

June 7, 1955

A. CLAUD-MANTLE

2,709,832

HOOD LATCH

Filed Feb. 28, 1952

4 Sheets-Sheet 1

Fig. 1.

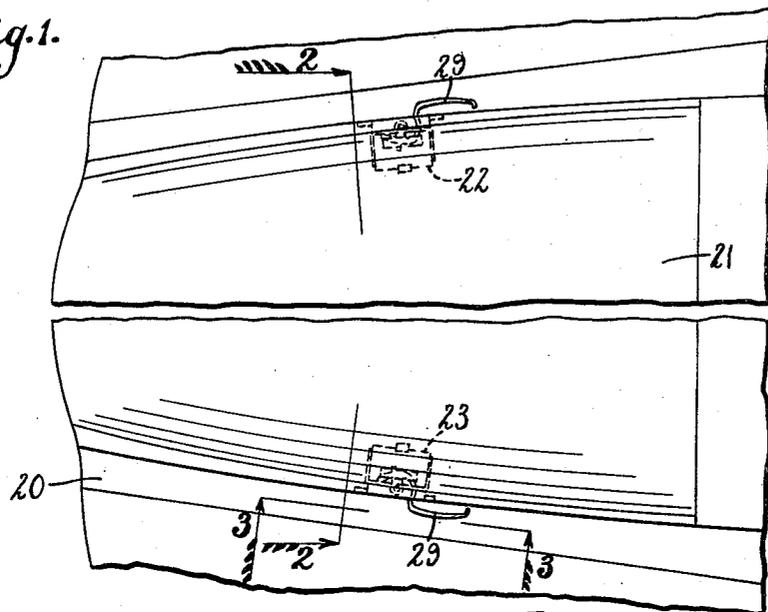


Fig. 2.

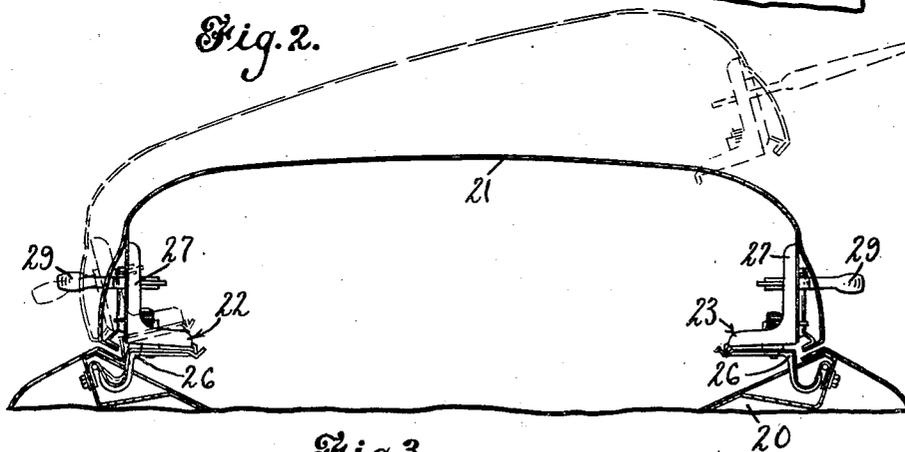
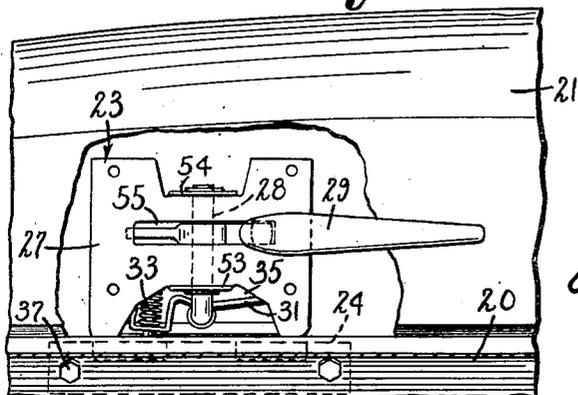


Fig. 3.



