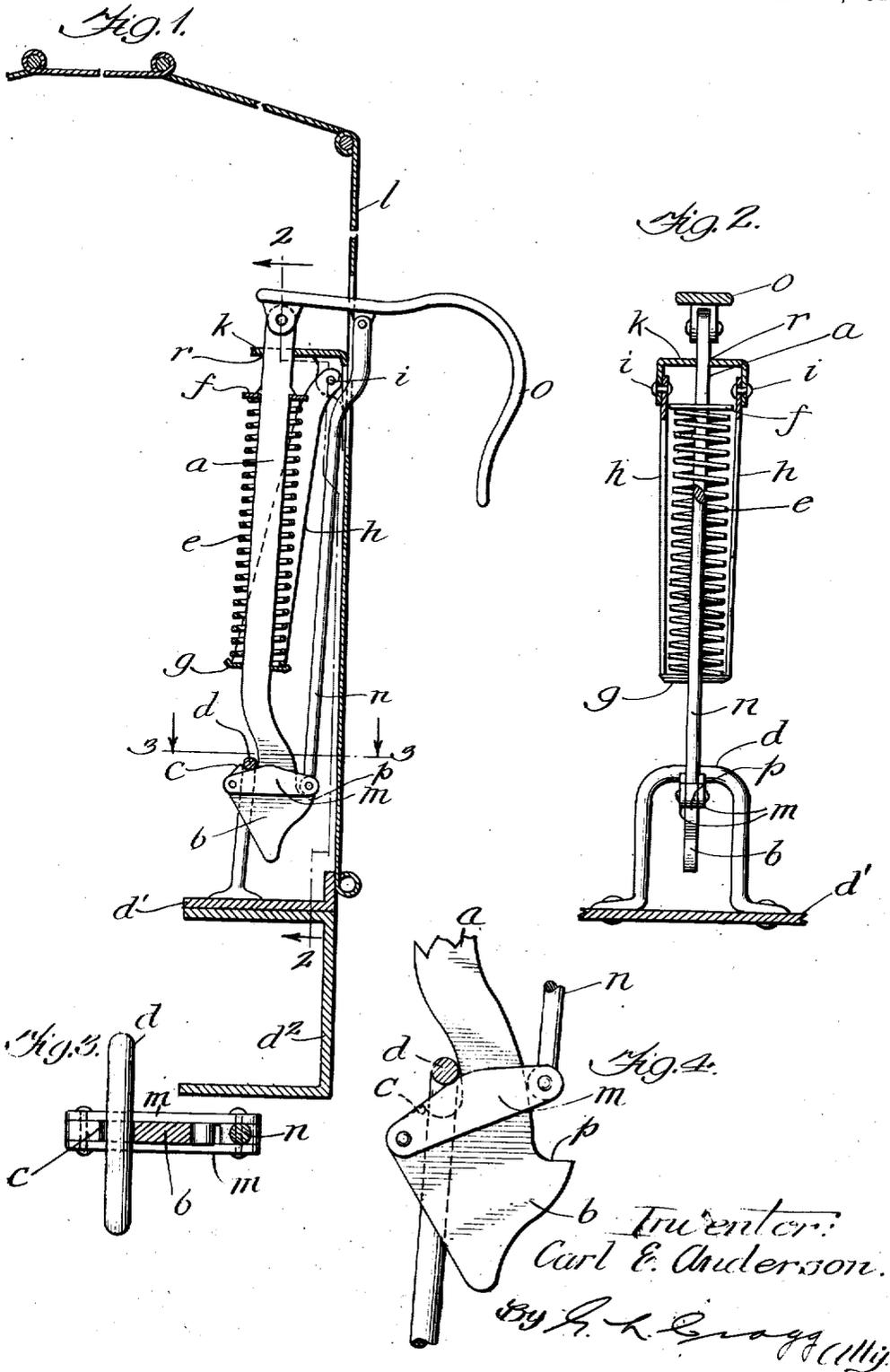


C. E. ANDERSON.
LATCH.

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1,298,272.

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Inventor:
Carl E. Anderson.

By *H. L. Cross* (att'y)

UNITED STATES PATENT OFFICE.

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LATCH.

1,298,272.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARL E. ANDERSON, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Latches, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to latches and is of particular service when employed in connection with the hoods of automobiles, though the invention is not to be limited to any particular use to which it may be put.

The device of my invention includes a latch bar, a catch for holding the latch bar, a spring for pressing the latch bar longitudinally to effect engagement of the latch bar with the catch, and mechanism operating against the force of the spring for releasing the latch bar from the catch.

