Dec. 14, 1926.

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W. MARSHALL

HINGE CONSTRUCTION FOR DECK LIDS

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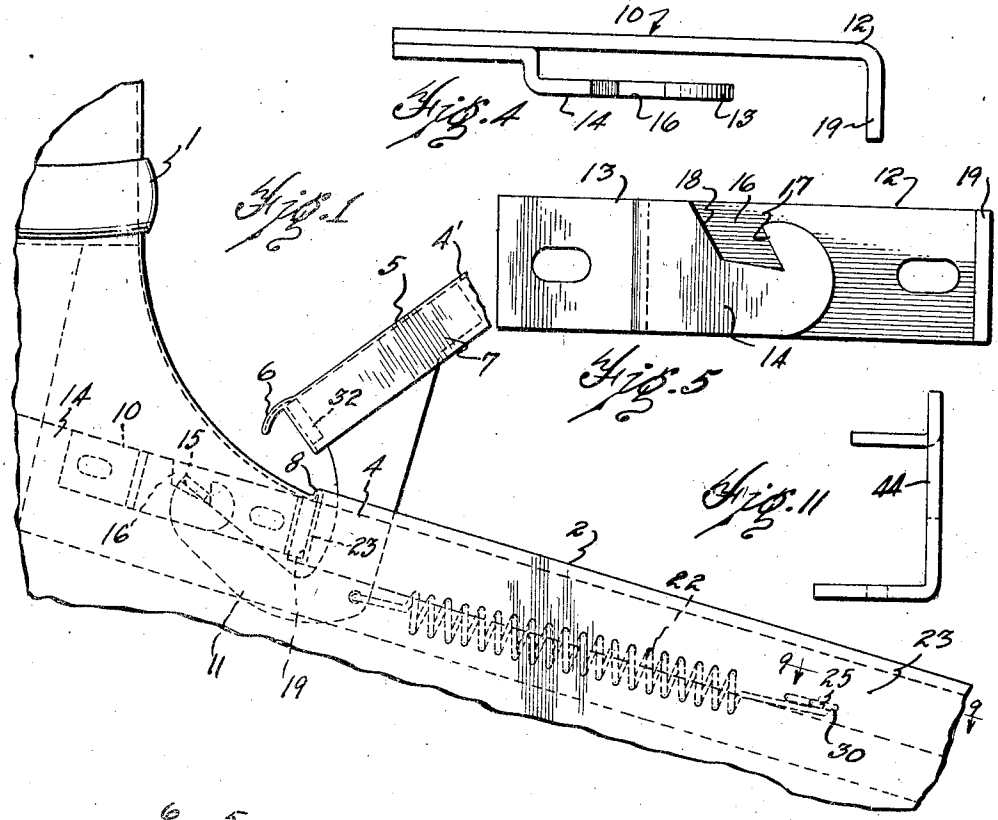


