May 3, 1932. E. L. CRUM 1,856,540

HOOD LATCH

Filed May 17, 1930

FIG. 1

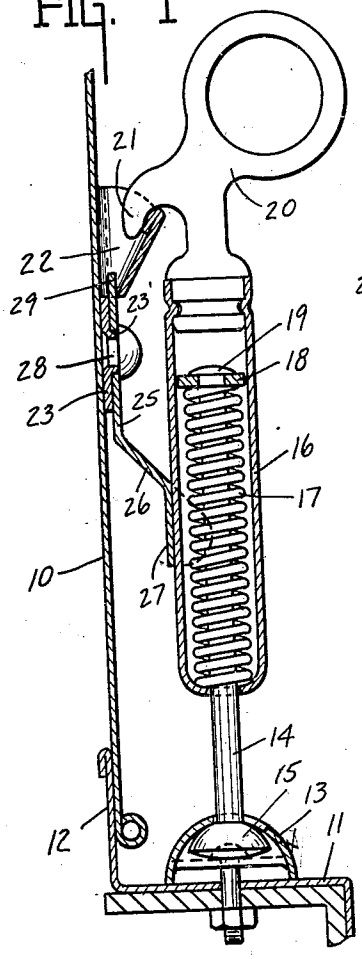


FIG. 2

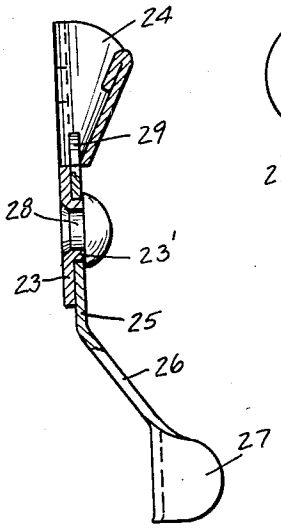


FIG. 3

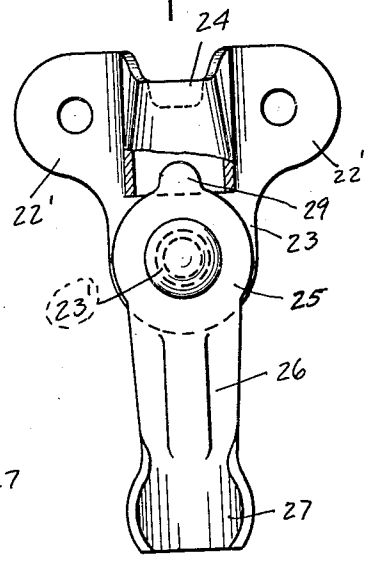
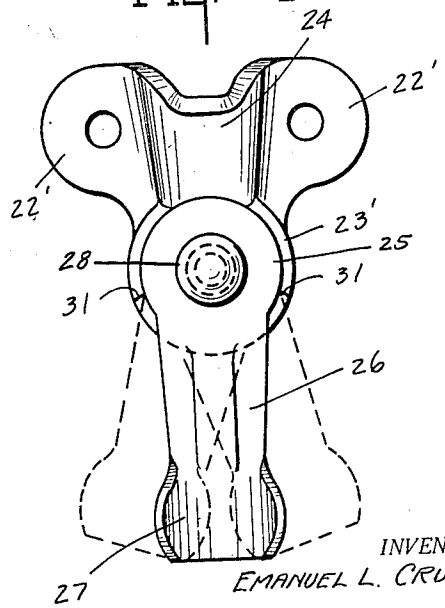


FIG. 4



INVENTOR
EMANUEL L. CRUM.

BY
Lockwood Lockwood Goldsmith & Galt
ATTORNEYS.

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UNITED STATES PATENT OFFICE

EMANUEL L. CRUM, OF INDIANAPOLIS, INDIANA

HOOD LATCH

Application filed May 17, 1930. Serial No. 453,117.

This invention relates to a hood latch of that character adapted to be used for resiliently securing an automobile hood in closed position, while at the same time exerting a lateral pressure thereon to prevent rattle.

The principal object of the invention is to provide a hood latch of this character wherein the means for exerting the side pressure on the side is mounted thereon as distinguished from being mounted upon the latch. For this purpose there is secured to the side of the hood, and preferably associated with the keeper mounted thereon, an outwardly extending spring metal arm provided on its free end with a saddle against which the hood latch is adapted to bear when in operative position, and thus exert a yielding side pressure against the hood.

One feature of the invention resides in the mounting of the spring member wherein it is pivotally secured to the hood to permit adjustment wherein there is misalignment between the latch and hood. Thus, wherein the position of the spring on the hood may be out-of-line with the mounting of the latch on the chassis, the spring may be adjusted about its pivotal mounting to compensate therefor.

A further feature of the invention resides in the means for limiting the pivotal adjustment of the spring to avoid being moved to such position that it would not be engaged by the hood latch.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

Fig. 1 is a sectional view of a portion of an automobile hood and chassis, showing a central vertical section of the hood latch and side spring in operative position. Fig. 2 is an enlarged view of the keeper and side spring mounted thereon showing a portion thereof in cross section. Fig. 3 is a front elevation thereof with a portion broken away. Fig. 4 is the same as Fig. 3 showing a modified form.

