Oct. 23, 1951 A. H. EICHHOLZ ET AL 2,572,706

BOX LID SUPPORT

Filed May 16, 1949

Fig. 1.

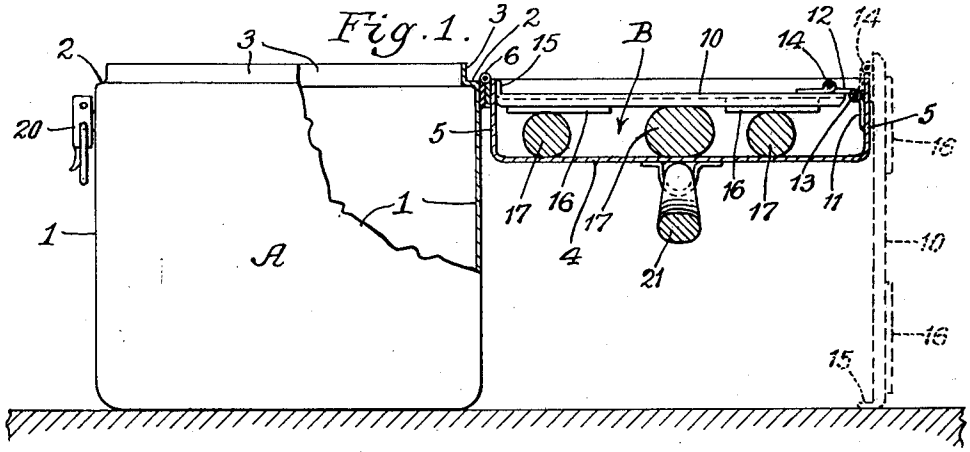


Fig. 2.

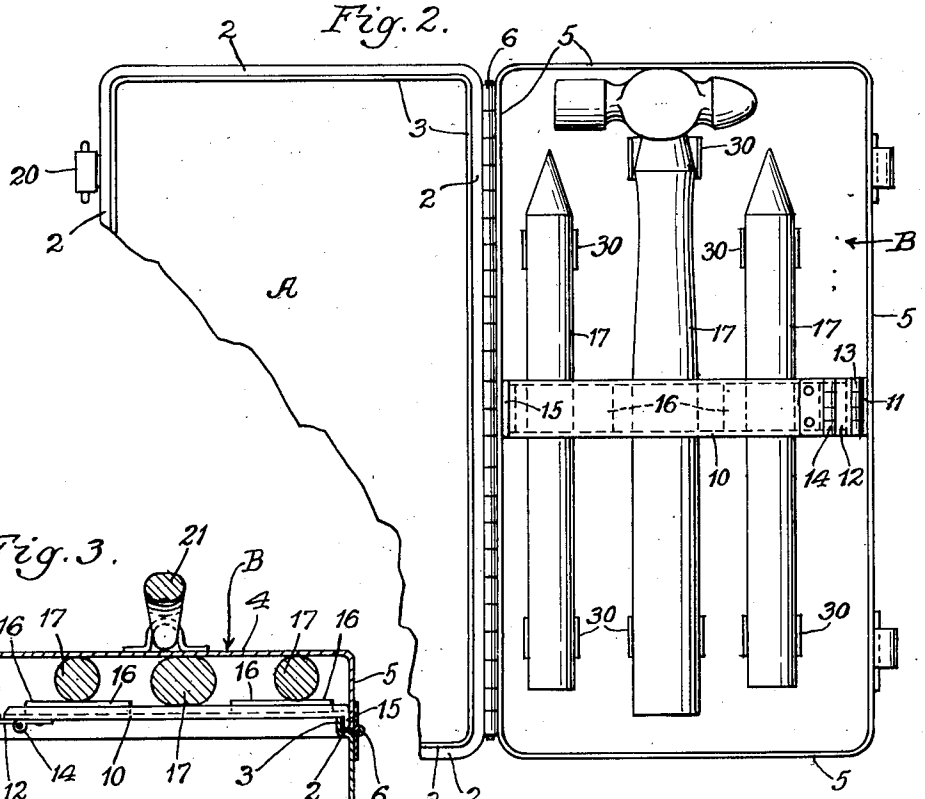


Fig. 3.

