Sept. 2, 1969 M. GROVER 3,464,170

WINCH LOCK MOVABLE PARTITIONS

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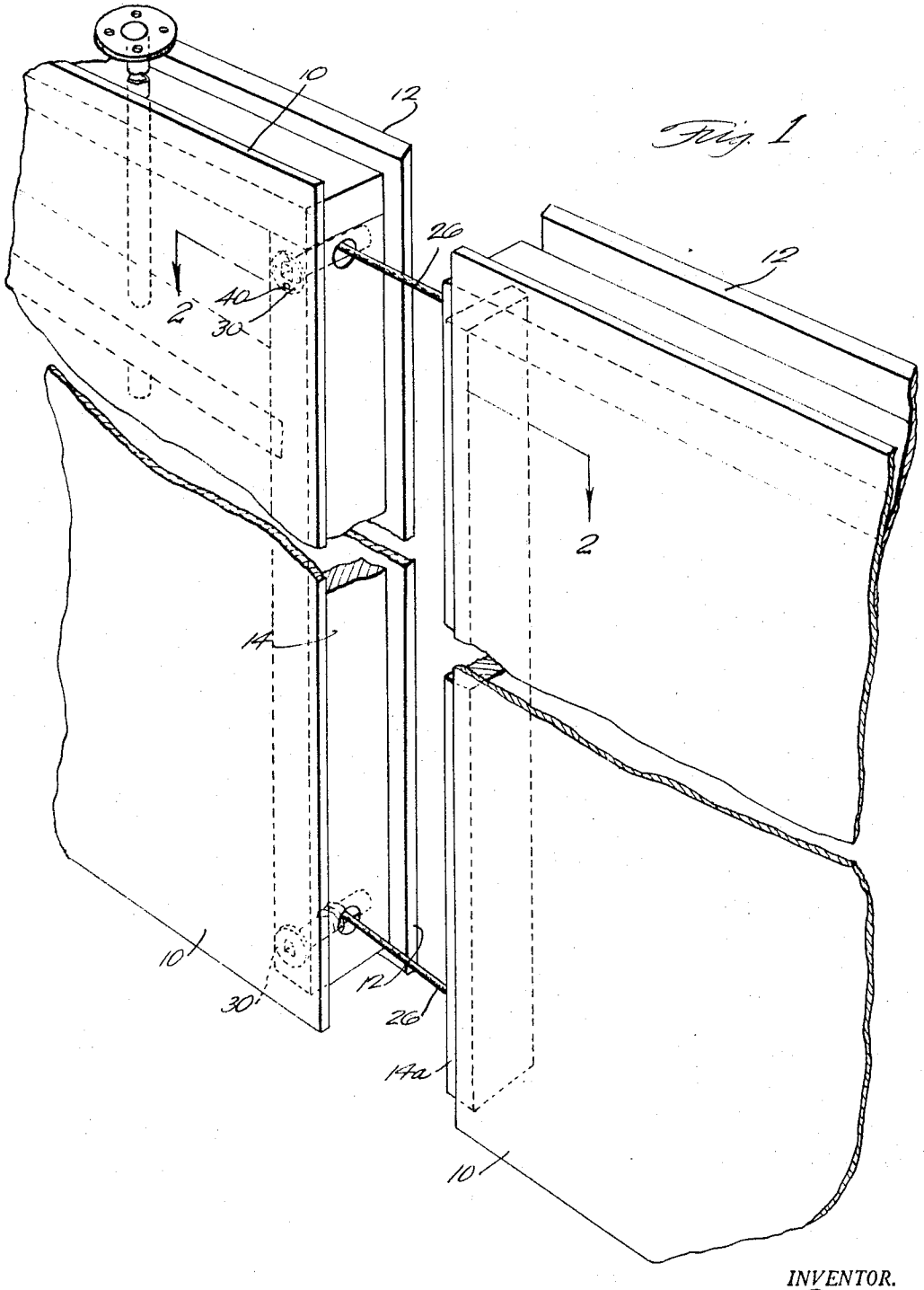