INVENTOR
Arthur Claud-Mantle
BY
Boswell & Bartholomew
ATTORNEYS

June 7, 1955

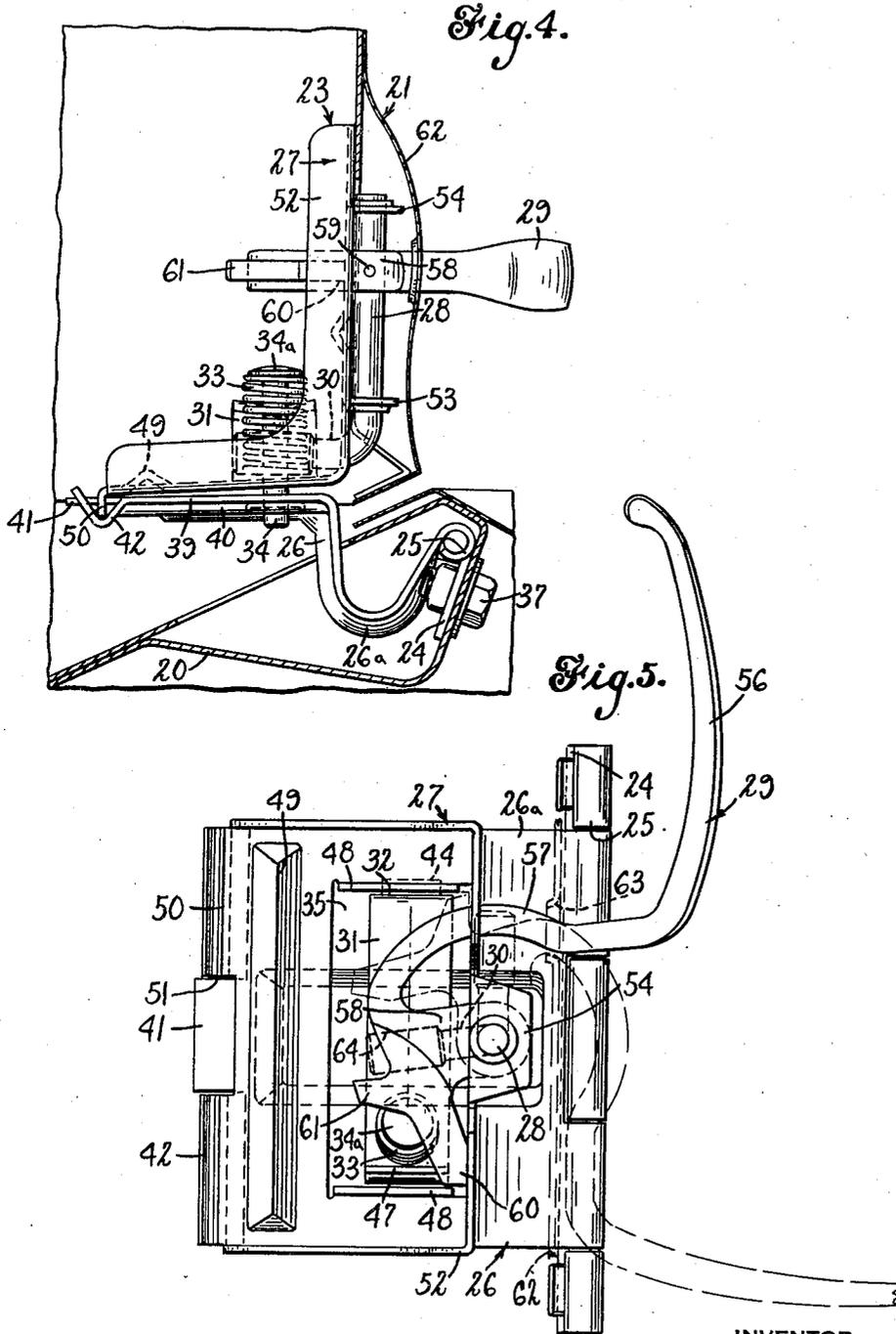
A. CLAUD-MANTLE

2,709,832

HOOD LATCH

Filed Feb. 28, 1952

4 Sheets-Sheet 2



INVENTOR
Arthur Claud-Mantle
BY
Rockwell & Bartholow
ATTORNEYS

June 7, 1955

A. CLAUD-MANTLE

2,709,832

HOOD LATCH

Filed Feb. 28, 1952

4 Sheets-Sheet 3

Fig. 6.

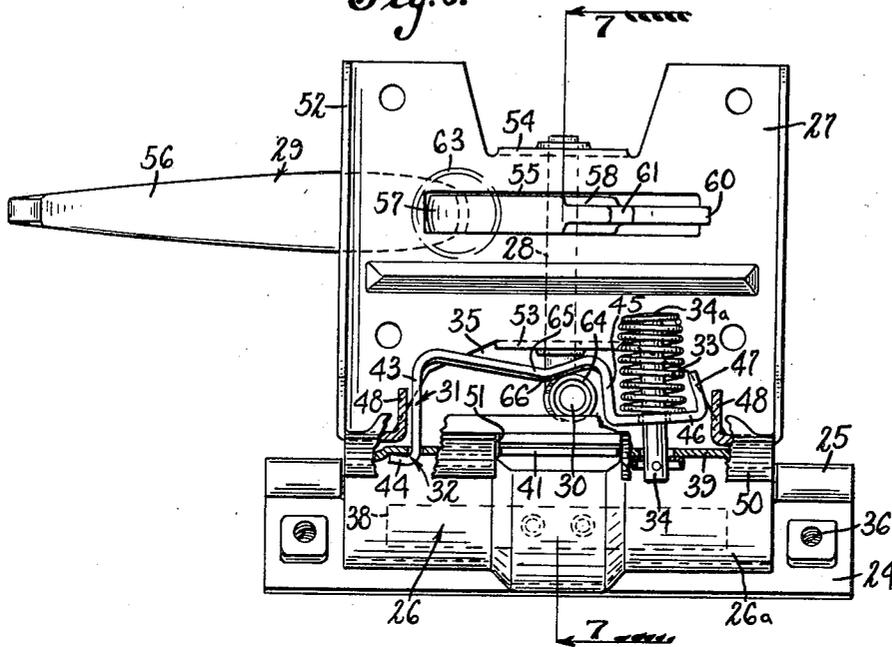
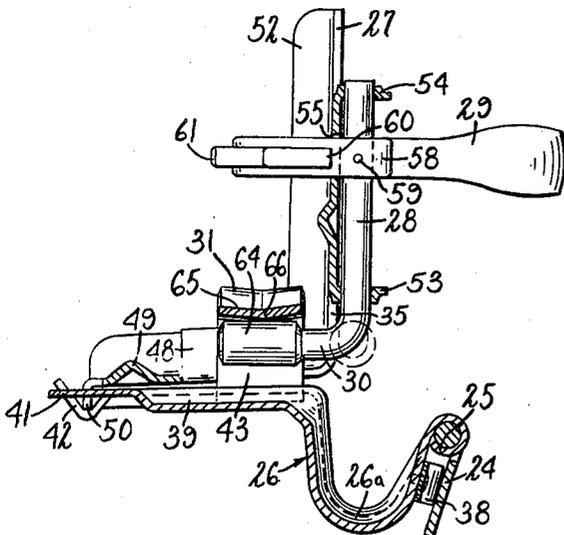