The preferred embodiment of my invention comprises a latch having a latch bar, a holding foot carried by the latch bar, a catch for engaging the toe of the foot, an abutment connected with the latch bar, a spring pressing against this abutment for operating the latch bar, a second abutment, the spring being interposed between the abutments, a pivoted link connected with the second abutment, a hand piece connected with the latch bar for operating it against the force of said spring, a link connected with the foot for also engaging the catch and serving when manually operated to clear the toe from the catch to permit the latch to be opened by the spring, an additional link connecting the latter link with the hand piece, and means for retaining the hand piece in accessible positions.

I will explain my invention more fully by reference to the accompanying drawing showing the preferred embodiment thereof and in which Figure 1 is a view in elevation, partially in section, showing the application of my device to an automobile hood; Fig. 2 is a view on line 2—2 of Fig. 1; Fig. 3 is a view on line 3—3 of Fig. 1; and Fig. 4 shows the relative position of some of the parts as the latch is being opened.

Like parts are indicated by similar charac-

ters of reference throughout the different figures.

The latch of my invention includes a latch bar *a* carrying a holding foot *b* whose toe *c* is adapted to be engaged with a toe catch *d* when the latch is closed. This toe catch, in the application of the invention illustrated, is carried by a bracket *d*¹ located within the hood of an automobile and attached to the automobile frame *d*². A coil spring *e* surrounds the latch bar and presses upon it in a direction away from the toe catch *d* and holds the toe of the holding foot in engagement with the toe catch when the latch is closed. The latch bar *a* carries an abutment *f* fixed upon the latch bar at a point remote from the holding foot and against which abutment the spring *e* presses upwardly. This spring is provided with a second abutment *g* engaging its other end that is movable with respect to the latch bar and longitudinally thereof, both abutments desirably surrounding the latch bar. The abutment *g* is carried upon a link *h* which is pivoted at *i* near the abutment *f*, the pivot *i* being located upon a bracket *k* which is secured to a lower hood section *l*, it being understood that each of the lower hood sections is equipped with a latch of my invention. A link *m* is pivotally connected at one end with the holding toe *c* and at the other end is pivotally connected with one end of a link *n* whose other end is connected with an intermediate portion of a hand piece *o*. A part of the hand piece projects into the hood space and is pivotally connected with the upper end of the latch bar *a*. The spring operates to hold the toe *c* (which is hook shaped) in engagement with the toe catch *d* through the intermediation of the link *m*, the spring positively pressing this link against the under side of the toe catch *d* near one end of this link to force the other end of the link into engagement with the heel *p*, this heel acting as a stop to limit the extent to which the link *n* may be lowered with respect to the latch bar. The heel *p* also acts as an abutment against which the link *n* may (though not necessarily) be downwardly pressed when the hand piece is pressed downwardly upon the application of hand pressure to the hand piece above the point of attachment of

the hand piece with the upper end of the link n .

Assuming that the latch is opened and is to be closed, sufficient hand pressure is applied to the hand piece over the upper end of the link n to overcome the pressure of the spring (in which operation the lower end of the link n may be either in or out of engagement with the heel piece), the downward pressure upon the hand piece being continued until the toe c moves underneath the toe catch d . Owing to the relative position of the pivot i and the upper end of the link n the hand pressure downwardly exerted will force the toe c beneath the toe catch d . When the latch is to be opened the outer free end of the hand piece is engaged by the thumb or forefinger and is pressed upwardly, causing the outer end of the link m to rise with respect to the latch bar, this link in rising bearing against the toe catch and causing the toe to be moved downwardly to a point that will clear the toe catch and permit the link m to ride off of the toe catch, the tip of the toe then being beneath the upper edge of the link so that the toe will not interfere with the riding of the link m along the toe catch. When the tip of the toe has thus been placed below the upper edge of the link m the spring will operate against the abutment f to press this abutment upwardly, the abutment carrying with it the latch bar, the spring finally completing the withdrawing movement of the latch bar without any further manual operation upon the hand piece.

The bracket k has a hole r through which the latch bar a operates and which closely surrounds the latch bar so that the hand piece o and the parts attached thereto cannot be bodily moved inwardly or outwardly to any material extent with reference to the hood section l , although a very slight inward and outward movement should be afforded owing to the relative location of the pivot i and the upper end of the latch bar a .

