

No. 756,585.

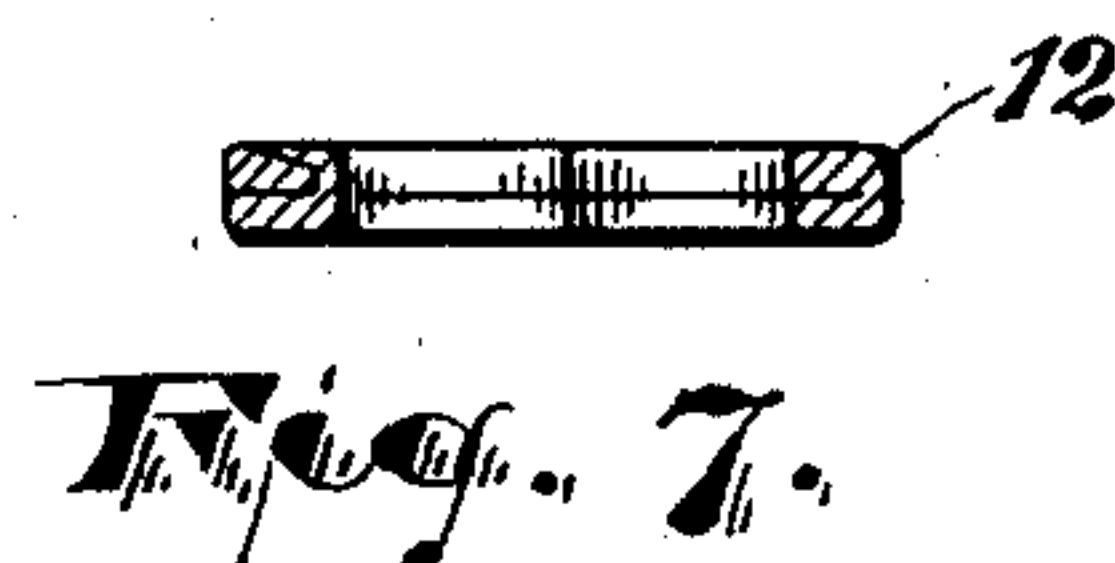
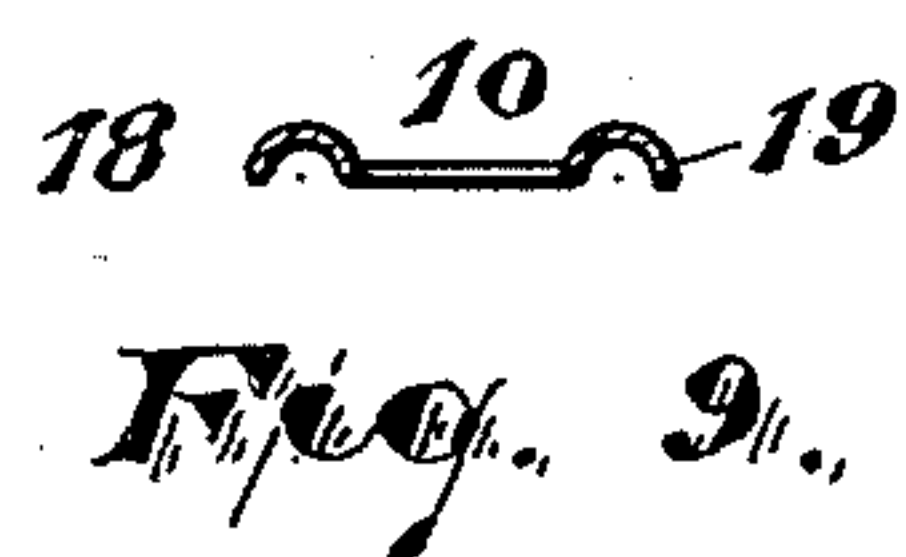
