

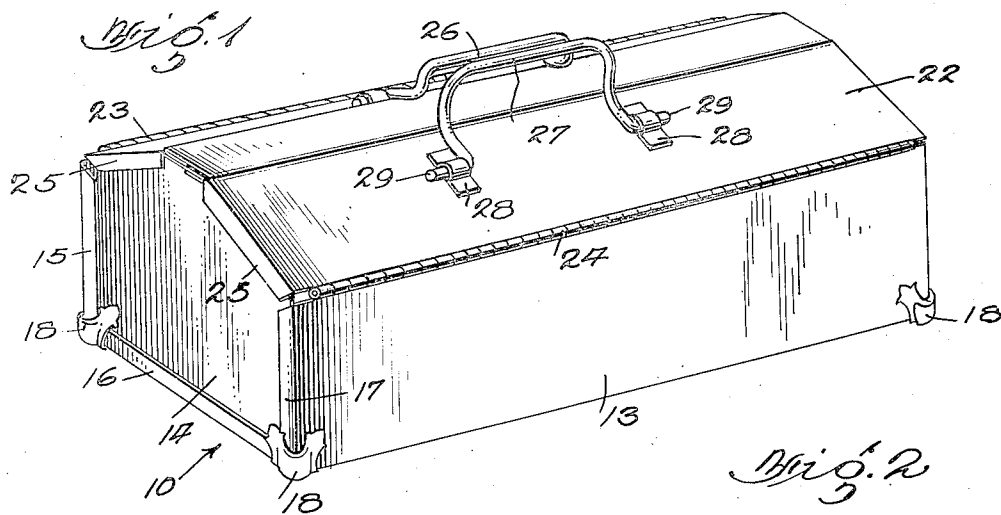
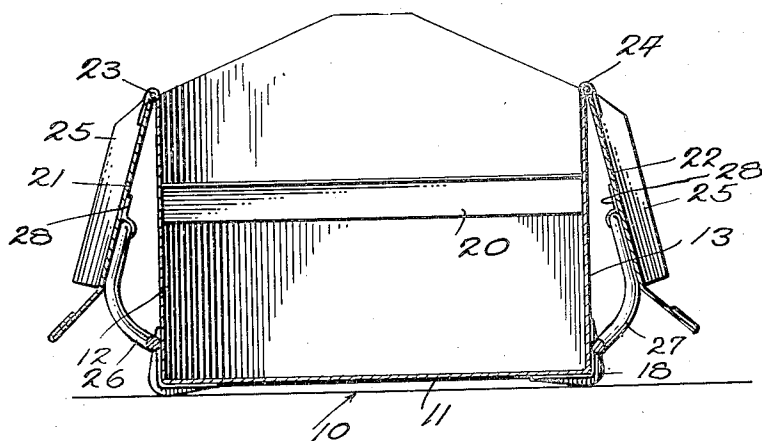
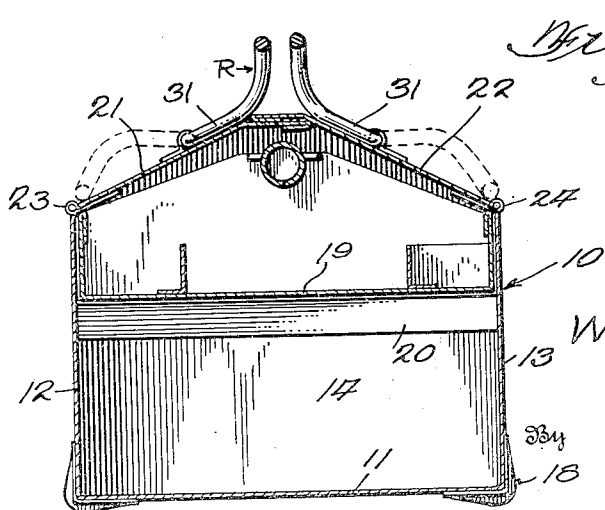
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TOOL BOX

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TOOLBOX

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2 Claims. (Cl. 206—16)

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The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes without the payment of any royalty thereon.

The present invention relates to tool boxes and more particularly to a portable sheet metal box arranged to contain mechanics' hand tools or similar articles.

One of the principal objects of the invention is to provide a tool box of novel and simplified mechanical design so constructed and arranged as to be instantly opened or closed and to be held in open or closed position without the necessity of providing any type of lock, hasp, buckle or latch.

Another important object of the invention is to provide a tool box of such mechanical design that it will be unusually rugged and durable in use and will be well adapted for economical methods of manufacture.

A further object of the invention is to provide a tool box wherein the top is closed by two identical and symmetrical overlapping top members, each arranged to include or support one of a pair of handles in such a manner that when the handles are grasped in one hand the box is held in closed position.

