

(No Model.)

H. A. STEPHENS.
LOCK.

No. 596,187.

Patented Dec. 28, 1897.

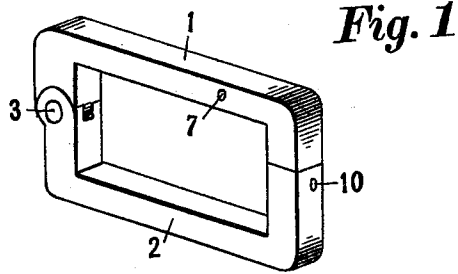


Fig. 1

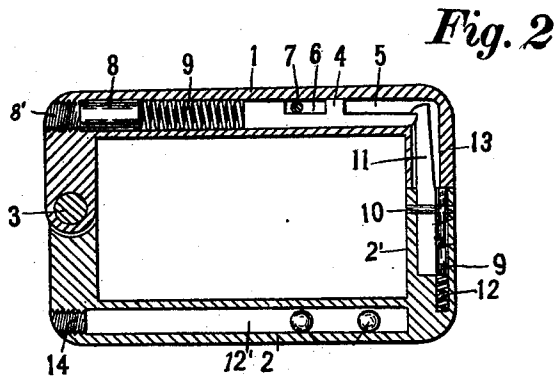


Fig. 2

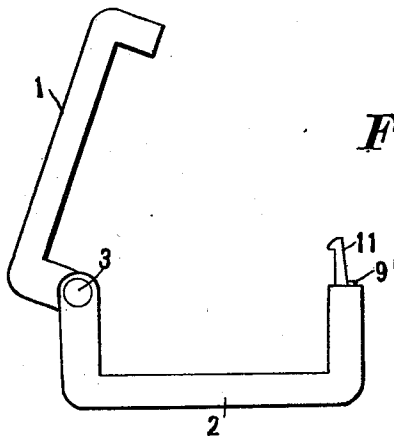


Fig. 3

WITNESSES.
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UNITED STATES PATENT OFFICE.

HARRY ALEXANDER STEPHENS, OF MISSOULA, MONTANA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 596,187, dated December 28, 1897.

Application filed April 30, 1897. Serial No. 634,556. (No model.)

To all whom it may concern:

Be it known that I, HARRY ALEXANDER STEPHENS, a citizen of the United States, residing at Missoula, in the county of Missoula and State of Montana, have invented certain new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to new and useful improvements in locks; and it consists in the construction and association of parts, as hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide a lock that shall be cheap and simple of construction and which may be quickly and easily locked and unlocked without the use of a key or other instrument independent of the lock itself, which object is attained by the device illustrated in the accompanying drawings, in which—

Figure 1 is a general perspective view of a lock as made in accordance with my invention. Fig. 2 is an enlarged central vertical section therethrough. Fig. 3 is a side elevation of the lock in an open position.

This improved lock is made in two parts 1 and 2, which are hinged together by a suitable rivet 3.

Portion 1 of the lock is channeled out along its upper side, as well as the front portion thereof, said channels opening one into the other.

4 designates a tumbler, which is of such size and formation as to snugly fit within channel 5 of portion 1. Formed in the upper side of tumbler 4 is a recess 6. Extending through the sides of portion 1 of the lock, so as to lie within recess 6, is a pin 7, said pin serving to limit the longitudinal movements of said tumbler and also to hold it with the proper side uppermost. The forward end of said tumbler is beveled upward for a purpose hereinafter referred to.

8 designates a plug having a threaded end 8', which is adapted to be screwed into the outer end of the channel of said part 1. Located within channel 5, between the forward

end of said screw-plug and the rear end of tumbler 4, is a coiled spring 9, the tendency of said spring being to force the said plug and tumbler apart.

