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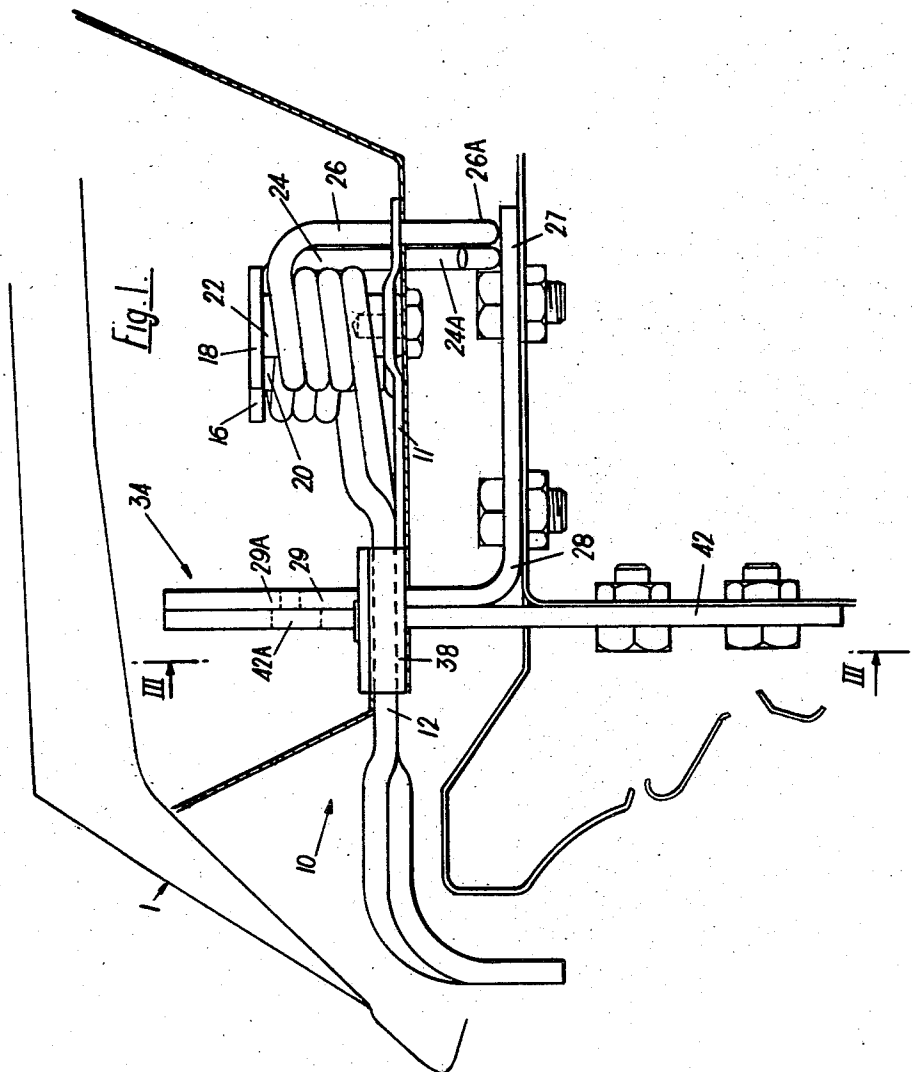
W. S. ATTWOOD ET AL

3,186,746

LATCHES

Filed Dec. 5, 1962

2 Sheets-Sheet 1



Inventors
William Spencer Attwood &
Harold Ernest Coverley
By E. E. James
Attorney

