Sept. 25, 1934. R. G. MOORE 1,974,622

HOOD CATCH

Filed March 20, 1933

Fig. 1.

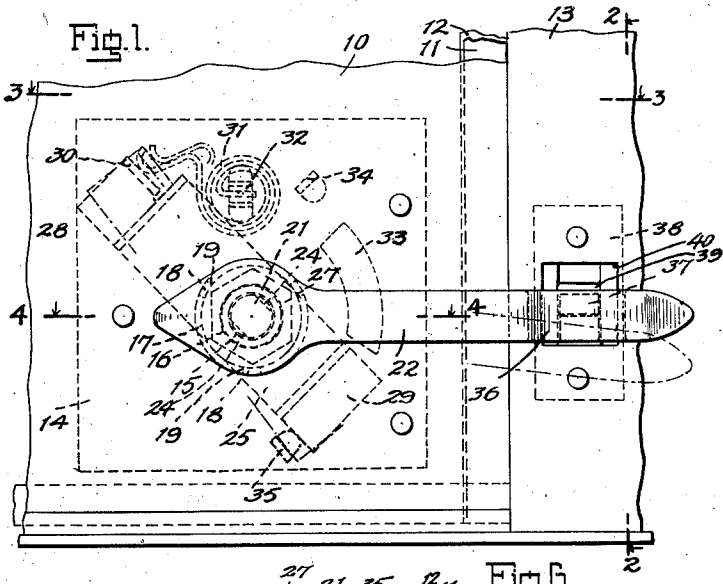


Fig. 2.

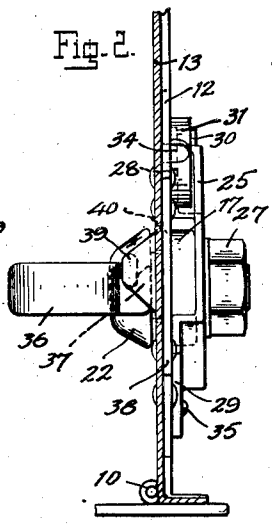


Fig. 3.

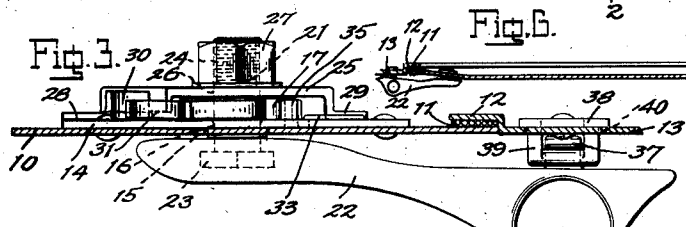


Fig. 6.

Fig. 4.

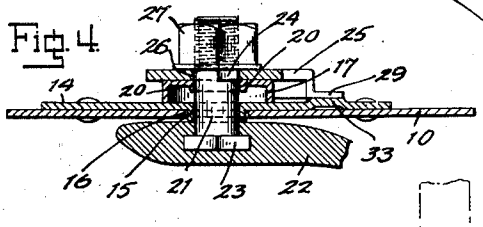


Fig. 7.

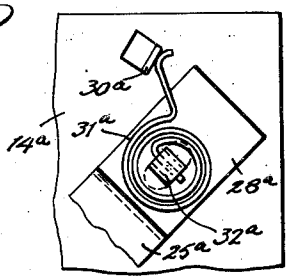


Fig. 5.

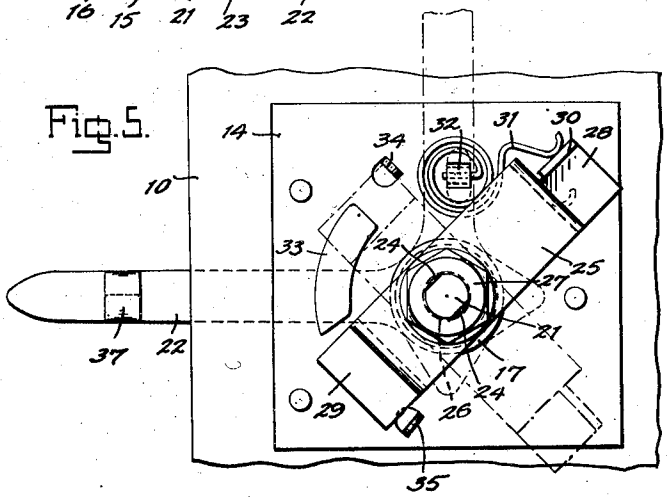
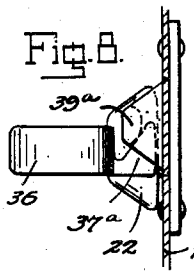


Fig. 8.



