No. 759,278. PATENTED MAY 10, 1904.

E. C. HORNER.

TRUNK LOCK.

APPLICATION FILED NOV. 6, 1903.

NO MODEL.

FIG. 2.

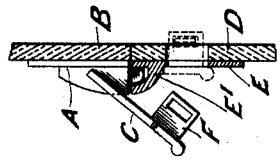


FIG. 6.

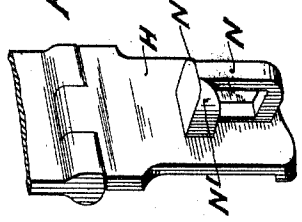


FIG. 7.

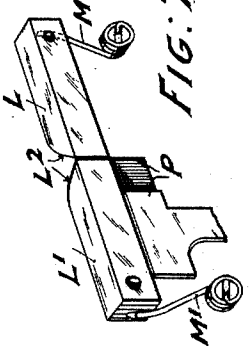


FIG. 1.

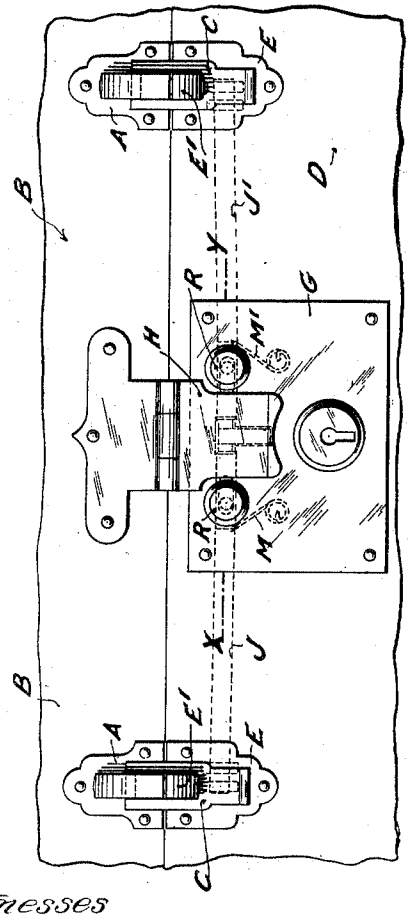


FIG. 3.

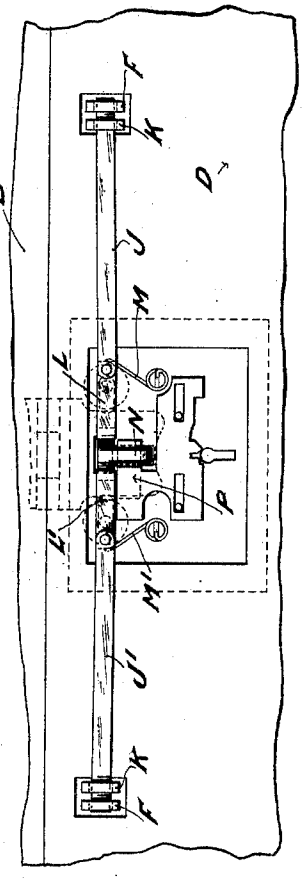


FIG. 5.

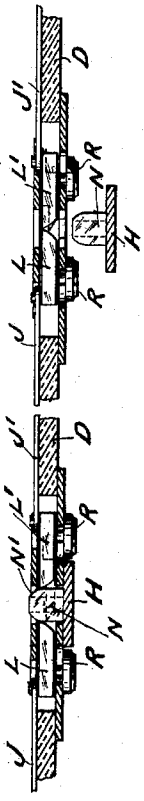


FIG. 4.

Witnesses

C. H. Walker.

E. Thos. Loftus

Inventor

Edgar Charles Horner

by John D. L. Lewis

Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 759,278. Patented May 10, 1904.

UNITED STATES PATENT OFFICE.

EDGAR CHARLES HORNER, OF LONDON, ENGLAND.

TRUNK-LOCK.

SPECIFICATION forming part of Letters Patent No. 759,278, dated May 10, 1904.

Application filed November 6, 1903. Serial No. 180,092. (No model.)

To all whom it may concern:

Be it known that I, EDGAR CHARLES HORNER, a subject of the King of Great Britain, and a resident of London, England, have invented certain new and useful Improvements in Trunk-Locks, of which the following is a specification.

