

No. 736,707.

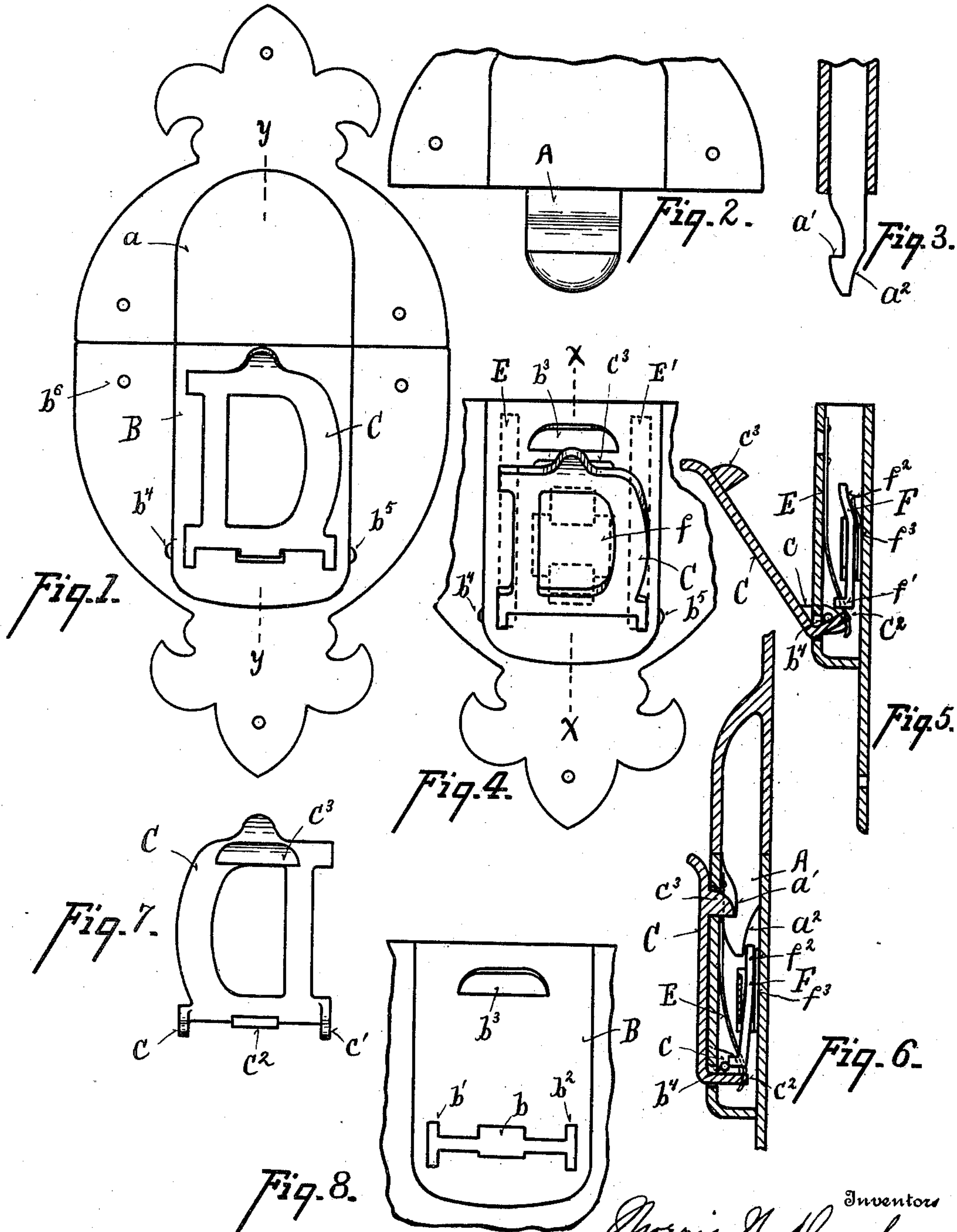
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M. N. DRUCKER & W. HAENSLER.

AUTOMATIC LATCH.

APPLICATION FILED DEC. 3, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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AUTOMATIC LATCH.

SPECIFICATION forming part of Letters Patent No. 736,707, dated August 18, 1903.

Application filed December 3, 1902. Serial No. 133,667. (No model.)

To all whom it may concern:

Be it known that we, MORRIS N. DRUCKER and WILLIAM HAENSLER, citizens of the United States of America, and residents of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Automatic Latches, of which the following is a specification.