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HOOD CATCH

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Application March 20, 1933, Serial No. 661,652

7 Claims. (Cl. 292—228)

The present invention relates to hood catches for securing the hoods of automobiles, and has for an object to provide a hood catch of simple construction and attractive appearance, which may be operated with facility, and will effectually hold the hood downwardly and inwardly against looseness and rattling. Another object is to provide a hood catch in which the handle and hooking means will be exteriorly disposed while the tensioning mechanism is interiorly disposed, thus providing a catch which may be easily and positively operated, and which at the same time will present a neat and inconspicuous appearance free from unsightly mechanism, and which lends itself to streamline design harmonizing with other parts of the automobile structure.

A further object is to provide a catch which may be horizontally disposed, out of relation with the sill, so that it may be conveniently reached and will in no way interfere with other parts of the automobile.

A still further object is to provide a hood catch which will utilize the springiness of the metal of the hood side to exert inward holding pressure.

With the above and other objects in view embodiments of the invention are shown in the accompanying drawing, and these embodiments will be hereinafter more fully described with reference thereto and the invention will be finally pointed out in the claims.

In the drawing:

Fig. 1 is a front elevation of one corner of an automobile hood and the adjacent cowl and sill structure, and showing the hood catch, according to the illustrated exemplary embodiment of the invention, attached thereto.

Fig. 2 is a vertical sectional view, taken along the line 2—2 of Fig. 1, and showing the catch in end elevation.

Fig. 3 is a horizontal sectional view, taken along the line 3—3 of Fig. 1, and showing the catch in top plan.

Fig. 4 is a horizontal sectional view, taken along the line 4—4 of Fig. 1.

Fig. 5 is a rear elevation of the catch, and showing the inoperative position in dot-and-dash lines.

Fig. 6 is a diagrammatic horizontal sectional view of the hood and the adjacent structure of the radiator and cowl and showing in exaggeration the flexing of the hood in the operative position of the catch.

Fig. 7 is a fragmentary rear elevation showing a modified form of spring means.

Fig. 8 is a fragmentary vertical sectional view showing a modified form of keeper.

Similar reference characters indicate corresponding parts throughout the several figures of the drawing.

Referring to the drawing the hood 10 is adapted to close in the usual manner against the lacing 11—11, provided along the inset marginal edge portions 12—12 of the radiator frame and cowl structures 13—13, and at each end of the hood, and adapted to cooperate with keepers provided on the radiator frame and cowl structures, hood catches according to the illustrated exemplary embodiment of the invention are mounted.

The hood catch comprises a rectangular mounting plate 14 adapted to be riveted, spot-welded or otherwise suitably secured to the inner side of the hood, preferably adjacent one of the lower corners, although if desired it may be at a substantially higher point than that illustrated.

A bearing opening 15 is provided in the plate and has an outwardly turned bearing flange which engages within an opening 16 in the hood, the edge of the flange projecting slightly beyond the outer surface of the hood. Upon the plate 14 a cup shaped bearing extension member 17 is secured as by staking lugs 18, engaged and expanded in slots 19 in the plate, and a central opening 20 having an inwardly turned bearing flange is provided therein in axial alignment with the bearing opening 15.

A shaft 21 is secured to the handle 22, as by having a head 23 formed at one end cast into the handle, and is rotatably mounted in the bearings 15 and 20. At its inner end the shaft projects beyond the bearing 20 and is provided with flat surfaces 24—24 at each side for the non-rotatable mounting thereon of a lever bar 25, having a correspondingly shaped opening 26 therein, the lever bar being secured against the end shoulders of the flat surfaces by a nut 27 screwed upon the threaded end of the shaft.

The lever bar is preferably at an inclined angle to the handle, the latter being horizontal when in operative position. The lever is at a 45° angle to the handle in the exemplary embodiment disclosed.