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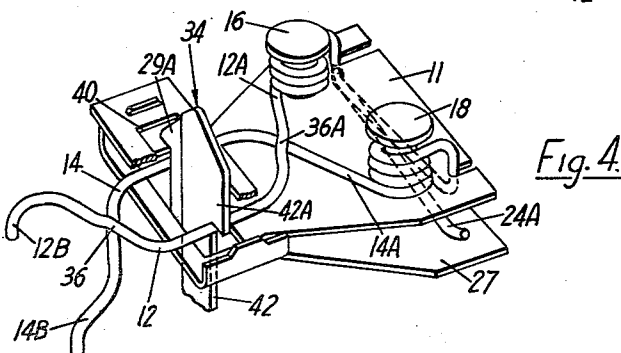
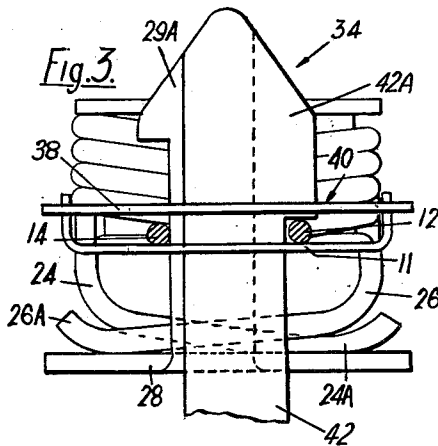
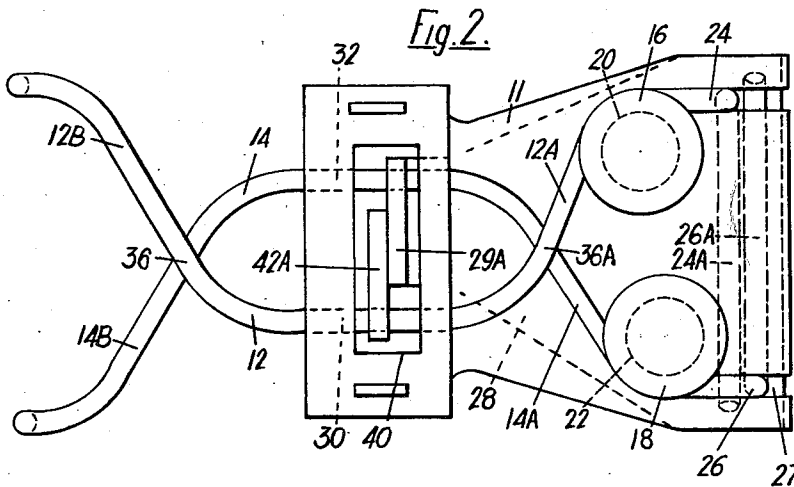
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Inventors
William Spencer Attwood &
Harold Ernest Coverley
By
E.E. James
Attorney

1

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LATCHES

William Spencer Attwood, St. Albans, and Harold Ernest Coverley, Redbourn, England, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

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4 Claims. (Cl. 292—19)

This invention relates to latch mechanism suitable for use on motor vehicles to secure the hood or deck lid closure members of an engine or luggage compartment.

The invention particularly contemplates latches of the type indicated which are economical and simple to produce and dependable in operation since they contain very few easily fabricated parts and require no critical assembly tolerances.

A hood latch mechanism illustrative of the invention includes a pair of stiff but resilient wires each having one end substantially fixed and the other end free, the free ends of these wires being deflectable by and adapted to latchably engage opposite barbs of a striker.

The foregoing objects, advantages and features of the invention will be apparent from the preferred illustrative embodiment particularly described below with reference to the accompanying drawings, in which:

FIGURE 1 is a fragmentary view of a motor vehicle with portions of an engine compartment bonnet or hood and the fixed vehicle body members broken away to show the illustrative latch mechanism in side elevation;

FIGURE 2 is a plan view of the latch mechanism;

FIGURE 3 is a fragmentary sectional view taken substantially in the plane of the line III—III in FIGURE 1, omitting some parts for the sake of clarity; and

FIGURE 4 is a perspective view of the illustrative latch mechanism.

The drawings show a motor vehicle latch mechanism and striker according to the invention. The latch mechanism 10 is attached to the hingeable engine compartment hood or bonnet 1 and a bonnet-attached bracket 11 which mounts a pair of stiff but resilient wires 12, 14. These wires are arranged side by side and form latch members, each having one end 12A and 14A fixed at 16 and 18 relative to the bracket and the other free at 12B and 14B so that they can be resiliently flexed about the fixture point. The wires 12 and 14 are mounted on the bracket 11 by being coiled about fixed pins 20 and 22, respectively. The adjacent extreme ends 24, 26 of the wires extend downwardly beyond the pins 20, 22 through slots in the bracket 11 and are bent laterally so that they press at 24A and 26A against a part 27 of a vehicle mounted striker plate 28 when the several members are in their hood closed latched positions as shown in the several drawing figures.

Between their extreme free ends 12B and 14B and their mounting pins 20 and 22, the wires are spaced apart at 30 and 32 to form a gap sufficient for the entry of a striker head therebetween. On each side of this gap, the wires are preferably crossed at 36 and 36A. Flexing movement of the wires is guided adjacent the gap by a flat guide casing or frame 38 secured to the bracket 11. Both the guide casing and the bracket have aligned slots 40 to admit the striker head and allow it to pass through the latch spring gap.

The striker assembly 34 includes the vehicle-mounted striker plate 28 which has an upwardly turned striker flange 29. A second striker plate 42 is adjustably secured against the flange 29 to provide a two piece striker head of spearhead shape having two opposite barbs 29A and 42A dimensioned so that when the striker head

2

passes through the aligned bracket slots 40 into the gap between the wire latch members, it forces these wires apart until they snap behind the barbs and thus secure the bonnet. The barbs 29A and 42A may be assembled as shown in offset position so that the wires snap behind them successively, not simultaneously. Thus, wire 12 acts as a main latch member and the other wire 14 acts as a safety latch member.