Fig. 7.



INVENTOR
Arthur Claud-Mantle
BY
Rockwell & Bartholomew
ATTORNEYS

June 7, 1955

A. CLAUD-MANTLE

2,709,832

HOOD LATCH

Filed Feb. 28, 1952

4 Sheets-Sheet 4

Fig. 8.

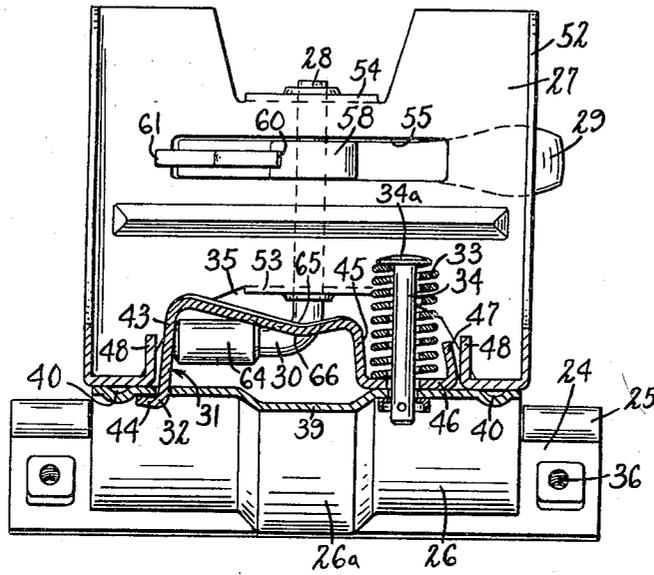
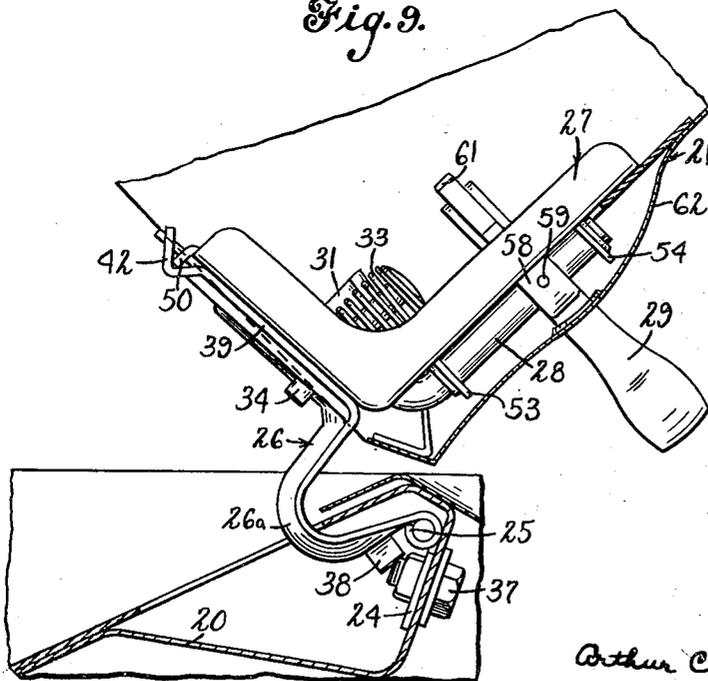


Fig. 9.



INVENTOR
Arthur Claud-Mantle
BY
Rockwell & Bartholomew
ATTORNEYS

1

2,709,832

HOOD LATCH

Arthur Claud-Mantle, Trumbull, Conn., assignor to The Bassick Company, Bridgeport, Conn., a corporation of Connecticut

Application February 28, 1952, Serial No. 273,892

10 Claims. (Cl. 16—128.1)

This invention relates to hood latches for automotive vehicles, and has particular reference to those used on trucks and delivery cars where the hood lid is of the dual-tip variety, and is fastened and released by latches manually operable from the respective sides of the hood.

In hood latches of the kind to which the invention relates, it has been common practice in the past to have lid-securing or clamping devices adjacent the front and rear ends of the lid at each side of the vehicle, these devices being operable from handle members located about midway of the ends of the lid.

An object of the present invention is to simplify and decrease the cost of the latch mechanism by providing a lid-securing mechanism that gives very satisfactory service and in which the securing or clamping means is much simpler than heretofore and operates upon the lid intermediate of the ends of the lid and in close adjacency to the operating or handle member.

