US012390012B2

(12) **United States Patent**
Nisley

(10) **Patent No.: US 12,390,012 B2**
(45) **Date of Patent: Aug. 19, 2025**

(54) **ANTI-TIP FURNITURE DEVICE**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 135 days.

(21) Appl. No.: **18/333,618**

(22) Filed: **Jun. 13, 2023**

(65) **Prior Publication Data**

US 2024/0122344 A1 Apr. 18, 2024

Related U.S. Application Data

(60) Provisional application No. 63/417,137, filed on Oct. 18, 2022.

(51) **Int. Cl.**
A47B 97/00 (2006.01)

(52) **U.S. Cl.**
CPC ***A47B 97/00*** (2013.01); *A47B 2097/008* (2013.01)

(58) **Field of Classification Search**
CPC ... A47B 97/00; A47B 2097/008; A47B 88/50; A47B 88/57
See application file for complete search history.

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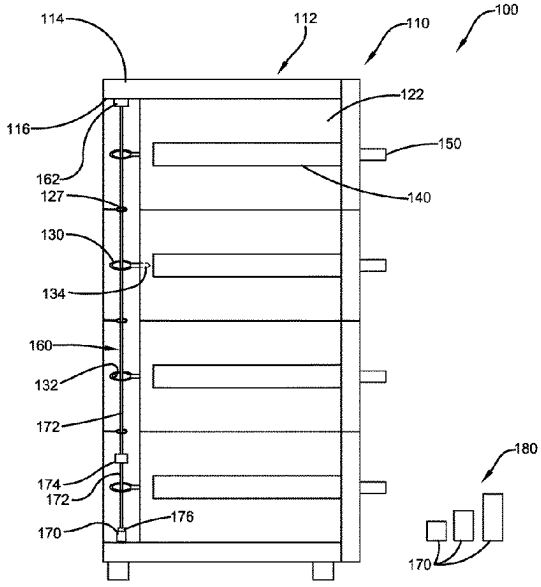
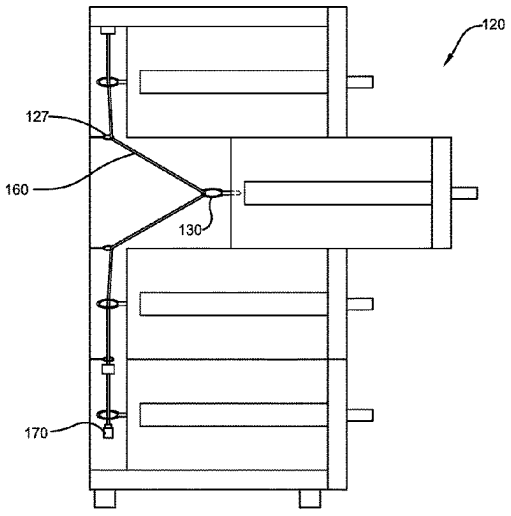
(57) **ABSTRACT**

An anti-tip furniture device is provided. The device prevents furniture with drawers from tipping due to all, or most drawers being opened at the same time. The device is primarily comprised of at least one piece of furniture which is comprised of at least one drawer with at least one eyelet, at least one line, and at least one counterweight. The drawer of the device has an eyelet positioned on the rear wall of the drawer. The line attaches to the exterior frame and runs vertically and/or horizontally through each eyelet of each drawer. The line is held in position via the counterweight. When one drawer of the device is opened, the line is tightened such that all other drawers cannot be opened fully. This prevents tipping of the device.

