April 18, 1944. F. MASTRANGELO 2,346,982

KNOCKDOWN CABINET OR LOCKER

Filed May 6, 1942 2 Sheets-Sheet 1

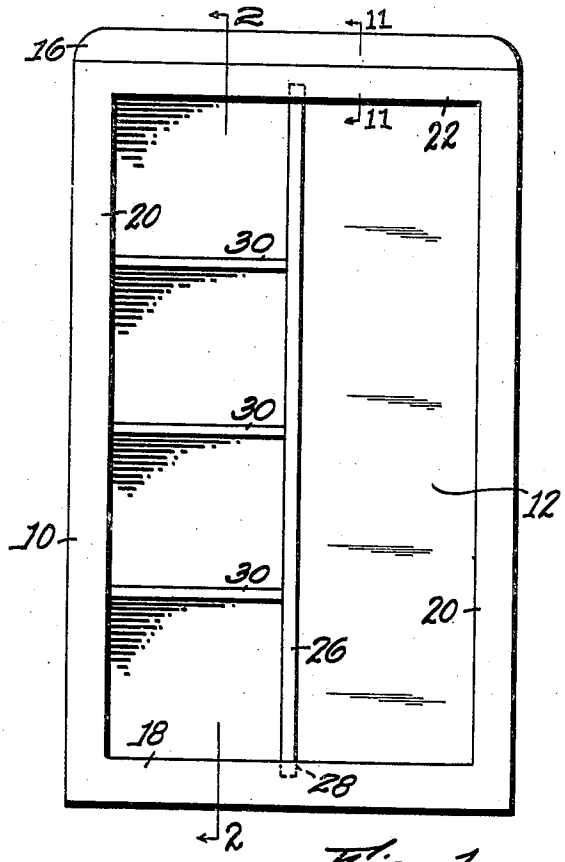


Fig. 1.

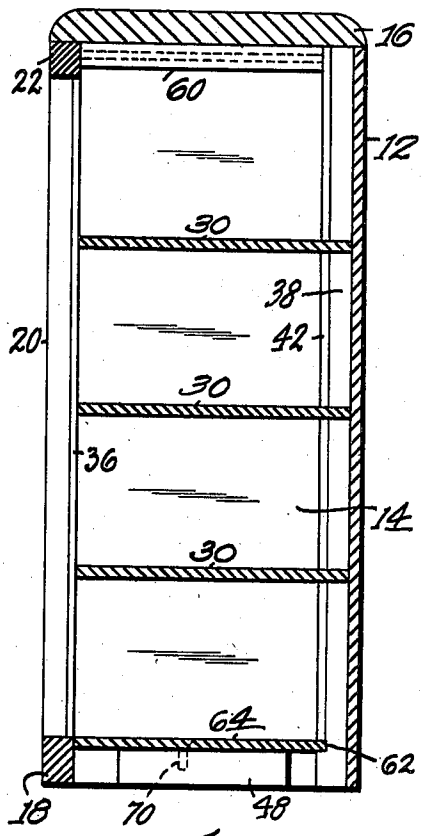


Fig. 2.

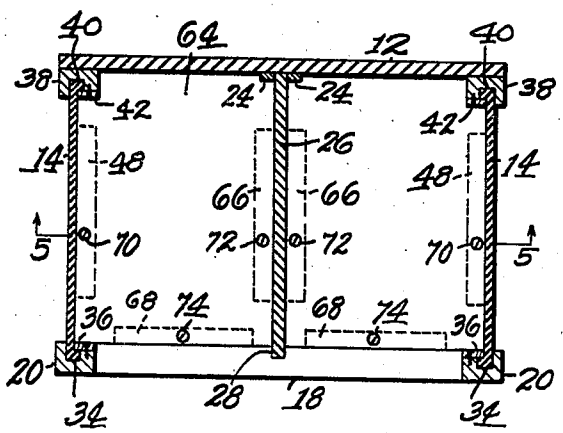


Fig. 3.

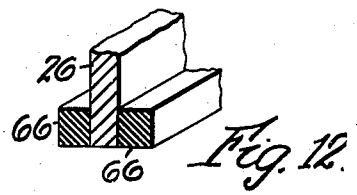


Fig. 12.

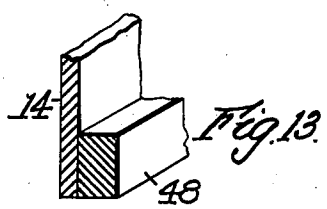


Fig. 13.

