

(No Model.)

E. H. PECK.

LATCH.

No. 392,133.

Patented Oct. 30, 1888.

Fig. 1

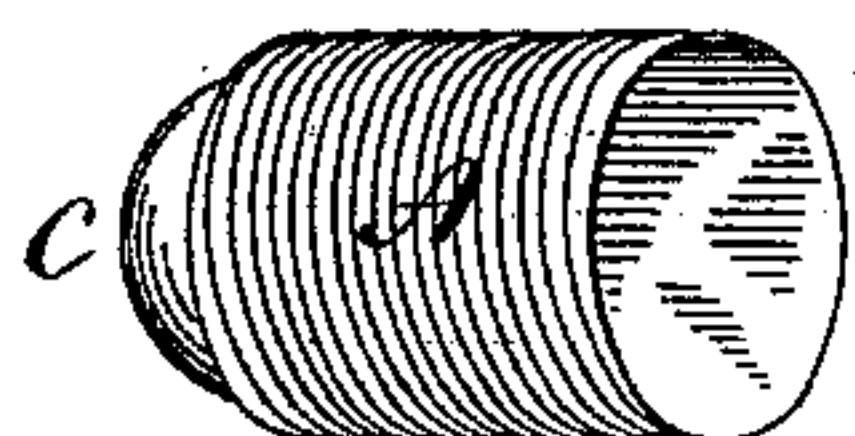


Fig. 2

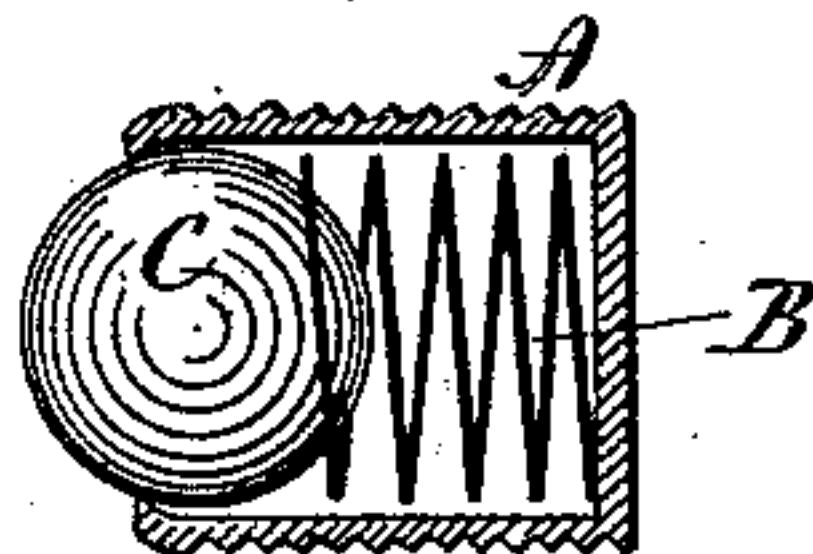


Fig. 3