The vertical end 2' of portion 2 is recessed, into which recess a bolt 11 is secured by a pin 10 or other suitable means of fastening. Said bolt does not occupy all of the space in said recess, but sufficient room is allowed for the insertion of a plunger 9, and lying beneath said plunger is a coiled spring 12, the tension of said spring being such as to normally force said plunger upward against the end 13 of portion 1, said plunger being provided with a recess (not shown) similar to recess 6 of tumbler 4, which receives pin 10 to limit the upward movement of said plunger and to prevent its withdrawal or accidental displacement.

Portion 2 of the lock is bored out, as shown at 12', and placed therein are balls which are adapted to roll and rattle as the lock is moved to serve as a blind in the attempted opening of the lock by a person not knowing the manner of unlocking, said balls being held within said bore 12' by means of a screw-plug 14.

When desired to unlock the parts from the position shown in Fig. 2, the corner adjacent to screw-plug 8 is struck with sufficient force to overcome the tension of spring 9 and jar tumbler 4 in the direction of said plug, thus drawing the outer end of said plunger free from the angled head of bolt 11. Immediately upon the withdrawal of the end of said tumbler the spring 12, being compressed, will exert its power against plunger 9. The upper end of said plunger, bearing against portion 1 of the lock, will force said portion from portion 2 to a sufficient distance to indicate that the parts are unlocked.

When desired to lock the parts, all that is necessary is to close part 1 from the position shown in Fig. 3 down upon part 2, as shown in Fig. 1. As the hooked head of bolt 11 strikes against the beveled end of tumbler 4 said tumbler will compress its spring 9 sufficiently to allow said head to pass, when said tumbler will spring forward and remain under the head of said bolt, preventing its withdrawal from channel 5 until a succeeding operation of unlocking, as will be readily understood.

It will thus be seen that the construction and arrangement of parts hereinbefore set forth and illustrated in the drawings produces a lock that is neat in its appearance, one which is practically dirt-proof, and one which will serve as a "sprocket-lock" for bicycles to the highest degree of efficiency.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A lock, of the character set forth, consisting of a two-part case hinged together, a bolt in one member and a tumbler in the other, said tumbler adapted to engage said bolt and to be released therefrom by concussion, substantially as set forth.

2. A lock consisting of two rectangular members pivoted together, a spring-depressed tumbler in one member, a bolt in the other, said tumbler adapted to engage said bolt and to be released therefrom by concussion, and the gravity-balls adapted to roll in one of said members, substantially as and for the purpose set forth.

3. A lock consisting of two rectangular members pivoted together, said members being channeled substantially as shown, a tumbler and spring in the channel of one of said parts, means for controlling the longitudinal movements of said tumbler, a bolt secured in the other member, said tumbler adapted to engage said bolt and to release it by concussion of the member in which it is located, substantially as and for the purpose set forth.

4. A lock, of the character set forth, consisting of the members 1 and 2, united by a rivet 3, said member 1 being channeled out

at 5, the recessed tumbler in said channel 5, the pin 7 extending through the recess of said tumbler, the screw-plug 8 closing the opening of said channel 5, the coiled spring 9 located between said tumbler and said plug, the bolt 11 secured in member 2, said bolt adapted to enter channel 5 of member 1 to be engaged by said tumbler 4 and to be released therefrom by concussion, all substantially as shown and described.

5. A lock, of the character set forth, consisting of the members 1 and 2, united by a rivet 3, said member 1 being channeled out at 5 and 13, the recessed tumbler in said channel 5, the pin 7 extending through the recess of said tumbler, the screw-plug 8 closing the opening of said channel 5, the coiled spring 9 located between said tumbler and said plug, the bolt 11 secured in member 2, said bolt adapted to enter channel 5 of member 1 to be engaged by said tumbler 4 and to be released therefrom by concussion, the plunger located in the channel of member 2 at the side of said bolt and held therein by a recessed pin 10, the coiled spring under said plunger, member 2 being channeled out at 12' and having a screw-plug 14 closing one end thereof, and the balls within said channel 12', all substantially as shown and described for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY ALEXANDER STEPHENS.

Witnesses:

H. D. ROHDER,
U. D. RICHARDS.