CLAIMS

We claim:

1. An apparatus for adjusting the height of a furniture item, the apparatus comprising:

a frame structure, the frame structure comprising a vertically positioned track member that extends a particular height;

a furniture item in communication with the frame structure through the vertically positioned track member; and

an adjustment guide in communication, through a cable, with both the furniture item and the frame structure, wherein the adjustment guide further comprises:

a cable tensioner device in communication with the cable, wherein the cable extends from the cable tensioner device to the frame structure, wherein actuating the cable tensioner device causes the furniture item to change vertical location with respect to the frame structure, the cable tensioner device comprising:

a driving shaft including a threaded portion and an unthreaded portion, wherein the unthreaded portion includes a driving head which is configured to selectably attach to a drill; and

a plurality of offset bearings that connect the furniture item to the track, and that enable the furniture item to rotate away from a user or other item when the furniture item contacts the user or the other item, wherein:

the plurality of offset bearings attach the furniture item within upper and lower positions of the track;

an upper bearing of the plurality is positioned opposite a lower bearing of the plurality on respective front or back walls of the track;

the position of the upper and lower bearings provides a point of rotation for the furniture item that is between the upper and lower bearings; and

the lower bearing is mounted to a leveler having an adjustable pivot block such that the position of the lower bearing is adjustable along the leveler to adjust the angular relationship between the upper bearing and the lower bearing and to adjust the tilt of the furniture item; and

wherein the upper and lower bearings are free to roll along respective front and back walls of the track when the furniture item is rotated away from the user or other item.

2. The apparatus as recited in claim 1, wherein the cable tensioner device comprises a tension plate connected to the threaded portion of the driving shaft, wherein the driving shaft is configured to move the tension plate in different directions along the shaft based upon the direction of rotation of the driving shaft.

3. The apparatus as recited in claim 1, wherein actuating the cable tensioner device causes the cable to retract and the furniture item to rise with respect to a modular wall.

4. The apparatus as recited in claim 1, further comprising a cable engagement point that is configured to receive and hold the cable.

5. The apparatus as recited in claim 1, wherein the adjustment guide is attached to the furniture item.

6. The apparatus as recited in claim 5, wherein the furniture item comprises an interface surface that is substantially parallel to a floor and wherein the adjustment guide is attached to an underside of the interface surface.

7. The apparatus as recited in claim 6, wherein actuating the cable tensioner device such that the cable extends, causes the furniture item to lower with respect to a modular wall, and further wherein extending the cable does not directly exert a significant downward force on the furniture item.

8. A system for adjusting the height of a furniture item attached to a modular wall system, the system comprising:

a modular furniture item configured to connect to a modular wall system, the modular furniture item comprising a front portion that faces an end user, and a rear portion on an opposing side;

the modular furniture item comprising an adjustment guide, wherein the adjustment guide is configured to adjust the vertical positioning of the modular furniture item relative to the modular wall system, the adjustment guide comprising:

a cable engagement point that is configured to receive and hold a cable, the cable engagement point disposed upon a tension plate,

the tension plate connected to a cable tensioner device, wherein the cable tensioner device is configured to move the tension plate and thereby extend or retract the cable, the cable tensioner device comprising:

a driving shaft including a threaded portion and an unthreaded portion, wherein the unthreaded portion includes a driving head which is configured to selectably attach to a drill; and

a plurality of offset bearings that connect the modular furniture item to the modular wall system, including an upper bearing and a lower bearing, wherein the lower bearing is mounted to a leveler having an adjustable pivot block such that the position of the lower bearing is adjustable along the leveler to adjust the angular relationship between the upper bearing and the lower bearing and to adjust the tilt of the modular furniture item;

wherein the modular furniture item is configured to tilt upwards, towards the modular wall system, in response to the front portion of the modular furniture item contacting an object or user while being lowered by the adjustment guide; and

wherein the modular furniture item is configured to continue lowering when the front portion of the modular furniture item is no

longer contacting the object or user and the modular furniture item is no longer tilted upward.

9. The system as recited in claim 8, wherein:

the tension plate moves different directions along the shaft based upon the direction of rotation of the driving shaft, and

rotating the driving shaft in a first direction causes tension on the cable to increase and the furniture item to rise with respect to the modular wall system.

10. The system as recited in claim 8, wherein the cable tensioner device is configured to apply an upward force on the furniture item to drive the furniture item upward, and to release the upward force so that the furniture item drops downward on its own due to weight.

11. A system for adjusting the height of a furniture item attached to a wall system, the system comprising:

a wall mounted furniture item in communication with a channel bracket, wherein the wall mounted furniture comprises an upper surface and a lower surface;

the channel bracket physically attached to a wall, the channel bracket comprising opposing first and second side walls;

the wall mounted furniture item comprising an adjustment guide attached to the lower surface, wherein the adjustment guide is configured to adjust the vertical positioning of the modular furniture item relative to the channel bracket, the adjustment guide comprising:

a cable tensioner mechanism, wherein the cable tensioner mechanism is configured to exert an active force in only a single direction, the cable tensioner mechanism comprising:

a driving shaft including a threaded portion and an unthreaded portion, wherein the unthreaded portion includes a driving head which is configured to selectably attach to a drill; and

a plurality of bearings that connect the wall mounted furniture item to the wall at multiple vertical points along the channel bracket, including at least a first bearing and a second bearing, wherein the second bearing is mounted to a leveler having an adjustable pivot block such that the position of the second bearing is adjustable along the leveler to adjust the angular relationship between the first bearing and the second bearing and to adjust the tilt of the wall mounted furniture item; wherein:

the plurality of bearings is positioned within the channel bracket such that:

the plurality of bearings maintains constant rotational contact with one of the first or second opposing side walls of the channel while raising or lowering the furniture item, and

the plurality of bearings change position to contact the other of the first or second side walls when the furniture item contacts an outside force during use so that the furniture item can be adjusted vertically up or down whether the bearings change position or not.

12. The system as recited in claim 11, wherein the adjustment guide comprises a cable engagement point that is configured to receive and hold a cable, the cable engagement point disposed upon a tension plate.

13. The system as recited in claim 12, wherein the cable tensioner mechanism moves the tension plate.

14. The system as recited in claim 11, the system further comprising:

the channel bracket extending parallel to the wall, the channel bracket comprising a front wall and a back wall that are separated by a first width;

a channel insert disposed within the channel bracket; the channel insert configured to slide along a longitudinal length of the channel bracket;

the first bearing disposed proximate a first end of the channel insert, the first bearing comprising a diameter that is less than the first width;

the second bearing disposed proximate a second end of the channel insert, the second bearing comprising a diameter that is less than the first width;

the first bearing in communication with the front wall of the channel insert; and

the second bearing in communication with the back wall of the channel insert.

15. The system as recited in claim 14, wherein when the wall mounted furniture item contacts an item while being lowered by the adjustment guide the first bearing contacts the back wall and the second bearing contacts the front wall, causing the wall mounted furniture item to tilt towards the wall system.