固定连接有两个上平直板和两个下平直板,所述抽屉滑动设于上平直板和下平直板之间,所述上平直板底部固定连接上有滑条,所述抽屉相对上滑条的侧壁位置开设有上滑槽,所述上滑条与上滑槽适配滑动。

[0006] 本实用新型中的平直度高的抽屉进一步设置为:所述下平直板顶部固定连接有下滑条,所述抽屉底部靠近下滑条的位置开设有下滑槽,所述下滑条与下滑槽适配滑动。

[0007] 本实用新型中的平直度高的抽屉进一步设置为:两个所述下平直板之间固定连接有助支撑板,所述辅助支撑板与抽屉底部活动贴合。

[0008] 本实用新型中的平直度高的抽屉进一步设置为:所述抽屉内槽相对两侧内壁固定连接安装有安装条,两个所述安装条相对一侧均均匀开设有若干安装槽口。

[0009] 本实用新型中的平直度高的抽屉进一步设置为:所述安装槽口适配插接连接有隔板,所述隔板的高度低于抽屉的内槽高度。

[0010] 本实用新型中的平直度高的抽屉进一步设置为:所述抽屉靠外一侧设有装饰板,且装饰板外侧设有把手。

[0011] 与现有技术相比,本实用新型具有如下有益效果:上述的一种平直度高的抽屉上

方设置限位结构,使得抽屉在长期盛放物品后,侧板被限位,防止滑轨侧的侧板不会出现平直度倾斜的情况出现,进而保证抽屉平直,保证抽屉的滑轨保持平直状态,进而保证抽屉的抽拉推入稳定顺畅;在抽屉上方限位拉住侧板的结构,保证抽屉的平直度,同时在下方设置辅助的底部限位结构,进一步提升抽屉的平直度限位效果,保证抽屉的平直度,进而顺畅使用抽屉。

【附图说明】

[0012] 图1为本实用新型中抽屉结构的立体示意图;

[0013] 图2为本实用新型中抽屉安装的结构剖视示意图;

[0014] 图3为本实用新型中图2的A处放大结构示意图;

[0015] 图4为本实用新型中图1的B处放大结构示意图。

[0016] 图中:1、抽屉;2、柜体;3、滑轨组件;4、上平直板;5、下平直板;6、上滑条;7、上滑槽;8、下滑条;9、下滑槽;10、辅助支撑板;11、安装条;12、安装槽口;13、隔板。

【具体实施方式】

[0017] 下面通过具体实施例对本实用新型所述的一种平直度高的抽屉作进一步的详细描述。

[0018] 实施例一

[0019] 请参阅图1~4:一种平直度高的抽屉,包括抽屉1和柜体2,抽屉1相反两侧外壁和柜体2内槽相对位置均设有滑轨组件3,且滑轨组件3适配滑动,柜体2靠近抽屉1上下内槽分别固定连接有两个上平直板4和两个下平直板5,抽屉1滑动设于上平直板4和下平直板5之间,上平直板4底部固定连接上有滑条6,抽屉1相对上滑条6的侧壁位置开设有上滑槽7,上滑条6与上滑槽7适配滑动,通过上方的上平直板4的结构限位,进而防止抽屉1滑轨侧板倾斜,保证滑轨组件3的平直度更高,提升抽屉1使用的流畅和稳定。

[0020] 下平直板5顶部固定连接有下滑条8,抽屉1底部靠近下滑条8的位置开设下滑槽9,下滑条8与下滑槽9适配滑动,下滑条8与下滑槽9在抽屉1下方进行进一步的限位和辅助滑动,进而提升抽屉1平直度限位的效果,两个下平直板5之间固定连接有帮助支撑板10,辅助支撑板10与抽屉1底部活动贴合,通过辅助支撑板10在抽屉1下方托起,进而减少抽屉底部出现变形,上滑槽7和下滑槽9内槽壁均涂有润滑胶体,抽屉1靠外一侧设有装饰板,且装饰板外侧设有把手,通过在滑动的槽体内添加润滑材料,进而保证抽屉1抽出推入的顺畅。

[0021] 实施例二

[0022] 如图1和图4所示,在实施例1的基础上做了进一步改进:

