S. E. WINSHIP.

TRUNK SECURING MEANS.

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1,231,978.

Patented July 3, 1917.

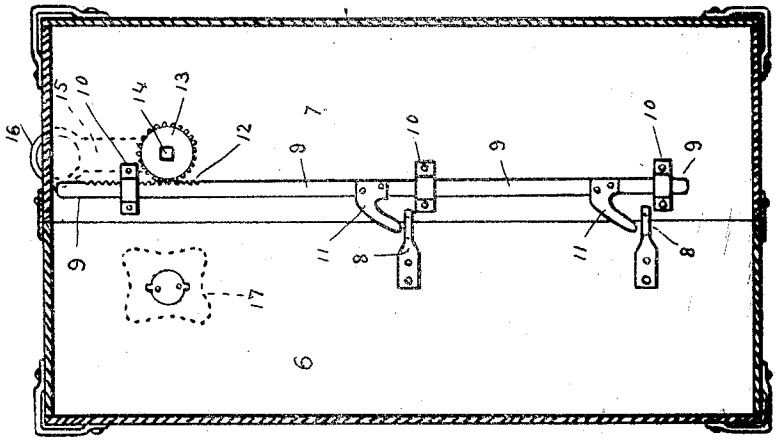


Fig. 2.

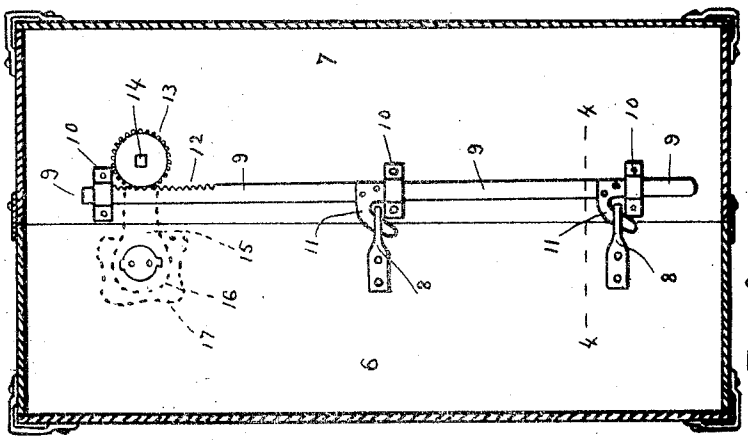


Fig. 3.

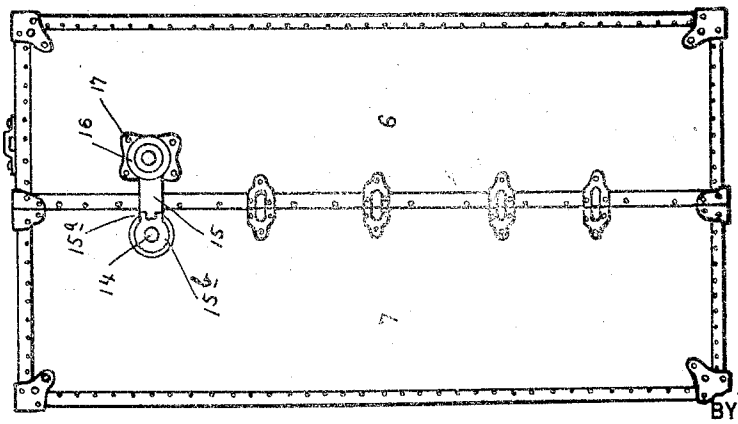


Fig. 1.

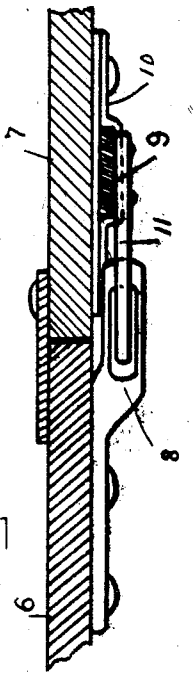


Fig. 4.

INVENTOR

Stephen E. Winship

BY Martin & Jones

ATTORNEYS

UNITED STATES PATENT OFFICE.

STEPHEN E. WINSHIP, OF MALDEN, MASSACHUSETTS, ASSIGNOR TO W. W. WINSHIP & SONS COMPANY, OF UTICA, NEW YORK, A CORPORATION.

TRUNK-SECURING MEANS.

1,231,978. Specification of Letters Patent. Patented July 3, 1917.

Application filed January 20, 1916. Serial No. 73,242.

To all whom it may concern:

Be it known that I, STEPHEN E. WINSHIP, of Malden, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Trunk-Securing Means; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the reference-numerals marked thereon, which form part of this specification.

My present invention relates to means for securing together the two parts of a trunk, and more particularly to such means as will at one movement lock the trunk together at more than one point.

The purpose of my invention is to provide improved locking means of the character described, and furthermore, to provide means that are simple in construction, positive in action and not likely to get out of order.

Another object of this invention is to provide a device of the character described, having an improved operating means tending to greater efficiency of the device.

