A. H. MERRILL.

KEY CARRYING DEVICE.

APPLICATION FILED FEB. 27, 1908.

905,731. Patented Dec. 1, 1908.

Fig. 1.

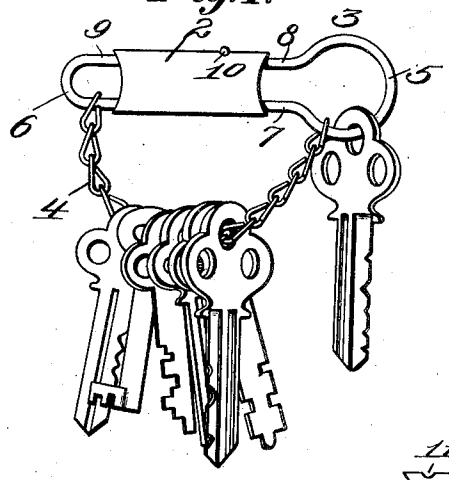


Fig. 4.

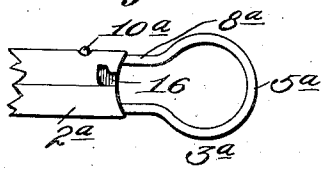


Fig. 5.

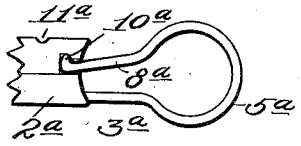


Fig. 2.

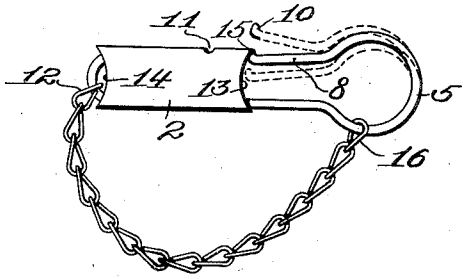
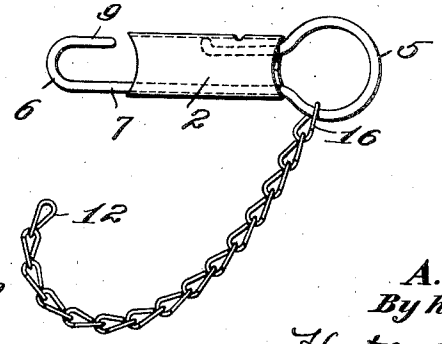


Fig. 3.



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UNITED STATES PATENT OFFICE.

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KEY-CARRYING DEVICE.

No. 905,731. Specification of Letters Patent. Patented Dec. 1, 1908.

Application filed February 27, 1908. Serial No. 418,045.

To all whom it may concern:

Be it known that I, ARTHUR H. MERRILL, a citizen of the United States, residing at Hartford, county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Key-Carrying Devices, of which the following is a specification.

This invention relates to a key-carrying device, the object of the invention being to provide a simple article of this character of such a nature as to maintain the keys supported thereby separated; for example, there may be one key such as a house door key separated from the remaining keys, by virtue of which this particular key can readily be reached.

In the drawings accompanying and forming part of this specification I show in detail certain advantageous forms of embodiment of the invention which, to enable those skilled in the art to practice the same, will be set forth at length in the following description, while the novelty of the invention will be included in the claims succeeding said description.

Referring to said drawings, Figure 1 is a side elevation of a key-carrying device involving my invention and showing the same in working relation. Fig. 2 is a similar view showing by full lines one portion of one of the key-carrying members just prior to its separation from a keeper and, by dotted lines, two other positions of said portion. Fig. 3 is a similar view showing another portion of said key-carrying member in its advanced or releasing position. Figs. 4 and 5 are detail views of another form of the device showing one of the elements thereof in locked and unlocked positions respectively.

Like characters refer to like parts throughout the several figures.