[0023] 为了提升抽屉1内部空间的利用率,通过抽屉1内槽相对两侧内壁固定连接有安装条11,两个安装条11相对一侧均均匀开设有若干安装槽口12,且安装条11通过安装槽口12适配插接连接有隔板13,隔板13的高度低于抽屉1的内槽高度,通过插拔安装多个隔板13,可以将抽屉1的空间分隔,进而使得存放的东西更加的整齐规律,提升抽屉1的空间利用率。

[0024] 本实用新型的工作原理是:使用时,抽屉1通过滑轨组件3相互咬合,利用内部的滑轨滚轮在滑道内滚动,实现抽屉1的移动,然后通过抽屉1外侧的把手,实现将抽屉1抽出和推入,在此过程中,抽屉1上方通过上平直板4的上滑条6在上滑槽7内滑动,下方的下平直

板5的下滑条8在下滑槽9内滑动,提升抽屉1滑动过程中的平直度,长时间使用过程中,抽屉1通过上平直板4结构的限位,防止抽屉1的滑轨侧板出现倾斜,保证平直度,同时下方的下平直板5结构和辅助支撑板10在抽屉1底部进一步提升平直限位效果,使得抽屉1和柜体2的安装平直度更高,为了方便抽屉1使用存放整齐,通过安装条11上的安装槽口12,插入多个隔板13,可将抽屉1分隔呈多个区域,方便整齐存放物品,提升抽屉1存放的整齐,减少因为乱放出现的存放容积利用率低的问题,提升存放容积利用率。

[0025] 上述的实施例仅例示性说明本发明创造的原理及其功效,以及部分运用的实施例,而非用于限制本实用新型;应当指出,对于本领域的普通技术人员来说,在不脱离本实用新型创造构思的前提下,还可以做出若干变形和改进,这些都属于本实用新型的保护范围。