17 Claims, 4 Drawing Sheets





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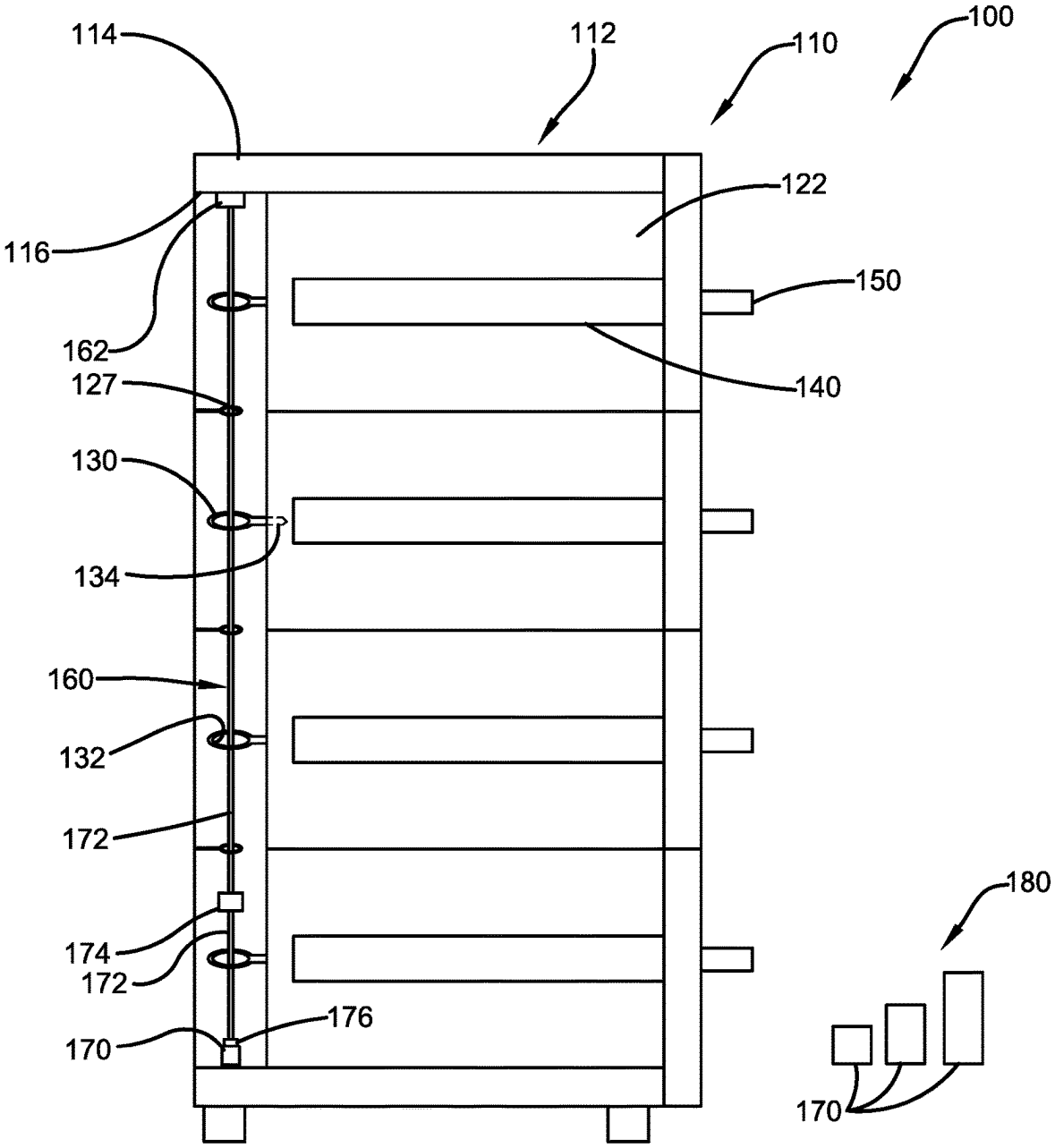
114
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FIG. 1

