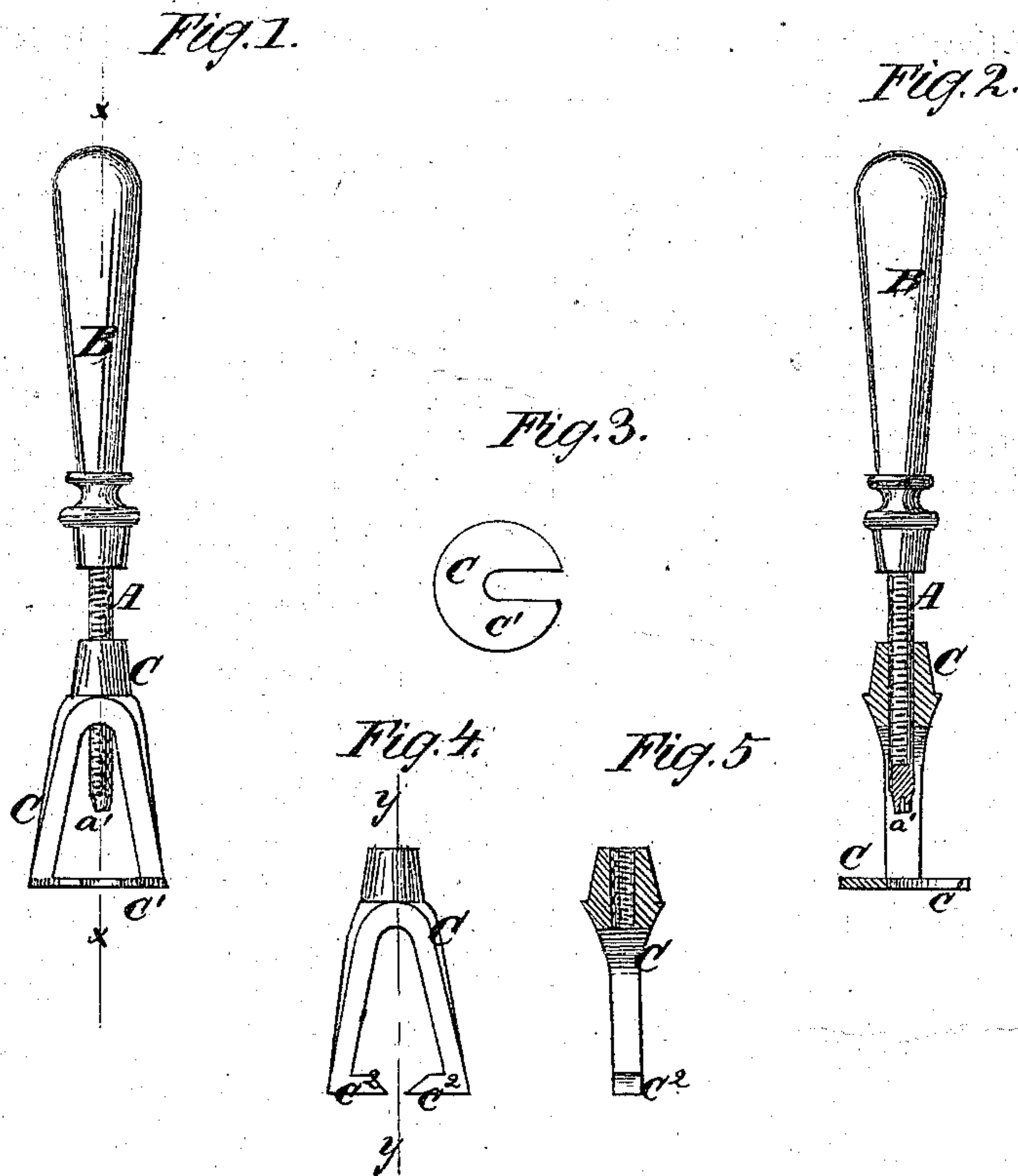


JAMES INGRAM.

Improvement in Tools for Removing the Roller from, and
Replacing it upon, the Balance Shaft.

No. 125,737.

Patented April 16, 1872.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES INGRAM, OF TROY, NEW YORK.

IMPROVEMENT IN TOOLS FOR REMOVING THE ROLLER FROM AND REPLACING IT UPON THE BALANCE-SHAFT.

Specification forming part of Letters Patent No. 125,737, dated April 16, 1872.

Specification describing a new and Improved Watchmaker's Tool, invented by JAMES INGRAM, of Troy, in the county of Rensselaer and State of New York.

Figure 1 is a front view of my improved tool. Fig. 2 is a detail sectional view of the same taken through the line *x x*, Fig. 1. Fig. 3 is a bottom view of the same. Fig. 4 is a front view of a modification of the same. Fig. 5 is a detail sectional view of the same taken through the line *y y*, Fig. 4.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved tool, simple in construction, convenient in use, and reliable in operation, for removing the roller from and replacing it upon the balance-staff; and it consists in the tool constructed as hereinafter more fully described.

A is a screw, to the upper end of which is attached a handle, B. In the lower or forward end of the screw A is formed a small hole, *a'*, as shown in Fig. 2, to receive the fine pivot of the staff. C is a U-shaped piece, having a screw-hole formed in its middle part or bend to receive the screw A. Upon the lower ends

of the arms of the piece C is formed a disk, *c'*, having a hole formed in one side and extending to the center of said disk to receive the roller, so that, by screwing down upon the shoulder, the roller may be raised from the staff without any danger of breaking the pivot or putting the balance out of shape. The piece C *c'* is designed for replacing the roller upon the balance-staff, and is constructed the same as the piece C *c'*, except that, instead of the slotted disk *c'*, it has two inwardly-projecting hooks, *c'*, beveled upon the upper sides of their inner edges, as shown in Figs. 4 and 5.

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

The combination of the screw A having a hole, *a'*, formed in its lower end and provided with the handle B with the U-shaped piece C, whether made with a slotted disk, *c'*, or beveled hooks *c'* upon the ends of its arms, substantially as herein shown and described, and for the purposes set forth.

Witnesses:

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