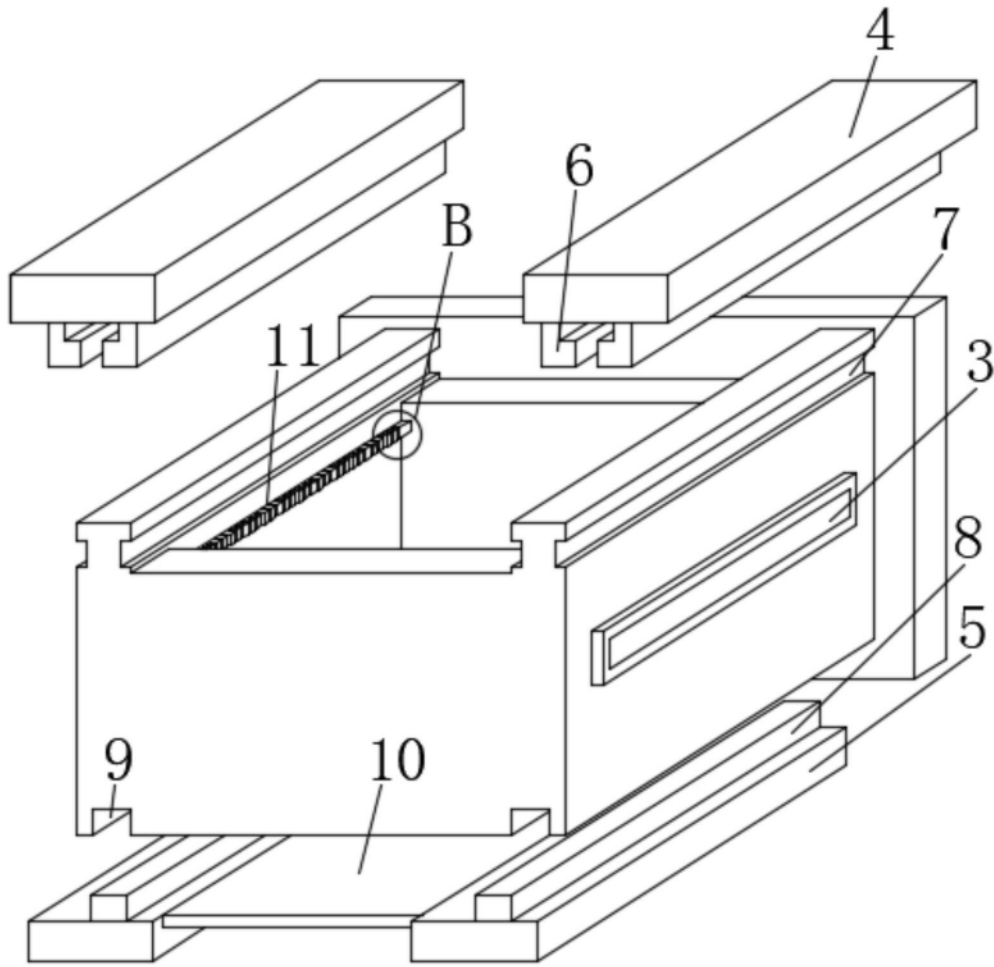


图1

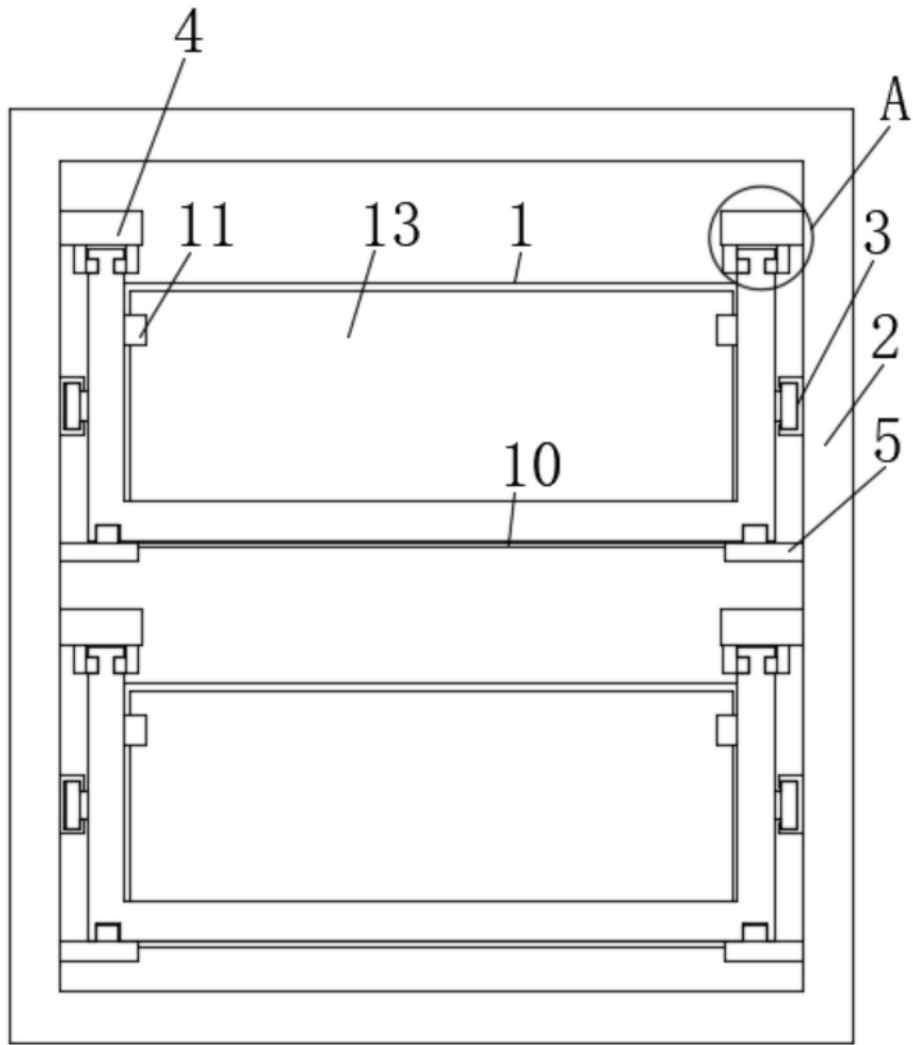


图2

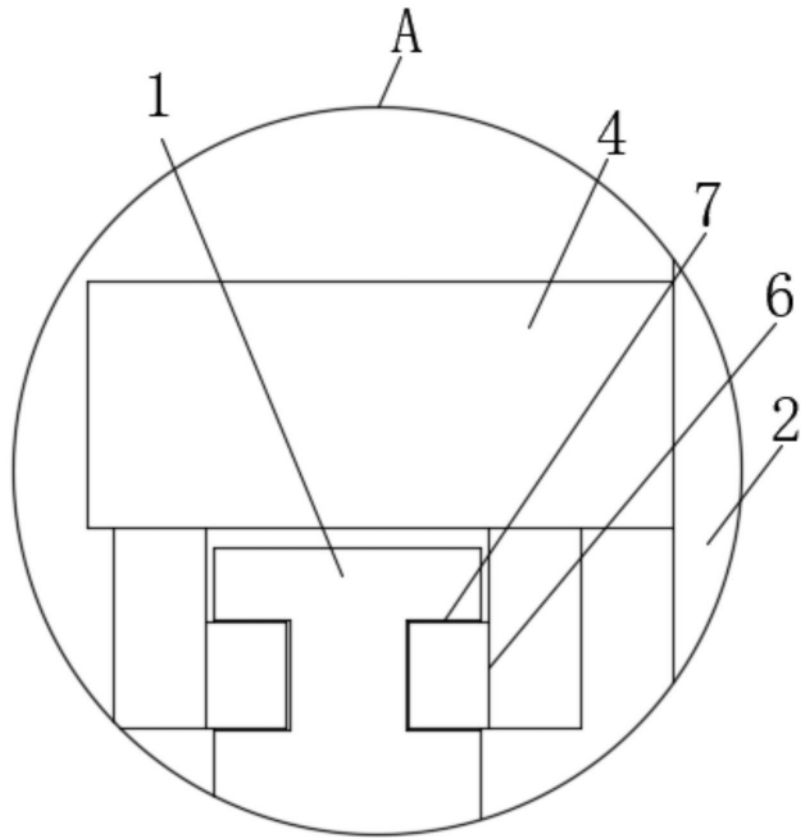


图3

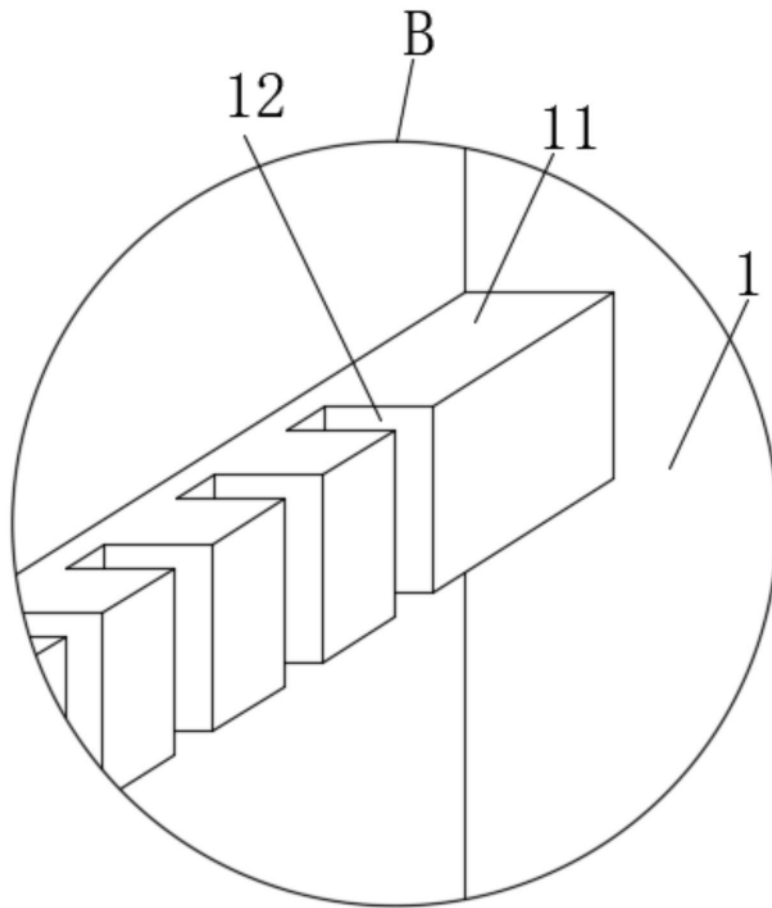


图4

Certification of Translation Accuracy

Translation of **Invention Patents - CN219594089U** from **Chinese (Simplified)** to **English**

As an authorized representative of RushTranslate, a professional translation services agency, I hereby certify that the above-mentioned document has been translated by an experienced, qualified and competent professional translator, fluent in the above-mentioned language pair and that, in my best judgment, the translated text truly reflects the content, meaning, and style of the original text and constitutes in every respect a complete and accurate translation of the original document. This document has not been translated for a family member, friend, or business associate.