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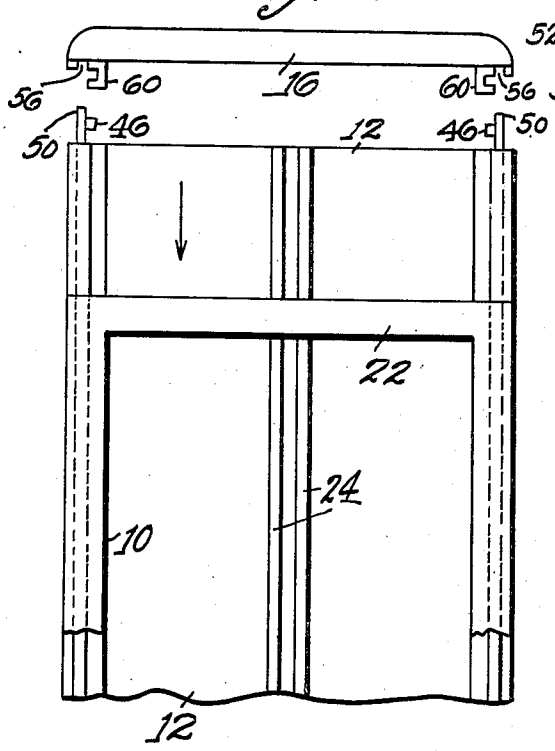
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April 18, 1944. F. MASTRANGELO 2,346,982

KNOCKDOWN CABINET OR LOCKER

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Fig. 4



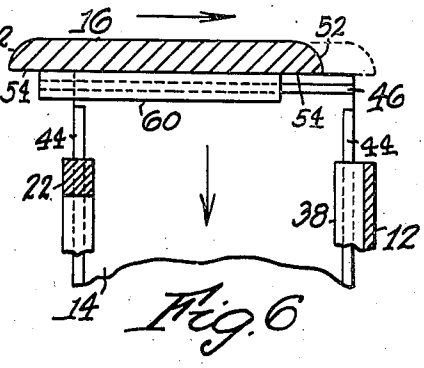


Fig. 6

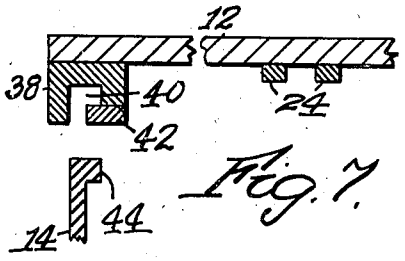


Fig. 7.

Fig. 8.

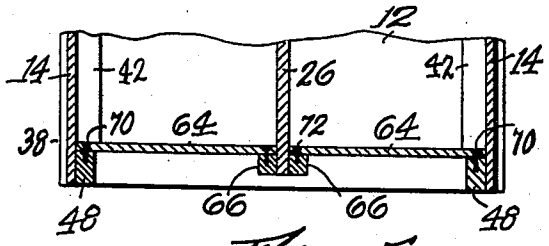


Fig. 5.

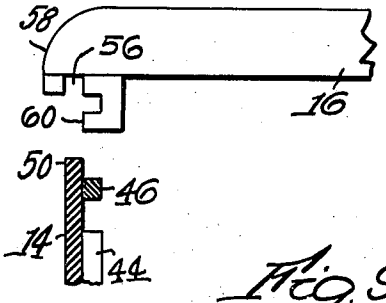
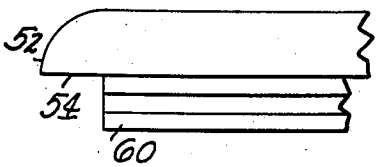


Fig. 9.



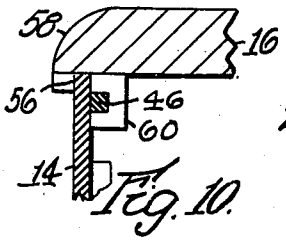


Fig. 10.

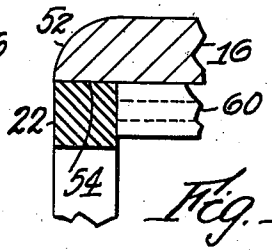


Fig. 11.

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UNITED STATES PATENT OFFICE

2,346,982

KNOCKDOWN CABINET OR LOCKER

Frank Mastrangelo, Fitchburg, Mass.

Application May 6, 1942, Serial No. 441,925

6 Claims. (Cl. 312—143)

This invention relates to a knock-down cabinet or locker construction and the objects of the invention include the provision of a cabinet or locker having separate sides, front, rear, top, and shelves, wherein the parts are so arranged as to allow the complete assembly and fastening thereof into a unitary device in a few minutes, and wherein a few wood screws are the sole fastening members; the provision of a knock-down cabinet or locker which may be shipped with the parts all in flat parallel condition and which may be put together in a minute or two with a screw driver as the only tool necessary, said cabinet or locker being as easily taken down as it is assembled; and the provision of a cabinet or locker wherein separate side panels may be locked to a separate top, the side panels then being locked to separate front and rear frames to assemble the cabinet or locker, all without the use of separate fasteners or tools of any kind, there being a shelf which is adapted to be screwed to the side panels and front frame to make the cabinet or locker a unitary device which cannot be taken apart in any respect except upon removal of the screws in the shelf.