In many constructions of trunks, boxes, cases, and the like such articles (hereinafter in this specification termed "trunks") are fitted with a hasp-lock and in addition with auxiliary fastening devices, such as hinged clips. Such auxiliary fastenings are commonly located at a distance from and on each side of the principal lock and can ordinarily be operated to hold the parts of the trunk together independently of the principal lock, and therefore such auxiliary fastenings present advantages in that they afford a quick and ready means of securing and holding the parts of the trunk together when it is not desired to otherwise lock the same.

The present invention relates to improved means for locking or securing such auxiliary fastenings by laterally-sliding bolts operated by the main hasp.

The objects of this invention are to render the locking of such auxiliary fastenings absolutely automatic; to effect the same by the customary inward movement of the staple end of a hinged hasp; to locate the means for operating the laterally-sliding bolts within the lock-casing, but wholly independent of the locking-bolt, and to render the device as a whole simple and free from liability to disarrangement.

The invention consists in certain novel combinations of parts hereinafter set forth and claimed.

I will further describe my invention with reference to the accompanying drawings, wherein—

Figure 1 is a front elevation showing a principal lock and side fastenings applied to the front of a trunk, so much of the latter being shown as is necessary for the purposes of this specification. Fig. 2 is a vertical transverse section taken through one of the side fastenings shown at Fig. 1; and Fig. 3 is a sectional elevation of a portion of the interior of the trunk, showing my improved locking devices, Figs. 1 and 3 showing the fastenings in the locked position and Fig. 2 showing a side fastening in full lines open and in dotted lines locked. Fig. 4 is a horizontal section taken about the line X Y of Fig. 1 to illustrate the action of the hasp in automatically operating the sliding bolts of the side fastenings, the said bolts being in the locked position; and Fig. 5 is a similar view of the same parts, showing the hasp removed and the said bolts unlocked. Fig. 6 is a perspective view of the hasp, showing the loop thereof constructed to operate upon sliding bolts, as hereinafter described, in addition to serving its usual office—namely, of receiving the bolt of the principal lock; and Fig. 7 is a diagram perspective view showing the adjacent ends of the sliding bolts and the bolt of the principal lock.

Referring to the drawings, the side fastenings each consist of a plate A, attached to the lid B of a trunk, the said plate having a projecting part upon which is pivoted a tongue or link C, which latter may be controlled by spring action, so as to tend to remain either in its engaging or disengaging positions.

Upon the body D of the trunk is fixed the opposite plate E of the side fastening, having a projecting part E′, over which the loop of the link C takes when the latter is closed down to hold the two parts of the trunk together, and the lower extension of the link C has fixed upon it a staple or loop projection F, Fig. 2, which takes through an aperture in the plate E and passes to the interior of the trunk.

G is the principal lock, fixed upon one part of the trunk, and H is the hasp, hinged to the other part of the trunk.

In the interior of the trunk I mount laterally-extending bolts J J′, the outer ends of the said bolts extending through guides K, so that their said outer ends may engage the loop projections F of the side fastenings C when the latter have been placed in position and the bolts J J′ slid, and at Fig. 3 the bolts are shown in such engagement.

The inner ends of the bolts J J′ in the example of construction now described are respectively connected to slides L L′, which I

have shown as being fitted and guided against the interior of the lock-plate and capable of sliding upon but independently of the bolt P of the principal lock. The adjacent ends of the two slides L L′ are inclined in opposite directions, as shown at Figs. 4, 5, and 7, so that upon a part of the hasp H being forced against these adjacent ends the slides will be separated and the bolts J J′ will be caused to enter the loops F F of the auxiliary fastenings, and this action will take place against springs M M′, which are thereby put into tension. The springs are conveniently located within the cover-plate of the lock, which latter cover-plate has been removed at Fig. 3 in order to shown the mechanism more clearly.

It is not essential in all cases that the slides L L′ should consist of parts separate from the bolts J J′ and be pivoted thereto, as shown, because obviously the slides and bolts may in some cases be made in one piece and the bolts then extend to the central lock and have their adjacent ends beveled or sloped. The slides L L′ are thus to be separated and the bolts caused to automatically lock the auxiliary fastenings by the action of some part of the hasp of the principal lock when the said hasp is brought into engagement with its lock, and for this end it has been found convenient in practice to utilize the staple N of the hasp H for the fulfilment of this office. To this end the upper part N′ of the staple is formed somewhat rounded at its end, as shown at Figs. 4, 5, and 6, and when the staple N enters its aperture in the lock-plate its rounded edges act upon the sloping ends L^2, Fig. 7, of the slides and obviously will separate the latter and cause the bolts to enter the loops F, and so effect the locking of the auxiliary fastenings against the action of the springs M M′. The hasp being then in position it is secured by the lock-bolt P entering the loop N either by the medium of the ordinary key or by the usual spring action common with such trunk-locks.