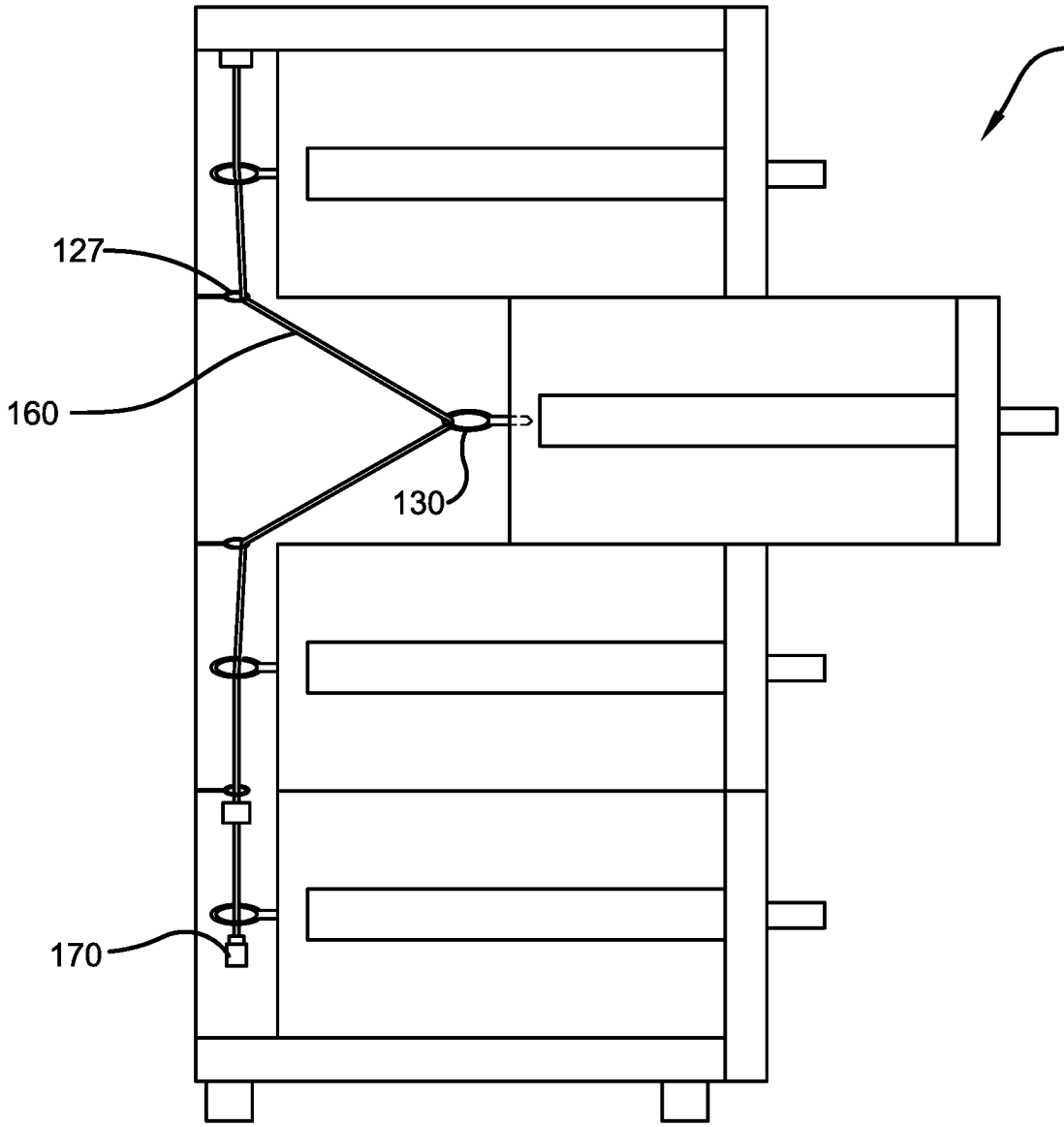

FIG. 2

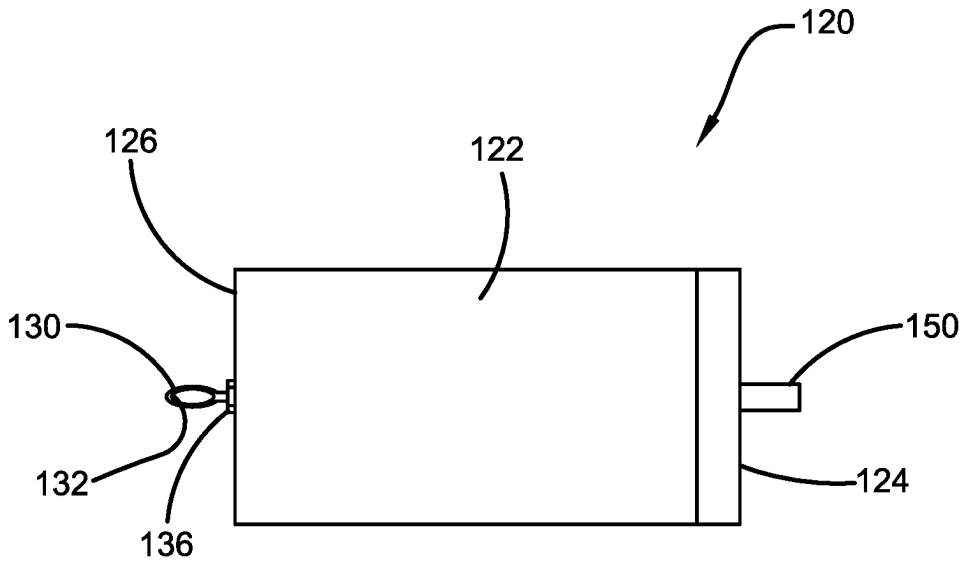

FIG. 3

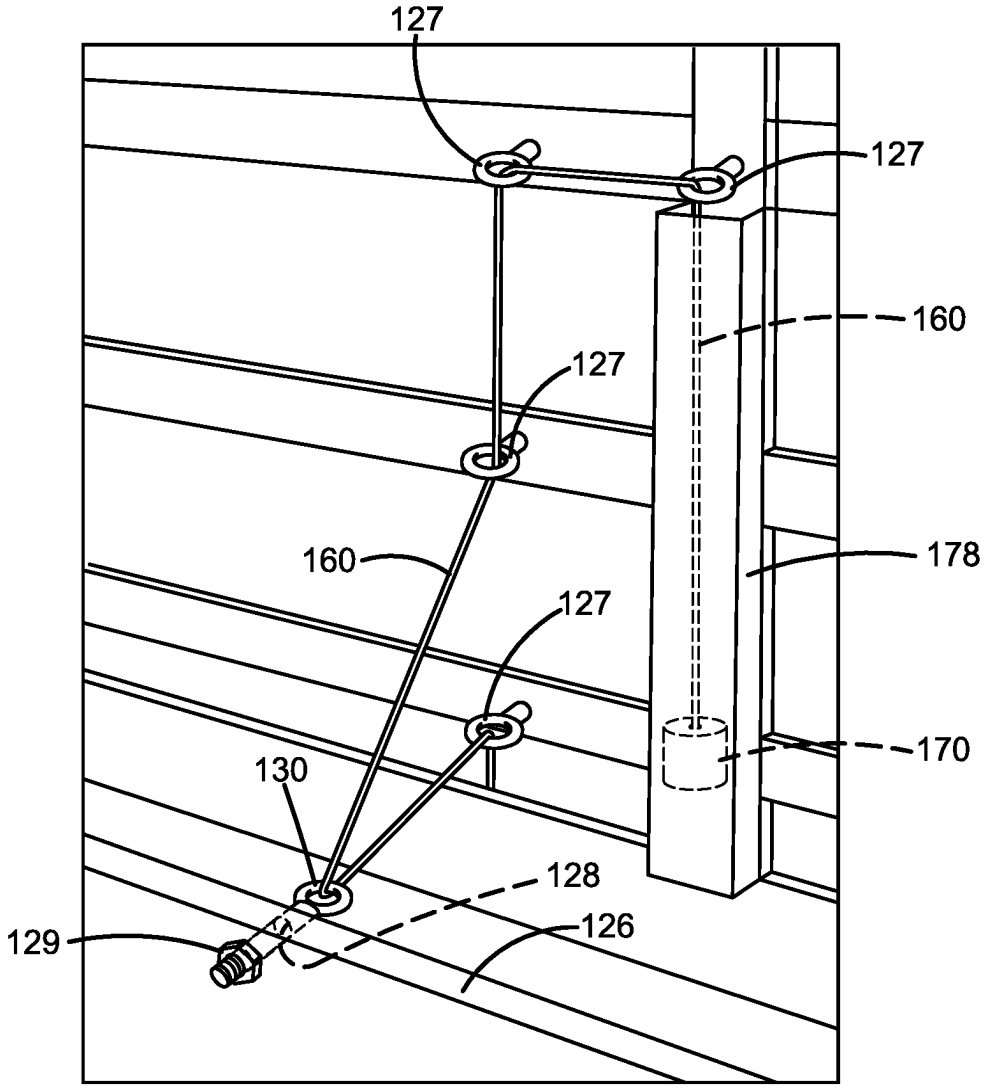

FIG. 4

ANTI-TIP FURNITURE DEVICE

CROSS-REFERENCE TO RELATED APPLICATION

The present application claims priority to, and the benefit of, U.S. Provisional Application No. 63/417,137, which was filed on Oct. 18, 2022, and is incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

The present invention relates generally to the field of furniture. More specifically, the present invention relates to an anti-tip furniture device with a counterweight suspended from a line attached to a draw of the device. When a drawer of the device is opened, the line is tightened such that all other drawers can only be partially opened, and the device is prevented from tipping. Accordingly, the present disclosure makes specific reference thereto. Nonetheless, it is to be appreciated that aspects of the present invention are also equally applicable to other like applications, devices, and methods of manufacture.

BACKGROUND

Many young children may climb on and/or open drawers of furniture. If all or most drawers of a piece of furniture are open at one time, the furniture can easily tip over. Because almost half of furniture tip over injuries happen in the head and neck area, the injuries are often significant or fatal. A study by the Nationwide Children's Hospital spanning 30 years found that of all incidents of children being harmed by toppling furniture 575 incidents were fatal. Further, an estimated 18,000 Americans went to emergency rooms across the U.S. in 2020 for injuries sustained when furniture, a TV, or another appliance tipped over and hurt them.

Therefore, there exists a long-felt need in the art for a device that provides a piece of furniture that cannot easily tip and injure nearby individuals. More specifically, there exists a long-felt need in the art for an anti-tip furniture device that provides a dresser or other similar piece of furniture that cannot tip over due to all, or most drawers of the device being pulled outwards at one time. In addition, there exists a long-felt need in the art for an anti-tip furniture device that contains no visible external safety features that disrupt the visual appearance of the furniture.

