

W. H. TAYLOR.  
KEYS FOR LOCKS.

No. 189,521.

Patented April 10, 1877.

Fig 1

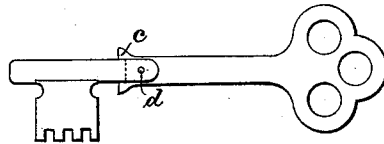


Fig 3.

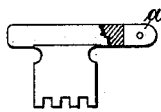


Fig 2.

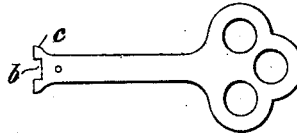


Fig 3 a

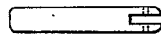


Fig 4



Fig 5



Fig 6



WITNESSES

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INVENTOR

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By his Attorneys.

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# UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE  
YALE LOCK MANUFACTURING COMPANY, OF SAME PLACE.

## IMPROVEMENT IN KEYS FOR LOCKS.

Specification forming part of Letters Patent No. 189,521, dated April 10, 1877; application filed  
February 23, 1877.

*To all whom it may concern:*

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain Improvements in Keys, of which the following is a specification that will enable persons skilled in the art to make and use the same, reference being had to the accompanying drawings.

My improvements relate to keys in which a flat steel shank and bow are employed; and their object is to secure the strength, lightness, convenience in use, and economy in manufacture of such a shank and bow, united securely with a round stem, or that part of an ordinary round key which gives it support, and serves as its journal in the bearing of the lock-case.

Keys made wholly of sheet metal involve the use in the lock of a hub or "rollback," to support them during their revolution, and it is often difficult to enter the flat key in this hub when the lock is on the door, because the hub is out of sight, and the key must pass through a greater or less thickness of wood to reach the lock. The hub is also occasionally turned and the slot changed from its vertical position by accident, so that the key cannot enter until it is replaced. Hence it has heretofore been attempted to combine the advantages of a round and flat key, as appears by the patent of Emery Parker, granted May 4, 1869, in which a flat sheet-metal bow, shank, and bit, made of one piece, are united with a peculiar slotted stem cut nearly in two, which leaves it weak. Furthermore, owing to this construction, soldering or brazing must be largely depended upon for securing the two parts together, which injures the appearance of the key and renders it difficult to finish.

My purpose is to obviate these objections by an improved construction, which will enable the parts to be more securely fitted and united with less reliance upon soldering or brazing, and with a greater facility for finishing. To this end my invention consists of a key the shank and bow of which are made of one piece of sheet metal, and rigidly united to a separate cylindrical or other shaped stem, that carries the bit or wing.

I am aware that a sheet-metal bow and

shank have heretofore been hinged to the stem in the formation of a folding key; but my invention has no reference to such a key.

In the drawings, Figure 1 is a view of my key complete. Fig. 2 is a view of the sheet-metal shank and bow detached. Figs. 3 and 3<sup>a</sup> are views of the cylindrical stem and bit or wing. Figs. 4, 5, and 6 are views, in cross-section, of different blanks from which stems and bits may be made.

I prefer to make the bit and stem of a single piece of metal. This may be done by cutting suitable blanks from rolled or drawn stock, of the form, in cross-section, shown by Fig. 4, or by stamping out sheet-metal blanks and doubling or folding them, as shown in cross-section by Figs. 5 and 6, and then punching or trimming the blanks to give the bit the desired shape, and leave it shorter than the stem. In one end of the stem, in order to connect it with the sheet-metal shank, I form a slot, *a*. I stamp out the shank and bow from sheet metal of a thickness at least equal to the width of the slot in the stem, and at the same time form in its end a slot, *b*, corresponding in width to the diameter of the stem, leaving projections *c* on each side of the slot *b*. I then interlock the shank and stem by means of the slots, which stand at right angles to each other, so that the sides of the stem-slot embrace the shank, and the sides of the shank-slot embrace the stem, and secure them either by soldering (or brazing) or by a rivet, *d*, or by both. I prefer, for greater security in fastening the parts together, to form a slot in the shank, although it might be dispensed with. But whether it is employed or not, the width of the shank at the point of junction with the stem should be greater than the diameter of the latter, in order to extend out on each side of the stem and form shoulders, as indicated at *e*, Fig. 1, which shoulders constitute a stop or gage for the key when inserted in the lock.

I do not in this application claim, broadly, the combination of a sheet-metal bow and shank formed of one piece, and a stem and bit formed of one piece, and united with the shank and bow, as I have made that combination the subject of claim in another application.

Having thus described my invention, what I claim as my improvements is—

1. A key shank and bow without bit or stem, formed of one piece of sheet metal, and provided with a slot in its end for uniting it with the stem, substantially as described.

2. The combination of a sheet-metal bow and shank, slotted at its end, with a round slotted stem, carrying a bit, substantially as described.

3. The combination of a sheet-metal bow

and shank with a round slotted stem, carrying a bit, when the shank is wider at the point of junction with the stem than the diameter of the stem, for the purpose specified.

In testimony whereof I have hereunto subscribed my name.

WARREN H. TAYLOR.

Witnesses:

E. D. OGDEN, Jr.,  
WALTER FULLER.