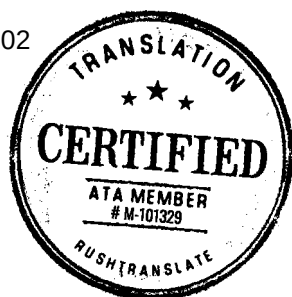
This is to certify the correctness of the translation only. I do not make any claims or guarantees about the authenticity or content of the original document. Further, RushTranslate assumes no liability for the way in which the translation is used by the customer or any third party, including end-users of the translation.

A copy of the translation is attached to this certification.



Mike Bortscheller
Authorized Representative
Order Date: June 19, 2026

RushTranslate
640 South Fourth Street
Suite 300
Louisville, KY 40202
United States



(19) China National Intellectual Property Administration

[QR Code]



(12) Invention Patent Application

(10) Authorized Patent No.: CN219594089 U

(45) Date of Authorization: 08/29/2023

(21) Application No.: 202320796620.5

(22) Application Date: 04/12/2023

(71) Patentee: Zhangjiagang Hongsheng Technology Co., Ltd.

Address: Luyuan Juqiao Village, Tangqiao Town, Zhangjiagang City, Suzhou,
Jiangsu Province, 215600

(72) Inventors: Liyan Bao, Gang Cheng, Haining Liu

(74) Patent Agency: Anhui Yanzhi Intellectual Property Agency Co., Ltd

Company 34229

Patent Agent: Yufeng Jia

(51) Int. Cl.

A47B 88/40 (2017 .01)

A47B 88/90 (2017 .01)

Claims Description 1 Page
Instruction Manuals 3 Pages
Attached Drawings 4 Pages

(54) Title of the Invention

A drawer with a high level of flatness

(57) Summary

This utility model relates to a drawer with a high level of flatness, comprising a drawer and a cabinet body. Slide rail assemblies are provided at opposite positions on the opposite outer walls of the drawer and the inner groove inside the cabinet, and the slide rail assemblies fit to slide. Two upper flat plates and two lower flat plates are fixedly connected to the upper and lower drawer slots near the cabinet body. The drawer slides between the upper and lower flat plates. The bottom of the upper flat plate is fixedly connected to an upper slide bar. The side wall of the drawer opposite the upper slide bar is provided with an upper sliding groove, which fits to the upper slide slot to slide. This utility model sets a limiting structure above the drawer so that the side panels of the drawer are limited after long-term storage, preventing the side panels on the slide rail side from tilting in flatness, thereby ensuring the drawer remains flat, keeping the slide rails straight, and ensuring stable and smooth pulling and pushing of the drawer.

[Scheme]

CN 219594089 U



1. A drawer with high flatness, comprising a drawer and a cabinet body. Slide rail assemblies are provided at opposite positions on the opposite outer walls of the drawer and the inner groove inside the cabinet, and the slide rail assemblies fit to slide. The characteristic is: near the upper and lower inner grooves of the cabinet body, two upper flat plates and two lower flat plates are fixedly connected, respectively. The drawer slides between the upper flat plates and the lower flat plates. The bottom of the upper flat plate is fixedly connected to an upper slide bar, and an upper slide groove is provided at the side wall position of the drawer relative to the upper slide bar. The upper slide bar and the upper slide groove fit to slide.
2. The drawer with high flatness according to claim 1, characterized in that: a slide strip is fixedly connected to the top of the lower flat plate, and a slide groove is provided at the bottom of the drawer near the slide strip, which fits with the lower slide groove to slide.
3. The drawer with high flatness according to claim 1, characterized in that: An auxiliary support plate is fixedly connected between the two lower flat plates, which fits movably against the bottom of the drawer.
4. The drawer with high flatness according to claim 1, characterized in that: mounting strips are fixedly connected to the inner walls of the inner grooves on both sides of the drawer, and several mounting slots are evenly set on each side of the two mounting strips.
5. The drawer with high flatness according to claim 4, characterized in that: the mounting slot of fit, plug and connect with a partition, and the height of the partition is lower than the height of the inner slot of the drawer.
6. The drawer with high flatness according to claim 1, characterized in that: the outer side of the drawer is provided with a decorative plate, and the outer side of the decorative plate is equipped with a handle.

-2-

A Drawer with a High Level of Flatness

[Technical Field]

[0001] This utility model relates to the technical field of drawers, specifically to a drawer with high flatness.

[Background Technology]

[0002] A drawer refers to a retractable box used to store items in furniture such as tables and cabinets. It has a bottom but no lid, can be freely pushed and pulled, and is used to hold items. It is a common furniture component in daily life.