The subject matter disclosed and claimed herein, in one embodiment thereof, comprises an anti-tip furniture device. The device is primarily comprised of at least one piece of furniture, the furniture is comprised of at least one drawer with at least one eyelet, at least one line, and at least one counterweight. The furniture is preferably a dresser, wherein each drawer of the dresser has an eyelet positioned on the rear wall of the drawer. The line attaches to the exterior frame and runs vertically through each eyelet. The line is held in position via the counterweight. When one drawer is opened, the line is tightened such that all other drawers can only be partially opened.

In this manner, the anti-tip furniture device of the present invention accomplishes all of the foregoing objectives and provides a piece of furniture that cannot easily tip and injure nearby individuals. More specifically, the line prevents all or more than one drawer of the device from being completely pulled outwards at one time. As a result, the device greatly reduces the likelihood of tipping. While doing so, the device has no visible external safety features that disrupt the visual appearance of the furniture.

SUMMARY

The following presents a simplified summary in order to provide a basic understanding of some aspects of the disclosed innovation. This summary is not an extensive overview, and it is not intended to identify key/critical elements or to delineate the scope thereof. Its sole purpose is to present some general concepts in a simplified form as a prelude to the more detailed description that is presented later.

The subject matter disclosed and claimed herein, in one embodiment thereof, comprises an anti-tip furniture device primarily comprised of at least one piece of furniture, the furniture is comprised of at least one drawer with at least one eyelet, at least one line, and at least one counterweight. In differing embodiments, the furniture may be any furniture type known in the art such as, but not limited to, a dresser, a desk, a nightstand, a chest, etc., or any furniture type with at least one drawer. In the preferred embodiment, the furniture is a vertical or horizontal dresser with at least one drawer.

The rear wall of the drawer is comprised of at least one eyelet having at least one opening. In the preferred embodiment, the eyelet is comprised of a threaded, pointed tip that can be screwed into the rear wall, such that the eyelet is secured to the rear wall. In the preferred embodiment, each drawer of the furniture has at least one eyelet. All eyelets of each drawer are preferably positioned in the same position on the rear wall of each drawer such that they align within the frame. In this manner, at least one line can be fed through the opening of each eyelet within the frame.

The line preferably attaches to a bottom surface of a top wall of the exterior frame. The line is also comprised of at least one counterweight. In one embodiment, the counterweight is comprised of at least one removable section that can be removed to allow the counterweight to be lightened to produce the desired amount of slack in the line relative to the weight in each drawer.

During use, the line runs through each eyelet of each drawer. When one drawer is opened (i.e., pulled away from the frame) the line tightens. As a result, all other drawers will then not open fully as the line does not contain enough slack to allow the other drawers to fully open. In this manner, multiple drawers of the furniture cannot be opened at the same time. This prevents the furniture from tipping due to all or most drawers being extended at once.

Accordingly, the anti-tip furniture device of the present invention is particularly advantageous as it provides a piece of furniture that cannot easily tip and injure nearby individuals by preventing all, or more than one, drawers of the device from being pulled outwards at one time. As a result, the device greatly reduces the likelihood of tipping. In addition, the device has no visible external safety features that disrupt the visual appearance of the furniture. In this manner, the anti-tip furniture device provides a novel solution to reduce furniture from tipping over.

To the accomplishment of the foregoing and related ends, certain illustrative aspects of the disclosed innovation are described herein in connection with the following description and the annexed drawings. These aspects are indicative, however, of but a few of the various ways in which the principles disclosed herein can be employed and are intended to include all such aspects and their equivalents.

Other advantages and novel features will become apparent from the following detailed description when considered in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

The description refers to provided drawings in which similar reference characters refer to similar parts throughout the different views, and in which:

FIG. **1** illustrates a cross-sectional side view of one potential embodiment of an anti-tip furniture device of the present invention in accordance with the disclosed architecture;

FIG. **2** illustrates a cross-sectional side view of one potential embodiment of an anti-tip furniture device of the present invention in accordance with the disclosed architecture;

FIG. **3** illustrates a side view of a drawer of one potential embodiment of an anti-tip furniture device of the present invention in accordance with the disclosed architecture; and

FIG. **4** illustrates a perspective view of an inside of one potential embodiment of an anti-tip furniture device of the present invention in accordance with the disclosed architecture.