The ends of the bar are bent downwardly into contact with the plate 14 providing offset end extensions 28 and 29. The extension 28 has a flange 30 bent upwardly at one edge, and which is adapted to engage the end of a coiled spring 31 secured to the plate 14 by a clip 32. The end 29 is adapted in the inoperative position of the catch to slide up on an arcuate rib 33 embossed from

the plate 14 to frictionally retain the catch in its inoperative position, a stop lug 34 struck up from the plate 14 limiting the swinging movement to inoperative position, as shown in dot-and-dash lines in Fig. 5 the handle assuming vertical position when the end 29 abuts the lug 34. A lug 35 struck up from the plate 14 is adapted to abut the end 29 when the handle is swung downwardly beyond the operative position, so that downward pressure on the handle will be exerted solidly upon the hood to press it to its closed position.

The handle projects horizontally beyond the end of the hood and is provided with an apertured finger grip portion 36 extending outwardly from the hood surface. Upon the inner side there is formed a keeper engaging hook 37.

The keeper comprises a base plate 38 and a yoke shaped horizontally arranged keeper bracket 39, the plate being preferably secured at the inner side of the cowl or radiatior frame 13, and the keeper bracket projecting through an aperture 40 in the cowl or frame.

In operation, the hood is drawn downwardly by downward pressure on the handles 22—22 at each end of the hood. The abutment of the lever bar end 29 with the stop lug 35 causes the downward pressure of the handles to be firmly transmitted to the hood, so that it can be effectually pulled down to its full limit with facility. As shown in dot-and-dash lines in Fig. 1, the handle is swung below the horizontal operative position the hood being swung outwardly as it is pressed down to clear the keeper. When fully pulled down it is pressed inwardly against the lacings and upon release of the handle the spring 31 presses it upwardly, engaging the hook 37 with the keeper 39, thus retaining the hood closed and exerting a downward pressure thereon.

The fit of the shaft 21 in the bearings 15 and 20 is relatively snug and the outward spacing of the hook from the plane of the hood is so designed that the handle must be forcibly pressed inwardly to engage the hook. The ends of the hood being supported against the lacings 11, the inward pressure of the handle causes the hood to be slightly sprung or warped, as indicated diagrammatically in Fig. 6, and being held in this position by engagement of the hook in the keeper the inherent springiness of the sheet metal of the hood exerts an inward pressure upon the hood thus pressing the hood ends inwardly firmly against the lacings.

To disengage the catch the handle is pressed downwardly, the hood swung outwardly, and the handle then swung to its raised position, indicated in dot-and-dash lines in Fig. 5, where it is frictionally retained through engagement of the end 29 with the embossed surface 33. The stop lug 34 limits the swinging of the handle to the vertical position as shown.

In Fig. 7 I have shown a modified form of the invention in which the spring 31^a is secured by a clip 32^a upon the offset end 28^a of the lever bar 25^a, and is adapted to have its end engaged with a lug 30^a struck up from the base plate 14^a. The operation is substantially the same as the first embodiment the spring being tensioned in the operative position of the catch.

In Fig. 8 I have shown a modified form of hook and keeper, adapted to both pull the hood downwardly and exert an inward pressure thereon. In this case the hook 37^a has an angularly disposed keeper engaging surface and the keeper 39^a is likewise angularly disposed, so that as the handle is pressed upwardly the keeper cams it inwardly, with the result that the hood is pressed both downwardly and inwardly.

I have illustrated and described preferred and satisfactory embodiments of my invention, but it will be obvious that changes may be made therein, within the spirit and scope thereof, as defined in the appended claims.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

1. Automobile hood fastening means for engaging a keeper disposed upon a fixed part in relation to the end of the hood, comprising a mounting fixture adapted to be secured to the hood, catch means carried by said mounting fixture comprising a finger gripping portion, a keeper engaging portion at one end, and a mounting shaft at the other end having bearing in said mounting fixture, a lever bar carried by said shaft, and spring means and abutment means cooperating between said bar and said mounting fixture adapted upon swinging movement of said catch means to be tensioned and to exert pressure thereon in keeper engaging direction, the effective spring movement of said catch means being from a point below its point of engagement with the keeper to a point above said point of engagement, whereby a continuous downward pressure is exerted on the hood in the engaged relation of the catch means with the keeper.