Another object is to provide an improved manually operable hood lid fastener which can be very successfully used in connection with hood lids of the dual-tip variety.

A further object is to provide a hood latch, of the general type above indicated, having improved operation characteristics, and especially one in which there are very effective provisions for inhibiting vibration and noise and looseness of the latch parts resulting from wear in service.

In the accompanying drawings:

Fig. 1 is a plan view showing the hood portion of an automobile equipped with hood latches embodying my improvements;

Fig. 2 is a section on line 2—2 of Fig. 1, an upwardly lifted position of the hood lid being indicated in broken lines;

Fig. 3 is an enlarged view taken from the line 3—3 of Fig. 1, with parts broken away, showing the latch in the latched position;

Fig. 4 is a fragmentary view on a larger scale, partly in section, showing certain parts appearing at the right of Fig. 2;

Fig. 5 is a top plan view, with certain parts omitted, of the latch structure shown in Fig. 4, the released position of the latch being shown by broken lines;

Fig. 6 is an elevation, partly in section, of the latch mechanism shown in Figs. 4 and 5, looking from the inner side of the plate that carries the manipulating handle;

Fig. 7 is a section on line 7—7 of Fig. 6;

Fig. 8 is a vertical longitudinal section of the latch looking from the inner side of the plate that carries the manipulating handle, the latch being in the released position; and

Fig. 9 is a view generally similar to Fig. 4 showing the position of the parts when the lid has been lifted.

In the form of device selected for illustration, two latch devices embodying my improvements are shown, each being applied to the hood intermediate of the hood

2

ends and serving to secure the lid at the side margin by action upon the hood lid and its intermediate part, the latching and releasing action of each device being effected by lateral swinging movement of a manual manipulating member or handle. In this form the manipulating handle, when the device is in the latched position, extends at one side longitudinally beyond the mounting plate so as to have a substantially horizontal position at one side of the lid, and as in this particular case it is desired to have the manipulating members stand rearwardly from the latch in the fastened position, as shown in Fig. 1, the two latch devices are of opposite hand. However, as the two devices shown are substantially identical so far as construction and operation are concerned, a description of one will suffice, the device shown in detail in the drawings being that appearing at the right of Fig. 2. Each of these hood latches is of the type used in a dual-tip lid structure in which the lid can be swung upwardly from either side, and can, if desired, be entirely removed from the engine enclosure. For this purpose each latch comprises in its structure a hinge in which a pintle or like pivot element hinges together two parts, one of which parts is secured in fixed position at the marginal part of the engine enclosure, and the other of which parts is a plate-like element adapted to be positioned substantially horizontally within the engine enclosure at the upper part thereof and is equipped with latch mechanism whereby it is adapted to be latched to and released from another plate-like member which is adapted to be mounted at the inner side of the hood lid and carries upon it a part of the latching mechanism and also a manipulating member or operating handle for the latch mechanism, which operating member or handle extends to the exterior of the hood lid and by swinging movement is adapted to fasten and release the latch. This last-mentioned plate-like member in the form shown is generally of L shape, having an upright portion and a generally horizontal portion, the upright portion serving as a mounting for an upright detent shaft rigid with the swinging handle member and provided at the lower end with a swinging detent arm. This swinging detent arm is adapted to cooperate with a spring-pressed keeper member that is provided upon a portion of the first-mentioned latch plate in the manner hereinafter described.

In the drawings, the hood or engine-enclosing structure of an automobile is shown in Figs. 1, 2 and 3, and here the fixed part of the engine enclosure or hood is indicated at 20 and the hood lid at 21, the hood lid being latched to and hingedly connected to the marginal portions of the engine enclosure at its respective sides by means of latch devices, generally indicated at 22 and 23. In Figs. 3 to 9, inclusive, the detail structure of the latch device 23 is shown.

In the drawings, the part fastened to the marginal portion of the engine enclosure is indicated at 24, the hinge pintle is shown at 25, the plate-like part connected by pintle 25 to part 24 is indicated at 26, the L-shaped plate part of the latch mechanism is indicated at 27, the detent shaft at 28, the manipulating member rigid with shaft 28, at 29, and the detent member at the lower end of shaft 28, at 30. The latch mechanism carried by plate 26, which cooperates with the detent member or arm 30, includes a keeper 31 that extends lengthwise of the mounting plate 26 and has pivotal connection to the plate 26 at one end of the keeper, as indicated at 32. A spring 33 mounted upon a pin 34 presses downwardly upon the free end portion of the keeper 31 so as to maintain it normally in the position shown in Fig. 8. In the latched position of the latch, the detent arm 30 is extended under the keeper 31 so as to have engagement with the upper wall of the keeper, as shown in Fig. 7, and in the released

position of the latch the arm 30 is withdrawn from the keeper and extends generally in the plane of the upright portion of the mounting plate 27. When the detent arm or bolt member is moved into and out of the latching position, it moves through a cut-out portion or aperture 35 which is provided in the detent-carrying plate structure.