A still further object of my invention is to provide means that will not only securely lock together the members of the trunk when brought together, but which is also adapted to assist in the final closing together of the members of the trunk; and moreover, to provide a device wherein this double action is secured without additional members and without requiring any additional or different movements of the parts by the person using the trunk.

Further advantages and purposes of my invention will appear from the specification and claims hereafter made.

Figure 1 is a side elevation of the outside of a trunk embodying my invention.

Fig. 2 is a perpendicular sectional view of the same trunk, looking toward the side of the trunk that is equipped with my invention, the parts being shown in the position they occupy before the locking movement is begun.

Fig. 3 is a similar sectional view, but with the parts in the position they occupy when the trunk is locked.

Fig. 4 is a sectional view on an enlarged scale on line 4—4 of Fig. 3.

Referring to the drawings in a more particular description, it will be seen that my closing and locking device is shown as applied to a trunk wherein the first member 6 and the second member 7 are hingedly secured to each other at their rear sides (not shown) and are adapted to be brought together and locked along their meeting front edges, which edges it is desired shall be secured and locked at several points in order to add to the strength and security of the trunk.

Adjacent the edge of the first trunk member 6 there is provided one or more eye straps 8. Near the opposite edge of the second trunk member 7 there is provided a rod 9 mounted on said member to slide longitudinally thereof as by being slidingly housed in bearings or straps 10, which are securely fastened to said second trunk member 7. Upon said rod 9 there are provided hooks 11 equal in number to the eye straps 8 and rigid relative to said rod either by being formed integral therewith or rigidly fastened thereto. The arrangement of the said parts is such that when the rod 9 is moved in one direction as to upper position upon the drawings the hooks 11 will be free from the eye straps 8, allowing the trunk to be closed or opened as desired, but upon the rod being moved in the other direction as downward upon the drawings the hooks 11, assuming the trunk to be closed or substantially closed, will engage or enter the eyes of the eye straps 8 and thus in an obvious manner prevent the two members of the trunk from being drawn apart as long as the rod is in that position.

Preferably also the hooks 11 will have a camming engagement with the strap eyes 8 as the rod 11 is moving from unlocked to locked position so that downward movement of the rod 9 not only causes the hooks 11 to enter the eyes 8 but the edges of the hooks facing toward the rod 9 will have a camming or wedging action upon the coöperating surface of the eyes and thereby with great force and at each eye the two members of the

trunk will be drawn toward each other to final closed position. This camming action is of great importance in evenly closing a trunk and locking it, as it enables one person readily to bring the trunk together conveniently along its meeting edges. Furthermore by having the hooks 11 and the eyes of eye straps 8 so proportioned to each other that the hooks fit fairly closely in the eyes, it will be obvious that the outer edges of the hooks 11 will have a camming action upon the inner edge of the eyes, viz.; that part of the eyes farthest from the locking rod 9, when the locking rod and its attached hooks are being moved to unlocked position or raised as shown in the drawing and that this camming action will thus operate to force the edges of the two parts of the trunk slightly away from each other and so make complete opening of the trunk by the hands more convenient.

As means for imparting the necessary longitudinal motion to the rod 9 there is provided upon said rod a rack 12, with the teeth of which engage the teeth of a pinion 13 revolubly mounted in any desired way upon the trunk member 7 adjacent the rod 9 and fixed upon its shaft or axle 14, which extends through said member 7 to a point just without the said trunk member. To said axle 14 without the trunk there is secured an arm 15. This arm terminates in a lock 16 adapted to be brought into engagement with and lock with the usual eye or hasp member upon a plate 17 upon the trunk member 6 and located opposite to the axle 14 in the way of an ordinary trunk lock. Preferably also the arm 15 will be hinged at 15^a to the portion 15^b of the arm, which is connected to axle 14 as suggested in Fig. 1. Such hinged connection between the two parts of arm 15 allow the lock 16 to be swung toward and away from the plate 17, but does not interfere with the arm 15 acting as a lever for the manipulation of the pinion 13.

It will be noted that the arm 15 not only acts as a means for manipulating from outside the trunk the interlocking hooks 11 and strap eyes 8, but also serves to lock together the two members of the trunk at still another point.

What I claim as new and desire to secure by Letters Patent is:

1. In a trunk, the combination with sections pivoted together, of means for locking said sections comprising a longitudinally movable locking bar secured to one of said sections, inter-engaging locking members carried by said bar and the other of said sections, said locking members being arranged to positively force said sections apart when adjusted to unlocked position.

2. In a trunk, the combination with sections pivoted together, of means for locking said sections comprising a longitudinally-movable locking bar carried by one of said sections inter-engaging locking members carried by the other of said sections, said locking members being arranged to positively force said sections together when adjusted to locking position and to positively force said sections away from each other when the bar is adjusted to unlocked position.

3. In a trunk, the combination with sections, of means for locking said sections together comprising a longitudinally-adjustable bar located within the trunk, means operable from the exterior of the trunk for adjusting said bar and means operable upon the longitudinal adjustment of said bar for automatically forcing said sections toward and from each other.

In witness whereof I have affixed my signature, this 15th day of January 1916.

STEPHEN E. WINSHIP.