A further object of the invention is to provide a tool box wherein the cover is composed of two identical, relatively small cover sections, each arranged to assume a position nested closely against the side walls of the box when in their open position, in order that the open box will occupy a minimum of table or bench space.

Another object of the invention is to provide a new and improved tool box as described above, wherein handles may be folded downwardly against the top portions of the box in such a manner that they do not project above the extreme top of the box, so that the boxes may be stacked or inserted into shipping cartons without interference from the handles.

These and other important objects are accomplished in the present invention by the particular novel arrangement of parts hereinafter described.

Before entering into a detailed description of the preferred embodiment of the invention illustrated in the drawing, it should be pointed out that tool boxes available on the market at the present time are ordinarily arranged to be closed by some type of cover, but these are usually unsatisfactory to the average mechanic for several reasons. First, in the ordinary prior art structures, the box cover, when opened, projects up-

wardly or outwardly from one side of the box a considerable distance. This forms an obstruction preventing easy access to the interior of the tool chamber and thus prevents the quick and easy selection of a desired tool from the box or trays. In cases where the cover is so arranged as to extend laterally from the box, it is undesirable in that it occupies a comparatively large space, (often as great as the space occupied by the base of the box itself) without permitting any use whatsoever of the space thus occupied.

A further objection to the conventional type of tool box has been that the raised cover often shaded the interior of the box or cast shadows into the compartments or trays and thus rendered it difficult to select small screws or bolts or other mechanical parts that cannot be easily distinguished under poor illumination.

Another disadvantage to the conventional type of tool box now known to be available on the open market has been that they are arranged to be secured in closed position by some type of lock or hasp between the cover and the body of the box. In sheet metal constructions, where there is no great accuracy of manufacture and where all parts are subject to considerable abuse, either by corrosion, rusting or bending, such types of structures have been universally unsatisfactory for the reason that the locks fail to open and close without some effort on the part of the user and often stick or bind in such a manner as to completely prevent the box from being opened or closed. Inasmuch as in most conventional structures the box may be carried only by a handle secured on the top, the failure of the lock to adequately secure the top on the box body often results in accidental opening of the box while being carried in such a manner as to spill the entire contents.

The deficiencies of the prior art structures are overcome by the teachings of the present invention by providing a box having a top structure composed of two identical top sections, each of which is hinged along the opposite side of the side walls of the box and arranged to extend inwardly and overlap the other top section at the approximate center point of the container.

A handle member is pivoted on each of these top sections and so arranged that it will cooperate with the other handle to form a double hand grip, each handle lying sufficiently close to the other that they may be simultaneously gripped by one hand when the box is to be lifted. The handles are so shaped as to bear against

the surfaces of the top sections and hold them securely closed.

Referring now more particularly to the drawing,

Fig. 1 is a perspective view of a tool box constructed in accordance with the principles of this invention.

Fig. 2 is a transverse sectional view showing a box in open position with the tray removed.

Fig. 3 is a transverse sectional view showing the box in closed position.

The body 10 of the box consists of a bottom wall 11 and side walls 12 and 13, which are preferably formed of a single sheet of metal folded at the lower corners. End walls 14 are provided at each end and are united with the side walls and bottom by welding against the flanges 15, 16 and 17, formed on the bottom and side walls, respectively.

Preferably, though not necessarily, a conventional ball-shaped reinforcing piece 18 is welded on each of the lower box corners and if desired an interior tray 19 may be supported on brackets 20 secured to the inner surfaces of the end walls.

Inasmuch as the details of the tray constitute no essential part of the present invention, however, it will not be described in further detail.

The cover members wherein the essence of this invention resides, constitute two identical cover sections 21 and 22, each of which is secured to the upper edge of one of the side walls by a piano hinge 23 or 24. If desired, the hinges may be formed integrally with the cover sections, but it is considered preferable to utilize separate hinges spot-welded or secured in any other satisfactory manner to the side walls and to the top sections.

From an examination of Figs. 2 and 3 of the drawing, it will be seen that each of the cover sections 21 and 22 are identical and each is arranged to extend from one edge of the box somewhat across the center, so that when both covers are closed they will overlap along the top of the box where they contact each other. The inner edges of each of the covers 21 and 22 terminate in a marginal flange disposed at a slight angle from the main portion of the cover so that when the box is closed these flanges will lie in face-to-face relationship with each other. Inasmuch as the cover sections are identical, it will be seen that either may be closed first, and when the other is closed thereafter its marginal edge will lie smoothly against the upper surface of the first. Each of the cover sections 21 and 22 has downwardly extending flanges 25 at each end, arranged to overlap and extend downwardly along the outer surface of the end walls 14.

