Aug. 13, 1929. E. W. CUMMINGS 1,724,457

FOLDING BENCH STRUCTURE

Filed Aug. 23, 1926

Fig. 2.

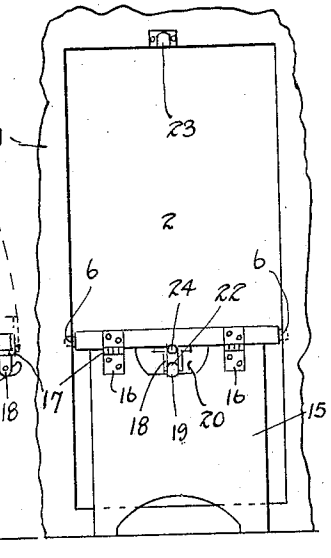


Fig. 1.

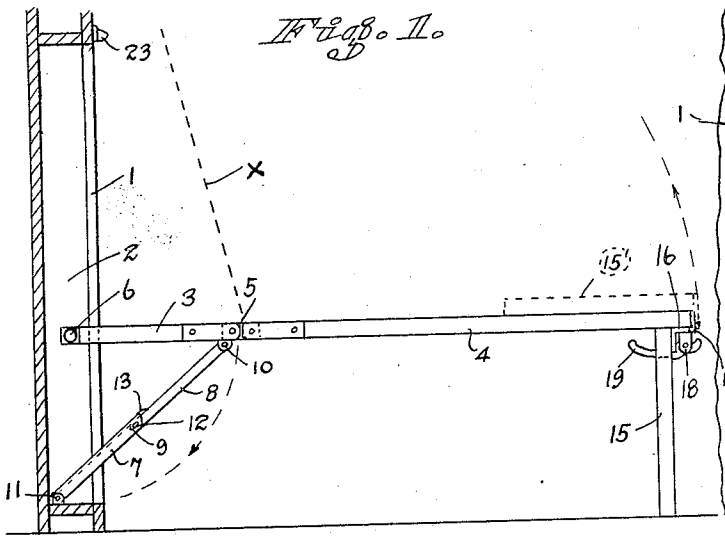


Fig. 3.

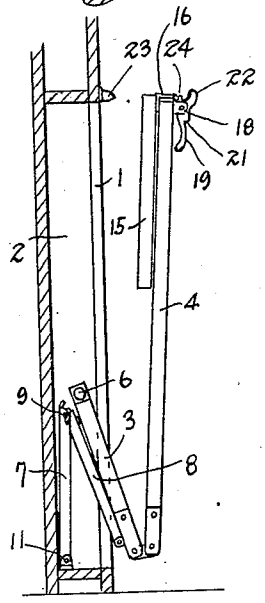


Fig. 4.

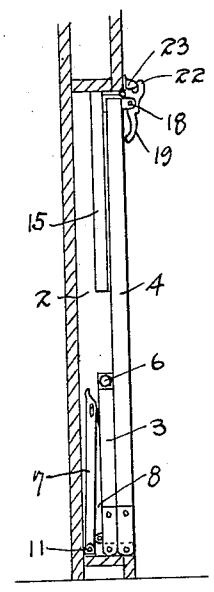
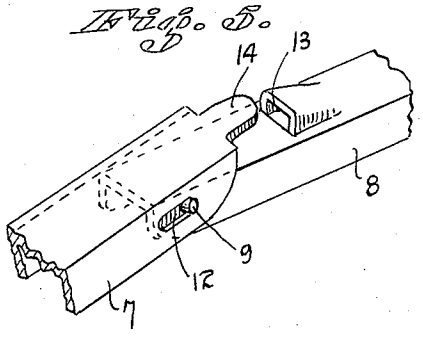


Fig. 5.



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UNITED STATES PATENT OFFICE.

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FOLDING-BENCH STRUCTURE.

Application filed August 23, 1926. Serial No. 130,893.

This invention relates to folding bench structures as pivoted at one end to a wall or support, and to similar service board structures whether of a height and size to adapt them for use as tables, benches or ironing boards.

The objects of the invention are to provide such a structure which will be more rigid and safer against collapse when unfolded, or that is, outfolded, for use, and which is simple in operation.