The extreme free ends 12B and 14B of the latch wires 112 and 14 are shaped conveniently for the fingers and are pinched together scissorwise to open the hood or bonnet. By reason of the crossing of the wires, such pinching spreads the striker engaging latch portions 30 and 32 of these wires to disengage the striker barbs 29A and 42A. When the wires are clear of the barbs, the bonnet is initially urged upwardly by the depending spring ends 24 and 26 of the latch wires beyond potential latching engagement and can be subsequently lifted away from the striker.

From the foregoing description it will be seen that the preferred illustrative embodiment of the invention provides a relatively simple, economical latch mechanism achieving the several stated objectives and advantages. It will be further apparent that various modifications and changes might be made therein without departing from the spirit and scope of the invention as defined in the following claims.

We claim:

1. A latch mechanism for a closure member mounted for movement relative to a support member, said latch mechanism comprising a pair of resilient elements secured to one of said members and having spaced latch portions cooperating to define a striker receiving gap extending substantially parallel to said one member, a striker secured to and extending from the other of said members substantially normal to the latch portions of said resilient elements, said striker having a head with opposite barbs thereon adapted to enter said gap and transversely engageable with spaced latch portions upon movement of the closure member toward said support member to laterally deflect said latch portions apart until said portions resiliently snap behind and latchably engage said barbs, and said resilient elements each having a spring portion resiliently engageable with said striker to maintain the latch portions of said spring elements in latching engagement with said striker barbs when said members are in their latched position, and said spring portions being operable to bias said members apart upon release of said latch portions from latching engagement with said barbs.

2. A latch mechanism for a closure member movable between opened and closed positions relative to a support member, said latch mechanism comprising a pair of spaced parallel pins secured to one of said members, a pair of resilient wires each having a coiled portion embracing one of said pins and having a free end portion extending therefrom, said free end portions being laterally crossed adjacent said laterally spaced coiled portions and recrossed remotely therefrom to define a striker receiving gap therebetween, striker means secured to the other of said members and including a head having two opposite barbs adapted to enter said gap normal to said free end wire portions upon movement of said closure member proximate said support member and to engage and laterally deflect said end wire portions apart until said wires snap behind and latchably engage said barbs, said opposite striker barbs are adjustable in offset relation normal to the free end wire portions, and means for guiding lateral deflection of said gap defining wire portions by said striker means so that the gap defining por-

3

tions of said wires successively and alternately snap behind said barbs.

3. A latch mechanism for a closure member movable between opened and closed positions relative to a support member, said latch mechanism comprising a pair of spaced parallel pins secured to one of said members, a pair of resilient wires each having a coiled portion embracing one of said pins and having a free end portion extending therefrom, said free end portions being laterally spaced to define a striker receiving gap therebetween, and striker means secured to the other of said members and including a head having two opposite barbs adapted to enter said gap normal to said free end wire portions upon movement of said closure member proximate said support member and to engage and laterally deflect said end wire portions apart until said wires snap behind and latchably engage said barbs, said resilient wires each having a second free end portion depending from the coiled portion thereof, said depending end portions being resiliently engageable with said striker means to maintain said striker barbs in latching engagement with the latch portions of said wires when said members are in their closed positions, said depending end portions biasing the closed members apart in an opening direction out of potential latching engagement upon release of said latch wire portions from latching engagement with said barbs.

4. A latch mechanism for a closure member movable between opened and closed positions relative to a support member, said latch mechanism comprising a pair of spaced parallel pins secured to one of said members, a pair of resilient wires each having a coiled portion embracing one of said pins and having a free end portion extending therefrom, said free end portions being later-

4

ally spaced to define a striker receiving gap therebetween, and striker means secured to the other of said members and including a head having two opposite barbs adapted to enter said gap normal to said free end wire portions upon movement of said closure member proximate said support member and to engage and laterally deflect said end wire portions apart until said wires snap behind and latchably engage said barbs, the gap defining portions of said wires being crossed adjacent their free ends on the side of said gap remote from their pin mounted coil portions, said resilient wires each having a second free end portion depending from the coiled portion thereof and resiliently engageable with said striker means when said members are in their closed proximate positions, said depending end portions biasing the closed members to maintain the latch portions of said wires in latching engagement with said striker barbs and urging said members apart in an opening direction out of potential latching engagement upon release of said latch wire portions from latching engagement with said barbs.

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M. HENSON WOOD, JR., *Primary Examiner.*