While I have herein shown and particularly described the preferred embodiment of my invention, I do not wish to be limited to the precise details of construction shown as changes may readily be made without departing from the spirit of my invention, but having thus described my invention I claim as new and desire to secure by Letters Patent the following:—

1. A latch structure including a latch bar; a holding foot carried by the latch bar; a catch for engaging the toe of the foot; an abutment connected with the latch bar; a spring pressing against this abutment for operating the latch bar; a second abutment, the spring being interposed between the abutments; a pivoted link connected with the second abutment; a hand piece connected with the latch bar for operating it against

the force of said spring; a link connected with the foot for also engaging the catch and serving when manually operated to clear the toe from the catch to permit the latch to be opened by the spring; and an additional link connecting the latter link with the hand piece.

2. A latch structure including a latch bar; a holding foot carried by the latch bar; a catch for engaging the toe of the foot; a link connected with the foot for also engaging the catch and serving when manually operated to clear the toe from the catch; a spring for opening the latch when the toe is cleared from the catch; a hand piece; and a second link connecting the hand piece with the aforesaid link.

3. A latch structure including a latch bar; a holding foot carried by the latch bar; a catch for engaging the toe of the foot; an abutment connected with the latch bar; a spring pressing against this abutment for operating the latch bar; a second abutment, the spring being interposed between the abutments; a pivoted link connected with the second abutment; a hand piece connected with the latch bar for operating it against the force of said spring; a link connected with the foot for also engaging the catch and serving when manually operated to clear the toe from the catch to permit the latch to be opened by the spring; an additional link connecting the latter link with the hand piece, the heel of the aforesaid foot acting as a stop to limit the extent to which said additional link may operate the link connected therewith; and means for retaining the hand piece in accessible positions.

4. A latch structure including a latch bar; a holding foot carried by the latch bar; a catch for engaging the toe of the foot; an abutment connected with the latch bar; a spring pressing against this abutment for operating the latch bar; a second abutment, the spring being interposed between the abutments; a pivoted link connected with the second abutment; a hand piece connected with the latch bar for operating it against the force of said spring; a link connected with the foot for also engaging the catch and serving when manually operated to clear the toe from the catch to permit the latch to be opened by the spring; and an additional link connecting the latter link with the hand piece, the heel of the aforesaid foot acting as a stop to limit the extent to which the said additional link may operate the link connected therewith.

5. A latch structure including a latch bar; a holding foot carried by the latch bar; a catch for engaging the toe of the foot; a link connected with the foot for also engaging the catch and serving when manually operated to clear the toe from the catch; a spring for opening the latch when the toe is

cleared from the catch; a hand piece; and a second link connecting the hand piece with the aforesaid link, the heel of the aforesaid foot acting as a stop to limit the extent to which the second link may operate the first.

5 6. A lock for an automobile hood comprising latching means for releasably holding the hood in a closed position, and a handle connected with the hood, for raising
10 the hood and including means for engaging the latching means and moving the latching means to an inoperative position when the handle is moved to raise the hood.

15 7. An automobile hood, locking means for said hood positioned within the same, and means for raising the hood constituting actuating means for the locking means ex-

tending through said hood for engaging said locking means and moving the locking means to an inoperative position with the hood closed. 20

8. An automobile hood, locking means for said hood positioned within the same, and actuating means for said locking means extending through said hood for permitting
25 said locking means to be moved to an inoperative position with the hood closed.

In witness whereof, I hereunto subscribe my name this 16th day of September, A. D., 1916.

CARL E. ANDERSON.

Witnesses:

G. L. CRAGG,
ETTA L. WHITE.

DISCLAIMER

1,298,272.—*Carl E. Anderson*, Chicago, Ill. LATCH. Patent dated March 25, 1919.
Disclaimer filed February 10, 1931, by the assignee, *Chicago Forging & Manufacturing Co.*

Enters the following disclaimer, to wit:

A. Your petitioner disclaims from claim 6 of said Letters Patent all locks except locks used in connection with an "automobile hood" of the type illustrated in Fig. 1 of said Letters Patent, having the part upon which the "latching means for releasably holding the hood in a closed position" is supported and to which the "handle" is connected, movable in two directions about two hinges and the "latching means" releasably holds the "automobile hood" against movement about both hinges.

B. Your petitioner disclaims from claims 7 and 8 of said Letters Patent all locks except locks used in connection with an "automobile hood" of the type illustrated in Fig. 1 of said Letters Patent, having the part upon which the "locking means for said hood" and the "means for raising the hood" are supported, movable in two directions about two hinges, and the "locking means" holds the hood against movement about both hinges.

[*Official Gazette February 24, 1931.*]