Fig. 4

Fig. 1

Fig. 5

Fig. 11

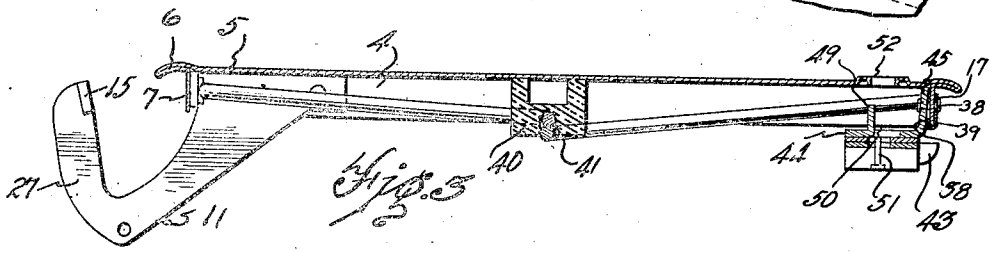


Fig. 3

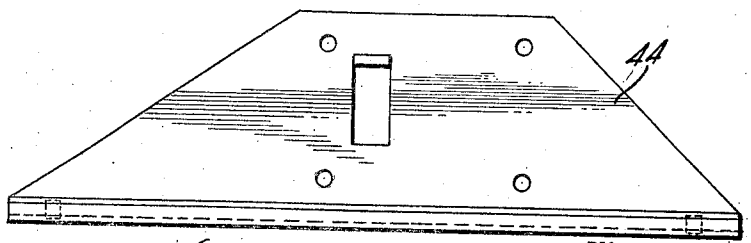


Fig. 10

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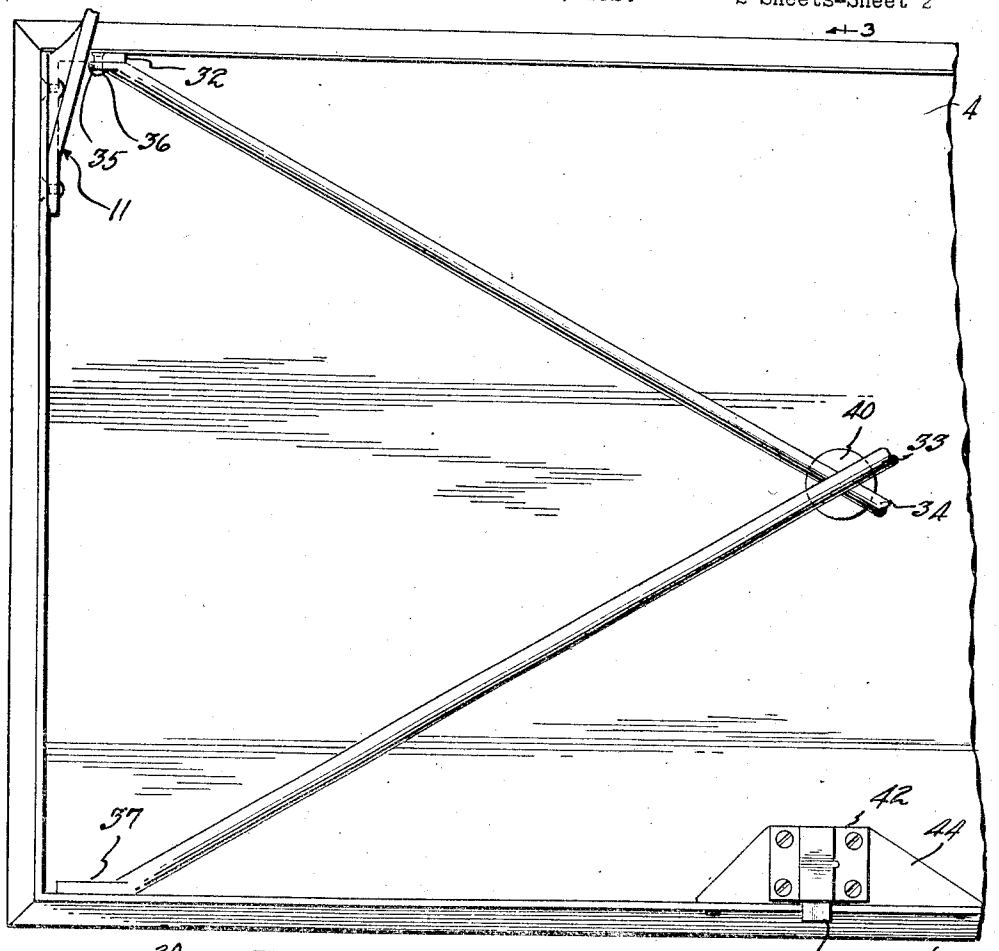
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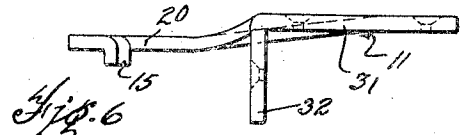
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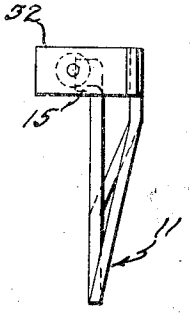
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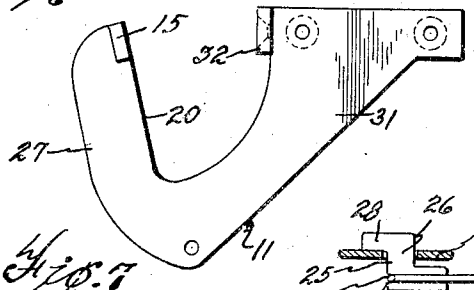
Hig. 2



Hig. 6



Hig. 8



Hig. 7

Hig. 9

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UNITED STATES PATENT OFFICE.

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HINGE CONSTRUCTION FOR DECK LIDS.

Application filed October 13, 1924. Serial No. 743,442.

This invention relates generally to hinge construction for deck lids and the like and consists of certain novel features of construction, combinations and arrangements of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings—

Figure 1 is a fragmentary side elevation of a vehicle body embodying my invention.

Figure 2 is a top plan view of the deck lid.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a top plan view of the main hinge part.