2. Automobile hood fastening means for engaging a keeper disposed beyond the end of the hood, comprising a mounting fixture adapted to be secured to the hood, catch means carried by said mounting fixture comprising a finger gripping portion, a keeper engaging portion at one end, and a mounting shaft at the other end having bearing in said mounting fixture, a lever bar carried by said shaft, spring means carried by said mounting fixture, and abutment means carried by said bar adapted upon swinging movement of said catch means to tension said spring means to exert pressure on said catch means in keeper engaging direction, the effective spring movement of said catch means being from a point below its point of engagement with the keeper to a point above said point of engagement, whereby a continuous downward pressure is exerted on the hood in the engaged relation of the catch means with the keeper.

3. Automobile hood fastening means for engaging a keeper disposed upon a fixed part in relation to the end of the hood, comprising a mounting fixture adapted to be secured to the hood, catch means carried by said mounting fixture comprising a finger gripping portion, a keeper engaging portion at one end, and a mounting shaft at the other end having bearing in said mounting fixture, a lever bar carried by said shaft, spring means carried by said bar, and abutment means carried by said mounting fixture adapted upon swinging movement of said catch means to exert pressure on said catch means in keeper engaging direction, the effective spring movement of said catch means being from a point below its point of engagement with the keeper to a point above said point of engagement, whereby a continuous downward pressure is exerted on the hood in the engaged relation of the catch means with the keeper.

4. Automobile hood fastening means for engaging a keeper disposed upon a fixed part in relation to the end of the hood, comprising a

mounting fixture adapted to be secured to the hood, catch means carried by said mounting fixture comprising a finger gripping portion, a keeper engaging portion at one end, and a mounting shaft at the other end having bearing in said mounting fixture, a lever bar carried by said shaft, spring means and abutment means cooperating between said bar and said mounting fixture adapted upon swinging movement of said catch means to be tensioned and to exert pressure thereon in keeper engaging direction, the effective spring movement of said catch means being from a point below its point of engagement with the keeper to a point above said point of engagement, whereby a continuous downward pressure is exerted on the hood in the engaged relation of the catch means with the keeper and means cooperating between said bar and mounting fixture adapted to frictionally retain said catch means in inoperative position.

5. Automobile hood fastening means for engaging a keeper disposed upon a fixed part in relation to the end of the hood, comprising catch means adapted to be mounted upon the hood comprising an exterior finger gripping portion and a keeper engaging portion carried by said finger gripping portion, said catch means adapted to be depressed in closing the hood and to spring upwardly to engage said keeper, the effective spring movement of said catch means being from a point below its point of engagement with the keeper to a point above said point of engagement, whereby a continuous downward pressure is exerted on the hood in the engaged relation of the catch means with the keeper and means adapted to frictionally retain said catch means in inoperative position.

6. Automobile hood fastening means for engaging a keeper disposed upon a fixed part in relation to the end of the hood, comprising a mounting fixture adapted to be secured to the hood, catch means carried by said mounting fixture comprising a finger gripping portion, a keeper engaging portion at one end, and a mounting shaft at the other end having bearing in said mounting fixture, and spring means and abutment means cooperating between said shaft and said mounting fixture adapted upon swinging movement of said catch means in one direction to contact and tension said spring to exert pressure on said catch means in keeper engaging direction, and upon swinging movement in the other direction to be separated from each other whereby said spring is not under tension in the inoperative position of said catch means.

7. Automobile hood fastening means for engaging a keeper disposed upon a fixed part in relation to the end of the hood, comprising a mounting fixture adapted to be secured to the hood, catch means carried by said mounting fixture comprising a finger gripping portion, a keeper engaging portion at one end, and a mounting shaft at the other end having bearing in said mounting fixture, and spring means and abutment means cooperating between said shaft and said mounting fixture adapted upon swinging movement of said catch means in one direction to contact and tension said spring to exert pressure on said catch means in keeper engaging direction, and upon swinging movement in the other direction to be separated from each other whereby said spring is not under tension in the inoperative position of said catch means and means adapted to releasably retain said catch means in inoperative position.

RAYMOND G. MOORE.