Referring now more particularly to the details of the structure, the part 24 is preferably a relatively narrow strip or plate having means such as threaded holes 36 by which it can be rigidly secured in substantially horizontal position to the marginal part of the engine enclosure. Screws such as indicated at 37 engage the threaded holes 36, as shown, for example, in Fig. 4, and the plane of the plate 24 may be approximately vertical. Means such as leaf springs 38 may be fixed to the plate 26 in a position to abut against the strip 24 so as to hold the plate 26 normally in approximately horizontal position, as shown in Fig. 4 and Fig. 7. Near the hinge pintle 25 the plate 26 may have a U-shaped portion, indicated at 26^a, so as to clear the adjacent sheet metal work when the hood lid is swung upwardly, as shown in Fig. 9. The U-shaped part 26^a of plate 26 is integral with a portion 39, which in the position of Fig. 7 is substantially horizontal, and the plate 26 preferably has a transverse groove in the U-shaped portion 26^a and in the flat portion 39 for the purpose of reinforcing the plate structure. The flat portion of the plate 26 may also have transverse grooves 40 formed in it adjacent the forward and rearward ends for the purpose of strengthening the plate structure.

At the inner end and at the middle part the plate portion 39 may be provided with a part 41 (Fig. 7) in the nature of a tongue which is flat and projects inwardly past V-shaped portions 42 formed in the plate portion 39 at the respective sides of the part 41. The V-shaped portions 42, which are formed in the plate by bending the metal, provide valleys or V-shaped seats adapted to receive downturned lip portions provided upon the L-shaped mounting plate 27, as hereinafter described.

The keeper 31, previously mentioned, is formed of a strip or bar of metal having an approximately horizontal upper portion integral with a downturned leg 43 at one end, which leg provides the pivotal connection 32 with the plate 26, as previously mentioned. For this purpose the leg 43 extends through a slot provided in the portion 39 of plate 26, and below the slot the leg is bent, as shown at 44, to hold the keeper in position, the arrangement being such that the keeper can have a limited amount of swinging movement in a vertical plane. Adjacent the opposite end of the keeper 31 the keeper is provided with a downturned leg 45 that is integral with a horizontal portion 46, and with an upturned tip or extremity 47. The pin 34, previously mentioned, has its lower end secured in place beneath the plate portion 39, and extends upwardly with clearance through a hole in the keeper portion 46, and the helical spring 33, which is confined between a head 34^a on pin 34 and the keeper portion 46, normally holds the portion 46 against the plate portion 39, as shown in Fig. 8.

For the purpose of guiding the mounting plate 27 with respect to the keeper, the mounting plate is provided in the horizontal portion thereof with upturned lugs 48, which lugs are located in the position of Fig. 8 adjacent the keeper leg 43 and the keeper tip 47, respectively, these lugs 48 facing each other across an open space that is a part of the cut-away portion or aperture 35 previously mentioned.

The cut-away portion or aperture 35 is formed in part in the upright portion of the L-shaped plate 27, and in part in the horizontal portion, and it extends inwardly past the lugs 48. The inner part of plate 27 beyond the cut-away portion is in the form of an upwardly crowned bar 49 extending the full length of the plate and provided at the inner margin with downturned lips 50 that are adapted to engage in the valleys or seats provided by the V-shaped portions 42, as shown in Fig. 7, for the purpose

of locating the plate 27 laterally with respect to the lower plate 26 and preventing relative displacement of the plates in a lateral direction. Between the lip portions 50 there is a cut-away portion 51 provided at the margin of the lower plate enabling the upper plate to accommodate the projecting tongue-like part 41 of the lower plate in a manner to locate the two plates relatively to each other in a longitudinal direction, and prevent relative displacement in such direction. Preferably those portions of the lips 50 which are adjacent the part 41 are slightly beveled in order to facilitate the seating of the upper plate on the lower plate.

The upper plate 27 is preferably made of a single member bent to provide the L-shaped form, and for strengthening purposes this member is preferably provided along both ends with integral flanges 52. The upright portion of the plate is provided with holes for the necessary fastening members by which the upper plate is secured to the side wall of the hood lid. The detent shaft 28, previously mentioned, is mounted in suitable bearings provided in the upright part of the plate 27. In the form shown, there is a lower bearing 53 provided upon the plate, which bearing is formed in a metal portion bent outwardly from the plate, as shown in Fig. 7. The upper bearing 54 for the shaft is in this form provided by a similar outwardly bent portion of the plate. Between the upper and lower bearings the plate is provided with a longitudinal slot 55 through which extends a part of the operating structure for the shaft 28, which structure is located in part outwardly of the plate and in part inwardly thereof. This operating structure includes the manipulating member 29, which in this form is provided with a horizontal bowed handle portion 56 that is integral with a shank member 57 that extends through the slot 55 and is integral with a reversely turned portion 58 by means of which the handle is rigidly fastened to the shaft. In this form the portion 58 is provided with a hole through which the shaft extends, and the shaft is rigidly fastened to the portion 58 in a suitable manner as by means of a suitable fastening pin 59.

The manipulating member 29 also preferably includes as parts thereof suitable stop members which serve the purpose of arresting the manipulating member in the fully latched and fully released positions, respectively, and in this form the handle shank part 58, previously mentioned, has integral therewith a stop member 60 and a second stop member 61. As will be noted from Fig. 5, the stop member 60 abuts the wall of the mounting plate when the latch is in the latched position, the point of engagement of member 60 with the plate being forwardly of the slot 55, whereas in the completely released position the stop member 61 engages the plate rearwardly of the slot 55, as indicated by the broken lines in Fig. 5.