Figure 5 is a side elevation of the hinge part shown in Figure 4.

Figure 6 is a top plan view of the cooperating hinge part.

Figure 7 is a side elevation of the cooperating hinge part shown in Figure 6.

Figure 8 is an end view of the cooperating hinge part shown in Figures 6 and 7.

Figure 9 is a sectional view taken on the line 9—9 of Figure 1.

Figure 10 is a top plan view of the lock attaching plate.

Figure 11 is an end elevation of the plate shown in Figure 10.

Referring now to the drawings in which like characters of reference designate corresponding parts throughout the several views, the numeral 1 designates a vehicle body of the closed type having a rearwardly projecting downwardly inclined deck 2 at the top of the usual luggage compartment 3. For gaining access to the compartment 3 there is a suitable opening 4 in the deck that is preferably normally closed by means of a metallic lid 4. As shown, this lid comprises a sheet metal panel 5 that is preferably return-bent at its edges to form the laterally extending flanges 6 and the depending flanges 7. When the lid is closed, the depending flanges 7 fit within the openings 4 in the deck, while the lateral flanges 6 overlap the upstanding return-bent edge portions 8 of the opening 4 and thereby form a tight joint between the lid and deck.

The lid 4 is preferably pivotally connected at its forward end to the deck 2 and for this purpose I preferably provide a pair of strong and durable hinges 9. As shown, each hinge preferably comprises the main supporting part 10 and the cooperating pivotal part 11. To facilitate attachment, each main part 10 is provided with a long arm 12 and a relatively short arm 13. The long arm 12 is preferably bolted to the frame work 14 of the body below the deck 2, while the short arm 13 is preferably spot welded to the arm 12 at one end thereof and is provided with a laterally offset portion 14 for supporting the cooperating hinge part 11. Each cooperating part 11 preferably comprises a substantially U-shaped member that is preferably riveted at one end to the depending side flanges 7 of the lid and is provided at the other end thereof with a laterally extending pivot lug 15. To simplify the hinge construction and assembly of the hinge parts, the pivot lugs 15 of the hinge parts 11 preferably engage suitable elongated open slots or recesses 16 in the upper edges of the lateral supporting arms 14 of the main hinge parts 10. As shown, these slots 16 are preferably provided with parallel forwardly inclined end walls 17 and 18 respectively which are adapted to be engaged alternately by the lugs 15 during the pivotal movement of the deck lid. In order that the pivot lugs 15 will not accidentally become disengaged from the slots 16 in the hinge parts 10, the long arms 12 of the latter are preferably provided at their rear ends with laterally extending flanges 19 which are adapted to be engaged by the rear edges 20 of the arms 21 of the cooperating hinge parts 11. It will also be readily apparent that the engagement of the arms 21 of the cooperating parts 11 with the lateral flanges 19 will limit the upward swinging movement of the deck lid.

To facilitate the upward movement of the lid I preferably provide suitable counterbalancing springs 22 which are preferably terminally connected to the base of the U-shaped member 11 and to the depending flanges 23 of the deck 2. Any suitable means may be employed for securing the springs 22 to the deck flanges 23. As shown in Figure 9 of the drawings I preferably provide suitable anchor members 25 that extend through openings 26 in the flanges 23 and are provided at the opposite ends thereof with opositely projecting laterally extending portions 27 and 28 respectively. The inner lateral portions 28 preferably

bear against the inner faces of the flanges 23, while the outer portions 27 are preferably provided with notches 29 which receive the hooked extremities 30 of the springs 22.

For reinforcing the lid, each cooperating hinge part 11 is preferably provided at the upper end of the arm 31 with a laterally extending portion 32 that is preferably riveted to the inner depending flange 7 of the deck lid and thereby cooperates with the arms 31 of the hinge parts 11 to form angle braces for the deck lid. To prevent the lid from weaving or twisting when being raised or lowered I preferably provide two metallic rods 33 and 34 respectively that are preferably crossed at the centre of the lid and extend to the corners thereof. As shown in Figure 2, the inner forward ends of the rods are preferably provided with flattened portions 35 that extend at a slight angle thereto and are preferably secured to the laterally extending portions 32 of the hinge parts 11 by the rivets 36 that are used to secure the lateral portions 32 to the inner depending flange 7 of the deck lid. The other ends of the rods are preferably provided with flattened portions 37 that extend at a slight angle thereto and are preferably spot welded to the outer depending flange 7 of the deck lid. To prevent the crossed rods 33 and 34 from rattling I preferably provide a yieldable block or cushion member 38 that preferably engages the inner face of the lid 4 and is provided with suitable grooves or channels 39 for receiving the rods 33 and 34 respectively. As an added precaution these rods are preferably welded together at the point of intersection thereof before the resilient block 38 is mounted thereon. To strengthen the lid further, I preferably provide a sheet metal finish strip 40 that preferably extends across the outer end and along the opposite sides of the lid and is provided at its lower edge with a return-bent flange 41 that embraces the lower edges of the outer and side flanges 7 and holds the same together. Thus, this finish strip 40 gives the lid a neat and attractive appearance and at the same time materially reinforces the same. Any suitable means may be used to secure the finish strip 40 to the outer and side flanges 7 of the deck lid.

