

A. H. CHURCHILL.

Improvement in Locks for Railway Car-Seats.

No. 131,331.

Patented Sep. 17, 1872.

Fig. 1.

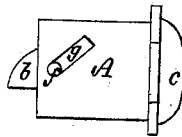


Fig. 3.

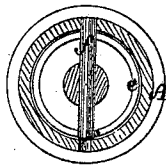
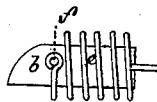
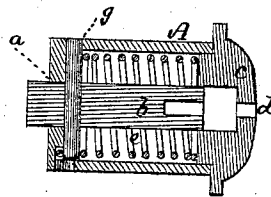


Fig. 2.



Witnesses.
J. G. Gage
E. G. Pinkham.

A. H. Churchill.
by F. Curtis.
Atty.

UNITED STATES PATENT OFFICE.

ALGERNON H. CHURCHILL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN LOCKS FOR RAILWAY CAR-SEATS.

Specification forming part of Letters Patent No. 131,331, dated September 17, 1872.

To all whom it may concern:

Be it known that I, ALGERNON H. CHURCHILL, of Boston, Suffolk county, Massachusetts, have invented an Improved Lock for Railway Car-Seats, of which the following is a specification:

This invention consists of a tubular case containing a sliding bolt and a coiled spring enveloping and advancing such bolt, a transverse pin from said bolt extending into an oblique slot formed in the case, and serving, by traveling therein, to retract the bolt when it is rotated by a suitable key, as hereinafter stated; the object of the invention being to obtain a strong, simple, and efficient lock, but more especially one sufficiently short to enable it to be applied to cast-iron railway car-seat frames, which are of much less thickness than the wooden ones heretofore in general use.

The accompanying drawing represents my lock, in Figure 1, as a side elevation; in Fig. 2 as a longitudinal section; and in Fig. 3 as a transverse section—Fig. 4 being a view of its bolt and spring.

In the drawing, A represents a tubular case closed at one end, with the exception of a hole, *a*, for passage of the bolt *b*, and having its opposite end closed by a cap, *c*, pierced with an orifice or key-hole, *d*, through which a key is to be inserted in order to partly rotate and retract the bolt. A spiral or other proper spring, *e*, envelops the bolt *b* and is compressed between the two heads of the case A in such manner as to throw forward the bolt, the two ends of such spring being securely confined within the case, to render misplacement impossible. A transverse pin, *f*, passes through or projects from one side of the bolt *b* and en-

ters an oblique slot, *g*, formed in one or both sides of the case A at an angle of about forty-five degrees to its axis, the action of the pin upon the slot, upon partial rotation of the bolt, serving to retract the latter to such an extent as to unlock it.

The object in confining the two ends of the bolt-spring is to obtain a double action—that is, a pressure upon the bolt both longitudinally and circumferentially, the former being to advance and lock the bolt and the latter to neutralize the thrust and wear upon the pin and slot, which would otherwise ensue. The power of the spring and its direction is so adjusted that it tends to drive the latter, upon turning the bolt with a suitable key, forward with a semi-rotative or spiral movement, coinciding with the angle of the slot *g*; hence the friction between the pin and slot is reduced to a small amount, and little wear results at this point.

By my method of applying the spring and the double action thereby obtained I am enabled to greatly reduce the length of the entire lock, and adapt it to car-seats formed of cast-iron. The device is simple, inexpensive, efficient, and durable.

Claim.

I claim the herein-described lock, composed of the case A, bolt *b*, spring *e*, slot *g*, and pin *f*, the whole being arranged and operating as herein explained.

ALGERNON H. CHURCHILL.

Witnesses:

F. CURTIS,
W. E. BOARDMAN.