No. 779,501. PATENTED JAN. 10, 1905.

C. H. RICHARDS.

TRUNK.

APPLICATION FILED SEPT. 16, 1904.

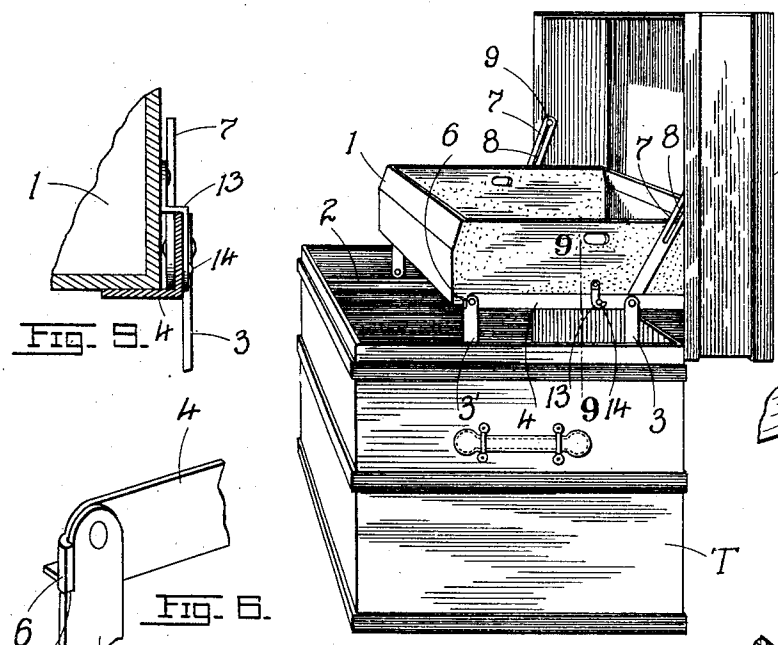


Fig. 1.

Fig. 9.

Fig. 6.

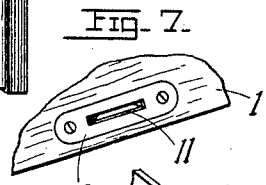


Fig. 7.

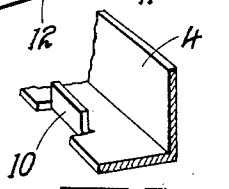


Fig. 8.

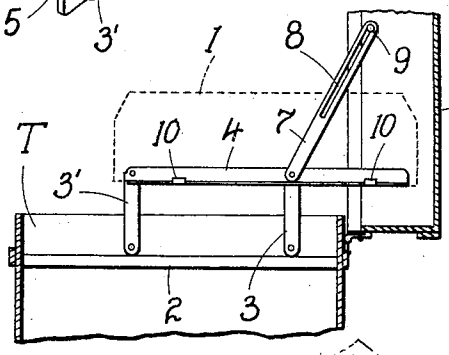


Fig. 2.

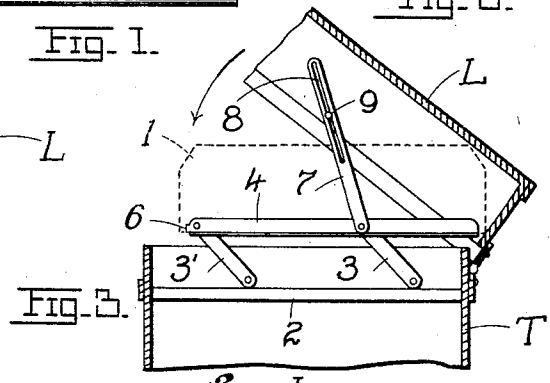


Fig. 3.

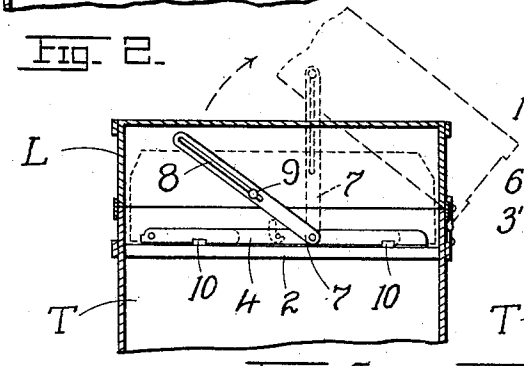


Fig. 4.

