F. CARR.

TOOL CHEST.

APPLICATION FILED MAY 3, 1919. RENEWED NOV. 29, 1920.

1,366,243.

Patented Jan. 18, 1921.

Fig. 1.

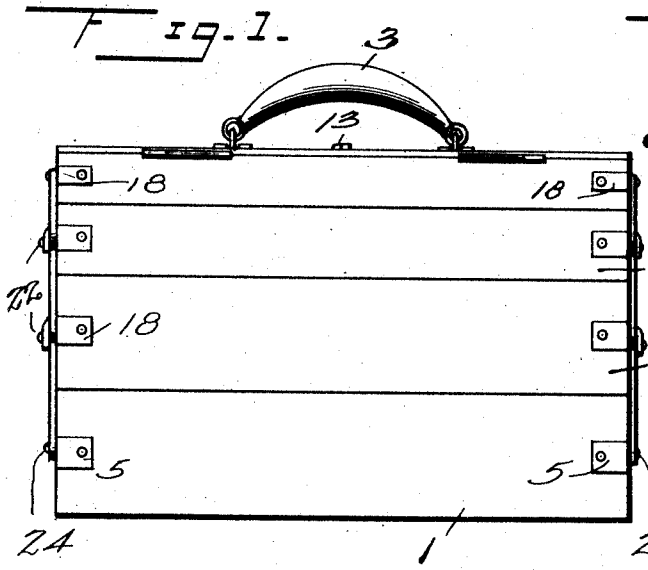


Fig. 2.

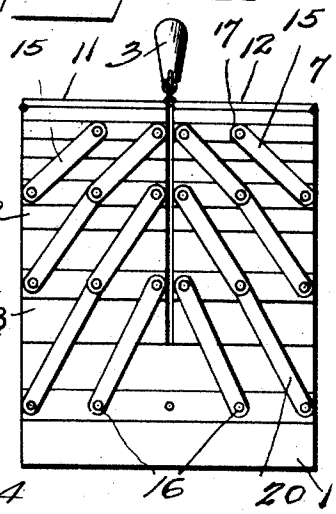


Fig. 3.

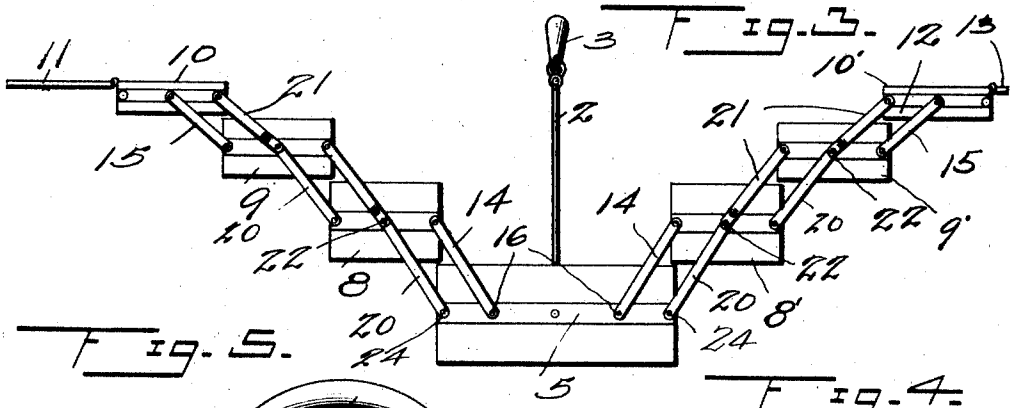


Fig. 5.

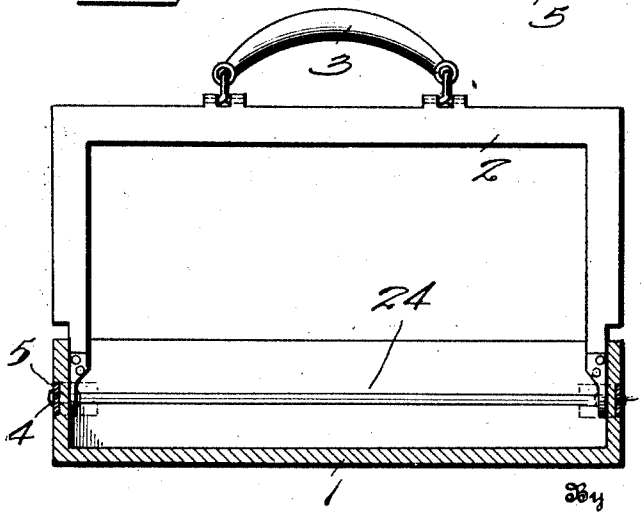


Fig. 4.

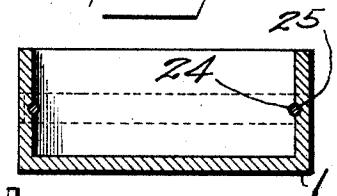
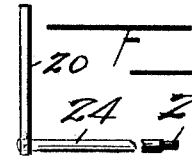


Fig. 6.



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TOOL-CHEST.

1,366,243. Specification of Letters Patent. Patented Jan. 18, 1921.

Application filed May 3, 1919, Serial No. 294,613. Renewed November 29, 1920. Serial No. 427,205.

To all whom it may concern:

Be it known that I, FRANCIS CARR, a citizen of the United States, residing at Ogden, in the county of Weber and State of Utah, have invented a new and useful Tool-Chest, of which the following is a specification.

The present invention relates to improvements in tool chests of that type involving the use of display receptacles or trays which are attached together so that the trays may be brought together in compact form in two tiers, or opened into position where the trays are terraced or stepped relatively to each other.