Inventors
Arthur H. Eichholz
Henry Samuelson
by Parker & Carter
Attorneys.

Patented Oct. 23, 1951 2,572,706

UNITED STATES PATENT OFFICE

2,572,706

BOX LID SUPPORT

Arthur H. Eichholz and Henry Samuelson, Chicago, Ill., assignors to Central Stamping and Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application April 16, 1949, Serial No. 87,938

3 Claims. (Cl. 206—16)

1

The invention relates to an improvement in containers and closures therefor.

One purpose is to provide an improved container adaptable for use as a work box or kit or tool box.

Another purpose is to provide a container with improved means for maintaining tools or other material within its lid and against unintended movement from the lid when the lid is closed.

Another purpose is to provide a container of the type described in which unitary means are provided for holding material within the lid when the lid is closed, and for holding the lid in generally horizontal position when the lid is opened.

Other purposes will appear from time to time in the course of the specification and claims.

We illustrate the invention more or less diagrammatically in the accompanying drawings, wherein:

Fig. 1 is an end view with the lid open and with parts broken away and parts in vertical section;

Fig. 2 is a plan view illustrating the container with the lid in open position; and

Fig. 3 is a partial vertical transverse section illustrating the parts with the lid in closed position.

Like parts are indicated by like symbols throughout the specification and drawings.

Referring to the drawings, A generally indicates a work box or tool box which may have side and end walls 1 which are shown as upwardly recessed as at 2 and terminating in an upper generally vertical portion 3.

B generally indicates a closure which is shown as including a top wall 4 and a circumferential side wall 5. The closure B may be secured to the box A by any suitable means. We illustrate, for example, a piano type hinge 6. The parts are so proportioned that when the closure B is in the closed position in which is is shown in Fig. 3 the edges of the closure side wall 5 surround the top portion 3 of the side and end walls of the box A and abut against the ledge or offset 2.

A primary purpose of our invention is to provide ready means for holding tools or other equipment or material in place within a lid of a work or kit box, so that they will remain in place when the closure is in the closed position of Fig. 3, but will readily be available for use when the closure is in the open position of Figs. 1 and 2. However, if it happens that the box A is partly or substantially empty, with the closure

2

B loaded with heavy tools or material, then there is the risk that the weight within the closure or lid B may tilt the box A until the lid strikes the supporting surface. We prevent this by employing as a securing means for the tools or equipment in the lid or closure a member which is also adapted to serve as a ground engaging support for the open lid. 10 generally indicates a locking bar or member which is provided with a composite or double center hinge which includes the hinge member 11 fixed to the inner surface of the side wall 5 of the closure and the intermediate link 12 which is pivoted as at 13 to the fixed hinge member 11 and is pivoted as at 14 to the securing member or bar 10. The opposite end of the bar 10 is shown as having an upturned flange 15 which, when the bar is in the normal closed position of Figs. 1 and 2, terminates at its upper edge even with or below the plane of the upper edge of the side wall 5 of the closure.

The member 10 may, if desired, be provided with one or more positioning members or pads 16. If the bar 10 is made as a channel, as shown in Figs. 1 and 2, the members 16 enter the recess of the channel and are cemented into place. They may, for example, be of sponge rubber or some other equivalent material and are formed or adapted to engage the tools or other equipment 17 diagrammatically indicated in Figs. 1 and 2.