In the drawings there is shown a portion of an automobile hood 10 and a chassis member 11 having an upwardly extending flange 12 against which the hood is adapted to be held in closed position. Secured to the chassis portion 11 there is an anchor plate 13 to which is loosely secured the anchor rod 14 through the medium of the enlarged head 15. The anchor rod extends upwardly through the lower end of the barrel 16 of the latch, and is surrounded by the spiral compression spring 17. The upper end of the rod is provided with a spring engaging washer 18 and head 19. Secured to the upper end of the barrel there is a latching head 20 having a finger 21 adapted to engage over the keeper 22 which is secured to the side of the hood.

The keeper 22 is formed with a downwardly extending plate 23 below the pocket portion indicated at 24. Pivotally mounted to the plate 23 of the keeper there is a spring arm comprising the plate portion 25, the outwardly extending intermediate portion 26 and the saddle portion 27. The plate portion 25 bears firmly against the plate 23 and is pivotally connected therewith by the rivet or bolt 28. The pocket 24 is open at the lower portion thereof so as to receive the upper part of the plate 25. Said plate 25 is further provided with an ear 29 formed on the top part thereof and extending upwardly into the pocket 24 in position to engage the side edges of said pocket for limiting the swinging movement of the arm.

The position of the arm 26 is such that upon the latch being moved to operable position as illustrated in Fig. 1, the side surface of the barrel 16 will engage in the saddle 27 of the spring arm and force it under spring tension toward the hood, thereby yieldingly forcing the hood under tension against the flange 12 so as to prevent any rattle thereof.

From the above it will be noted that whereas the arm may be swung about its pivotal connection with respect to the keeper plate so as to be aligned with the barrel of the latch, by reason of the tongue 29 limiting its pivotal movement, at no time can said arm be swung to an extreme position wherein the latch would not contact therewith. Within the limitations of the adjustment of said arm, the latch will always engage some portion there-

of, while its adjustment permits of such positioning as to normally center the arm and latch with respect to each other. In addition to the above, the plate 25 is placed and held firmly against the keeper plate by the overlapping of the pocket whereby it is held both at the top and at the pivotal point against any tilting action. This arrangement steadies the connection between the arm and the keeper and eliminates undue strain upon the rivet 28.

The plate 23, as shown in Fig. 2, is provided with an opening surrounded by an upturned flange 23′ extending throughout the thickness of the plate 25 and protruding through the center opening therein, whereby said flange 23′ serves as a pivotal bearing for said plate. The rivet or bolt 28 extends through the opening in the plate 23 and flange 23′, so that the enlarged head thereon extends radially beyond the flange 23′ bearing against the adjacent face of the plate 25 for holding it in position on said flange. This greatly strengthens the pivotal connection between the plates 23 and 25 so that no substantial stress or strain is imposed on the rivet 28.

The modified form illustrated in Fig. 4 shows a similar arrangement wherein the plate 25 of the arm is imbedded in a recess formed in a cast keeper plate 23′, the casting being cut away to provide shoulders 31 against which the adjacent portions of the plate 25 engage so as to limit the swinging movement to the positions illustrated in dotted lines therein.

The invention claimed is:

1. The combination with a vehicle hood and chassis member, of a hood latch therefor having one end anchored to said chassis and the other end yieldingly connected therewith, a keeper fixedly secured to the side of said hood in a position to be engaged by the free end of said latch for yieldingly holding the hood in lowered position, and a spring arm adjustably mounted on said keeper so as to extend downwardly and outwardly from said hood in position to be engaged by said latch under spring tension when in operative position for holding said hood under tension against lateral movement with respect to said chassis.

2. In a hood latch for vehicles, the combination with a yielding hold-down latch having a body portion, of a keeper fixedly attached to the hood in position to be engaged by said latch for holding said hood in downward position, a spring arm pivotally connected with said keeper in position to be engaged by the body of said hood latch when in operative position for exerting a yielding inward pressure against said hood, said arm being adjustable about its pivotal mounting to permit of alignment thereof with said latch, and means for limiting the pivotal movement of said arm within predetermined limits for preventing movement of said arm beyond a contacting position with said latch.

3. In a hood latch for vehicles, the combination with a yielding hold-down latch having a body portion, of a keeper fixedly attached to the hood in position to be engaged by said latch for holding said hood in downward position, a spring arm pivotally connected with said keeper in position to be engaged by the body of said hood latch when in operative position for exerting a yielding inward pressure against said hood, said arm being adjustable about its pivotal mounting to permit of alignment thereof with said latch, means for limiting the pivotal movement of said arm within predetermined limits for preventing movement of said arm beyond a contacting position with said latch, and means for engaging the opposite end of said arm from the free end thereof for holding it against tilting action about said pivotal connection.

In witness whereof, I have hereunto affixed my signature.

EMANUEL L. CRUM.