[0003] Upon searching, the patent publication number is: CN203555383U "A kind of drawer", including side panels, base plates, support rails, and slide rail assemblies for opening and closing drawers. The support rails are either integral molding from metal or are fixed as one unit by at least two metal profiles set separately. The upper side of the support rail is bent downward, and a front connector connecting to the front panel and a rear connecting part to the rear back panel are provided on it; The side plate is arranged on the upper part of the support rail and is positioned between the front and rear connectors; Decorative covers are installed on the front and rear connectors; The base plate is installed on the support rail; The front panel or connecting seat abuts against the front connector and support rail. Through the above structural improvements, this utility model ensures that the selection of materials for the side panels, front panel, rear panel, and bottom panel is not affected by drawer assembly components. It can be customized according to user needs, making drawers with this structure more competitive in the market, more suitable for consumers, attractive and practical; Drawers are pulled and pushed in through a slide rail structure. Because drawers hold items for long periods and furniture drawers are usually made of wood, prolonged heavy loads can lead to drawers sagging, causing the side panels to tilt and reduce the slide's flatness. Afterward, when pulling out the drawer, the slide rail becomes less smooth to slide because of its reduced tilt flatness, affecting both the drawer's smooth operation and user experience.

[Summary of the Utility Model]

[0004] To solve the above problems, the purpose of this utility model is to provide a drawer with a high degree of flatness.

[0005] To achieve the above purpose, the technical solution adopted by this utility model: a drawer with high flatness, comprising a drawer and a cabinet body. Slide rail assemblies are provided at opposite positions on the opposite outer walls of the drawer and the inner groove of the cabinet, and the slide rail assemblies are fitted to slide. Two upper flat plates and two lower flat plates are fixedly connected to the upper and lower slots near the inner groove of the cabinet body. The drawer slides between the upper flat plate and the lower flat plate, and an upper slide bar is fixedly connected to the bottom of the upper flat plate. An upper slide groove is provided at the side wall position of the drawer relative to the upper slide bar, and the upper slide bar fits the upper slide groove to slide.

[0006] The drawer with high flatness in this utility model is further configured as follows: a sliding strip is fixedly connected to the top of the lower flat plate, and a sliding groove is provided at the bottom of the drawer near the sliding strip, which fits the sliding groove to slide.

[0007] The drawer with high flatness in this utility model is further configured as follows: an auxiliary support plate is fixedly connected between the two lower flat plates, which fits movably against the bottom of the drawer.

[0008] The drawer with high flatness in this utility model is further configured as follows: mounting strips are fixedly connected to the inner walls of the drawer inner grooves on both sides, and several mounting slots are evenly set on the opposite side of the two mounting strips.

[0009] The high-flatness drawer in this utility model is further configured as follows: the mounting slot fits, plugs and connects with a partition, of which the height is lower than the inner slot height of the drawer.

[0010] The drawer with high flatness in this utility model is further configured as follows: the outer side of the drawer is equipped with a decorative plate, and the outer side of the decorative plate is equipped with a handle.

[0011] Compared with prior art, this utility model has the following beneficial effects: a limit structure is set on the aforementioned high-flatness drawer,

enabling that after long-term storage of items, the side panels of the drawer are limited, preventing the side panels on the slide rail from becoming tilted, thereby ensuring the drawer remains flat, keeping the slide rails flat, and ensuring its stable and smooth pulling and pushing; The upper limit structure of the drawer is positioned to hold the side panel structure to ensure the drawer flatness, while auxiliary bottom limiting structures are set below to further enhance the drawer's flatness and limiting effect, ensuring drawer flatness and smooth use.

[Description of the Drawings]

[0012] Figure 1 is a perspective schematic diagram of the drawer structure in this utility model;
[0013] Figure 2 is a sectional schematic diagram of the drawer mounting in this utility model;
[0014] Figure 3 is an enlarged schematic diagram of point A in Figure 2 of this utility model;
[0015] Figure 4 is an enlarged structural schematic diagram of point B in Figure 1 of this utility model.
[0016] In the figure: 1. Drawer; 2. Cabinet body; 3. Slide rail assembly; 4. Upper flat plate; 5. Lower flat plate; 6. Upper slider; 7. Upper slide groove; 8. Lower slider; 9. Lower slide groove; 10. Auxiliary support plate; 11. Mounting strip; 12. Mounting slot; 13. Partition.