Other objects of the invention include the provision of a knock-down cabinet or locker having front and rear frames or panels provided with undercut grooves at the interior side surfaces thereof, for the slidable reception of cleats secured to a pair of side panels, to secure the latter to the front and rear frames without the use of tools; the provision of a top member having cleats for the slidable cooperation with grooves or cleats in the side panels, the top being slid onto the side panels just prior to final seating of the latter in the front and rear frames, the cleats on the top member fitting between the front and rear panels and being stopped thereby against sliding from the side panels once the latter are finally seated; and the provision of a cabinet or locker as just above described including a shelf or shelves for screw attachment to further cleats on the front frame and side panels to rigidly lock all the members together in unitary condition for use, the cabinet or locker being capable of easy dismantling upon the removal of the screws in the shelf.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the drawings, in which

Fig. 1 is a view in front elevation of a cabinet or locker embodying the invention;

Fig. 2 is a vertical section on line 2—2 of Fig. 1;

Fig. 3 is a horizontal section through the cabinet or locker;

Fig. 4 is an exploded view showing assembly of the parts;

Fig. 5 is a section on line 5—5 of Fig. 3, parts being broken away;

Fig. 6 is a vertical section showing the assembly;

Fig. 7 is an exploded sectional view of a corner detail;

Fig. 8 is an exploded view of the top assembly, parts being broken away;

Fig. 9 is a side elevation of the top element;

Fig. 10 is a sectional view showing the parts of Fig. 8 assembled;

Fig. 11 is a section on line 11—11 of Fig. 1;

Fig. 12 is a perspective view of the lower end of the center panel; and

Fig. 13 is a perspective view of the lower end of a side panel.

In the drawings there is shown a cabinet or locker comprising a front frame 10, a rear frame or panel 12, two side panels 14, and a top 16. The front frame consists of a bottom rail 18, vertical side rails 20, and top rail 22, these parts forming an open frame which may be equipped with doors to close the locker if desired. The rear panel is provided with spaced cleats 24 which do not extend to the bottom of the locker but which form a guideway for the slidable reception of a center panel 26, this center panel being received and supported at its front edge in a notch in the bottom rail 18 of the front frame, as illustrated at 28, and at its rear edge, the center panel may be supported in a stop in the guideway or by other similar means. Shelves 30 may be supported between the center panel and one side panel as by conventional brackets, thus providing a shelf storage, there being an open coat storage space at the other side of the center panel.

The vertical side rails 20 of the front frame are provided with vertical slots 34 extending from the rear surfaces of the rails forwardly of the locker. These slots form the rails into a U-shape, and the inner legs of the U's are shorter than the outer legs to provide seats for strips 36 which partially overlie the slots 34 so as to produce an undercut in each slot as shown. Slots 34 extend from top to bottom of the side rails for the purpose of slidably receiving the side panels 14, as will be described.

The rear panel 12 is provided with separate vertical side rails 38 which are permanently secured thereto on the inner surface thereof, and these side rails are provided with longitudinal slots 40 and overlying strips 42 to form undercut grooves or slots complementary to the slots 34 in the front frame. The effect of slots 34 and 40 is to provide vertical guideways in the front and rear frames for slidably receiving and retaining the side panels.

Each side panel 14 has vertical edge cleats 44 integral therewith and top and bottom horizontal cleats 46, 48 respectively. All three cleats on each panel are disposed on one surface only, the outer surfaces of the side panels being left plane. Top cleats 46 are slightly spaced from the top edges of the side panels to leave a top vertically projection portion 50.

The top element 16 comprises a solid flat body having its edges quarter-round to form smooth lines with the front and rear frames. At the front and rear edges 52 the top is rabbeted or undercut at 54 to fit the frames, and a pair of parallel grooves 56 are formed adjacent to but spaced from the side edges 58, these grooves running from undercut to undercut across the top at its under surface. A pair of outwardly facing angle cleats 60 are permanently secured to the under surface of top 16 so that their angled free edges terminate substantially even and parallel with the inner walls of grooves 56.

