July 17, 1923. 1,462,205

L. F. KORNS

KEY RING AND THE LIKE

Filed Nov. 18, 1921

Fig 1

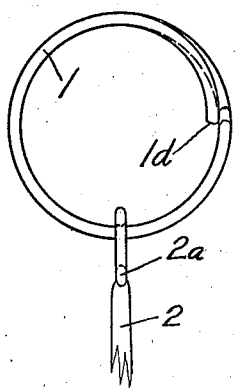


Fig. 2

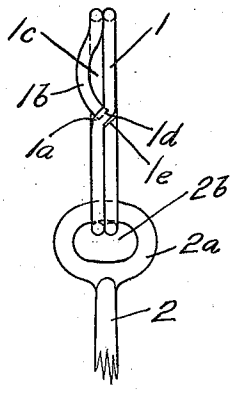


Fig. 3

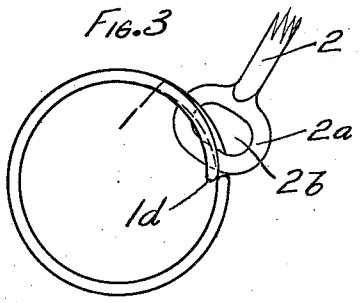


Fig. 4

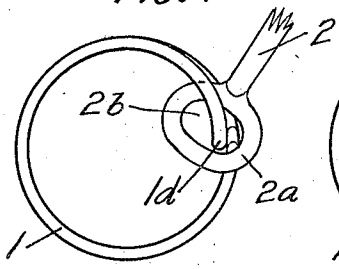


Fig. 5

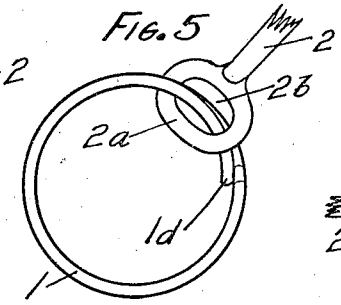


Fig. 6

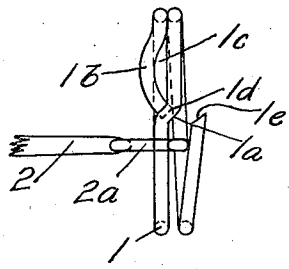


Fig. 7

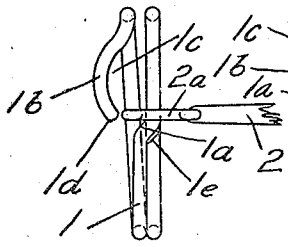


Fig. 8

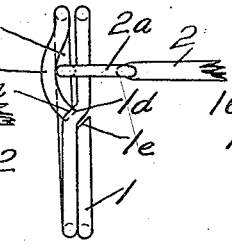
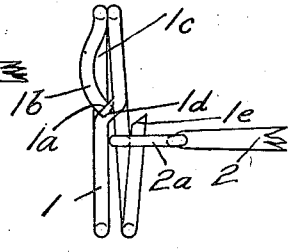


Fig. 9



INVENTOR.
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BY
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Patented July 17, 1923. 1,462,205

UNITED STATES PATENT OFFICE.

LEWIS F. KORNS, OF MINNEAPOLIS, MINNESOTA.

KEY RING AND THE LIKE.

Application filed November 18, 1921. Serial No. 516,239.

To all whom it may concern:

Be it known that I, LEWIS F. KORNS, a citizen of the United States of America, and resident of Minneapolis, Hennepin County, State of Minnesota, have invented certain new and useful Improvements in and Relating to Key Rings and the like, of which the following is a specification.

This invention relates to certain improvements in and relating to key rings; and the objects and nature of the invention will be readily understood by those skilled in the art, in the light of the accompanying drawings and specifications illustrating what I now believe to be the preferred embodiments or mechanical expressions of my invention from among other forms, constructions and arrangements within the spirit and scope thereof.