Fig. 1

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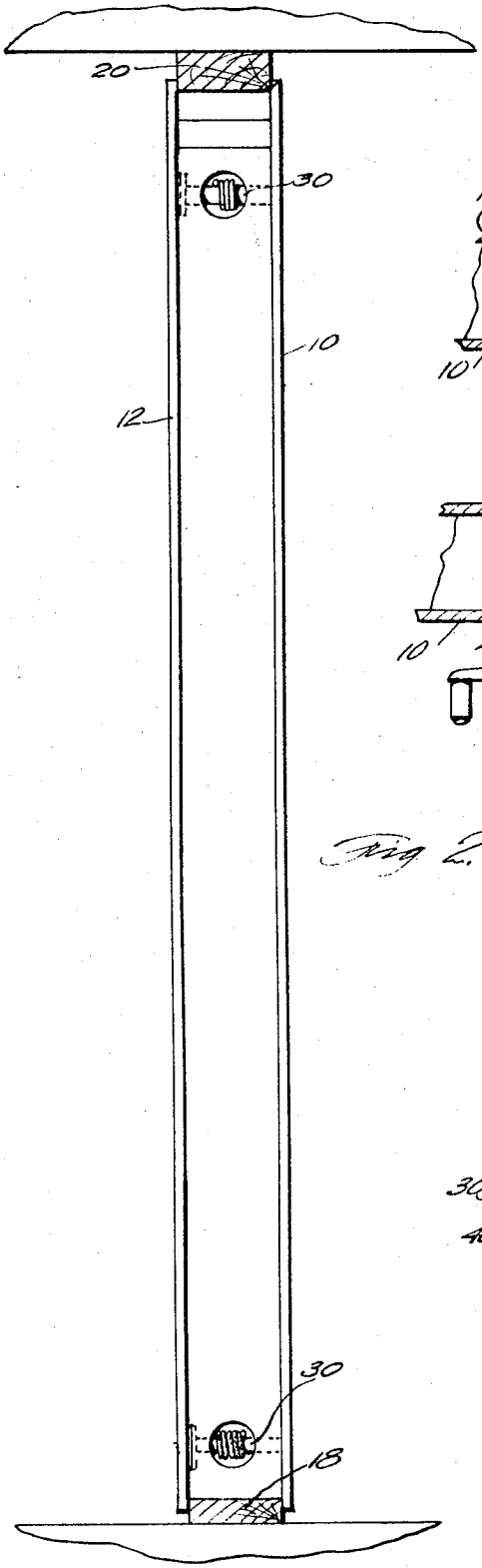


Fig. 2.

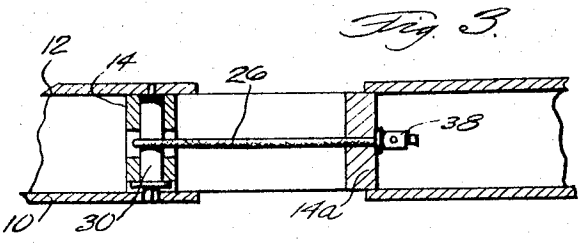


Fig. 3.

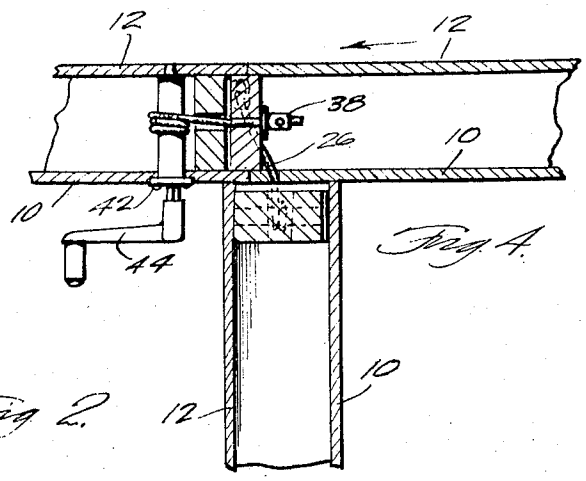


Fig. 4.

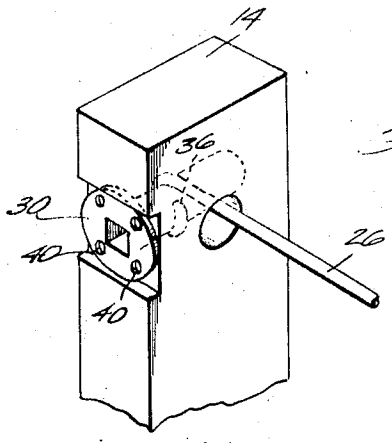


Fig. 5.

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WINCH LOCK MOVABLE PARTITIONS

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U.S. Cl. 52—122 4 Claims

ABSTRACT OF THE DISCLOSURE

A winch lock movable partition of fastening movable wall panels together by means of winding rods or small winches, using a rope of nylon or similar strength material for engaging the adjacent edges of wall panels together and locking the winding rods in position.

The wall panel can be of any finished or unfinished variety of wall boards, prefinished wood, paneling, vinyl-covered plaster boards, pressed wood faced or formica-like finish panels.

The panels would be drawn together by means of winding rods or small winches. A rope of nylon or similar strength would be attached to one edge of the panel while the winch would be built into the other edge as shown on the illustration. A 11/16" hole through the frame would hold the winding rod. A cut out, the thickness of the holding flange would be necessary to allow the holding flange to rotate under the outer skin of the panel. A hole at least 1¼" in diameter cut through the frame would allow attaching the rope from the adjoining panel to the winding rod through the hole in the rod. The hole of this size would allow for the rope to wind on the rod as the winch were wound by means of a crank or ratchet wrench. Access to the winch would be through a hole cut through the outer skin of the panel. This hole could be plugged with the same material as the outer finished skin. When plaster board covered with vinyl cloth is used, an X or T cut in the cloth could be made and the plaster removed to allow access to the winch. When the panels have been pulled tightly together by winding the winches, screws would be inserted through the holes in the holding flange into the wood frame. These would keep the winding rods from unwinding.