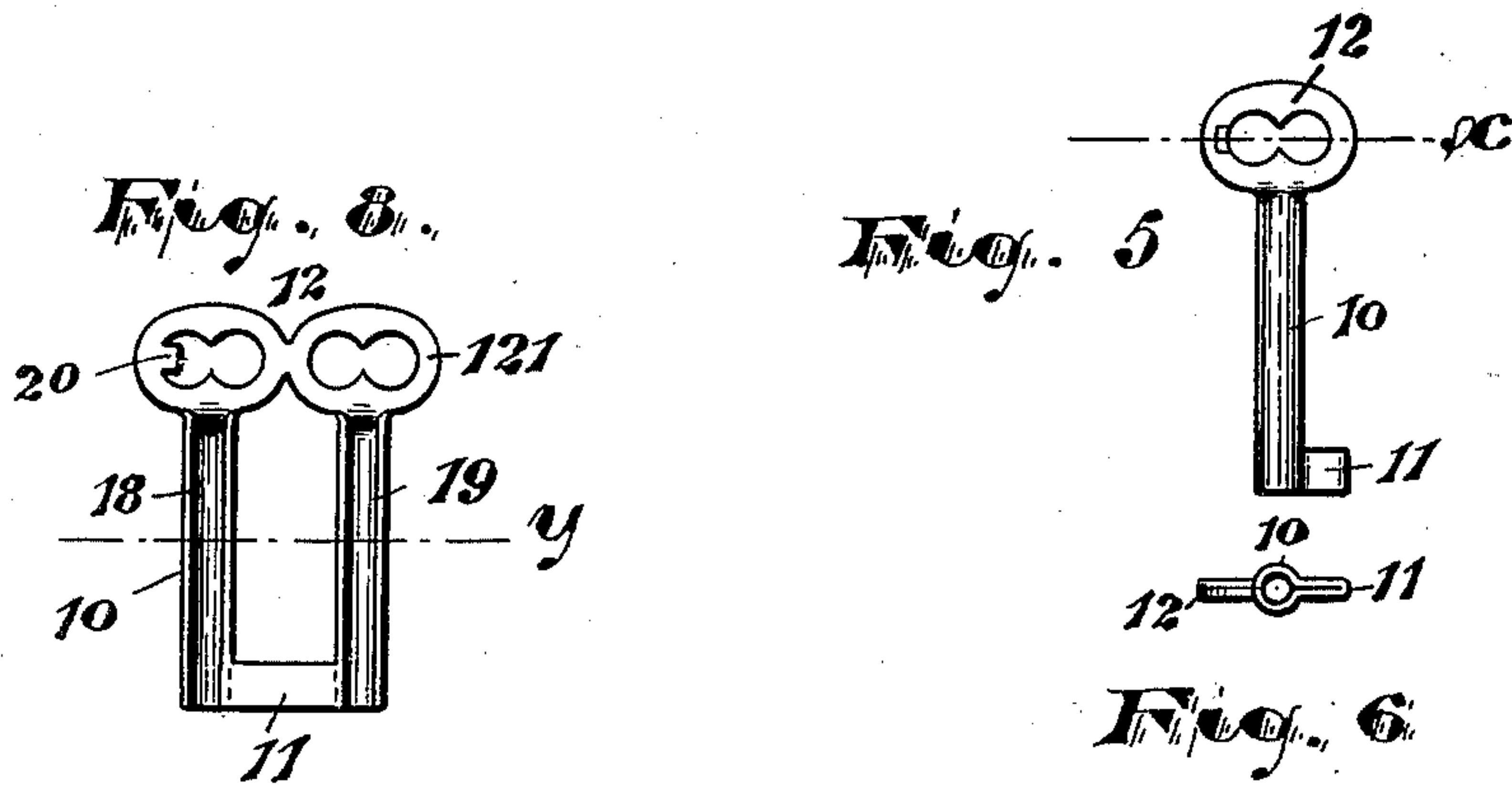
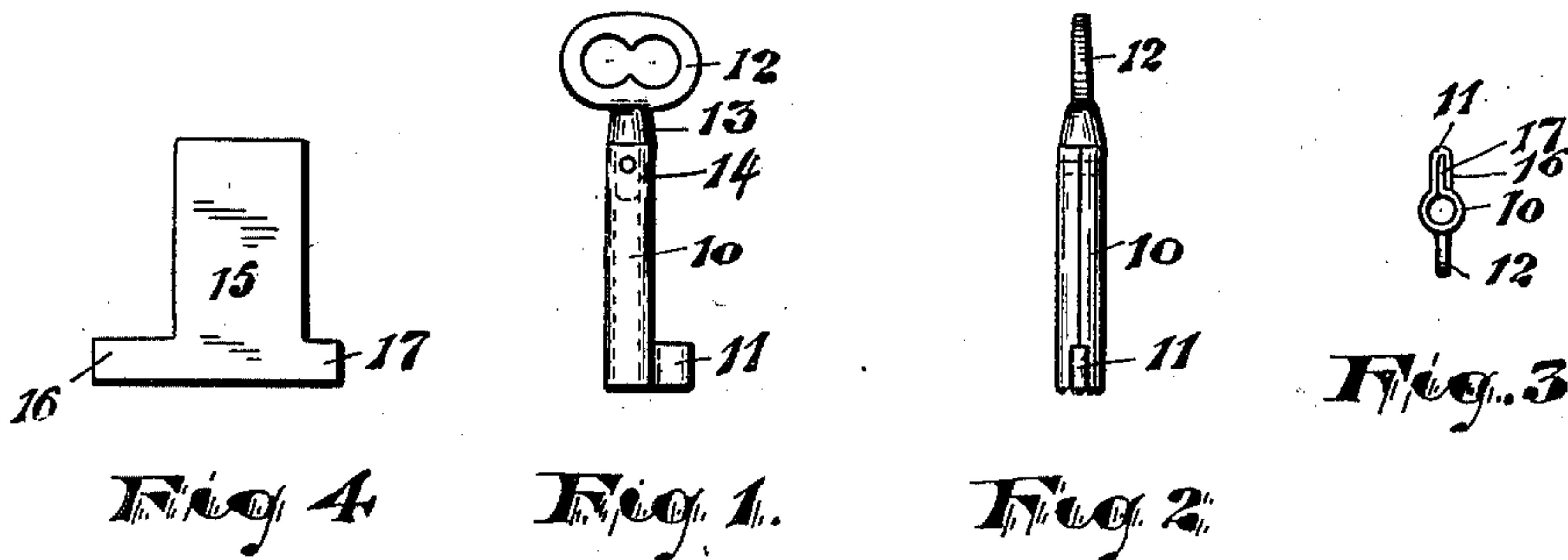
PATENTED APR. 5, 1904.

