Oct. 19, 1937. G. L. EBER 2,096,452

TELESCOPING CASE COUPLING MEMBERS

Filed April 22, 1933

Fig. 1

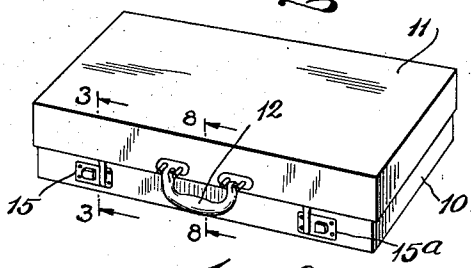


Fig. 9

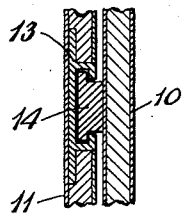


Fig. 8

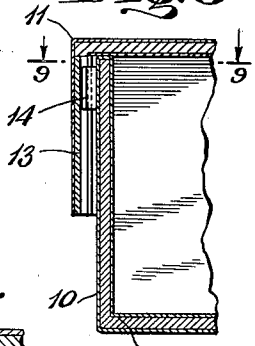


Fig. 2.

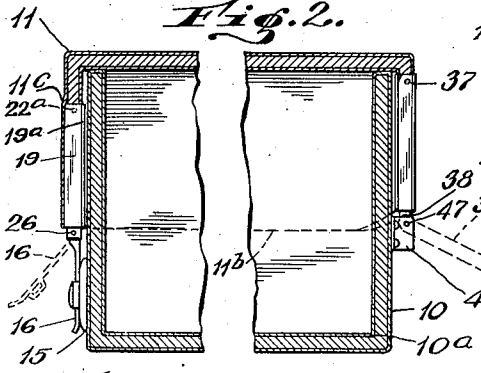
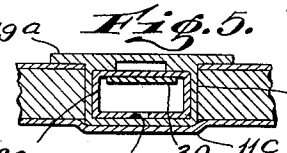


Fig. 5.



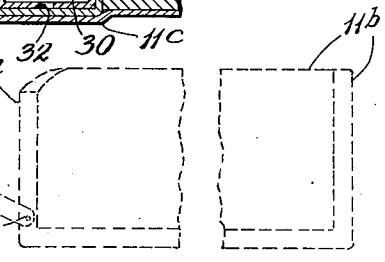


Fig. 3

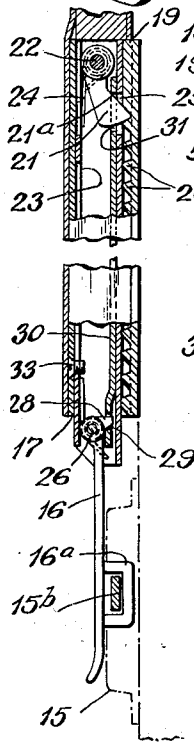


Fig. 4.

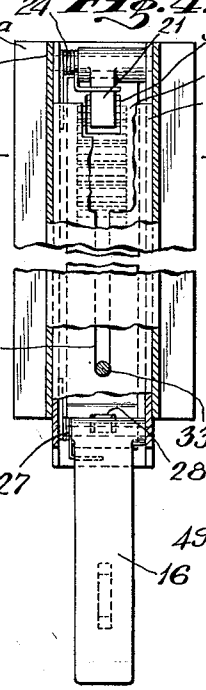


Fig. 6.

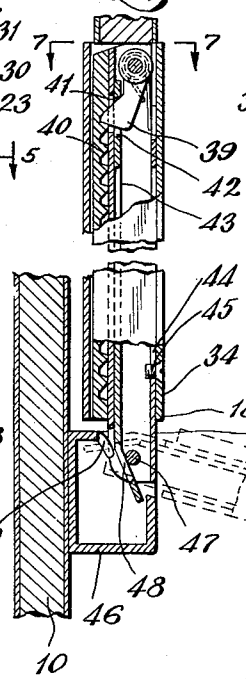
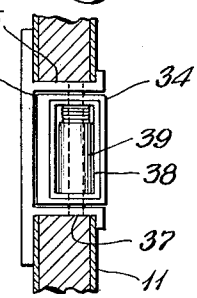
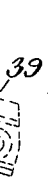


Fig. 7.





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TELESCOPING CASE COUPLING MEMBERS

George L. Eber, New York, N. Y.