The object of our invention is a latch for trunks which will be locked automatically by the action of closing the trunk and which will be set in position to be automatically locked by the action of releasing the locking-lever to reopen the trunk. This object is attained by the means described in the specification, particularly pointed out in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a latch embodying our invention shown in its closed position. Fig. 2 is a detail elevation of the bolt which is to be secured to the lid of the trunk. Fig. 3 is a sectional view of the same, the upper part of the bolt being shown broken off in both Fig. 2 and Fig. 3. Fig. 4 is a detail view of the keeper and the locking-lever shown in its open position. Fig. 5 is a central sectional view of the same upon line $x x$ of Fig. 4. Fig. 6 is a central vertical sectional view taken upon line $y y$ of Fig. 1. Fig. 7 is a detail view of the locking-lever. Fig. 8 is a detail plan view of the housing or keeper.

Referring to the parts, bolt A, mounted in a suitable housing a , is to be secured to the lid of a trunk. The bolt has upon its outer face a tooth a' , and its under side has a beveled portion a^2 . Housing or keeper B, which is to be secured to the trunk in alinement with bolt A, has upon its lower end a centrally-located rectangular hole b and in horizontal alinement with the hole two elongated slots $b' b^2$ and near its upper end a centrally-located enlarged hole b^3 . A locking-lever C is journaled upon housing B in the following manner: At its lower end it has cam-shaped perforated lugs $c c'$, which project through slots $b' b^2$ and are journaled upon screws $b^4 b^5$, passed through the sides of the housing into the perforations in the lugs. Secured

upon the interior of the housing B are flat springs $E E'$, which contact the cam-shaped ends of lugs $c c'$ and tend to hold lever C either in its raised position, as shown in Fig. 5, or in its lowered position, as shown in Fig. 1 and Fig. 6.

Centrally located upon the lower edge of lever C is an arm c^2 , which projects inward through hole b , and at the upper end of the lever C is an inwardly-projecting tooth c^3 , which in the lowered position is to engage tooth a' upon bolt A to lock the bolt in its keeper. The means by which the entrance of the bolt into the lever lowers the locking-lever C is as follows: Upon the inner plate b^6 is a slide F, which slides in a way f , and its lower end has an outwardly-projecting arm f' , which stands adjacent to arm c^2 of the locking-lever. When bolt A enters the keeper B, its nose strikes the upper end of slide f , pushes it downward, and thereby rotates lever C upon its pins $b^4 b^5$ and causes tooth c^3 to project through hole b^3 and engage tooth a' . Lever or slide F is curved outward slightly at its upper end f^2 , so that when it is pushed downward through way f by bolt A end f^2 is moved by contact with the way toward the right hand of Figs. 5 and 6, as indicated in Fig. 6, so that beveled portion a^2 of the bolt rides up over slide F, and therefore holds tooth a' firmly in contact with tooth c^3 , the outward pressure of end f^2 being occasioned by a spring f^3 , secured to plate b^6 beneath slide F, so as to exert an outward pressure on the slide. The movement of end f^2 of the slide F toward the right hand of the drawings moves the arm f' in the opposite direction, as shown in Fig. 6, so that when lever C is rotated outward to release bolt A its end c^2 at the same time contacts arm f' of slide F and pushes the slide upward to reset it, so that it is in position for automatically locking itself again when the trunk is the next time closed.

What we claim is—

1. In a latch the combination of a keeper, a locking-lever journaled upon the keeper, means for holding the lever normally in a raised or lowered position, a bolt to enter the keeper and means for conveying the motion

of the bolt to the lever to lower the lever to lock the bolt therein automatically, substantially as shown and described.

2. In a latch the combination of a keeper, 5 a locking-lever journaled thereon having an arm projecting into the keeper, means for holding the lever normally in a raised or lowered position, a slide within the keeper adjacent to the inwardly-projecting arm of the 10 lever, and a bolt to enter the keeper to contact the slide and thereby lower the locking-lever to engage the bolt to retain it in the keeper, substantially as shown and described.

3. In a latch the combination of a keeper, 15 having near its lower end slots, a lever having an arm to project inward through one of the slots, and cam-shaped lugs projecting inward through the other of the slots, a spring engaging the cam-shaped lugs to hold the 20 lever normally raised or lowered, a slide within the keeper adjacent to the arm of lever and a bolt to enter the keeper, contact the

slide and lower the lever, thereby locking the lever and the bolt, substantially as shown and described.

4. In a latch the combination of a keeper, 25 a lever journaled thereon, having at its lower end an arm projecting into the keeper and at its upper end an inwardly-projecting tooth, a way upon the inside of the keeper, a slide 30 in the way, its lower end adjacent to the arm of the lever and its upper end curved outward, a spring to press outward upon the upper end of the slide and a bolt having upon its upper face a tooth to be engaged by the 35 tooth of the lever and a beveled portion on its under side to ride up over the upper end of the slide when the bolt enters the keeper, substantially as shown and described.

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