For holding the lid in closed position, I preferably provide a suitable lock 42 having a reciprocatory bolt 43 that is adapted to engage a suitable keeper (not shown) below the deck 2 at the rear edge of the opening 4. For mounting the lock casing upon the lid, there is a metal attaching plate 44 that is preferably secured to the upper face of the lock casing and is provided at its rear edge with an upstanding flange 45 that is riveted to the outer depending flange 7 of the deck lid and to the central portion 46 of the finish strip 40. In order that the proper key (not shown) may be used to operate the lock bolt 43, the plate 44 is preferably provided with a struck-out portion 49 providing an elongated opening 50 which is in alignment with the key opening 51 in the lock casing and a suitable opening 52 in the deck lid 54.

From the foregoing description it will be readily apparent that the cooperating hinge parts 11 may be easily and quickly assembled upon the main hinge parts after the latter have been secured to the supporting framework of the vehicle body. Inasmuch as the lugs 15 loosely engage the open recesses 16 in the main hinge parts it is also apparent that the deck lid may be quickly detached from the vehicle body whenever desired. Moreover the finish strip 40 connects the depending rear and side flanges 7 and thereby materially reinforces the deck lid in addition to improving the appearance thereof.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim as my invention is:

1. The combination with a closure member, and a support therefor, of a hinge connecting the closure member to the support having a main hinge part secured to the support, a cooperating hinge part secured to the closure member and having a lateral projection, said main hinge part having an open slot receiving the projection of the cooperating part, and counterbalancing means for the closure member normally retaining the lateral projection of the cooperating part in the slot in the main part.

2. The combination with a closure member, and a support therefor, of a hinge connecting the closure member to the support having a main hinge part secured to the support, a cooperating hinge part secured to the closure member having a lateral projection, said main hinge part having an open slot receiving the projection of the cooperating part, and a counterbalancing coil spring terminally connected to the cooperating hinge part and said support for retaining said projection in the slot in said main hinge part.

3. In an automobile body, the combination with a deck having an opening therein, and a closure for the opening, of a hinge connecting the closure to the deck having a main part secured to the deck, and a substantially vertically disposed cooperating part projecting downwardly from the closure, the cooperating part having a lateral projection, and the main part having an offset substantially horizontally disposed arm provided with an

open vertical slot receiving the lateral projection of the cooperating part.

4. In a vehicle body, the combination with a deck having an opening, and a closure for said opening, of a hinge connecting the closure to the deck having a main part secured to the deck, a cooperating part secured to the closure and having an open connection with the main hinge part, and counterbalancing means for the closure normally retaining the cooperating hinge part in operative position with respect to the main hinge part.

5. The combination with a closure member and a support therefor, of a hinge connecting the closure to said support including a part having two arms, one arm being secured to the support and the other arm having an open slot therein, and a cooperating part having a substantially U-shaped arm, one end of the last mentioned arm being secured to the closure and the other end having a lateral projection mounted for pivotal movement in the open slot aforesaid.

6. In an automobile body, the combination with a deck having an opening therein, and a closure for the opening, of a hinge having a main part secured to the deck and a cooperating part secured to the closure, the main part having two arms, one of said arms being substantially horizontally disposed and having an upwardly opening slot, said cooperating part having a lateral projection mounted for pivotal movement in the open slot aforesaid.

7. In an automobile body, the combination with a deck having an opening therein, and a closure for said opening, of a hinge having a main part secured to the deck and a cooperating part secured to the closure, the main part having a substantially horizontally disposed portion provided with an upwardly opening slot, the cooperating part having a lateral lug mounted for pivotal movement in said slot, and said main part also having a lateral projection constituting a stop for said cooperating part for limiting movement of the closure in one direction.

In testimony whereof I affix my signature.

WILLIAM MARSHALL.