Referring initially to Figs. 1, 2, and 3, the key-carrying device therein illustrated includes in its construction a plurality of key-carrying members and a keeper directly coöperative with one of said members. These several parts may be of any desirable character. The keeper for instance may consist of a sleeve or tube as 2 slidably connected with a key-carrying member as 3. The keeper 2 may if desired be made of sheet metal shaped to the desired form or to present approximately a flat tube. The key-carrying member 3 has coöperative therewith a second key-carrying member as 4. The former may, for illustration, be termed a "primary key-carrying member," while the latter might be distinguished as a "secondary key-carrying member," although these terms are adopted simply for convenience of description. The primary key-carrying member 3 may consist of wire and may be of integral construction whereby cheapness in manufacture and resilience of said member are obtained, the latter function being of advantage in the particular form of embodiment of the invention herein illustrated. The key-carrying member 3 comprises two end loops as 5 and 6, what are shown as the lower branches thereof being connected by a bar as 7 to present a substantially skeleton member. The loop 5 is made of circular or substantially circular form so as to obtain a spring-like effect in the free branch 8 thereof. This free branch 8 of the loop 5 is pressed toward the bar 7 as shown by the lower dotted lines in Fig. 2 and, when the pressure or other restraining influence is removed, said free branch is swung outward, as shown by the upper dotted lines in said figure, by the power of the spring, coil, or resilient loop 5.

When the parts are in operative or working relation the free branch 8 of the loop 5 and the free branch 9 of the loop 6 are both inclosed by the keeper or sleeve 2, as shown in Fig. 1, and I provide means to prevent relative movement of these two parts at this time. This result might be obtained by friction but, as indicated, positive means are provided for this purpose, and this can be accomplished by forming at the end of the free branch 8 a projection as 10 adapted to enter a perforation or hole as 11 in what is illustrated as the upper portion of the tubular or sleeve-like keeper 2. When the projection or catch 10 fits in said perforation as indicated in Fig. 1, it will not be possible for either the sleeve or key-carrying member 3 to move relatively to each other. By moving the branch 8 inward a sufficient distance the projection or catch 10 can be moved from out of the perforation 11, thereby unlocking the key-carrying member 3 and permitting it to be moved either toward the right as shown in Fig. 2, or toward the left as illustrated in Fig. 3, to apply either a key to the loop 5 or to connect one with the loop 6 by application over the branches 8 and 9 respectively.

The diameter of the loop 5 is greater than the depth or width of the keeper 2 from which it will be clear that the key-carrying

member 3 cannot be pushed entirely through the keeper 2 from the right toward the left in Fig. 1. In Fig. 3 said loop 5 is shown as having reached the limit of its movement to the left, the loop 5 at this time abutting against the adjacent end of the keeper 2 and, by virtue of the construction to which I have referred, it will be clear that the loop 5 cannot enter the keeper. During the described movement of the key-carrying member 3 from the right toward the left it will be clear that the branch 9 is moved from out of said loop. It will be assumed that both the branches 8 and 9 are inclosed in the keeper 2 and that it is desired to move the key-carrying member 3 toward the right in Fig. 1 so as to effect the application of a key to the loop 5. To do this of course the hook, projection, or catch 10 is moved from out of the perforation 11, after which the key-carrying member can be moved toward the right as shown in Fig. 2, or, what is the same thing, the keeper can be moved toward the left; in fact, both said parts can be relatively moved to accomplish the desired object, the directions indicated having been given simply to aid in an understanding of the invention. I provide means to also prevent the movement of the key-carrying member 3 entirely through the sleeve, tube, or keeper 2 during the movement of the member 3 toward the right in said Fig. 1, and this means in the present case consists of the secondary key-carrying member 4 which is preferably of flexible character and, if desired, a chain may be employed for such purpose. When a chain is employed the terminal links thereof will be connected with the primary key-carrying member 3 at opposite sides of the keeper 2, whereby the link 12 of the chain, by abutting against the left end of the keeper 2, will prevent the key-carrying member 3 being moved entirely through the sleeve or tube 2 during the movement of the same toward the right in Fig. 1. When the limit of such movement is reached the link 12 will strike against the sleeve, keeper, or tube 2 to secure the result indicated.

The opposite ends of the keeper 2 are shown as formed on inward arcs as 13 and 14 whereby there will be formed a catch portion as 15 at the top of the arc 13, which, when the key-carrying member 3 is advanced toward the right, serves to prevent the branch 8 from being accidentally separated from the keeper 2, and the possible loss of a key or keys on the loop 5. The branch 8 can be separated from the keeper 2 by first an inward pressure by the finger, which results in moving said branch inward or downward to the lower dotted-line position in Fig. 2, after which the branch 8 is swung outward by the springiness of the coil or loop 5 to permit the application of a key to the loop 5 by way of said branch 8, or a separation of the link 16 from said loop 5 and its branch 8.