J. P. CLARK.

KEY.

APPLICATION FILED NOV. 12, 1903.

NO MODEL.



WITNESSES:

Ralph Lancaster

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# UNITED STATES PATENT OFFICE.

JAMES P. CLARK, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE  
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## KEY.

SPECIFICATION forming part of Letters Patent No. 756,585, dated April 5, 1904.

Application filed November 12, 1903. Serial No. 180,818. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES P. CLARK, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented and produced a new and original Improvement in Keys; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

The objects of this invention are to reduce the cost of construction and provide a key which at reduced cost will be more accurate in construction and will avoid the loss due to the boring-out operation heretofore largely practiced and to secure other advantages and results, some of which may be hereinafter referred to in connection with the description of the working parts.

The invention consists in the improved key and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like figures of reference indicate corresponding parts in each of the several figures, Figure 1 is a side view, Fig. 2 is an edge view, and Fig. 3 is an end view, of my improved key. Fig. 4 is a plan of a blank from which the same is constructed. Fig. 5 is a side view, and Fig. 6 is an end view, of a modified form of construction. Fig. 7 is an enlarged section taken on line *x*, Fig. 5. Fig. 8 is a plan of a blank from which the last construction is made; and Fig. 9 is a section of the same, taken at line *y*.

In said drawings, 10 indicates the body of the key, 11 the bit thereof, and 12 the bow. The said bow may be a casting with a cylindrical shank extension 13, reduced in diameter at its lower end, as indicated in outline in Fig. 1 at 14, so that the tubular body of the key may lie flush on the outside with the larger part of said shank 13 to give a smooth finish to the key.

The body 10 is of sheet metal and is cylindrical or of tubular form, the sheet metal of the blank 15, Fig. 4, being bent by suitable tools, and thus made accurate and uniform in all keys made by said tools. The bit 11 is integral with the said tubular body 10 and is made double or of two thicknesses of sheet metal, as shown in Figs. 3 and 6, so as to be better able to withstand the lateral pressure brought thereon in the locking and unlocking operations.

To secure the heavy bit, I prefer the construction shown in Fig. 3, in which the blank shown in Fig. 4 is provided at one end with lateral extensions, the extension 16 of which is longer than the opposite extension 17 on the other side of the body of the blank. These extensions are brought together as shown in Fig. 3, the longer extension being wrapped around the shorter one, thus reinforcing the said shorter one and locking the lapping sides of the tube together, so as to prevent spreading. By this construction a bit of great strength is produced, and when the parts are pressed together by suitable dies the joints are hardly observable and a key of great neatness is produced.

By the construction of Figs. 5, 6, 7, 8, and 9 a double or reinforced bit is also secured, and in this case there is no need for riveting the bow to the body. In this case the twin members 18 19 of the key-blank of Fig. 8 are doubled one on the other and riveted together by a lug 20 in the perforation of one member of the bow, which is forced by the bending-dies around the opposite part 121 of the bow of the opposite twin member, as indicated in Fig. 7.

I am aware that other modifications of construction may be provided without departing from the spirit or scope of the invention, and thus I do not wish to be limited by any of the above-employed descriptive expressions excepting as the state of the art may require.

Having thus described the invention, what I claim as new is—

1. The improved key having a tubular body and bit formed of one piece of sheet metal, said bit comprising bit extensions one of which



is longer than and is bent double over the extremity of the other to reinforce the same, substantially as set forth.

2. The improved key having a body of sheet  
5 metal with a short and long bit extension at the longitudinal edges thereof, the said body being bent into tubular form and the short and long bit extensions being bent to lie face to face, the long extension being bent over  
10 and around the projecting extremity of the short extension.

3. The improved key, consisting of a tubu-

lar body having a bow secured at one end and at the opposite end having bit extensions lying face to face, the said extensions being  
15 bent double at the projecting extremity of the bit, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of November, 1903.

JAMES P. CLARK.

Witnesses:

CHARLES H. PELL,  
RUSSELL M. EVERETT.