The portion 57 of the handle structure is preferably disposed on a curve concentric with the detent shaft, and, for the purpose of accommodating this portion and permitting its free movement, a sheet metal part 62 of the hood lid, which is a masking portion overlying the detent shaft, is provided with an aperture such as indicated at 63 in Fig. 5.

The stop arrangement just described is of such character that the swing of the detent shaft is limited to approximately 90°, the handle part of the manipulating member being substantially longitudinally disposed when the lid is in the secured position and being substantially transversely disposed with respect to the lid when the latch is fully released.

The detent arm 30 is preferably provided by bending the lower end portion of the shaft 28 so as to provide a substantially horizontal detent arm. This arm is preferably provided at the extremity with a roller element 64, preferably in the form of a sleeve provided on the arm in such a manner that the sleeve is easily rotatable. This roller element is of a length substantially equal to the width of the keeper 31.

As will be noted from Figs. 6 and 8, the upper approximately horizontal portion of the keeper bar or plate is sloped in a longitudinal direction to provide in such portion intermediate of the ends thereof a slight downward bulge in the nature of a transverse valley, as indicated at 65, and, as will be noted from Fig. 7, this part of the keeper is also bent downwardly in a transverse plane to provide a longitudinal valley, the result being that on the under surface of the keeper a blunt projection 66 is formed, the same being adapted to act as a cam cooperating with the underlying roller 64.

In the released position of the latch the roller 64 has the longitudinal position shown in Fig. 5 in dotted lines, and when the lid is lowered at the side in question the cut-away portion of the upper plate enables the generally horizontal portion of said plate to move over the keeper member, and the inner marginal portion of the upper plate engages the inner marginal portion of the lower plate in a manner to properly engage the upper plate with the lower plate. At this time there is a slight angle between the laterally extending portions of the respective plates somewhat greater than that shown in Fig. 7, and the engagement between the laterally extending portions of the plates takes place, as above stated, at their inner marginal portions. The detent arm being in the position above indicated, there is no interference with the described downward movement of the upper plate. The handle 56 is then moved in a counterclockwise direction with respect to Fig. 5, and this causes the detent arm to swing inwardly and to engage the upper part of the keeper bar and swing over the cam projection 66 to take the position shown in Fig. 6, which is the fully engaged position of the latch. In moving to this position the keeper bar is swung upwardly at its right-hand end (Fig. 6) against the action of the coil spring 33. After the detent passes the projection 66, it is very strongly held against a return movement, and the action of the latch is such as to lessen the angle between the plates and hold the lid very strongly in a closed position against the pressure of the spring.

The action caused by the turning of the detent arm is one of camming the lid downwardly at that side of the lid, moving the detent arm and therefore the lid in a downward direction against the action of the spring 33, which is compressed by the consequent upward movement of one end of the keeper bar. A result of this is that the lid is forced down and held down against spring pressure, and the spring, acting against a keeper that has a certain amount of free movement, takes up vibrations and shocks that would ordinarily be transmitted from the lower part of the hood structure to the hood lid. The pivotal or like connection between the keeper and the lower plate structure enables the keeper to have a certain amount of movement independently of the lower hood structure, and this movement is resisted by the spring. Furthermore, in the fully engaged position of the detent arm, as above described, there is very little surface contact between the detent arm and the keeper, and for this reason also there is less tendency to transmit vibrations from the lower part of the hood structure to the upper part.

It will be noted from Figs. 5 and 6 that in the fully latched position the detent arm is swung slightly forwardly of what may be termed the dead-center position, being at a small angle to a line at right angles to the axis of the keeper member.

In the action above referred to of camming the lid downwardly at one side for closing the lid, the upper and lower plates having their lateral portions at a slight angle to each other being pivotally related to each other because of the engagement of the marginal lips of the upper plate in the seats or valleys of the lower plate, the angle between the plates is decreased as a result of the pivotal movement of the upper plate. When the fully latched position has been reached, there is still an acute angle

between the lateral portions of the two plates, as shown, for example, in Figs. 4 and 7.

It is to be understood that Figs. 4 and 7 show the condition at the right-hand side of the lid when the latch at the other side of the lid is fully latched, as shown in Fig. 2, that is to say, when the lid is subject to latching tension at both sides. At such time the lateral portions of the upper plates at the respective sides of the lid are somewhat lifted with respect to the lateral portions of the lower plate. When it is desired to release the lid at one side the manipulating handle at that side is turned in the proper direction and the lid is released by the disengagement of the detent arm from the keeper. As a consequence the keeper, under the influence of its spring, moves back to its normal position with respect to the lower plate. The lid is then free to be lifted at the side in question. When this lifting movement occurs, the hinge part of the latch at the opposite side of the lid comes into operation so that the lid swings upwardly to a position such as that indicated by the broken lines in Fig. 2. As respects the latch at the last-mentioned side of the lid, this will no longer have its lateral plate portions at an acute angle to each other, but will have them in substantially parallel abutting relation, as shown, for example, in Fig. 9, this being due to the fact that the previously referred to tension on the lid structure in a transverse direction has been removed. When the latch device at the respective side acts as a hinge to support the lid in a raised position, the keeper spring holds the free end of the keeper down against the upper surface of the lower plate.