The primary object of the invention is the provision of a simple but strong structure of this character whereby the chest may be opened, either one tier at a time, or both tiers simultaneously, in order that access to the contents of the trays and boxes may be had with facility and the article sought may be quickly found and procured. Thus the invention is adapted for many uses and the trays or boxes of the chest may contain articles, implements, or tools peculiar to the profession or trade of the owner.

In the accompanying drawings one complete example of the physical embodiment of the invention is illustrated, the parts being combined and arranged according to the best mode so far devised for the practical application of the principles of the invention.

Figure 1 is a side elevation of the tool chest of the invention, the trays being compacted and closed.

Fig. 2 is an end view of the chest or cabinet of Fig. 1.

Fig. 3 is an end view of the chest with the chest trays opened out in terraced form for displaying the contents of the trays.

Fig. 4 is a transverse view in section of one of the trays.

Fig. 5 is a view showing the bottom box or base tray in longitudinal section and illustrating the attachment thereto of the handle and bail for carrying the chest.

Fig. 6 is a detail of one of the connecting rods and a link forming part of the structure of the chest.

In the preferred form of the invention as illustrated in the drawings I utilize the bottom box or tray 1 as the base of the chest, and this box is of suitable dimensions, preferably rectangular in shape and open at the top for the U-shape bail 2, made of sheet metal and fashioned with an attached handle 3 similar to a satchel handle, while the bail is pivoted at each end, as at 4, in a metallic strap 5 at the ends of the box. As shown, the box is of wood and the strap 5 is of metal to reinforce the structure and form bearings for the pivots 4, 4, as well as performing a similar function for other parts as will be described.

Above the box or base tray are arranged two tiers, as 6 and 7, of trays indicated by the numerals 8, 9, and 10 and 8′ 9′ 10′ superposed in tiers and located symmetrically at the sides of the longitudinal center of the bottom box upon which they are supported, both in compacted form and in opened position.

The uppermost trays 10 and 10′ are provided with hinged lids 11 and 12 respectively, and a latch or lock 13 may be employed in usual position to lock the two tiers of trays together when compacted, this lock device being of suitable or desired nature, or type.

As clearly shown in the drawings the trays are connected together by pivoted links which permit folding of the trays into compact form as in Fig. 2, and also permit opening of the trays or tiers of trays as in Fig. 3. The links are arranged as single units and as pairs, as for instance, the two lowermost trays 8 and 8′ are connected to the base tray by a pair of single links 14, 14, and the two uppermost trays 10 and 10′ are connected with their respective next lower trays 9 and 9′ by the single links 15, 15, the lower ends of the single links 14 being pivoted at 16 in the metal strap 5, and the upper ends of the links 15 being pivoted at 17 to a similar reinforcing metal strap 18, which latter strap is used, one on each of the trays 8, 9, 10, and 8′ 9′ 10′. In addition to these single links there are employed pairs of links as 20 21 which have their outer ends connected at the extreme sides of the trays, while their connected, inner ends are pivoted at 22 to a common pivot point secured at the longitudinal axial center of the trays. It will of course be understood that complementary links are arranged at both ends of the chest, and the description of one set will be applicable for both ends.

One end of each individual link is rigidly

secured to the squared end 23 of a rock bar 24, and each of the trays, except the two uppermost ones, has a pair of rounded grooves 25 in the interior opposite faces of their side walls to receive and support these bars 24. The two uppermost trays 11 and 12 need only one bar each and these bars, which lie and may turn in the grooves, extend through openings in the ends of the trays and have a reinforced bearing in the metal straps 18 of the trays. Thus each tray is supported by two pairs of links, one pair at each end, and the links are pivoted on a tray beneath the one supported, one pivot support on the rock bar seated in the groove in the wall of the lower tray, and the other pivot support at the longitudinal central axis of the lower tray. Exception however is made to the base tray or box, which has the links 20 pivoted at the sides of the tray, while the links 14 are pivoted at equidistant points at the sides of the longitudinal central axis of the tray. The supporting links of the trays remain in parallelism at all times, and when it is desired to open the chest, the latch or lock 13 is first opened or released and then one or both of the tiers of trays may be opened out to the terraced position of Fig. 3. In the opening movement the tray swings outwardly on the pivot centers, as for instance, the tray 10′ is swung outwardly from the lower tray 9′ in order to uncover and clear the top of the tray beneath, and in this movement the links 15 and 21 (at both ends of the tray) swing, the latter on rock bar 24 as the upper pivot point and fixed point 22 as the lower pivot and the former on the fixed upper pivot point 22 with the rock bar 24 as its lower pivot in the side wall of the tray 9′. The action of the other trays is the same as that explained and further explanation is unnecessary.

The four links, two at each end, supporting each of the superposed trays form a rigid and stable supporting instrumentality for the tray and they hold the tray in horizontal position so that the contents are easily accessible, and the relatively close arrangement of the end links permits freedom of movement so that the links may swing on their pivots, and this movement is enhanced by the utilization of the rock bars which are seated in the grooves of the side walls of the trays.

The handle, which is attached at the lower portion of the chest, to the base tray or box, provides a facile means for transportation, and the compactly arranged trays when arranged in tiers as shown may be readily carried by the handle 3.

What I claim is—

1. The combination in a tool chest with an upper and a lower tray each having a groove in the inner face of one of its side walls and rock bars in said grooves projecting through the end walls of the trays, a link fixed on the ends of each bar, and said links each having pivotal connection with the adjoining tray.

2. The combination in a tool chest comprising a base tray and opposed tiers of superposed trays, the inner faces of the walls of the trays having grooves and rock bars supported therein with their ends projecting through the end walls of the trays, links fixed on the said projecting ends and having their ends each pivoted on an adjacent tray, and the two uppermost trays having securing means to lock the tiers against lateral movement.

FRANCIS CARR.