May 25, 1926. 1,586,319

M. MEYERSON

TOOL BOX

Filed Dec. 1, 1920 2 Sheets-Sheet 1

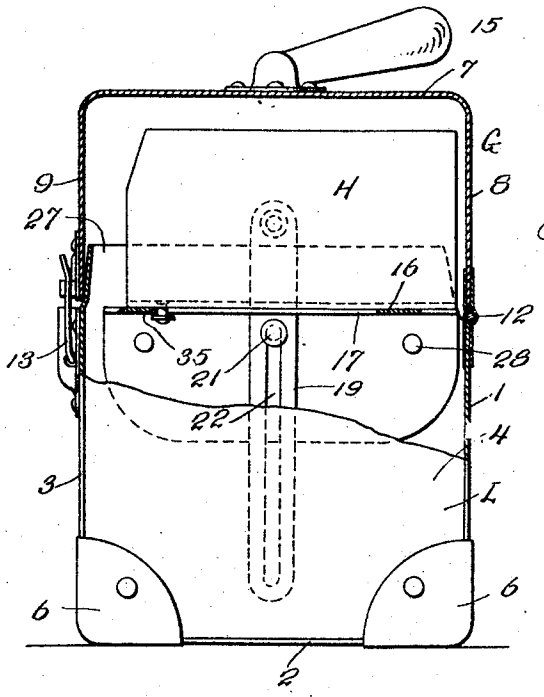


Fig. 1.

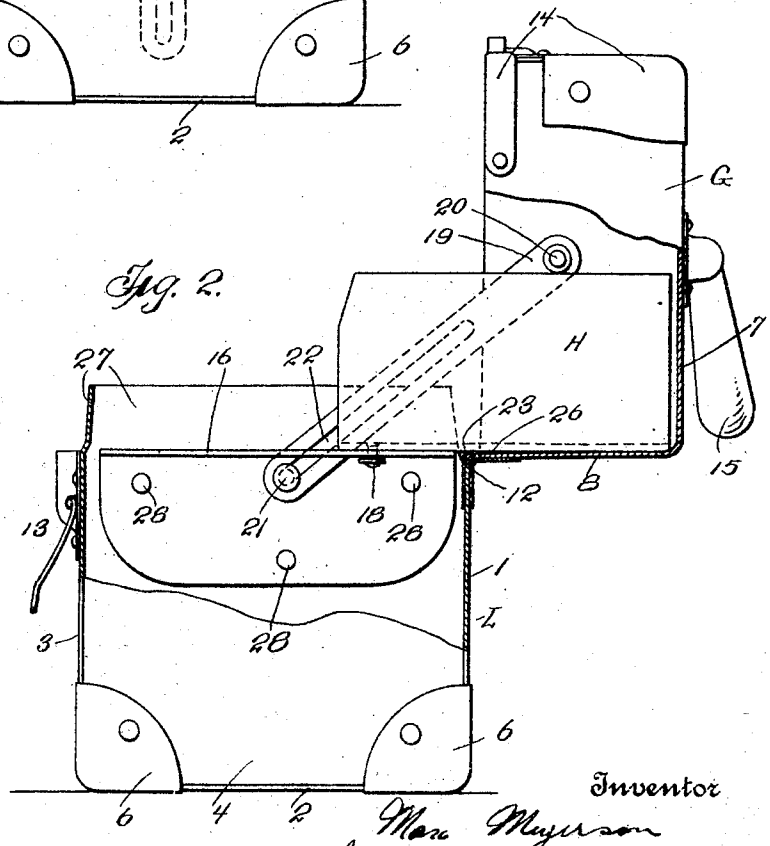


Fig. 2.