It will be understood that if desired the entire lower surface of the member 10 may be padded or the member 10 may be formed to conform to or grip and thus positively position whatever tools or equipment are to be positioned within the closure B. Assume that the parts are in position, as shown in Fig. 1, with the member 10 in the full line or closing position. When the closure B is moved to the fully closed position in which it is shown in Fig. 3, the free end of the member 10 rests upon the edge portion 3 of the side and end walls of the container A. When the lid is in the closed position of Fig. 3, it is impossible for the member 10 to move from the position in which it is shown in Fig. 3, in which position it snugly holds whatever tools or equipment or materials have been positioned in the lid. As a matter of fact, during the closing movement, as soon as the closure B has been sufficiently moved from its horizontal position of Fig. 1 to permit gravity to urge the tools 17 against the bar 10, it is already too late for the bar 10 to escape from the closed position. If it swings slightly about its pivot or pivots by grav-

ity, it is immediately pushed back into position by engagement with the portions 2, 3 of that part of the side wall 1, which is opposite to the hinge 6. As a matter of fact, any possibility of movement is so slight as to be negligible. Thus, heavy tools, kits or other equipment are firmly held within the lid or closure B. When the hasp or closure 20 is closed and the lid is lifted by its handle 21, there is complete freedom from any risk of undesired or unintended escape of the tools 17 or whatever other material is being carried in the lid B.

However, when the lid B is moved to the open position of Figs. 1 and 2, the locking action is terminated and all that the user has to do to obtain access to the tools 17 is to swing the closing bar 10 from the full line to the dotted line position of Fig. 1. The flange 15 then becomes a ground engaging enlargement and the member 10 a firm support for the edge of the cover or closure B opposite to the hinge 6. Thus, no matter what the relative weight of the load of articles or material in the container A and the lid B may be, the weight of the lid cannot tilt the container A. Even if the lid is entirely full of heavy equipment and the container is completely empty, the parts will stay in the position shown in Fig. 1, with the equipment within the closure B fully accessible and the closure or lid in the horizontal position.

It will be realized that while we have described and claimed a practical and operative device, nevertheless many changes may be made in the size, shape, number and disposition of parts. If desired, we may employ more than one of the locking members 10. It will also be understood that we may employ any suitable means for preventing unintended lateral movement of tools or equipment, such means being shaped, if desired, for specific tools or kits. We illustrate such centering means at 30 in Fig. 2. When the tools or given material are centered by such centering means, then the locking member 10 cooperates with such centering or positioning means in holding the tools or kit or material in fixed position. If desired, the locking member may be shaped to conform to the kit or tools. It will be realized, therefore, that we wish our description and drawings to be taken as in a broad sense illustrative or diagrammatic, rather than as limiting us to our specific disclosure herein.

We claim:

1. In combination in a container including a body portion having side and bottom walls and a cover member hingedly connected to one of said side walls along one edge and movable about the hinge axis through substantially 180° from a substantially horizontal closed position to a

substantially horizontal open position, said cover member being provided with an article-receiving cavity in open communication with the body portion of the container when the cover is closed, the weight of said cover member when open and unsupported tending to tilt the body portion of the container out of upright position; support means movably attached to the inside of the cover member near one edge thereof and swingable, when the cover is open, through substantially 270° from a position transverse of the cover and in a plane substantially parallel to that of the cover, to a position substantially perpendicular to the plane of the cover and depending therefrom, said support member when in said first-mentioned position being adapted to engage articles deposited within the cavity in the cover to support said articles from beneath when the cover is closed and thus retain the articles in place within the cover, said support means being dimensioned in length to engage, when in said second-mentioned position, the surface on which the container is supported to support the cover member in a substantially horizontal open position, and thereby overcome the tendency of the cover when open to overturn the body portion of the container.

2. The structure of claim 1 characterized in that the support means includes article engaging holding and positioning members of yieldable, compressible material.

3. The structure of claim 1 characterized by and including a surrounding side wall on the cover, and means within the side wall for limiting lateral movement of articles in said cover, the support means being adapted, when in closed position, to hold such articles against unintended downward movement when the cover is in closed position.

ARTHUR H. EICHHOLZ.
HENRY SAMUELSON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
784,601	Taylor	Mar. 14, 1905
1,057,195	Wheary	Mar. 25, 1913

FOREIGN PATENTS

Number	Country	Date
15,244	Great Britain	of 1909
330,414	Great Britain	June 12, 1930
574,136	France	Mar. 24, 1924