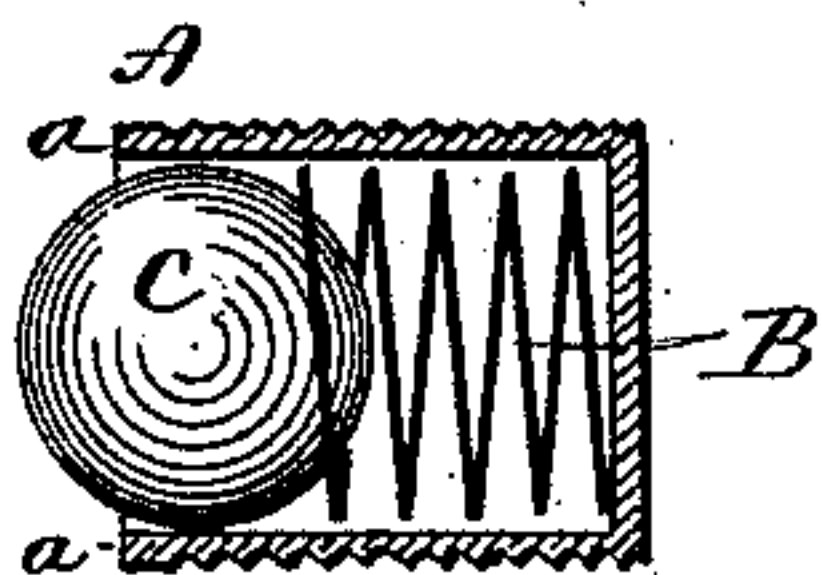


Fig. 4

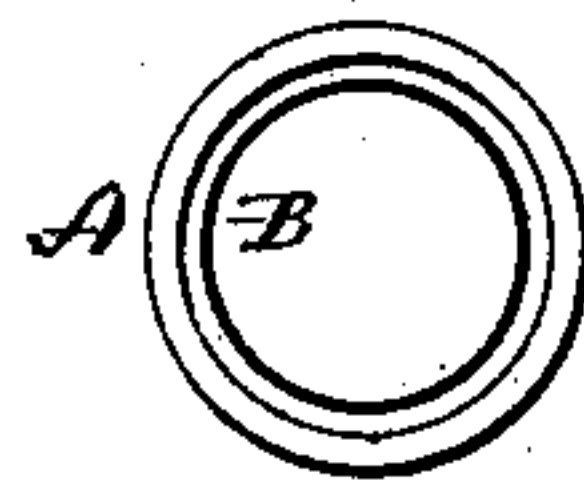


Fig. 5

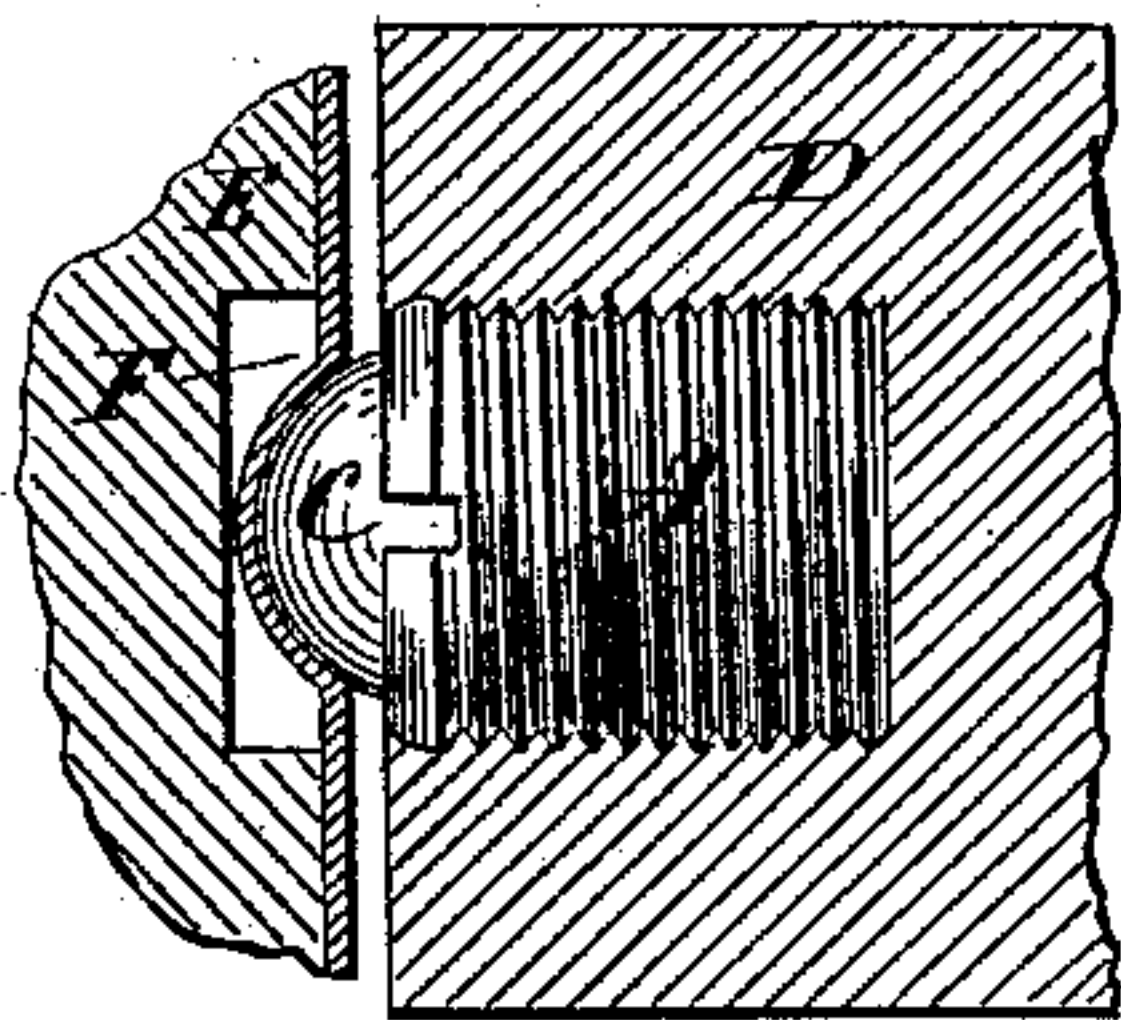
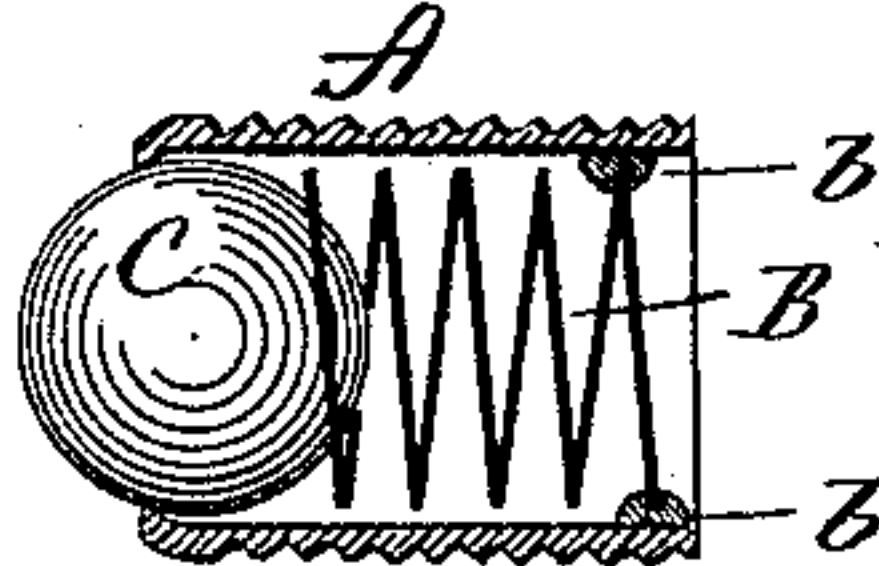