[Detailed Embodiments]

[0017] The following provides a further detailed description of a drawer with high flatness described in specific embodiments of the present utility model.

[0018] Example 1

[0019] Please refer to Figures 1~4: A drawer with high flatness, comprising drawer 1 and cabinet body 2. The opposite outer walls of drawer 1 and the inner groove of cabinet body 2 are equipped with slide rail assemblies 3 at opposite positions, and the slide rail assembly 3 fits to slide. Cabinet body 2 is fixedly connected to two upper flat plates 4 and two lower flat plates 5 near the upper and lower inner grooves of drawer 1. Drawer 1 is slidably arranged between the upper flat plate 4 and the lower flat plate 5. The bottom of the upper flat plate 4 is fixedly connected to an upper slide bar 6. An upper sliding groove 7 is provided at the side wall position of drawer 1 relative to the upper slide bar 6. The upper slide strip 6 and the upper sliding groove 7 fit to slide. The upper flat plate 4 is structurally constrained to prevent tilting of the slide rail side plates of drawer 1, ensuring higher flatness of the slide rail assembly 3 and improving the smoothness and stability of drawer 1 operation.

[0020] The top of the lower flat plate 5 is fixedly connected to a sliding strip 8. A sliding groove 9 is provided at the bottom of drawer 1 near the sliding strip 8. The sliding strip 8 and the sliding slot 9 are fit to slide. The lower sliding strip 8 and lower sliding slot 9 further limit and assist sliding below the drawer 1, thereby enhancing the flatness and limiting effect of drawer 1. An auxiliary support plate 10 is fixedly connected between the two lower flat plates 5, which fits movably against the bottom of drawer 1. By lifting the lower part of drawer 1 with auxiliary support plate 10, deformation at the bottom of the drawer is reduced. Both the upper sliding groove 7 and the inner groove walls of sliding groove 9 are coated with lubricating gel. The outer side of drawer 1 is equipped with a decorative plate, and the outer side of the decorative plate is equipped with a handle. Adding lubricant material inside the sliding groove, further ensures the smooth withdrawal and push-in of drawer 1.

[0021] Example 2

[0022] As shown in Figures 1 and 4, further improvements have been made based on Example 1:

[0023] To improve the utilization of the internal space of drawer 1, mounting strip 11 is fixedly connected to the inner walls on both sides of the inner slots of drawer 1, with several mounting slots 12 evenly provided on opposite side of two strip 11. Through the mounting slots 12, the mounting strips 11 fit, plug and connect with partitions 13, of which the height is lower than the inner slot height of drawer 1. By installing multiple partitions 13 by plug-and-pull, the space of drawer 1 can be divided, making stored items more organized and improving the space utilization of drawer 1.

[0024] The working principle of this utility model: during use, drawer 1 interlocks with each other via the slide rail assembly 3, and the internal slide rail rollers roll within the slideway to move drawer 1. Then, through the handle on the outside of drawer 1, drawer 1 is pulled out and pushed in. During this process, the upper part of drawer 1 slides inside the upper sliding groove 7 via the upper slide strip 6 of the upper flat plate 4,

while the lower slide strip 8 of lower flat plate 5 slides inside the slide groove 9, increasing the flatness of drawer 1 during sliding. Over long-term use, drawer 1 uses the limiting structure of upper flat plate 4 to prevent tilting of the slide rail side plate of drawer 1, ensuring flatness. At the same time, the lower flat plate 5 structure and auxiliary support plate 10 further enhance the flatness limit effect at the bottom of drawer 1, making the mounting flatness of drawer 1 and cabinet body 2 higher. To facilitate the use and storage of drawer 1 neatly, by inserting multiple dividers 13 via the mounting slot 12 on the mounting strip 11, drawer 1 can be divided into multiple areas, making it convenient to store items neatly, improving the tidiness of drawer 1 storage, reducing low space utilization caused by messy storage, and improving storage space utilization.

[0025] The above embodiments only illustrate the principles and effects of the invention, as well as some of the embodiments used, and are not intended to limit the utility model; It should be noted that for those skilled in the art, as long as the creative concept of this utility model is not departed from the original concept, various modifications and improvements can also be made, all of which fall within the protection scope of the present utility model.



[Figure 1]

-6-



[Figure 2]

-7-



[Figure 3]

-8-



[Figure 4]

-9-