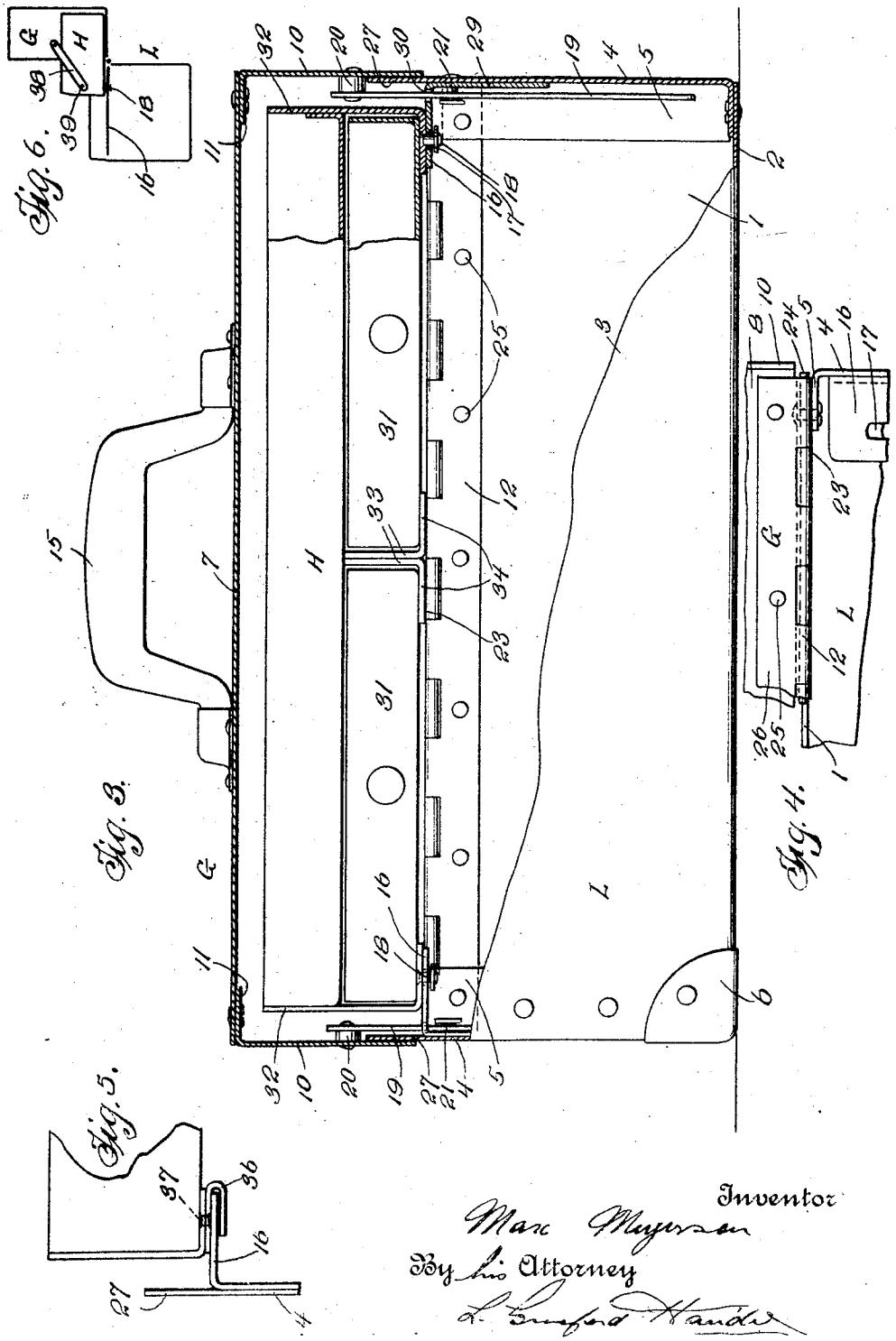
Inventor
Max Meyerson
By his Attorney
L. Crawford Handy

May 25, 1926. 1,586,319

M. MEYERSON

TOOL BOX

Filed Dec. 1, 1920 2 Sheets-Sheet 2



Inventor
Marc Meyerson
By his Attorney
L. Bradford Handler

Patented May 25, 1926. 1,586,319

UNITED STATES PATENT OFFICE.

MAX MEYERSON, OF NEW YORK, N. Y.

TOOL BOX.

Application filed December 1, 1920. Serial No. 427,602.

This invention relates to a tool box, the same being in the nature of an improvement over the structure shown and described in my pending application, Serial No. 216,663, filed February 11, 1918.

An object of the present improvement is to provide a tool box having practically the same advantages as in the box of said pending application, but being of much simpler and cheaper construction.

A further and more detailed object is to provide a box having a hinged cover and constructed so that when the cover is open a portion thereof will stand to complete a supporting guide, or runway, continuing from a guide or runway formed in the body of the box, so that a tray which is included within the box may be readily slid along said runway when desired.

A further object is to provide a continuous hinge by which the cover is connected with the body portion of the box, said hinge being disposed so as to form a part of, and strengthen, said runway.