It will be seen from the foregoing that in the improved hood latch the securing or clamping means operates upon the lid intermediate of its ends, and in close adjacency to the operating or handle member, and that as a result the mechanism is simplified and its cost decreased. It will be seen, also, that the latch is improved, as a result of the possibility of taking up, by spring action, looseness or play likely to cause vibration and noise. In the operative position of the hood latch mechanism, the mounting plates have a relationship in which one plate can swing relatively to the other by a pivoting action, the pivot being provided by interfitting parts that do not cause objectionable noise or objectionable wear, and the pivotal movement of the plate serving to compress and release a spring acting upon a keeper member. The keeper member is free to move in a generally vertical plane with respect to the mounting plate which carries it, and the spring interposed between the mounting plate and the keeper allows considerable up-and-down movement relatively to each other of the two mounting plates without bringing the opposing face portions of the plates into contact with each other. These are all features which mark substantial improvement in a latch of this character, and among other things they provide effective means for taking up lost motion and reducing vibration, noise and wear.

The embodiment of the invention shown in the drawings is by way of example only, and various changes in the organization of parts and in the details may be made without departure from the principles of the invention or the scope of the claims.

What I claim is:

1. In a latch mechanism for releasably securing a dual-tip lid to a hood body, a lower mounting plate adapted to be hinged to the hood body for upward swing-movement, said plate extending inwardly from the hood body and having a part thereof disposed in substantially horizontal position when the lid is in closed position, said part of the lower plate having a valley formed therein adjacent the inner margin thereof and extending longitudinally of the lid, an upper mounting plate having an upwardly directed portion adapted to be rigidly secured to the lid at one side thereof and having a lower flange extending inwardly from said upwardly directed portion

7

and inclined downwardly with respect to the lid, said flange having a depending lip at the inner margin thereof and extending longitudinally of the lid, said lip being seated in said valley and said flange and said part of the lower plate being in angular and pivotal relationship when the lid is in closed position, a movably mounted detent member carried by the upper mounting plate and having a laterally turned arm, a manually operable operating element adjacent the upper mounting plate and carried thereby having operative means of connection with said detent member, and an upwardly extending bail-like keeper member carried by said part of the lower plate outwardly of said margin thereof, the upper plate having a keeper-receiving aperture formed in said flange outwardly of said margin thereof, said keeper member being adapted to be penetrated and engaged by said arm of the detent member to latch the lid to the fixed part of the hood.

2. In a latch mechanism for two relatively swingable structures and having a laterally swingable detent adapted to be carried by one of the structures, a mounting plate adapted for connection to the other structure, a pivotal keeper member formed of a strip of metal and having a leg pivoted to said plate at the distal end of the leg to permit vertical swinging movement of said member and having a second leg laterally spaced from the first leg and shorter than the latter, said pivotal member having a body interconnecting corresponding ends of said legs and spaced from said plate and having a substantially flat extension extending laterally from the second leg at the remote end of the latter adjacent said plate, said body being inclined inwardly from the first leg and then slightly outwardly adjacent the second leg and providing ingress and egress for the detent between said body and said plate adjacent the first leg, said body being adapted for latching engagement with the detent intermediate the second leg and the inwardly inclined portion of the body, and spring means carried by said plate and comprising a coil spring engaging said extension and urging said pivotal member toward said plate.

3. In a latch mechanism for securing a dual-tip lid to a hood body, a lower mounting plate adapted to be hinged to the hood body for upward swinging movement, said plate extending inwardly from the hood body and having a part thereof disposed in substantially horizontal position when the lid is in closed position, an upper mounting plate having an upwardly directed portion adapted to be rigidly secured to the lid at one side thereof and having a lower flange extending inwardly from said upwardly directed portion, said flange having a keeper-receiving aperture formed therein, an upwardly extending shaft mounted on the upwardly directed portion of the upper mounting plate in substantially parallel relation with respect thereto and having a lower laterally turned arm, an operating member carried by said portion of the upper plate having a manually operable portion extending to the exterior of the lid and having operative means of connection with said shaft, and an upwardly extending bail-like keeper carried by said part of the lower plate and adapted to be received in said aperture for latching engagement with said arm.

4. In a hood latch for releasably securing a dual-tip hood lid to a fixed hood part, a lower mounting plate in hinged relationship to the fixed hood part, an upper mounting plate having an upwardly extending portion in fixed relation to the hood lid and having a lower portion extending laterally from the upwardly extending portion and opposing a portion of the lower plate, said plates having marginal portions engageable with one another to provide a pivotal angular relationship of the plates, a spring-loaded bail-like keeper having a lost-motion connection with said portion of the lower plate, said lower portion of the upper plate being provided with a keeper-receiving aperture, an upwardly extending shaft journaled in the upwardly extending

8

portion of the upper plate and having a lower laterally turned arm swingable into said keeper and cooperating therewith to latch the hood lid to the fixed part of the hood, the spring-loaded keeper exerting a resilient downward pull on the lid when the lid is in latched position, and a manually operable operating member extending through the lid and fixed to said shaft.

