Oct. 9, 1923. 1,470,001

E. B. DESCOMBES

LATCH FOR DOORS OF MOTOR VEHICLES

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Fig. 1

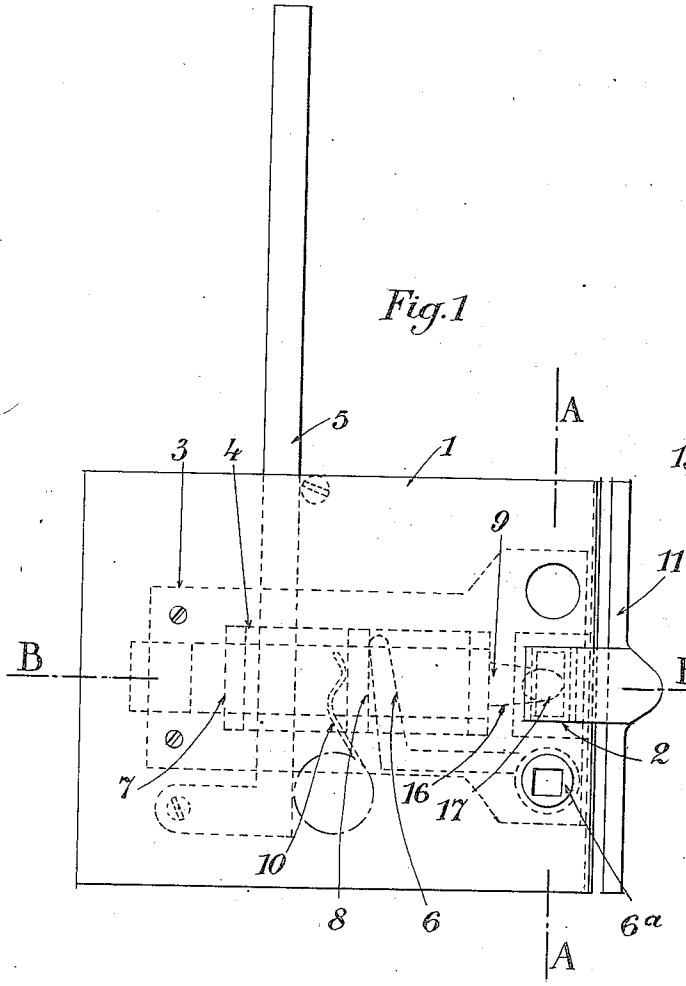



Fig. 2

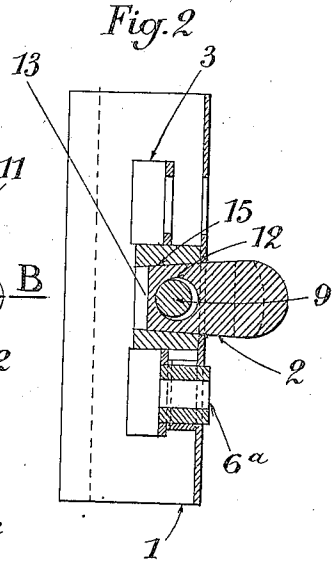
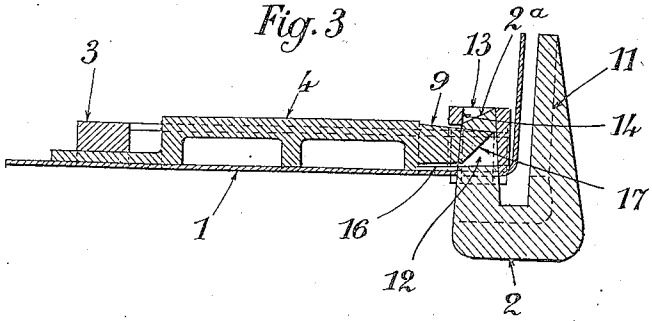



