

(No Model.)

L. HILLEBRAND.

KEY.

No. 305,451.

Patented Sept. 23, 1884.

Fig. 1.

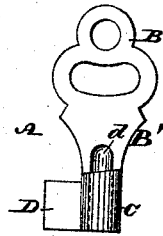


Fig. 3.

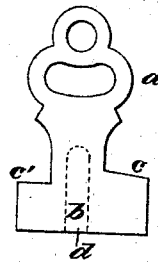


Fig. 2.

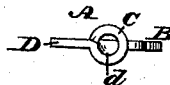


Fig. 4.

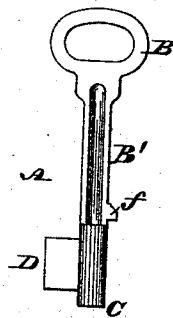


Fig. 6.

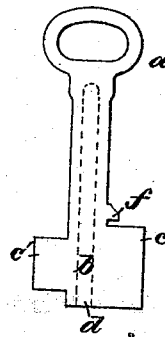
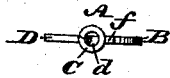


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LOUIS HILLEBRAND, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO DANIEL WOLF, OF SAME PLACE.

KEY.

SPECIFICATION forming part of Letters Patent No. 305,451, dated September 23, 1884.

Application filed March 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, LOUIS HILLEBRAND, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Lock-Keys, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 is a side elevation of a key embodying my invention. Fig. 2 is an end view thereof. Fig. 3 is a view of the blank from which the key is made. Fig. 4 is a side elevation of a modification. Fig. 5 is an end
15 view thereof. Fig. 6 is a view of the blank thereof.

Similar letters of reference indicate corresponding parts in the several figures.

20 My invention consists of the construction of a sheet-metal key, whereby the same is strong and durable, and has a barrel open at both ends, all as will be hereinafter fully set forth.

Referring to the drawings, A represents a key embodying my invention, formed of the
25 handle B, shank portion B' of the handle, the barrel or stem C, and the bit D.

In Fig. 3 is shown the blank from which the key, Fig. 1, is made, the same consisting of the portion *a*, the portion *b*, and the lips *c* *c'*,
30 on opposite sides of the portion *b*, all integral and formed or cut from a flat piece of sheet metal. The portion *b* is longitudinally crimped, forming a groove, *d*, which subsequently constitutes one half of the post-hole
35 of the key, and the lip *c* is then bent over said portion *b* in semi-cylindrical form, producing the other half of the post-hole and shaping the barrel C, the lip *c'* now becoming the bit D, and the portion *a* constituting the handle
40 D, which remains flat.

It will be seen that the handle, barrel, and bit are integral, and the key is produced in an easy, rapid, and inexpensive manner. Furthermore, as the barrel is formed of sheet
45 metal, it is strong and durable, and drilling of the same is avoided, and the bit, also formed of sheet metal, possesses elasticity, great strength, and durability, such advantages not existing in a key formed of cast metal. The
50 opening of the barrel to receive the post is unobstructed throughout its length, whereby it may be readily cleansed by the insertion of a suitable implement or by simply blowing

through it, and the groove *b* is continued into the shank B' toward the handle, thus crimp- 55
ing the shank and vastly strengthening the handle.

In Figs. 4, 5, and 6 I show a stop, *f*, formed integral with the other parts of the key, for limiting the entrance of the key into the key- 60
hole, the key in other respects being similar to that shown in Fig. 1, except in size and design.

I am aware that a sheet-metal key with a crimped flat handle is not new, and I am also 65
aware that a cast metallic key has been made with its shank open throughout, wherefore I disclaim such features; but in my key the lip *c* is cut away on the side toward the handle, so that the end of the groove *d* which is formed 70
on the shank toward the handle, outside of the barrel, is uncovered, making the said end of the groove constitute a side opening, from which dirt, &c., in the barrel may be readily removed and a cleaning implement may 75
be inserted into the barrel at either end, especially at the end toward the handle, without interference of the bow portion thereof or the necessity of placing said bow portion in the mouth to blow out obstructions from the 80
barrel from the inner end thereof.

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

1. A sheet-metal key formed with a flat 85
handle, a shank, and a barrel, which latter consists of a crimp in said shank and a bent-over lip, the end of which toward the handle is cut away, exposing the inner end of the crimp, which end forms an opening at the side 90
of the shank, substantially as and for the purpose set forth.

2. A sheet-metal key formed with a flat handle, a crimped shank, and a barrel, which latter consists of the crimp in said shank and 95
a bent-over lip, said crimp being extended beyond the termination of the barrel toward the handle, and the end of the lip toward the handle cut away, exposing the extended portion of the crimp, forming an opening at the 100
side of the shank, substantially as and for the purpose set forth.

L. HILLEBRAND.

Witnesses:

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