5. In a hood latch for releasably securing a dual-tip hood lid to a fixed hood part, a lower mounting plate in hinged relationship to the fixed hood part, an upper mounting plate fixed to the lid and having an upwardly extending portion and a lower portion extending laterally from the upwardly extending portion and opposing a portion of the lower plate, said plates having marginal portions engageable with one another to provide a pivotal angular relationship of the plates, a bail-like keeper having a pivotal connection to said portion of the lower plate for swinging movement in a vertical plane, said lower portion of the upper plate being provided with a keeper-receiving aperture, an upwardly extending shaft journaled in the upwardly extending portion of the upper plate and having a lower laterally turned arm swingable into said keeper and cooperating therewith to latch the hood lid to the fixed part of the hood, and spring means carried by the lower plate and urging the keeper toward said portion of the lower plate, the spring-pressed keeper exerting a resilient downward pull on the lid when the lid is in latched position, and a manually operable operating member extending through the lid and fixed to said shaft.

6. In a hood latch for releasably securing a dual-tip hood lid to a fixed hood part, the combination of a lower mounting plate for application to the fixed hood part and having a portion thereof adapted to be disposed approximately horizontally, a keeper mounted above said portion and carried by said plate, said keeper being constituted by an elongated member having one end thereof in pivotal relation to the plate so that the keeper may swing in a vertical plane, a spring carried by said plate acting on the other end of said keeper and pressing it in a downward direction, a plate for application to the hood lid having a portion thereof above and opposing said portion of the first plate and provided with an aperture in which said keeper is received, and an operating member pivotally mounted on the second plate to swing in a substantially horizontal plane and having in fixed relation thereto a swingable detent engageable with said keeper at the under side thereof intermediate the ends of the keeper.

7. In a latch mechanism such as described, the combination of a lower mounting plate, a rigid keeper member carried by said plate, an upper mounting plate having a portion thereof opposing said lower plate, said portion being provided with a keeper-receiving aperture, said keeper comprising an upper portion and two leg portions interconnected by the upper portion, one leg portion of the keeper having a pivotal connection with the lower plate whereby the other leg portion is swingable toward and away from the lower plate, spring means carried by the lower plate and urging said other leg toward the lower plate, and detent means carried by the upper plate and comprising a laterally swingable member engageable with the spring-pressed keeper member at the under side of the upper portion thereof.

8. In a latch mechanism such as described, the combination of a lower mounting plate, a rigid keeper member carried by said plate, an upper mounting plate having a portion thereof opposing said lower plate, said portion being provided with a keeper-receiving aperture, said keeper comprising an elongated member extending approximately horizontally and having one end thereof pivotally connected to the lower plate for swinging movement in a vertical plane, the keeper member having an upwardly inclined portion intermediate the ends thereof, spring means carried by the lower plate and urging the other end of the keeper toward the lower

plate, and detent means carried by the upper plate and comprising a laterally swingable member engageable with the spring-pressed keeper member at the under side of said inclined portion thereof.

9. In a latch mechanism such as described, the combination of a lower mounting plate, an upper mounting plate, one of the plates being provided with a keeper-receiving aperture and the other being provided with a keeper, said keeper comprising two leg portions and a portion interconnecting the leg portions, one leg portion of the keeper having a pivotal connection with said other plate, the other leg portion being swingable toward and away from the last-mentioned plate, spring means carried by said other plate urging said other leg portion of the keeper toward the last-mentioned plate, and means movably mounted on said one of the plates and comprising a latching member engageable with the spring-pressed keeper member intermediate the leg portions thereof.

10. In a latch mechanism for releasably securing a dual-tip lid to a hood body, a lower mounting plate adapted to be hinged to the hood body for upward swinging movement, said plate extending inwardly from the hood body and having a part thereof disposed in substantially horizontal position when the lid is in closed position, said part of the lower plate having a valley formed therein adjacent the inner margin thereof and extending longitudinally of the lid, an upper mounting plate having an upwardly directed portion adapted to be rigidly secured to the lid at one side thereof and having a lower flange extending inwardly from said upwardly directed portion and inclined downwardly with respect to the lid, said flange having a depending lip at the inner margin

thereof extending longitudinally of the lid, said lip being seated in said valley and said flange and said part of the lower plate being in angular and pivotal relationship when the lid is in closed position, a movably mounted detent member carried by the upwardly directed portion of the upper mounting plate and having a laterally turned arm, a manually operable operating element adjacent the upper mounting plate and carried thereby having operative means of connecting with said detent member, and an upwardly extending bail-like keeper member carried by said part of the lower plate outwardly of said margin thereof and adapted to be penetrated by the arm of the detent member, the upper plate having a keeper-receiving aperture formed in said flange outwardly of said margin thereof, one of said members having a spring-pressed lost-motion connection to the plate carrying the last-mentioned member to urge the other of said members relatively to said one of the members in a direction to decrease the angle between the flange of the upper plate and said part of the lower plate, whereby a resilient downward pull is exerted on the lid.

References Cited in the file of this patent

UNITED STATES PATENTS

1,250,574	Ferris	Dec. 18, 1917
2,097,911	Becker	Nov. 2, 1937
2,209,886	Hill	July 30, 1940
2,246,792	Dall	June 24, 1941
2,311,965	Reynolds	Feb. 23, 1943
2,378,654	Pekny	June 19, 1945
2,411,485	Webster	Nov. 19, 1946