Each cover section is also provided with a pivoted bail handle 26 and 27 respectively, which is formed of a round metal rod pivotally mounted on the cover section by a pair of sheet metal straps 28 enclosing the trunnions 29. It should be particularly noted that the legs of each of the bail handles are not straight, but are curved on the radius R so that when they are raised into adjacent positions shown in solid lines in Fig. 3 and urged together as by the force exerted by the hand grip of the carrier, the lower portions 31 of the bail will bear against the flat upper surfaces of the cover members and will thus hold the covers firmly down against the top of the end walls 14 and against each other. Thus, whenever the tool box is being carried from place to place, the hand grip of the person carrying it serves to positively lock the covers against opening.

However, the box may be instantly opened to provide access to the contents by simply lifting the handles individually and swinging the cover sections about the hinges and downwardly into the solid line position illustrated in Fig. 2. In this position it will be noted that the cover sections 21 and 22 are entirely below the upper edges of the side walls so that they do not present any obstruction to access to the interior of the box and cannot in any manner interfere with the removal of the interior tray or tools. Further, they will not constitute any obstruction to visibility, or to illumination of the box interior.

It will also be apparent that the cover sections lie in a position closely nested against the side walls and out of the way so that they do not add substantially to the amount of space occupied by the box. Further, since the cover sections are hanging downwardly there is no danger of dislodging or upsetting the box by accidentally striking any type of overhanging or upstanding cover.

It should also be noted that even when the box is in fully opened position it may be instantly closed by simply swinging the cover portions upwardly and gripping the handles. In this operation it is absolutely immaterial which cover is closed first and it is unnecessary to operate any type of lock or hasp to keep the covers in closed position.

The handles project above the top of the cover a considerable distance in order to provide a convenient grip for carrying, but whenever the box is not actually being carried they may be pivoted downwardly in the dotted line position shown in Fig. 3, where they will occupy a position wholly below the upper extremity of the box and wholly within the outer side extremities of the box as defined by the opposite side walls. Thus, each box occupies a substantially rectangular area and the inclined surfaces of the covers serve to provide a space into which the carrying handles can be folded. This factor is of considerable importance as a practical matter, since any number of boxes can be stored together with absolutely no waste space between any one box and the one next adjoining it. Further, the boxes do not require any special or especially designed type of shipping carton, since they may be perfectly fitted into a standard rectangular fibre board carton without fillers of any description such as are customarily required around projecting locks, hasps, or carrying handles.

While I have shown and described a present preferred embodiment of the invention, in compliance with the patent statutes, I am aware that it is subject to numerous modifications and alterations without departing from the teachings of the foregoing disclosure, and I therefore wish to be limited only by the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A tool box comprising, in combination, a box body consisting of a bottom wall, a pair of side walls, and a pair of end walls, a pair of identical and opposite cover sections symmetrically disposed on each side of the longitudinal center plane of the box body, each of said cover sections being pivotally secured to the extreme upper edge of one of the side walls by a hinge and extending angularly upwardly over the open top of the box body and across the center of the box to directly engage and overlap the

inner edge of the opposite cover section, each of the inner edges of each cover constituting a marginal flange projecting angularly from the plane of the cover section so that the marginal flanges will contact each other and lie in lapped face-to-face relationship with each other; a handle portion pivotally secured to the upper surface of each of the cover sections at a point intermediate from and spaced apart from the lower edge of the cover and from the marginal cover flange, each of said handles comprising a substantially straight center grip portion, a pair of pivoting trunnions, and curved leg portions extending from the grip portion to the trunnions, the curvature of each of the leg portions being such as to cause the lower part of the leg to contact in face-to-face relationship with the upper surface of the top section as the grip portion approaches a position adjacent to but spaced apart from the opposite handle grip, the length of the leg portions of the handle bail being such that when the handles are pivoted downwardly toward the lower edge of the top sections the handles will lie entirely below the top of the center of the box and entirely within the lateral dimensions defined by the vertical side walls of the box.

2. A tool box comprising, in combination, a box body consisting of a bottom wall, a pair of side walls, and a pair of end walls; a pair of identical and opposite cover sections symmetrically disposed on each side of the longitudinal center plane of the box body; each of said cover sections being pivotally secured to the extreme upper edge of one of the side walls by a hinge and extending angularly upwardly over the open top of the box body and across the center of the box to directly engage and overlap the inner edge of the opposite cover section; each of the inner edges of each cover constituting a marginal flange projecting angularly from the plane of the cover section so that the marginal flanges will contact each other and lie in lapped face-to-face relationship with each other; each cover portion having a handle portion pivotally secured to the upper surface; each of the handle portions comprising a longitudinal grip portion, pivotal mountings, and legs having an offset portion adapted to bear against the upper surface of the cover section as the handle approaches a position adjacent to but spaced apart from the opposite handle grip, to maintain the cover sections in closed position.

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