Fig. 3




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Fig. 4

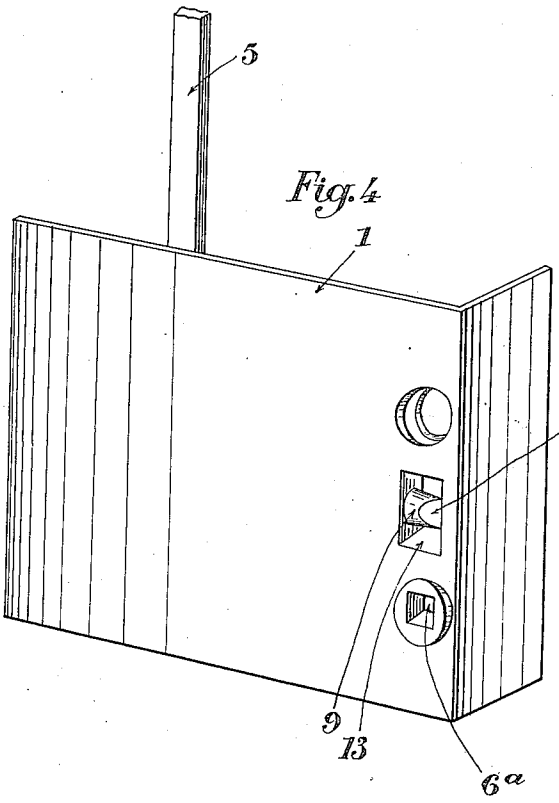
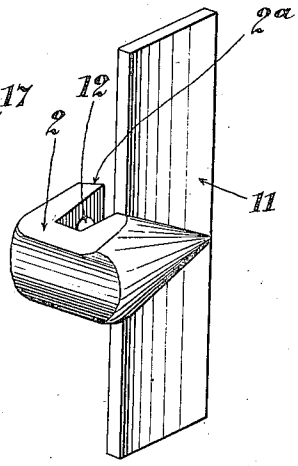



Fig. 5




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Patented Oct. 9, 1923. 1,470,001

# UNITED STATES PATENT OFFICE.

ETIENNE BENOÎT DESCOMBES, OF PARIS, FRANCE.

## LATCH FOR DOORS OF MOTOR VEHICLES.

Application filed January 3, 1922. Serial No. 526,486.

*To all whom it may concern:*

Be it known that I, ETIENNE BENOÎT DESCOMBES, a citizen of the French Republic, residing at Paris, in the Republic of France, have invented new and useful Improvements in Latches for Doors of Motor Vehicles, of which the following is a specification.

The present invention has for its object a latch for the doors of motor vehicles which is so constructed that all play of the vehicle door with respect to the vehicle body is efficiently and permanently prevented even after a long use, whereby all noise and vibrations resulting from such play are also done away with.

In the accompanying drawing given by way of example:

Fig. 1 is a front elevation (inside of the vehicle) of a latch according to the invention.

Fig. 2 is a cross-section thereof on the line A—A (Fig. 1).

Fig. 3 is a longitudinal section of the same on the line B—B (Fig. 1).

Fig. 4 is a perspective view of the lock casing as seen from the front (inside of the vehicle).

Fig. 5 is a corresponding perspective view of the door catch.

As shown in the drawing, the latch comprises two main pieces: the lock casing 1 mounted on the door, and the door catch 11 secured to the upright of the door frame. The lock contains a locking mechanism which may be of any suitable type and comprises, as shown, a guide plate 3 and a lock bolt 4 operated either from the inside by a lever 5 provided with the usual handle or from the outside by means of a small lever $6^a$ provided with an ordinary outer handle. Said levers respectively act upon two projections 7 and 8 on the lock bolt 4 which always tends to be returned into the closing position by the spring 10.

The door catch 11 has a projecting portion 2 in the shape of a hook or nose which has a pyramidal or like form, for instance, a conical form, and has formed therein a conical aperture 12. The nose 2 fits when the door is closed within an aperture 13 formed in the lock casing 1 and having a corresponding shape.

The bolt 4 has a conical end 9 which engages with the inner wall of the conical aperture 12 in the nose 2, under the action of the spring 10, so that the nose 2 is always forced tightly into the aperture 13. In this manner, all play is obviated and therefore all noise is prevented in spite of the vibrations of the chassis when travelling.

The conical end 9 of the lock bolt is cut at the end on an oblique plane 17 and the end of the nose 2 is also bevelled at $2^a$ in order to facilitate when the door is closed, the easy engagement of the nose 2 into the aperture 13 and also the withdrawal of the lock bolt 4.

It is obvious that the invention is not limited to the constructional dispositions above described.

Having now described my said invention, I declare that what I claim and desire to secure by Letters Patent is:

1. A latch for vehicle doors comprising in combination a lock casing, a door catch, one of said members being provided with a pyramidal recess, a pyramidal projecting part on the other member and engaging into said recess when closing the door, a lock bolt having a rectilinear movement in the lock casing in a direction at right angles to the movement of the said projecting part and a spring acting on said lock bolt, the door catch having an inclined face with which the lock bolt is adapted to engage, so as to force the said projecting part into the said recess.

2. A latch for vehicle doors comprising in combination a lock casing provided with a pyramidal recess, a door catch, a pyramidal projecting part or nose on said door catch adapted to engage into the said pyramidal recess in the lock casing and having formed therein a conical hole, a lock bolt provided with a conical end and having a rectilinear movement in the lock casing in a direction at right angles to the movement of the said nose and a spring acting on said lock bolt, the said conical end of the lock bolt being adapted to engage with the inner wall of said conical hole in the projecting nose so as to force the said nose into its recess in the lock casing.

In testimony whereof I have signed my name to this specification.

ETIENNE BENOÎT DESCOMBES.