It will now be understood that when the lid B of the box is closed onto the body D the auxiliary fastenings can be operated to hold the two parts together without in any way interfering with the principal lock. The trunk being so fastened upon the hasp being brought down and its loop N entering the slot in the lock-plate G that loop operates simultaneously upon the inclines of both the slides L L′, forces the same apart, and locks the side fastenings. The hasp is then secured by the principal lock-bolt P in the ordinary way, and upon being unlocked and brought away from engagement the slides and bolts J J′ will be instantly and automatically returned into their locked positions by the springs M M′ aforesaid, and thus the action of locking and unlocking the side fastenings automatically takes place respectively upon the bringing into position of the hasp and upon removing the said hasp from its locking position. By thus locking the side fastenings far greater security is afforded to the holding of the two parts of the trunk together as well as preserving the latter from undue strain which it would have to sustain by the accidental release of the side fastenings during transit.

The construction of fastenings which I have now described has been tried and found eminently satisfactory in practice; but since, as will be seen, the trunk would remain locked should the springs M M′ be injured by any unforseen means and the lateral bolts J J′ not be withdrawn from the side fastenings upon the release of the hasp I have provided against such an unusual event by providing two studs R R, one fixed upon each bolt or slide and projecting through slots in the front of the lock-plate to the exterior of the trunk. By this device should the said springs become inoperative the bolts J J′ can be withdrawn from the side fastenings by the studs R R being drawn together by the hand of the operator after the hasp has been released.

I would have it understood that I do not limit the application of my invention to side fastenings of the precise construction which I have illustrated, as it is obvious that the bolts J J′ might be caused to lock side fastenings of other constructions, as will be well understood by those skilled in the art.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In fastenings for trunks and the like, the combination with a hasp-lock for securing the lid to the body of the trunk, and auxiliary side fastenings for further securing the lid to the body of the trunk, of loops on said side fastenings, laterally-sliding bolts in the interior of the trunk extending normally to the proximity of said loops, springs which normally hold the outer ends of said bolts away from said loops, and a hinged hasp having a staple to interlock with the bolt of said lock and constructed with a pair of inclines arranged to act on the inner ends of said laterally-sliding bolts to force their said outer ends into said loops of the side fastenings when said staple of the hasp is pressed into the lock, substantially as hereinbefore set forth.

2. In fastenings for trunks and the like, the combination with a hasp-lock for securing the lid to the body of the trunk, independently-operated side fastenings, each consisting of a link hinged to the lid of the trunk, a slot in the body of the trunk below each link, and a loop projection on the link to enter the slot in the body of the trunk and extend to the interior thereof; of sliding bolts in the interior of the trunk, one for securing each side fastening, by entering the loop thereof, guides for the said bolts, springs to hold the bolts normally from engagement with the loops of the side fastenings, an inclined surface on the meeting end of each bolt, the said surfaces being at opposite inclinations, and a contact-

surface on each side of the staple of the hasp adapted to contact with the inclined surfaces of the bolts to slide the latter when the hasp is brought into position, and to so automatically secure the side fastenings, a lengthway slot to the exterior of the trunk in front of the sliding bolts, and studs on the bolts extending through the said slots for operating the bolts by hand if required, substantially as described.

3. In fastenings for trunks and the like, the combination with a hasp-lock for securing the lid to the body of the trunk, independently-operated side fastenings, each consisting of a link hinged to the lid of the trunk, a slot in the body of the trunk below each link, and a loop projection on the link to enter the slot in the body of the trunk and extend to the interior thereof; of sliding bolts in the interior of the trunk, one for securing each side fastening, guides for the said bolts, springs to hold the bolts normally from engagement with the loops of the side fastenings, a slide pivoted to the inner end of each bolt, an inclined surface on the meeting end of each slide, the said surfaces being at opposite inclinations and located to be operated upon by the hasp, and contact-surfaces formed upon each side of the staple of the hasp to engage inclines of the slides, to force the same apart to automatically bring the bolts to their locking position, when the hasp is brought into engagement with its lock, substantially as described.

EDGAR CHARLES HORNER.

Witnesses:

L. OLIVER,

WM. W. MARSHALL.