DETAILED DESCRIPTION

The innovation is now described with reference to the drawings, wherein like reference numerals are used to refer to like elements throughout. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding thereof. It may be evident, however, that the innovation can be practiced without these specific details. In other instances, well-known structures and devices are shown in block diagram form in order to facilitate a description thereof. Various embodiments are discussed hereinafter. It should be noted that the figures are described only to facilitate the description of the embodiments. They are not intended as an exhaustive description of the invention and do not limit the scope of the invention. Additionally, an illustrated embodiment need not have all the aspects or advantages shown. Thus, in other embodiments, any of the features described herein from different embodiments may be combined.

As noted above, there exists a long-felt need in the art for a device that provides a piece of furniture that cannot easily tip and injure nearby individuals. More specifically, there exists a long-felt need in the art for an anti-tip furniture device that provides a dresser or other similar piece of furniture that cannot tip over due to all, or most drawers of the device being pulled outwards at one time. In addition, there exists a long-felt need in the art for an anti-tip furniture device that contains no visible external safety features that disrupt the visual appearance of the furniture.

The present invention, in one exemplary embodiment, is comprised of an anti-tip furniture device primarily comprised of at least one piece of furniture. The furniture is comprised of at least one drawer with at least one eyelet, at least one line, and at least one counterweight. In differing embodiments, the furniture may be any furniture type known in the art such as, but not limited to, a dresser, a desk, a nightstand, a chest, etc., or any furniture type with at least one drawer. However, in the preferred embodiment, the furniture is a vertical or horizontal dresser with at least one drawer.

The rear wall of the drawer is comprised of at least one eyelet. The eyelet is attached to a rear wall of the drawer, such that the eyelet is secured to the rear wall. In the preferred embodiment, each drawer of the furniture has at least one eyelet. All eyelets of each drawer are preferably positioned in the same position on the rear wall of each drawer such that they align within the frame. In this manner, at least one line can be fed through the opening of each eyelet within the frame of the furniture.

The line preferably attaches to a bottom surface of a top wall of the exterior frame. The line is also comprised of at least one counterweight. The counterweight may be comprised of at least one removable section that can be removed to allow the counterweight to be lightened to produce the desired amount of slack in the line relative to the weight in each drawer.

During use, the line runs through each eyelet of each drawer. When one drawer is opened (i.e., pulled away from the frame) the line tightens. As a result, all other drawers will then not open as the line does not contain enough slack to allow the other drawers to fully open. In this manner, multiple drawers of the furniture cannot be opened at the same time. This prevents the furniture from tipping due to all or most drawers being extended at once.

Accordingly, the anti-tip furniture device of the present invention is particularly advantageous as it provides a piece of furniture that cannot easily tip and injure nearby individuals by preventing all, or more than one, drawers of the device from being pulled outwards at one time. As a result, the device greatly reduces the likelihood of tipping. In addition, the device has no visible external safety features that disrupt the visual appearance of the furniture. In this manner, the anti-tip furniture device provides a novel solution to reduce furniture from tipping over.

Referring initially to the drawings, FIG. **1** illustrates a cross-sectional side view of one potential embodiment of an anti-tip furniture device **100** of the present invention in accordance with the disclosed architecture. The device **100** is primarily comprised of at least one piece of furniture **110**, the furniture **110** is comprised of at least one drawer **120** with at least one eyelet **130**, at least one line **160**, and at least one counterweight **170**. In differing embodiments, the furniture **110** may be any furniture type known in the art. This includes, but is not limited to, a dresser, a desk, a nightstand, a chest, etc., or any furniture type with at least one drawer **120**. The furniture **110** may be made from any wood material known in the art. The furniture **110** may also be made of any metal, plastic, marble, glass, fabric, laminate, or synthetic material known in the art.

In the preferred embodiment, the furniture **110** is a vertical or horizontal dresser with at least one drawer **120**, as seen in FIG. **3**. The drawer **120** is preferably rectangular in shape and has a pair of parallel side walls **122** and a front wall **124** that is parallel to a rear wall **126**. The front wall **124** may be comprised of any handle **150** type known in the art that allows a user to easily open the drawer **120**.

Each side wall **122** is comprised of at least one track **140**. The track **140** allows the drawer **120** to slide in and out from the exterior frame **112** of the furniture **110**. The track **140** may be any track type known in the art, such as, but not limited to, a soft-close track or any cabinet track/glide known in the art.