The use of ¼" prefinished wood paneling would appear to be most practical at the present time for the outer skin of the panels. These would be extended ½" on the side to form a lapped joint. They would extend beyond the frame on the top ¾" to allow inserting a 1" x 4" board along the top to provide bracing. The skin would extend ⅝" below frame at the bottom to straddle a floor brace or rail. This rail would be nailed to the floor after being leveled by means of shims. When the panels were made to reach to the ceiling, a ceiling rail would be attached to the ceiling. This would of necessity be thicker than the floor rail and the channel in the top of the panel would have to be deep enough to permit raising the panel up over the floor rail. A moulding of the finished wood paneling could cover the ¾" space left between the panels and the ceiling.

The above and other objects and advantages of the invention will become apparent upon full consideration of the following detailed description and accompanying drawings in which:

FIG. 1 is a perspective and partially schematic view of a preferred embodiment of the invention;

FIG. 2 is a cross-sectional view taken along lines 2—2 of FIG. 1;

FIG. 3 is a cross-sectional view showing how two panels in longitudinal alignment are joined together;

FIG. 4 shows how two panels, together with a third, may form a T-shaped wall section; and

FIG. 5 shows a further embodiment or concept of practicing the present invention.

Referring now to the drawings, there is shown a series of wood paneling or other wall boards **10**, **12**, separated and secured to two-by-four members **14**, which are used as side frame members. There are disposed along the floor an arrangement of floor rails **18**, as shown in FIG. 2, and there is disposed along the ceiling or overhead a top or ceiling brace **20**, as illustrated in FIG. 2.

The wall members **10**, **12** are positioned on the floor rail and bridging the ceiling or top brace **20**, so that they are disposed in the position as shown in FIG. 1. A nylon rope **26** or the like of very strong nature and characteristics, is disposed from the side frame member **14***a* to a holding flanged spool **30**, on which the end of the nylon rope **26** terminates.

The opening flange rod **30**, as illustrated in each of the figures, is constructed to have a hole **36** in the center of the rod for retaining an end of the rope, as shown in FIG. **5**, and the other end may be secured or fastened through an opening in a side frame member **14***a*, as seen by a lock member or other equivalent means **38**. By this teaching, even a knot in the rope **26** of nylon may be used to fix the end in the side frame member **14***a*.

In FIG. 2, it is shown that the winch holding flange and rod **30** is covered by the board **12**, but in other embodiments such as that as shown in FIG. 1, the winch may be uncovered, and it is located so that it can be covered over or hidden by top trim (not shown).

In order to secure the holding flange in place, after it is positioned in place, screws or other retaining means (not shown) are threaded into or secured into the openings **40**, **40**, shown in FIGS. 1 and 5, for securing the holding flange in place. Another feature of this type of holding flange is to provide it with a ratchet surface on the back of the flange so that it engages a ratchet engaging surface and is thus held in place. FIG. 4 may illustrate rivets **42** or the like for holding the flange in position. A crank arm **44** is used in each of the holding flange winding rods to sufficiently turn the rod until the nylon rope **26** is under sufficient tension to hold the panels in place in accordance with the objects of the present invention.

In FIG. 4, there is shown a T wall addition and how the wall panels are then cinched together by using the winch. The winch or holding flange **30** is not ordinarily visible on the finished panel, and it is within the purview of the present invention to provide couplings for the panel sections **10**, **12**, by using the rope **26** in accordance with the embodiment described and illustrated in FIG. 4.

Such panels could be unlocked by removing the screw from the holding flange, removing the top brace, sliding the panels to clear the overlapping joints and lifting the panels over the floor rail. Thus, it would take only a few minutes to take down an entire wall section.

Doors and windows could be built into panels.

Everchanging space requirements in offices and possibly homes makes it desirable for a method of constructing movable walls with materials available in local markets. The great variety of prefinished wall paneling now available also makes this invention practical.

Although the invention is directed to the simple winch with a holding flange, a more expensive device using a ratchet instead of the holding flange should be included in the application.

Additional embodiments of the invention in this specification will occur to others and therefore, it is intended

that the scope of the invention be limited only by the appended claims and not by the embodiment described hereinabove.

Accordingly, reference should be made to the following claims in determining the full scope of the invention.

What is claimed is:

1. Winch lock movable partitions comprising pairs of wood paneling or other wall board, side frame members rigidly spacing apart said pairs of wall board and adapted to lock in place over a floor rail and in alignment with a ceiling brace, one of a pair of adjacent side frame members retaining a locked end of a nylon rope fixedly through a hole therein, the other of said pair of adjacent side frame members mounting a holding flanged winding rod, said rod having locking means on said flanged portion, and said rod having an end receiving portion including a hole to tie the other end of said nylon rope, for tensioning the rope when a crank turns the winding rod for locking movable partitions temporarily together.

2. The invention of claim 1 wherein said wall boards form a T-shaped wall section.

3. The invention of claim 2 wherein rivets hold the flanged rod in place.

4. The invention of claim 2 wherein apertures are disposed in the flanged rod.

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