The object of this invention is to provide certain improvements in key rings and the like, with the end in view of increasing the efficiency and ease with which keys may be attached and detached.

A further object of this invention is to provide such improvements and changes in the design and construction of key rings that will in the manufacture of the same obviate all operations of swaging, forging, or of in any manner changing the form of the cross section of the stock from which they are made.

A further object of this invention is to provide such improvements and changes in the design and construction of key rings as will allow of the use of such standard material in its manufacture as to obviate all tempering and finishing processes after the forming operation.

A further object of this invention is to provide certain improvements in the construction of key rings whereby the customary thumb-nail method of attaching and detaching keys from the same and the frequent injuries arising from said method may be eliminated.

With these and other objects in view, my invention consists in certain novel features in construction and in combination and arrangements as more fully and particularly set forth and specified hereafter.

Referring to the accompanying drawings:

Fig. 1 is a side view showing the ring with a key attached.

Fig. 2 is an edge view showing the ring with key attached.

Figures 3, 4, 5 and 6 are views showing the ring with the key in the different stages of being attached.

Figures 7, 8 and 9 are views showing the ring with the key in the different stages of being detached.

The ring 1 as shown in the accompanying drawings is manufactured from a single piece of commercial spring-tempered and polished round wire forming approximately two complete circles or turns, and is at a point intermediate its ends offset a distance equal to the diameter of the wire from which the ring is made, forming an oblique portion, 1^a.

The extreme end of the wire on the receiving side of the ring is formed with a laterally projecting arch, 1^b, forming the receiving space, 1^c, and also with an inward curve of a sufficiently reduced radius to admit of the extreme end, 1^d of the arched portion passing inwardly of the oblique portion, 1^a, when the curved portion, 1^b, is compressed by passing keys having exceptionally small openings in their heads, around the ring; which is necessary when securing additional keys to a ring with a key of the above description attached thereto.

The opposite end of the wire lies parallel and concentric with the main body of the ring and at its extreme end, 1^e, abuts with the oblique portion, 1^a.

To secure the key 2 to the ring 1, the edge of the ringed end, or head, 2^a, of the key is placed in the key receiving space, 1^c, of the ring, as shown in Fig. 3, and is then pressed downward until the extreme end, 1^d, of the arched portion, 1^b passes through the eye, 2^b, of the key, 2, as shown in Fig. 4. The direction of the key is then reversed as shown in Fig. 5, and is moved completely around the ring, as shown in Fig. 6, until it passes out from under the discharging end of the ring 1^e, and assumes the position shown in Figures 1 and 2, which show the key secured to the ring.

To remove the key, the coils of the key ring are expanded sufficiently to allow the ringed portion, 2^a, of the key, 2, to pass under the extreme end, 1^d, of the arched portion, 1^b, and into the receiving space, 1^c, as shown in Figures 7 and 8. It is then moved completely around the ring into the position shown in Figure 9 and out from between the body of the ring and the discharging end, 1^e.

It is evident that various changes, modifications and variations might be resorted to without departing from the spirit and scope of my invention, therefore, I do not wish to limit myself to the exact disclosure thereof.

What I claim is:—

1. In a key ring a coil of approximately two complete turns produced from a single piece of wire of a uniform cross-section throughout its entire length, an oblique portion intermediate its two ends forming an offset of a length equal to the cross-section of said wire, a laterally projecting arched portion at one end of said wire having its terminus inside of said coil and having an inward curvature of a sufficiently reduced radius to admit of its extreme end passing inwardly of the oblique portion when compressed.

2. In a key ring, a coil of approximately two complete turns, produced from a single piece of wire of a uniform cross section throughout its entire length and having a laterally projecting arched portion at one end of said wire having its terminus inside of said coil and having an inward curvature of a sufficiently reduced radius to admit of its extreme end passing inwardly of said coil.

LEWIS F. KORNS.