The rear wall **126** of the drawer **120** is comprised of at least one eyelet **130**. The eyelet **130** is comprised of at least one opening **132**. The eyelet **130** may be an opened or closed eyelet in different embodiments. In one embodiment, the eyelet **130** is comprised of a threaded, pointed tip **134** that can be screwed into the rear wall **126** such that the eyelet **130** is secured to the rear wall **126**. In a differing embodiment,

the eyelet **130** is comprised of at least one fastener **136** that allows the eyelet **130** to removably attach to the rear wall **126**. In this manner, the eyelet **130** can be used with the drawer **120** in a manner that does not damage the rear wall **126** permanently. The fastener **136** may be any fastener type known in the art such as, but not limited to, a magnet, an adhesive, hook and loop, etc. In a further embodiment, the rear wall **126** is comprised of at least one opening **128**. The opening **128** allows the eyelet **130** to be placed through the rear wall **126**. In this embodiment, the eyelet **130** is comprised of a threaded eyelet, which can be secured within the opening **128** from the inside of the drawer **120** via a nut **129**, pin, or other fastener of the like.

In the preferred embodiment, each drawer **120** of the furniture **110** has at least one eyelet **130**, and wherein all eyelets **130** are positioned in the same position on the rear wall **126** of each drawer **120** such that they align within the frame **112**. In this manner, at least one line **160** can be fed through the opening **132** of each eyelet **130** within the frame **112**. In one embodiment, the rear wall **126** is also comprised of at least one eyelet **127** that also receives the line **160**. This eyelet **127** is preferably a screw-in eyelet that can be attached to the rear wall **126** (or any other wall such as but not limited to the bottom surface **116** of the top wall **114**).

The line **160** is preferably comprised of a durable material. In one embodiment, the line **160** is preferably comprised of any type of braided Kevlar line material known in the art. In another embodiment, the line **160** is comprised of a rope such as, but not limited to, natural rope, a synthetic rope, a single braid rope, a plaited rope, a twisted rope, a double braid rope, a hollow rope, a manila rope, a polypropylene rope, a nylon rope, a bungee shock cord, etc.

The line **160** preferably attaches to a bottom surface **116** of a top wall **114** of the exterior frame **112** via the eyelet **127**. The line **160** preferably attaches via at least one line fastener **162**. The line fastener **162** may be a plurality of fastener types in differing embodiments such as, but not limited to, an eyelet, a screw, a bolt, an adhesive, etc. From the fastener **162**, the line **160** extends downward and is fed through each eyelet **130** of each drawer **120**. The line **160** may run horizontally and/or vertically in different embodiments.

The line **160** is also comprised of at least one counterweight **170**. The counterweight **170** may be any weight-type known in the art such as, but not limited to, a fabricated steel counterweight, a cast lead counterweight, a cast iron counterweight, etc. In one embodiment, the counterweight **170** is comprised of at least one removable section **172**. The section **172** can be removed from counterweight **170** to allow the counterweight **170** to be lightened to produce the desired amount of slack in the line **160**, or additional counterweights can be added to the line **160** if needed to compensate for drawer weight. In one embodiment, the device **100** is comprised of a kit **180** of a plurality of counterweights **170** of differing weights and/or each with a differing number of sections **172**.

In one embodiment, the counterweight **170** is contained within at least one open or fully enclosed channel **178**, as seen in FIG. **4**. The channel **178** may be positioned on the interior or exterior surface of any wall of the frame **112** (i.e., top wall, side walls, rear wall, bottom wall) of the furniture **110** in different embodiments. In the preferred embodiment, the channel **178** and counterweight **170** are rectangular, but may be any shape in different embodiments.

In one embodiment, each section **172** is comprised of at least one fastener **174** that allows each section **172** to attach to one another to form the counterweight **170**. The fastener **174** may be any type known in the art such as, but not limited to, hook and loop, magnetic, adhesive, etc. In a further embodiment, the counterweight **170** is comprised of at least one counterweight fastener **176** that allows the line **160** to removably attach to the counterweight **170**. The fastener **176** may be any fastener type such as, but not limited to, an eyelet, a bolt, a screw, etc.

During use, the line **160** runs through each eyelet **130**, **127**. When one drawer **120** is opened (i.e., pulled away from the frame **112** along the track **140**) the line **160** tightens. As a result, all other drawers **120** will then not open, or open only partially (i.e., not enough to tip the device **100**), as the line **160** does not contain enough slack to allow the other drawers to move, as seen in FIG. **2**. In this manner, multiple drawers **120** of the furniture **110** cannot be opened at the same time. This prevents the furniture **110** from tipping due to all or most drawers **120** being extended at once. In one embodiment, a user can un-attach any drawer **120** from the line **160** as desired to allow the drawer **120** to fully open. In addition, larger furniture **110** may have a plurality of lines **160** and counterweights **170** to account for the large size and weight of the drawers **120**.

Certain terms are used throughout the following description and claims to refer to particular features or components. As one skilled in the art will appreciate, different persons may refer to the same feature or component by different names. This document does not intend to distinguish between components or features that differ in name but not structure or function. As used herein "anti-tip furniture device" and "device" are interchangeable and refer to the anti-tip furniture device **100** of the present invention.