A further object is to provide connections between the tray and the cover whereby the tray will be moved back and forth by movement of the cover.

Other objects and aims of the invention, more or less specific than those referred to above, will be in part obvious, and in part pointed out in the course of the following description of the elements, combinations, arrangements of parts and applications of principles, constituting the invention, and the scope of protection contemplated will be indicated in the appended claims.

In the accompanying drawings which are to be taken as a part of this specification, and in which I have shown merely a preferred form of embodiment of the invention:—

Figure 1 is an end elevational view of a box constructed in accordance with this invention, the upper part of the box being shown in vertical section, and the cover being shown closed.

Figure 2 is a similar view showing the position of parts as they appear when the cover is open and the tray slid back along the runway.

Figure 3 is a front elevational view of the box shown in Fig. 1, a portion of the front wall being broken away and parts being shown in section for disclosing details of construction.

Figure 4 is a fragmentary top plan view showing the joint between the cover and body portion of the box.

Figure 5 is a fragmentary view illustrating a modified manner of slidably guiding the tray, and

Figure 6 is a diagrammatic view for illustrating a modification in which the tray is connected with the cover to be slid back and forth by movement of the cover.

Referring to the drawings for describing in detail the structure which is illustrated therein, the reference character L indicates the main body of the box. This may be made up of any suitable material, but preferably consists of a single sheet of fibre, or like material, bent to form a back wall 1, a bottom wall 2, and a front wall 3. Separate pieces of material are connected to form the end walls 4, said end walls having flanges, as 5, formed thereon being bent inwardly and being riveted to the end portions of the back, bottom and front walls. Suitable metallic corner braces 6 are provided for receiving wear and to cooperate with the flanges for strengthening the structure. A very stiff, strong and substantial body is thus provided.

The cover, as G, is preferably also formed from a single sheet of material bent to form a top wall 7 and back and front walls 8 and 9. End pieces 10 are held in position by flanges, or the like, 11, and complete the cover.

The cover is hinged to the rear wall 1 of the body by a hinge 12, and suitable latches, or other fastening devices, 13 are provided upon the front walls 3 and 9 cooperative to latch the cover closed.

Metallic corner braces 14 may be provided for strengthening the cover, if desired.

A handle 15, of suitable design, is provided upon the top wall 7 by which to carry the box.

Within the box is arranged a tray, or the like, indicated by the reference character H. This tray is of such size as to fit easily within the upper portion of the body L and is

supported at its opposite ends upon a pair of brackets 16. The brackets 16 are rigidly connected with the end walls 4 and the upper surfaces thereof are positioned to stand in a horizontal plane with the upper surface of the hinge 12.

Each of the brackets 16 is provided with a slot 17 longitudinally thereof and within these slots move studs, or rivets, 18 which are fixed to, and depend from, the tray H, said studs, or rivets, serving to hold the tray against displacement from the brackets while at the same time permitting the tray to move longitudinally along the brackets.

Slotted links, as 19, are provided for supporting the cover in open position, said links being pivotally connected, as at 20, by their upper ends with the cover and being slidably connected by their lower portions with stationary studs 21 carried by the body. The relation of the studs 21 with the lower end walls of the slots 22 of the links is such as to limit opening movement of the cover at a point where the rear wall 8 of the cover stands in a horizontal plane substantially in continuation of the brackets 16 so that thus said back wall and said brackets constitute a continuous runway along which the tray may be slid at will whenever the cover is open.

The hinge 12 is of the continuous type and extends from end to end of the box. Its position in the plane of the brackets so that it also comprises a part of the runway is of considerable importance since it provides a metallic surface, and in fact a continuous metallic corner, directly at the point where the tray, in moving backwardly, leaves the body of the box and passes into the cover. This metallic corner is, therefore, always stiff, straight and strong, and amply capable of withstanding rough usage. The pivot portion of the hinge provides a rounded corner, as indicated at 23, directly at the point which is first engaged by the tray when the tray is being moved backwardly. This rounded corner materially facilitates the backward movement of the tray especially in instances where, due to fault in assembly, the hinge may be raised a trifle above the horizontal plane of the brackets 16.