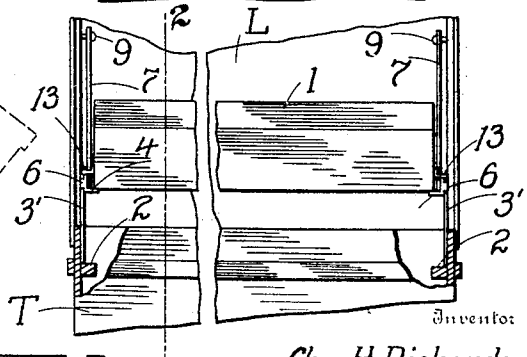


Fig. 5.

Witnesses

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No. 779,501. Patented January 10, 1905.

UNITED STATES PATENT OFFICE.

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TRUNK.

SPECIFICATION forming part of Letters Patent No. 779,501, dated January 10, 1905.

Application filed September 16, 1904. Serial No. 224,675.

To all whom it may concern:

Be it known that I, CHARLES H. RICHARDS, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Trunks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in trunks; and it consists in the novel construction and arrangement of parts more fully set forth in the specification, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a trunk with the lid open, showing my invention applied thereto. Fig. 2 is a transverse vertical section on line 2 2 of Fig. 5. Fig. 3 is a similar view showing the lid partly closed and the tray-supporting frame partly depressed. Fig. 4 is a similar view showing the lid closed and the tray-supporting frame in its lowest position. Fig. 5 is a front elevation (broken) of the trunk shown in Fig. 1. Fig. 6 is a perspective of the front end of one of the tray-supporting frames, showing the manner of coupling the front swinging arm thereof to the angle-piece or rest on which the tray is supported. Fig. 7 is a detail showing the metal-reinforced socket at the bottom of the tray for receiving the upturned lip formed on the angle-piece of the frame carrying the tray. Fig. 8 is a perspective showing the formation of the lip which is received by the socket shown in Fig. 7; and Fig. 9 is a vertical section on line 9 9 of Fig. 1, showing the locking-latch for the tray.

The object of my invention is to provide suitable means for raising the top tray or till of a trunk simultaneously with the opening of the trunk-lid so that access can be at once had to the contents of the trunk without the necessity of first lifting the tray by hand.

A further object is to provide a permanent rest for such tray, so that the occasion for its removal from the trunk will seldom arise. The advantages of such an arrangement will be best apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, T represents an ordinary form of trunk, and L the lid of the same. The upper tray or till 1 is supported on the side cleats 2 2 when the lid is closed, as will presently more fully appear. Pivoted along the inner surfaces of the side walls of the trunk, immediately above the cleats 2 2, are swinging arms 3 3′, oscillating in a vertical plane and being pivotally coupled at their upper ends to the angle-pieces or tray-supports 4 4, the latter extending a suitable distance rearward to give support to the full dimension of the tray. The arms 3 3′ and angle-pieces 4 jointly form a folding frame for the support of the tray. The highest position of this frame is that which corresponds to the vertical position of the arms 3 3′, Fig. 1, the frame being free to fold forwardly until the members 4 rest against the cleats 2, Fig. 4, but being locked against further rearward movement by the construction shown best in Fig. 1. In that figure it will be seen that the front arm 3′ is provided with a shoulder 5, against which bears the base of the terminal outwardly-deflected lip 6, formed in the vertical member of the angle-piece 4. The point of pivotal connection between the arm 3′ and angle-piece 4 being above the shoulder 5, it follows that the latter upon any incipient rotation of the arm 3′ (after it has reached its vertical position) would tend to swing upwardly, while the upper pivot of the arm 3′ would start to swing downwardly. Thus the frame as a whole is arrested in its further movement rearward, and being thus arrested it serves to prevent the lid from dropping rearwardly against the trunk after being swung to the open position. (Shown in Fig. 1.) The pivotal pin, which serves to connect the angle-piece 4 to the rear arm 3, at the same time serves to pivotally secure the lower end of the link 7, the latter being provided with an upper terminal slot 8, through which operates a pin 9, carried by the lid. It is this link connection between the angle-pieces 4 and lid L which serves to raise the tray-supporting frame upon the opening of the lid. When the lid is closed, the relative position of the parts is approximately that