Notwithstanding the foregoing, the anti-tip furniture device **100** of the present invention and its various components can be of any suitable size and configuration as is known in the art without affecting the overall concept of the invention, provided that they accomplish the above-stated objectives. One of ordinary skill in the art will appreciate that the size, configuration and material of the anti-tip furniture device **100** as shown in the FIGS. are for illustrative purposes only, and that many other sizes and shapes of the anti-tip furniture device **100** are well within the scope of the present disclosure. Although the dimensions of the anti-tip furniture device **100** are important design parameters for user convenience, the anti-tip furniture device **100** may be of any size, shape and/or configuration that ensures optimal performance during use and/or that suits the user's needs and/or preferences.

Various modifications and additions can be made to the exemplary embodiments discussed without departing from the scope of the present invention. While the embodiments described above refer to particular features, the scope of this invention also includes embodiments having different combinations of features and embodiments that do not include all of the described features. Accordingly, the scope of the present invention is intended to embrace all such alternatives, modifications, and variations as fall within the scope of the claims, together with all equivalents thereof.

What has been described above includes examples of the claimed subject matter. It is, of course, not possible to describe every conceivable combination of components or methodologies for purposes of describing the claimed subject matter, but one of ordinary skill in the art may recognize that many further combinations and permutations of the claimed subject matter are possible. Accordingly, the claimed subject matter is intended to embrace all such alterations, modifications and variations that fall within the spirit and scope of the appended claims. Furthermore, to the extent that the term "includes" is used in either the detailed

description or the claims, such term is intended to be inclusive in a manner similar to the term "comprising" as "comprising" is interpreted when employed as a transitional word in a claim.

What is claimed is:

1. An anti-tip furniture device comprising:

a piece of furniture comprising:

an exterior frame;

a drawer;

an eyelet;

a line; and

a counterweight comprising a plurality of weighted sections, wherein each weighted section is removably attachable to another weighted section.

2. The anti-tip furniture device of claim **1**, wherein the piece of furniture is comprised of a dresser, a desk, a nightstand, or a chest.

3. The anti-tip furniture device of claim **1**, wherein the line is positioned through the eyelet.

4. An anti-tip furniture device comprising:

a piece of furniture comprising:

an exterior frame;

a drawer comprised of a track and a handle;

a fastener;

a line; and

a counterweight attached to the line; and

wherein the counterweight comprises a plurality of weighted sections;

wherein each weighted section is removably attachable to another weighted section; and

wherein each weighted section is a different weight than the other weighted sections.

5. The anti-tip furniture device of claim **4**, wherein the fastener is positioned on a rear wall of the drawer.

6. The anti-tip furniture device of claim **4**, wherein the fastener is comprised of an eyelet.

7. The anti-tip furniture device of claim **6**, wherein the eyelet is comprised of a threaded, pointed tip.

8. The anti-tip furniture device of claim **4**, wherein the line is comprised of a Kevlar line material.

9. The anti-tip furniture device of claim **4**, wherein the track attaches to the exterior frame.

10. An anti-tip furniture device comprising:

a dresser comprising:

an exterior frame;

a drawer comprised of a track and a handle;

an eyelet positioned on a rear wall of the drawer;

a line positioned through the eyelet; and

a counterweight attached to the line via a counterweight fastener; and

a vertical enclosed channel attached to the exterior frame for retaining the counterweight; and

wherein the counterweight comprises a plurality of weighted sections;

wherein each weighted section is magnetically attachable to another weighted section; and

wherein each weighted section is a different weight than the other weighted sections.

11. The anti-tip furniture device of claim **10**, wherein the track is comprised of a cabinet track or a cabinet slide.

12. The anti-tip furniture device of claim **10**, wherein the eyelet attaches to the rear wall via a first fastener.

13. The anti-tip furniture device of claim **12**, wherein the first fastener is comprised of a magnet, an adhesive, or a hook and loop fastener.

14. The anti-tip furniture device of claim **10**, wherein the line is comprised of a natural rope, a synthetic rope, a single braid rope, a plaited rope, a twisted rope, a double braid rope, a hollow rope, a manila rope, a polypropylene rope, a nylon rope, or a bungee shock cord.

15. The anti-tip furniture device of claim **10**, wherein the line attaches to a bottom surface of a top wall of the exterior frame.

16. The anti-tip furniture device of claim **10**, wherein the counterweight fastener is comprised of an eyelet, a bolt, or a screw.

17. The anti-tip furniture device of claim **10**, wherein the eyelet is comprised of a threaded, pointed tip.

* * * * *