April 19, 1960 B. WALKER 2,932,963

KEY

Filed June 12, 1957

Fig. 1.

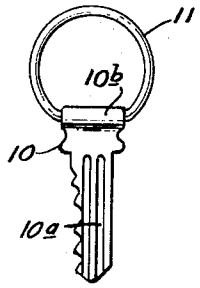


Fig. 2.

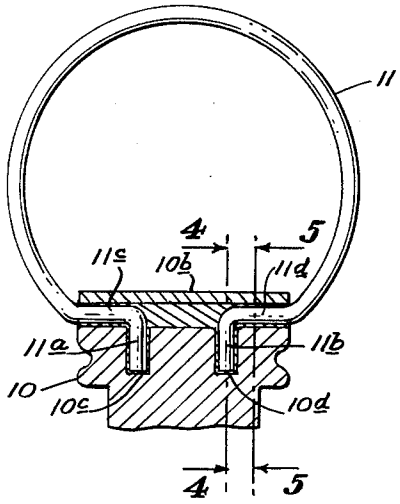


Fig. 3.

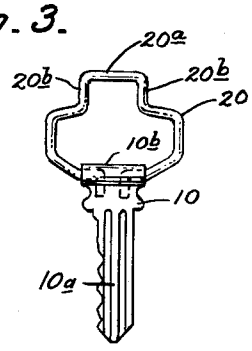


Fig. 4.

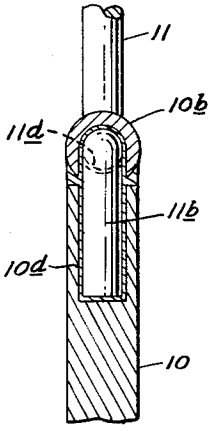


Fig. 5.

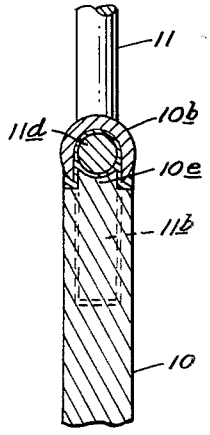
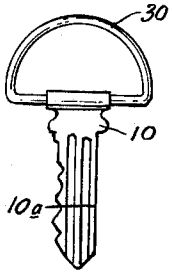


Fig. 6.



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United States Patent Office

2,932,963

Patented Apr. 19, 1960

2,932,963

KEY

Brooks Walker, Piedmont, Calif.

Application June 12, 1957, Serial No. 665,205

2 Claims. (Cl. 70—408)

This invention pertains to improvements in keys and has as one important object the making of a key lighter so that the chain of keys carried by a person will weigh much less and be less of a burden in the pocket.

A further object is to form part of the key from wire which is economical of material, light in weight, round on the edges, and provides a good grip for turning the key in the lock. It also provides a key which is easily attached to a key ring, chain hung on hook, nail, or other supports for a key or a group of keys.

Another object is the method by which the key portion that enters the lock is secured to the wire handle as by having the wire ends enter longitudinal holes for lateral stability of the wire loop and a reinforcing portion over the outward extending portions of the wire to help take the torque from the handle to the lock entering portion of the key.

Other features will be more particularly pointed out in the accompanying specification and claims.

I have illustrated my invention by way of example in the accompanying drawings in which:

Fig. 1 shows one form of the invention in side elevation.

Fig. 2 is an enlarged view partly in section of the upper portion of the key shown in Fig. 1.

Fig. 3 is another form of the invention's side elevation.

Fig. 4 is an enlarged section of a portion of the key taken at section 4—4 of Fig. 2.

Fig. 5 is an enlarged section of a portion of the key taken at section 5—5 of Fig. 2.

Fig. 6 is a side elevation of another form of the invention.

In all figures like numerals of reference refer to corresponding parts.

In Figs. 1, 2, 3, and 4 I have shown a key with a lock entering lower body portion **10**, a combination operating portion **10***a*, a wire ring upper portion **11** and a wire reinforcing portion **10***b*. Wire ring **11** has horizontal portions **11***c* and **11***d* which fit closely to the upper portion **10***e* of body portion **10**. Downward pointing ends **11***a* and **11***b* enter holes **10***c* and **10***d* in body portion **10** and are suitably secured as by brazing, soldering, cementing, swedging, etc. Reinforcing sleeve **10***b* is secured over horizontal portions **11***c* and **11***d* and extends over portion **10***e* of body portion **10**. This reinforcing sleeve is also suitably secured to body portion **10***e* and wire portions **11***c* and **11***d* by solder, brazing, cement, swedging, etc. so as to form a suitable bond. By this method the upper bulky portion of a key may be made of stiff wire, such as piano wire, which is light in weight, good looking, and suitable for key support on a key ring, hook, case, etc. where the key is to be carried or stored and still suitable for operating the lock by means of inserting and turning the key by the wire handle. A saving in brass, aluminum or other key material is also effected.

In Fig. 3 I have shown another form of wire key top where wire **20** has vertical section **20***b* near its top and a flat top section **20***a* rather than a round top like Figs. **1** and **2**.

Fig. 6 shows a wire formed in a half-circle.

Other forms of the wire top can be used.

Other features of the invention will be more particularly pointed out in the accompanying claims. To those skilled in the art to which this invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the spirit and scope of the invention. The disclosures and the description herein are purely illustrative and are not intended to be in any sense limiting.

I claim as my invention:

1. A key for a lock, including in combination a unitary flat body member with opposite faces and opposite edges, a lock-entering portion, and an end portion that stays outside the lock, said end portion ending in a projecting portion stepped in from both faces to provide a pair of ledges and having an arcuate end surface and a pair of openings inset from said edges and extending longitudinally into said body portion; a split wire loop having its ends bent to extend longitudinally of said body portion and inserted in said longitudinal openings and bent adjacent said ends to extend along said arcuate end surface out toward and beyond said edges, and having a continuous portion connecting the portions adjacent said ends and extending around and spaced from said body portion to provide the loop, said wire being light and slender relative to said key body member; a wire-reinforcing member capping said body member and completing enclosure of the part of said wire adjacent said ends, said wire reinforcing member being generally U-shaped in cross section with a central notch fitting over said end surface and cooperating therewith to enclose the portion of the wire extending along said end surface and having portions extending toward said ledges; and means bonding said wire and said wire-reinforcing member to said body member and to each other.

2. A key including a unitary flat body member with opposite faces and opposite edges and having a lock-entering portion and an end portion that stays outside the lock, said end portion ending in a projecting portion stepped in from both faces to provide a pair of ledges and having an end edge and a pair of separate openings inset from said edges and extending longitudinally into said body portion; a loop of wire, light and slender relative to said body member, having its ends bent to extend longitudinally of said body portion and inserted in said longitudinal openings and brazed there and the portion adjacent said bent ends extending along and brazed to said end surface; and a wire-reinforcing member capping said body member and the part of said wire adjacent said ends, said wire-reinforcing member being generally U-shaped in cross section with a central notch fitting over said end edge and cooperating therewith to enclose a portion of said wire extending along said end surface and having portions extending toward said ledges, said wire-reinforcing member being brazed to said body member and to said wire.

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