Application April 22, 1933, Serial No. 667,341

2 Claims. (Cl. 292—283)

This invention relates to coupling or retaining members for use in connection with telescoping suitcases or similar articles for retaining the separate parts of the case in closed position; and the object of the invention is to provide retaining or securing members of the class described which are relatively thin and flat in construction to permit their mounting in connection with the cover of the case to retain the same substantially invisible, thus producing a neat and finished appearance and eliminating the objectionable bulk of protruding members of this class as commonly employed; a further object being to provide a novel method of moving the latching pawl or other device into operative and inoperative positions to control the opening and closing of the case and retaining the case in closed position, said means involving a longitudinal, slidable bar actuated by a hinged member disposed at one end of the bar; a further object being to provide hinge members at the forward side of the case in the form of hasps retained in connection with the case proper by suitable latching and locking means and also including tensional means for moving the same in extended position when released from the latching or locking means; a further object being to provide a double hinge or pivot construction for the coupling members at the bottom of the case to permit the separation of the cover and case proper and the mounting of both of said parts on a surface in the operation of packing the same; a still further object being to provide the bottom of the cover proper with a short wall structure facilitating the swinging opening movement of the cover when both case and cover are in their freely closed position; and with these and other objects in view, the invention consists in a case and securing means therefor, which is simple in construction, efficient in use, and which is constructed as hereinafter more fully described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a perspective view of a case made according to my invention.

Fig. 2 is a transverse section of the case with part of the construction broken away and showing the cover of the case extended in dotted lines.

Fig. 3 is a partial section on the line 3—3 of Fig. 1, on an enlarged scale.

Fig. 4 is a face and sectional view of the device shown in Fig. 3, detached.

Fig. 5 is a partial section on the line 5—5 of Fig. 4.

Fig. 6 is a view similar to Fig. 3, but showing a section through one of the bottom coupling members employed.

Fig. 7 is a partial section on the line 7—7 of Fig. 6.

Fig. 8 is a partial section on the line 8—8 of Fig. 1; and,

Fig. 9 is a section on the line 9—9 of Fig. 8.

For the purpose of illustrating one method of carrying my invention into effect, I have indicated in Figs. 1 and 2 of the drawing a suitcase structure consisting of a bottom case proper 10 and a cover 11, the latter having a narrower back wall 11*a* than the side and front walls 11*b* as indicated in Fig. 2 of the drawing to facilitate the swinging opening movement of the cover when the same is in its fully closed position as seen in Fig. 2. The case parts 10 and 11 are of the usual or any preferred form and construction, and preferably include outer facings 10*a* and 11*c* respectively. At 12, I have shown a handle on the upper surface of the part 11, by means of which the case may be carried, and centrally of the upper wall of the cover 11 and countersunk in the inner surface thereof is a channel 13 in which a dove-tailed or T-shaped lug 14 is slidably mounted so as to key adjacent surfaces of the case 10 and cover 11 together to prevent separation thereof when a filled case is carried by the handle 12. On the upper wall of the case 10 adjacent the ends thereof, are combination latch and lock devices 15, 15*a* of conventional form to receive the hasps 16 of my improved coupling and latching devices 17 employed on the upper wall of the cover 11. As these devices 17 are both of the same construction, the brief description of one will apply to the other. Other coupling and latching devices 18 are disposed at the bottom of the case in alinement with the devices 17, and as the devices 18 are of similar construction, the brief description of one will apply to both.

Each of the devices 17 consists of a tubular casing 19 countersunk in and secured to the upper wall of the cover 11, the inner surface of the casing being flanged as seen at 19*a*, note Fig. 5, to reinforce the wall structure of the cover and also to provide for the attachment. At this time, it will also be noted that the facing

11c of the cover 11 passes over and conceals the casing 19.

The inner wall of the casing 19 is provided with longitudinally spaced and inwardly projecting teeth 20 adapted to be engaged by a pawl or other stop member 21 pivoted as seen at 22 in a tubular plunger 23, which fits and slides freely in the casing 19, and this plunger forms part of the coupling element of the device. A spring 24 is mounted on the pivot of the pawl 21 and serves to normally force the pawl in the direction of the teeth 20 through an opening 25 formed in the plunger 23. The hasp 16 is pivoted in the outer end portion of the plunger 23 as seen at 26, and includes a spring 27 which normally serves to move the hasp outwardly with respect to the latch and lock device 15, 15a, or in other words, is held under tension in said device, and when released will automatically spring outwardly, in which operation, a lug 28 on the pivot end of the hasp and engaging an aperture 29 in a release bar 30, serves to move said bar downwardly or outwardly with respect to the plunger, causing the pawl 21 to be moved out of engagement with the teeth 20 by its movement on the beveled surface 21a of the pawl, it being understood that the upper end of the bar 30 is provided with an opening 31 through which the pawl passes.

It will be understood at this time that as the hasp 16 is swung inwardly in its locked position as seen in Fig. 3 of the drawing, the bar 30 is moved upwardly into position to permit the pawl 21 to move into engagement with the teeth 20 and thus assume a locked position, in which position, the cover 11 may be moved downwardly with respect to the case 10, the teeth 20 throwing the pawl inwardly against the action of the spring in this movement, but any upward movement of the cover 11 with respect to the case 10 is checked or stopped by said pawl. It will also be seen that the front wall of the plunger 23 has an elongated aperture 32 with which a screw or pin 33 on the casing 19 operates to limit the outward movement of the plunger with respect to said casing. The hasp 16 has a U-shaped portion 16a receiving the latch and lock bolt 15b of the latch or lock devices 15, 15a, note Fig. 3 of the drawing.