Fig. 6



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UNITED STATES PATENT OFFICE.

EUGENE H. PECK, OF MERIDEN, CONNECTICUT, ASSIGNOR TO AUGUSTUS H. JONES, OF SAME PLACE.

LATCH.

SPECIFICATION forming part of Letters Patent No. 392,133, dated October 30, 1888.

Application filed April 16, 1888. Serial No. 270,850. (No model.)

To all whom it may concern:

Be it known that I, EUGENE H. PECK, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Double-Acting Latches; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of the latch complete; Fig. 2, a vertical central section of the same; Fig. 3, a vertical central section showing the spring and ball as introduced and before the edge of the case is closed upon the ball; Fig. 4, an open-end view of the case before the ball is inserted; Fig. 5, the application of the latch to door; Fig. 6, a modification in the case-support for the spring, all the figures enlarged.

This invention relates to an improvement in the construction of that class of latches which are designed for doors of furniture, the office of the latch being to hold the door in the closed position, yet yield to a pull upon the door, as in opening, without any direct action upon the latch, so that the latch is automatic both in engaging and disengaging. The nose of the latch is usually made of spherical or other shape, which will permit it to ride into the keeper or escape therefrom by a push or pull of the door accordingly, and the invention relates particularly to the latches of this character in which the bolt is in the form of a sphere or ball, the object being a very simple and cheap construction.

In the best construction of my improved latch the case A is made of cylindrical cup shape, screw-threaded upon its outside, as represented in Figs. 1, 2, and 3. Within the case a spiral spring, B, is set against the closed end of the case, and is of a diameter somewhat less than the internal diameter of the case.

C represents the ball-shaped bolt, which is of a diameter slightly less than the internal diameter of the case, but larger than the internal diameter of the spiral spring B. The spring is first set into the case through the open end, and then the bolt C is placed in the

open end of the case, and so as to set into the last convolution of the spring as a seat, as represented in Fig. 3. This done, the ball is forced into the case until its axis is inside the edge *a* of the case. Then the edge of the case is spun or struck down around the ball onto its smaller diameter, as represented in Fig. 2, and so as to reduce the diameter of the open end of the case to less than the diameter of the ball at its axis. The spring bears the ball outward, so that it rests upon the seat formed by the turned-in edge of the case, and the spring itself surrounds the ball, so as to form the seat for the ball opposed to the turned-in edge of the case.

The latch is applied to the edge of a door, as seen in Fig. 5, D representing the stile of the door, so that the protruding bolt projects beyond the edge of the door. In the jamb E a keeper, F, is set, forming a cavity corresponding to the protruding bolt, so that force applied to either open or close the door will cause the bolt to be forced into the case, compressing the spring in so doing, until the bolt may escape from the keeper in opening, or so as to pass into the keeper in closing.

Broadly considered, this character of latch is old and does not require particular description as to its operation. It is applicable to all purposes for which this class of latches is used, and by its outer screw-thread is conveniently secured and made adjustable, so that it may be unscrewed from the jamb to give a greater projection as the door shrinks.

While I prefer to make the case A of cup shape and closed as a bearing for the spring, the case may be of tubular shape, as represented in Fig. 6, and the end of the spring secured to the walls of the case by solder, as at *b*, or otherwise, it only being essential that the spring shall be firmly supported in the case as a yielding resistance for the bolt. By seating the bolt in the outer convolution of the spring the surface bearing upon the bolt is very slight. Consequently the ball will roll freely in its movement into or from the keeper and the follower usually employed between the bolt and spring in this class of latches is avoided. Consequently the cost of the latch is materially reduced.

I claim—

The combination of the cylindrical case A, closed at one end and screw-threaded upon its outside, the spiral spring B upon the inside of the case, one end of the spring seated against the closed end of the case, the ball C, of a diameter substantially that of the internal diameter of the case, but larger than the internal

diameter of said spring B, the said ball seated in the outer convolution of said spring, and the case at the open edge closed over the ball outside its axis, substantially as described.

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