shown in Fig. 4, the links 7 inclining forward and the pins 9 being near the bases of the slots 8. As the lid is swung to an open position in the direction shown by the arrow the links 7 are picked up by the pins 9, the latter traveling to the upper ends of the slots 8. (See dotted position in Fig. 4.) A further swinging of the lid rearward will pull on the links 7, the latter in turn picking up the tray-supporting frame until the parts assume the position shown in Fig. 2. The lid cannot swing rearward beyond the position indicated in Figs. 1 and 2 for the reason that further swinging of the tray-supporting frame is impossible, owing to its arrest by the lip 6 bearing against the shoulder 5. In closing the lid the initial movement thereof begins to throw the links 7 forward, and about the same time the top of the lid either pushes against the back of the tray or the rear ends of the pieces 4, thus starting the downward swinging of the arms 3 3′, which after they have swung from their vertical position will of their own accord under the action of gravity drop forward, Fig. 3, allowing the entire frame to settle against the cleats 2, when the latter will carry the full weight of the tray. To retain the tray against horizontal displacement on the frame, I provide the supporting members of the angle-pieces 4 with upturned lips 10, which enter the sockets 11 at the bottom of the tray, the sockets being reinforced by metal plates 12, as best seen in Fig. 7. Should the bottom of the trunk be unusually full and its contents accidently bear upwardly against the bottom of the tray as the latter is settling to its lowest position, vertical displacement or lifting of the tray is prevented by the locking hooks or latches 13, pivoted to the sides of the tray and engaging the pins 14 on the vertical members of the angle-pieces 4. Should it be desirable to lift the tray off its frame, the latches can be swung out of engagement from the pins 14, as is obvious.

It is to be noted that the present invention may be applied to any character of trunk; but it is to be understood that I do not wish to be limited to the precise mechanical details here shown, as they may in a measure be departed from without in any wise affecting the nature or spirit of my invention.

The special advantage inherent in the present device is that as the tray is being lifted or lowered with the respective opening or closing of the lid it always moves parallel to itself— that is to say, its horizontal position in the trunk is preserved.

Having described my invention, what I claim is—

1. In a trunk, a tray-supporting frame comprising a pair of vertically-swinging arms pivoted to the opposite trunk-walls, a tray-supporting member connecting the opposite ends of the arms, the forward arms having shoulders disposed along one of their longitudinal edges, a lip deflected from the front end of each tray-supporting member and bearing against the shoulder, the latter being relatively below the point of connection between the arm and member for the elevated position of the frame, and slotted links connecting the frame to the lid, the parts operating substantially as and for the purpose set forth.

2. In a trunk, a tray-supporting frame comprising a pair of vertically-swinging arms pivoted to the opposite trunk-walls, an angle-piece pivotally connecting the opposite ends of the arms, the forward arms having shoulders disposed along one of their longitudinal edges, a lip deflected from the vertical member of each angle-piece and bearing against the shoulder, said shoulder being relatively below the point of connection between the arm and angle-piece for the elevated position of the frame, and slotted links connecting the frame to the lid, the parts operating substantially as, and for the purpose set forth.

3. In a trunk, a tray-supporting frame adapted to fold freely in one direction, and means forming part of and located at the forward end of the frame for limiting the unfolding thereof in the opposite direction, substantially as set forth.

4. In a trunk, a tray-supporting angle-piece, the horizontal member thereof being provided with lips for engaging suitable sockets in the bottom of the tray, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. RICHARDS.

Witnesses:
EMIL STAREK,
G. L. BELFRY.