Rear panel rails 38 are slightly slotted at 62 for the reception of the rear edges of bottom shelves 64, which also underlie elements 42, these shelves being adapted to be screwed to cleats 48, 66, and 68, cleats 66 being permanently secured to opposite sides of the center panel 26 and cleats 68 being similarly secured to the rear face of bottom rail 18 of the front frame. All of cleats 48, 66, 68 are positioned so as to present top shelf-supporting surfaces at a level which will ensure that shelves 64 lie even with the bottom rail 18. A single wood screw secures the separate shelves 64 to each of the three cleats provided therefor, as shown at 70, 72, 74, and this will rigidly secure the side panels and center panel to the front frame.

To assemble the cabinet or locker, the front frame 10 and rear panel 12 are stood up and the central and side panels are vertically downwardly slid with respect thereto by inserting the former in guides 24 and side panel cleats 44 in the slots or grooves 34, 40. Before the side panels are finally seated, the top 16 is slid horizontally onto the tops of the side panels, slots 56 receiving the tops 50 of the side panels and angle cleats 60 receiving cleats 46. Obviously, the top 16 cannot be removed from the side panels or the locker except by sliding it to front or rear of the locker, and the side panels cannot be removed from the front frame and rear panel except by a vertical lifting movement. When the top 16 is correctly centered on the side panels, the latter and the top as a unit are pushed or slid downwardly, and the top will come to rest with the undercuts 54 resting on the front frame and rear panel, while the ends of cleats 60 are located and fit just between the front frame and rear panel, so that now the top may not be moved relative to the side panels in any direction.

Bottom shelves 64 are then inserted in slots 62 in rear panel rails 38, and these shelves come to rest and are supported on cleats 48, 66, 68. The screws 70, 72, 74 are driven in with an ordinary screw driver, and as this prevents any movement of the side panels relative to the front frame, the rear panel being anchored by reason of the shelves 64 extending into slots 62, the entire locker is rigidly anchored together and cannot be taken or fall apart except upon removal of the six screws. Clearly however, if a single bottom shelf 64 were used, only three screws would be necessary.

To disassemble the locker, the six screws are removed, the shelves 64 are lifted up and removed, and the top 16 and side panels 14 are raised as a unit to a position wherein the top cleats 60 are free of the front frame and rear panel, whereupon the top may be slid horizontally off the side panels. Center panel 26 and shelves 30 may then be taken out, and the entire locker may be shipped in flat pieces.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. A knock-down locker or the like comprising a front frame, vertical undercut grooves adjacent the sides of said frame, a rear panel, vertical undercut grooves adjacent the side edges of said panel, side panels, means on said side panels adapted to be slidingly received in said grooves to detachably connect said front frame, rear panel, and side panels together, horizontal cleats adjacent the tops of the side panels, a top element, means on the top element to slidingly receive said horizontal cleats to detachably secure said top element to said side panels, said last means fitting between said front frame and rear panel, a shelf or the like, and fasteners securing said shelf to said front frame and at least one of said side panels, whereby said locker may be completely disassembled by removing said fasteners, sliding the side panels vertically from the front frame and rear panel, and sliding the top element horizontally from the side panels.

2. A knock-down locker or the like comprising a front frame, vertical undercut grooves in the rear surface of said frame, said grooves being located adjacent the side edges of the frame, a rear panel, vertical undercut grooves in said panel, said grooves being located at its side edges, a pair of side panels, vertical cleats on said panels adapted to be slidingly received in said grooves to detachably secure said front frame, rear and side panels together except against relative vertical movement, a top element, cleats on said top element, horizontal cleats on said side panels located adjacent the tops thereof, said top element cleats being in part slidably receivable under said side panel horizontal cleats, to detachably secure said top element to said side panels, said top element cleats fitting between the front frame and rear panel, said front frame and rear panel providing stops to prevent such horizontal movement, a bottom shelf in said locker, and detachable fasteners securing said front frame and one side panel together to prevent relative vertical movement of said side panels and front frame.

3. A knock-down locker or the like as recited in claim 2 wherein the rear panel is provided with a horizontal slot, said shelf entering said slot to thereby prevent vertical movement of said rear panel with respect to said side panels.

4. A knock-down locker or the like as recited in claim 2 including a vertical guideway on the interior surface of the rear panel and a vertical slot in said front frame, and a center panel slidably received in said guideway and slot.

5. A knock-down locker or the like as recited in claim 2 including a center panel, means whereby said center panel is vertically slidably mounted in said front frame and rear panel, a second bottom shelf, and detachable fasteners for securing said second shelf to said center panel, the other side panel, and said front frame.

6. A knock-down locker or the like as recited in claim 2 including a center panel, a cleat on one side of said center panel at its lower end, means whereby said center panel is vertically slidably mounted in said locker, said bottom shelf extending between one side panel and said center panel, and a further detachable fastener for securing the shelf to the cleat.

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