By mounting the devices 17 in the upper wall of the cover 11 in the manner described, it will appear that the casings 19 are not visible, thus producing a neat and finished appearance, and furthermore, placing the coupling plunger in more or less direct alinement with the latching and locking members 15, 15a employed, producing the most effective results, and at the same time, a strong and practical construction without inclusion of excessive bulk of protruding bodies or members as in devices of this class of conventional form.

While the casing 19 and plunger 23 are shown comparatively thick, it will also be apparent that these plungers may be constructed relatively thin and still carry out the functions defined. Furthermore, the use of the flat tubular structures produces strong coupling members, as will be apparent.

The devices 18 consist of casing 34 substantially similar to the casings 19 except that the flanges 19a are removed and the casings 34 are fitted in and movable in liners 35 secured in and to the bottom walls of the cover 11 as clearly seen in Fig. 7 of the drawing. The liners 35 serve to reinforce the bottom walls of the cover where the opening is formed therein for the casings 34, and also to provide a definite socket 36 in which the casing 34 is movably supported, the latter being pivoted in the upper end of the liner as indicated at 37 in Figs. 2 and 7 in order to permit the outward swinging movement of the casing 34 with respect to the liner to permit the movement of the cover 11 into the position indicated in dotted lines in Fig. 2. Slidably mounted on the casing 34 is a tubular plunger 38 substantially similar to the plunger 23 and including a pawl 39 similar to the pawl 21 operating in connection with longitudinally spaced teeth or projections 40 on the inner surface of the back wall of the casing 34, the pawl passing through an aperture 41 in the plunger 38 and through an aperture 42 in a bar 43 which controls the operation of the pawl 39 the same as the bar 30. The plunger 38 has in its front wall an elongated aperture 44 similar to the aperture 32 in connection with which a screw or pin 45 on the casing 34 operates to limit the outward movement of the plunger.

The devices 18 instead of including on its plunger a hasp such as 16, has the plunger 38 directly pivoted to a supporting block 46 as seen at 47. The block 46 is secured to the bottom wall of the case 10 and the lower end of the bar or rod 43 includes an offset portion having an aperture 48 adapted to receive a lug 49 pressed from the wall of the block casing 46 so that in the outward swinging movement of the complete cover on the pivot 47, the lug 49 will enter the aperture 48 and engage the bar to draw the bar downwardly or in the direction of the pivot 47, which movement will release the pawl 39 from the teeth 40 as indicated in dotted lines in Fig. 6 to permit the free movement of the casing 34 outwardly on the plunger 38 into the position indicated in Fig. 2 of the drawing. It will be understood that as the cover is again swung upwardly on its pivot 47 as well as on the pivot 37, the bar 43 is again moved upwardly, thus releasing the pawl 39 to permit its movement into engagement with the teeth 40 to effect the same locking or latching principle as the pawl 21 in moving the cover 11 into its fully closed position and in compressing articles of apparel or the like back in the case.

It will be seen that the casing 34 is also disposed in alinement with the wall structure of the cover 11, and in the structure shown the casing 34 is not covered with the outer facing to permit the outward swinging movement of this casing with respect to the bottom wall of the cover, and if this movement should not be desired or deemed necessary, the casing 34 should be mounted directly in the cover wall structure in the same manner as the mounting of the casing 19, and this form of construction could be carried out in some type of casing construction where the element of packing is not an important factor.

It will be understood that while I have shown my invention as applied to a case of specific or conventional form, the same may be applied to other types of containers, and various other changes in and modifications of the construction herein shown and described may be made within the scope of the appended claims without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is;

1. A coupling device of the class described comprising a casing tubular in cross sectional form throughout its length, a tubular plunger fitting snugly in the casing and slidable longitudinally thereof, the casing being secured to one support, one end of the plunger normally projecting from the casing and having means for coupling the plunger to another support and movable relatively to the first support, stop elements spaced longitudinally of one wall of the casing, a latch member pivotally mounted within said plunger at the inner end thereof and movable transversely through an opening in one wall of the plunger into operative engagement with said elements to prevent relative movement of the plunger in the casing in one direction, and a bar mounted in and movable longitudinally of the plunger and in operative engagement with the coupling means of the plunger for engaging said latch member and moving said member into inoperative position to permit relative movement of the plunger in the casing in both directions.

2. External hasp and hinge fastenings of the extensible kind for luggage, comprising in combination an elongated casing provided with a line of ratchet teeth and fixed to the lid of the luggage, an elongated slide telescopically fitting the casing, a coupling member movably mounted on the slide, a spring-pressed pawl movable with the slide and disposed at the inner end thereof and pivoted in relation to the ratchet teeth so that while engaging said teeth strain tending to extend the fastenings puts the pawl in compression between its nose and its point of pivoting thereby to maintain the engagement of the pawl with said teeth, said pawl being without positive connection to the coupling member, and a hinged member at the outer end of the slide operative on the coupling member for disengagement of the pawl.

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