The hinge employed is preferably formed of sheet metal, each half being of U-shape in cross section, and being formed to receive a pivot rod 24 between them, as indicated. The two legs of the U, in each instance, are made to straddle adjacent portions of the walls 1 and 8, and are connected to said walls by rivets 25 extending thru both legs and thru the interposed portions of the walls. It is to be noted that by this means the two legs of the U straddling the wall 1 not only greatly reinforce the upper edge of said wall but also serve as a means for strengthening the connection with the flanges 5 at the ends of said wall 1. Also, that the two legs straddling the wall 8 not only greatly reinforce said wall 8, but also provide a broad metallic wearing surface, as indicated at 26, as a part of the runway over which the tray is slidable.

The front wall 3 and end walls 4 of the body L are preferably extended upwardly above the top surfaces of the brackets 16, as at 27, and are disposed to lap inside of the cover when the cover is closed, thus completing an appropriately tight joint.

The brackets 16 are of angle shape in cross section, and are connected to the end walls 4 by means of rivets, or the like, as 28. The legs of these brackets lapping against the walls 4 provide a double thickness, as indicated at 29, thru which the stationary studs 21 extend, said studs being thereby more rigidly and firmly supported. Suitable slots 30 are provided thru which the links 19 may freely operate.

Altho the tray H may be of simple pan-like shape, yet obviously it may take any other form as desired, for instance, it may be provided with partitioned compartments or with separate drawers, or the like, as 31. It may be constructed in any desired manner, but preferably is provided with sheet metal angles, as 32, at its opposite ends for reinforcing purposes and for carrying the studs 18, as well as for providing a desirable surface for sliding along the runway. Similar angles, as 33, may be provided intermediate the length of the tray so as to cooperate with the end angles for providing suitable guideways for the drawers.

It is to be noted that where angles, as 33, are employed, the lower horizontal legs, as 34, of said angles are made to serve also as wear plates for sliding over the hinge and surface portion 26 of the runway. The importance of the continuous hinge, for providing a proper surface to be engaged by, and to support, the angles 33 is apparent.

The slots 17 formed in the brackets 16 have their end walls, as 35, disposed in position such that they will serve to limit forward movement of the tray at a point so that the tray cannot possibly be moved far enough forwardly to interfere with the free swinging movement of the cover.

In Fig. 5 a modification is illustrated comprising the use of a slide member 36 in lieu of the studs 18, said member 36 being fixed rigidly with the tray, as by means of one or more rivets 37, and being bent to extend about the edge portion of the brackets 16. The member 36 would, of course, be such as to stand entirely within the body of the box when the tray is slid backwardly into the cover.

In Fig. 6 is diagrammatically illustrated a structure which is in all respects the same as that heretofore described except that the

link 38, corresponding to link 19 has its lower end pivotally connected, as at 39, directly with the tray H instead of being slidably connected with the body of the box.

By this arrangement it is apparent that the opening and closing movement of the cover, operating thru the link 38, will cause the tray H to be slid back and forth along the brackets 16.

Since the tray is connected with the brackets by means of the studs or rivets 18 so that the forward edge of the tray cannot be lifted away from said brackets it will be apparent that the links 38, the tray, and said studs, provide a line of connections between the cover and the body for limiting the opening movement of the cover, it being pointed out particularly in this connection that the backward movement of the tray into the cover may be limited either by engagement with the top wall of the cover, or by engagement of the studs 18 with the rear ends of the slots 17.

As many changes could be made in this construction without departing from the scope of the invention as defined in the following claims, it is intended that all matter contained in the above description, or shown in the accompanying drawings, shall be interpreted as illustrative only and not in a limiting sense.

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

1. A tool box comprising a body portion and a pivotally mounted cover therefor, a tray arranged within said box, supporting means for said tray along which the tray is adapted to slide partly into said cover when the cover is open, and pivot forming means connecting the cover with the body, said pivot forming means being of metal and being disposed so that it constitutes a metallic wear surface along which the tray is adapted to slide.

2. A tool box comprising a body portion and a pivotally mounted cover therefor, a tray arranged within said box, supporting means for said tray along which the tray is adapted to slide partly into said cover when the cover is open, and pivot forming means connecting the cover with the body, said pivot forming means being of metal and being disposed so that it constitutes a metallic wear surface along which the tray is adapted to slide, and said pivot forming means also comprising a reinforcing strip extending from one end portion of the box to the other being fixed to the cover to thereby reinforce the cover to support the tray.

In testimony whereof I affix my signature.

MAX MEYERSON.