In the drawings hereto Figure 1 is a side elevation of my invention as applied to a folding bench shown projecting in outfolded condition from a wall.

Figure 2 is an end view of Figure 1.

Figure 3 is a side view similar to Figure 1 but showing the elements in partly folded position.

Figure 4 is similar to Figure 3 but shows the elements folded to vertical position within the wall space or cabinet.

Figure 5 is an enlarged perspective detail of the strut joint.

More specifically the drawings show at 1 a wall or cabinet with a recess 2 with a horizontally extending service board or bench extending therefrom. This bench is in two sections 3 and 4 pivoted or hinged together at 5 with the longer outer portion 4 arranged to swing upwardly with relation to section 3 as dotted, and the latter is pivoted or hinged at 6 to the wall or cabinet to swing downwardly as dotted.

A folding brace of two sections 7 and 8 pivoted together at 9 is pivotally connected at opposite extreme ends to the board and wall respectively at 10 and 11.

This brace is of channel iron section with the lower one 7 made wider so as to overlap the upper section and bring its side legs parallel therewith as shown in Figure 5. The relation is sustained by a pin 9 passing through all of the legs, and the legs of one of the sections are slotted for the pin as at 12 so that the sections will be free for limited sliding movement on one another.

The web of member 8 is punched outward to form a pocket as at 13 and the extreme end of the web of member 7 is formed into a prong 14 to fit within this pocket upon the sections being aligned by lifting the bench a little above the horizontal.

The outer end of section 4 of the bench is further braced by a leg 15 hinged thereto by a pair of double offset hinges 16 having their axes at 17 so that the leg will swing from a vertical position (15) under and set back from the end of the board, to a position flat upon the top of the board as dotted at 15′ in Figure 1.

At the under-side of the bench at the extreme end is secured a bracket 18 pivotally supporting a member 19 extending through a space or notch 20 at the upper end of the leg. This member 19 is provided with a lug or shoulder on it at 21 which through a falling of the pivoted member when in position of Figure 1 engages the outer side of the leg and holds it against being accidentally kicked outward to collapse the bench.

To fold, the member 19 must be released by lifting it or else the outer section 4 of the bench must be swung back to an angle as per dotted line X at which point the member will fall out of engagement with the leg. In either event the leg may then be folded to position 15′ and the member then serves as a handle wherewith to lift the bench slightly on its pivots 6 and whereupon the brace 7—8 may be collapsed by pushing lightly with the foot and the whole assemblage lowered to the position shown in Figure 3.

By further movement to carry all members within the cabinet, a nose 22 on the member 19 acts as a stop against a locking bracket 23 secured to the wall or outside frame of the cabinet so as to determine the closed or folded relation of the parts, then upon giving the handle portion 19 a downward movement or upon letting it fall, a locking jaw 24 formed on the member 19 engages a complementarily formed catch on the bracket 23 to lock the combination in folded position as shown in Figure 4.

I claim:

1. A service board of the character described hinged to a support to swing from a vertical to a horizontally extended position, a leg at the outer end of said board, a hinge secured to the board and to the leg, said hinge comprising two plates pivoted together along one axis only, one of the plates secured to the board and one to the leg, the latter plate provided with a stepped offset portion whereby the leg is adapted to swing from a vertical position directly under and

with upper end against the extended board, outwardly clear over the end thereof to a position parallel with and against the top side of the board.

2. A service board hinged to swing from a vertical to a horizontally extended position, a leg hinged to the board adapted for folding parallel therewith, and means on the board adapted to lock the leg in standing position when the board is horizontally extended and serving also to lock the board when in vertical position.

3. A service board hinged at one end in a recess to swing from a vertical position therein to a horizontal position in extension therefrom, a leg hinged to the board adapted for folding parallel therewith, and means adapted to lock the leg in standing position when the board is horizontal and also operative as a stop for the board when swung to vertical position to align it within the recess.

4. A hinged service board of the character described provided with a strut brace extending angularly from under the board to a stationary support, said brace being formed of two dissimilar width channel sections one in straddling relation to the other slidably pivoted together through the legs of the channels, an offset pocket formed in the web of one section and a prong on the web of the other section adapted to mutually engage when the strut is in bracing position.

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