It is my custom to apply but a single key to the loop 5 and this key may be, as hereinbefore indicated, the outer door key of a house, or it may be any other key which is ordinarily difficult to find owing to its presence in a group. The key-carrying member 4 is shown as having a group or series of keys and, were a house key or one of such kind among several, it would be a difficult matter to locate the same. The advantage of positively separating the keys is obvious especially when a search for such a key is made in the dark. It will be clear that several keys may be carried on the loop 5 or other key-supporting part of the main key-carrying member, while only one key need be suspended from the key-carrying member 4. In applying keys to the part 4 it is my custom for this purpose to separate the link 12 from the loop 6 by way of the branch 9 and this relation is indicated in Fig. 3. In Fig. 1 I have shown a single key on the loop 5, while several keys are supported from the chain 4, although, from what has been stated, this condition might very well be reversed.

The foregoing description applies particularly to the form of embodiment of the invention illustrated in Figs. 1 to 3, inclusive. I will now refer particularly to the form of embodiment of the invention illustrated by Figs. 4 and 5. The keeper in these figures is denoted by 2^a, while the primary key-carrying member is denoted by 3^a, it having a loop 5^a provided with a branch 8^a, all constructed substantially like the corresponding parts hereinbefore described. When the key-carrying member 3^a reaches the limit of its movement toward the right in Figs. 4 and 5, the projection 10^a will be substantially in perpendicular alinement with the vertical portion of a bayonet or approximately L-shaped slot as 16 in one side of the keeper 2^a, and there is no possibility of any further endwise movement by virtue of the engagement of a link or other part as 12 against that end of the keeper 2^a opposite that near which the slot 16 is located. In view of this condition the key or keys cannot accidentally be separated from the loop 5 provided the projection or catch 10^a should be sprung out of the catch or projection 11^a. Before the branch 8^a can be separated from the keeper 2^a it is necessary that said branch be swung in an inward direction until the projection or catch 10^a and the adjacent portion of the branch 8^a are in register or coincidence with the bayonet or L-shaped slot 16. When this takes place the branch 8^a can be moved laterally so as to wholly separate the same from the keeper 2^a to apply a key to the loop 5^a or to disconnect the adjacent terminal link of a chain such as

4 from said loop 5^a. I therefore provide positive means to limit the endwise movement of the key-carrying member 5^a to such an extent that the accidental separation of the branch or latching member 8^a from the keeper 2^a cannot occur. In fact, two distinct movements are necessary before this operation can be accomplished, first, an inward movement, and then a lateral movement. The L-shaped slot 16 is formed substantially midway of the depth or width of the keeper 2^a so that the resilient branch or latch 8^a will have to be moved a short distance before the projection 10^a is opposite the vertical portion of the slot 16.

What I claim is:

1. A key-carrying device comprising a key-carrying member and a keeper movable on said key-carrying member, said key-carrying member having longitudinally separated loops provided with free branches and the keeper being adapted to inclose simultaneously both said free branches and being shaped and movable to uncover either of them.

2. A key-carrying device comprising a key-carrying member, a keeper movable on said key-carrying member, said key-carrying member having longitudinally separated loops provided with free branches and the keeper being adapted to inclose simultaneously both said free branches and being shaped and movable to uncover either of them, and a second and flexible key-carrying member connected with said loops at points outside the keeper.

3. A key-carrying device comprising a key-carrying member provided with open loops one of which is resilient to constitute a spring and each loop having a free branch, and a keeper separating the two loops and slidable on the key-carrying member and adapted to simultaneously inclose both said branches and movable to uncover either of them, one of said branches having means to engage the keeper to prevent relative movement of the keeper and key-carrying member.

4. A key-carrying device comprising a key-carrying member provided with connected opposite loops each having a free branch, one of the loops being of coil form to thereby make the free branch thereof resilient, and a keeper separating the two loops and slidable on said key-carrying member to inclose both branches and movable to uncover either of them, the resilient branch having a projection, and the keeper having an opening to receive said projection.

5. A key-carrying device comprising a key-carrying member provided with a loop having a resilient branch, and a keeper slidable on said key-carrying member and having a slot in its side at one end thereof to permit the lateral movement of said resilient branch.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ARTHUR H. MERRILL.

Witnesses:
F. E. ANDERSON,
JOSEPH P. KENNEDY.