

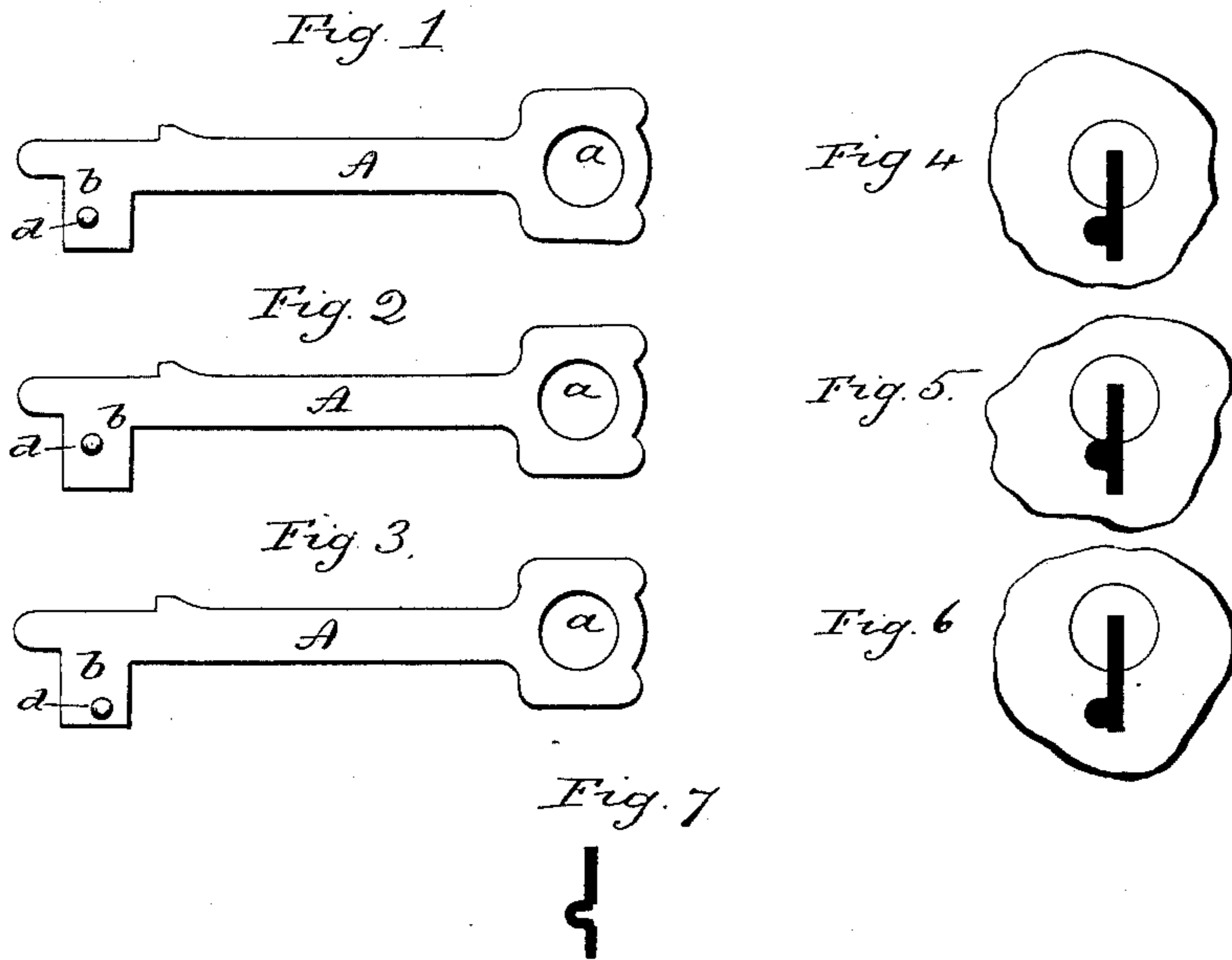
(No Model.)

J. H. BARNES & J. H. WOOLASTON.

KEY.

No. 353,113.

Patented Nov. 23, 1886.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

JOHN H. BARNES AND JOSEPH H. WOOLASTON, OF NEW HAVEN, CONNECTICUT, ASSIGNORS TO THE BARNES MANUFACTURING COMPANY, OF SAME PLACE.

## KEY.

SPECIFICATION forming part of Letters Patent No. 353,113, dated November 23, 1886.

Application filed August 9, 1886. Serial No. 210,383. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN H. BARNES and JOSEPH H. WOOLASTON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Keys; and we do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figures 1, 2, and 3, side views of the keys, showing the projection on the side of the bit in different positions; Figs. 4, 5, and 6, key-holes corresponding to the keys of Figs. 1, 2, and 3, respectively; Fig. 7, a transverse section through the bit.

This invention relates to an improvement in keys, and particularly to that class known as "flat keys"—that is, keys cut complete from sheet metal—and adapted for locks having a cylinder slotted to receive the tip of the spindle, with an opening from the slot into the case to admit the bit.

In locks of simple construction for the use of this class of keys the mechanism of one lock is the duplicate of another, and to prevent the keys being interchangeable the edges of the bit are notched and the interior of the case provided with corresponding projections, and the notch in the bit and the projection in the case made in different positions in different locks, so that only the key having a notch corresponding to the projection in the case can be used; but in this construction the notches make sharp angles in the edges of the bit, which are undesirable in a key to be carried in the pocket. In another construction of this class of keys the bit is bent so as to give it a curved shape from the spindle downward, and the case having a correspondingly-curved key-

hole the key is only adapted to that particular lock; therefore by varying the curves a variety of keys and locks may be produced in which the keys are not interchangeable; but the objections before mentioned are only increased by the curvature of the bit.

The object of this invention is to construct the keys without either the notches or bends, but yet so that they are not interchangeable.

A represents the shank of the key, with the usual loop, *a*, and the bit *b*, cut from sheet metal, and all flat and in the same plane.

On one side of the bit a small and preferably hemispherical projection, *d*, is formed of considerably less extent than the width of the bit, and preferably by striking in from the opposite side, so as to force the metal outward to form the projection, as seen in Fig. 7. The position of the projection on the bit may be varied with relation to the spindle, as shown in Figs. 1, 2, and 3, and it may be on either side. The side of the key-hole in the case is constructed with a recess corresponding in position to the projection on the bit fitted for that particular lock, as shown in Figs. 4, 5, and 6.

By this construction it will be seen that a number of locks with the same mechanism may be readily arranged so that the keys are not interchangeable, and without changing the shape or plane of the bit at the edges, and therefore avoiding the difficulties before mentioned.

We claim—

The herein-described key, having its bit constructed with a projection upon its side of less extent than the width of the bit, substantially as and for the purpose described.

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