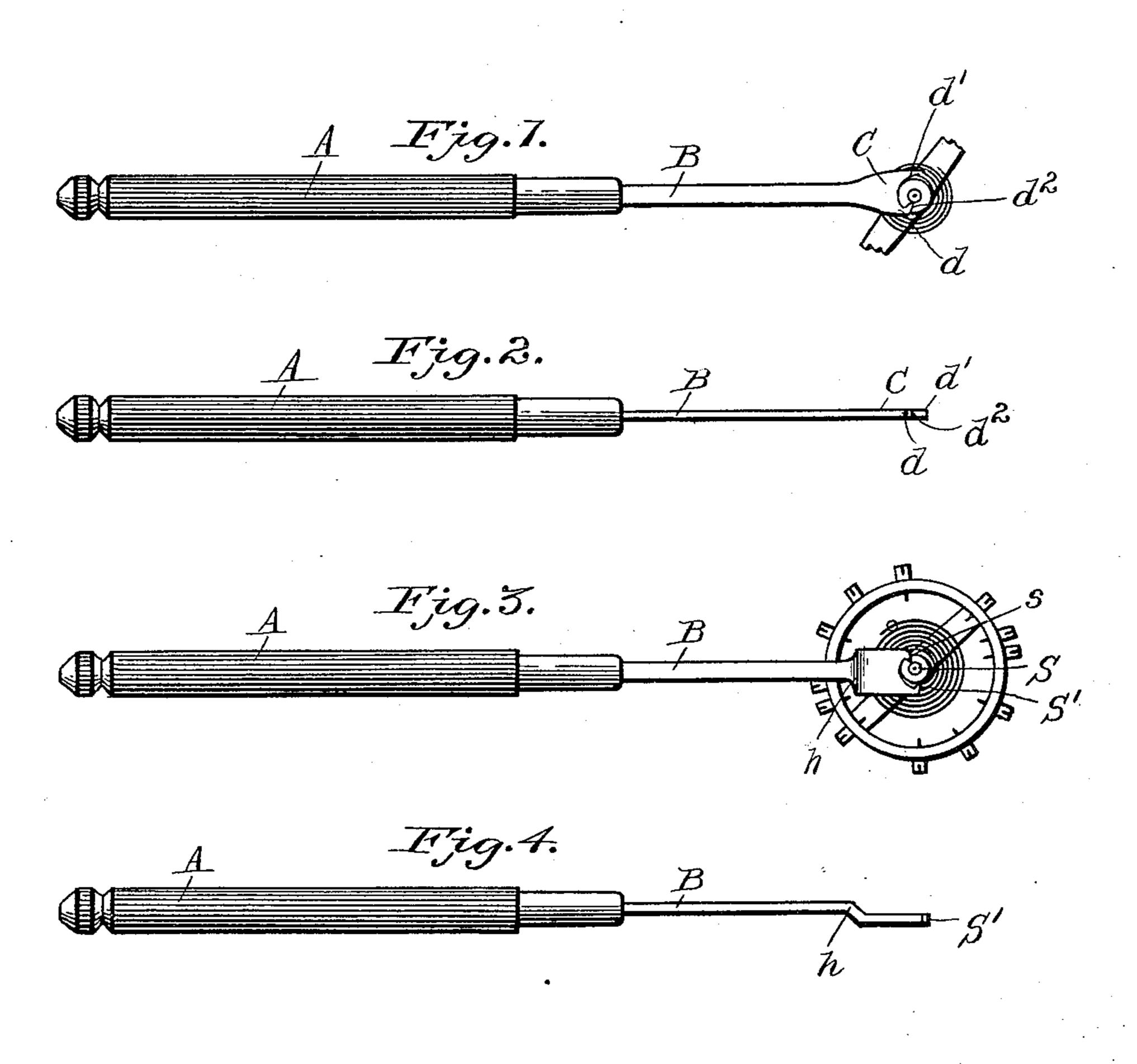
No. 640,613.

Patented Jan. 2, 1900.

## C. BASSETT. WATCHMAKER'S TOOL.

(Application filed July 6, 1898.)

(No Model.)



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WITNESSES

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BY

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## United States Patent Office.

CHARLES BASSETT, OF ANDERSON, INDIANA.

## WATCHMAKER'S TOOL.

SPECIFICATION forming part of Letters Patent No. 640,613, dated January 2, 1900.

Application filed July 6, 1898. Serial No. 685,258. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BASSETT, a citizen of the United States, and a resident of Anderson, in the county of Madison and State of 5 Indiana, have invented certain new and useful Improvements in Hair-Spring Adjusters and Collet-Removers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others ro skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a plan view of the tool or implement embodying the invention and illustrating its use. Fig. 2 is a side view of the same. Fig. 3 is a view similar to Fig. 1, but showing a slightly-modified form. 20 Fig. 4 is a side view of the tool shown in Fig. 3. Fig. 5 is a detail view showing another

use of the tool.

This invention is designed to provide a new and useful tool for use by watchmakers for 25 the purpose of adjusting the hair-springs of watches and also for removing collets from the balance-staffs.

With this object in view the invention consists in a tool formed with a flattened or 30 bladed end portion having therein an open slot or recess which opens in the direction of the longitudinal axis of the shank portion of the tool and whose lateral walls form jaws or prongs adapted to partially embrace the col-35 let of a watch, one or both of said jaws or prongs having its point bent inwardly and partially across the mouth of said slot or recess to form means for engagement with a slot in the watch-collet.

Referring to the accompanying drawings, the letter A designates the handle portion of the tool, B the shank, and C the flattened or bladed end portion, having the approximately semicircular open slot or recess c, 45 whose lateral walls form jaws or prongs dd'.

In the form of tool shown in Figs. 1 and 5 the jaw or prong d is formed with an inturned point  $d^2$ , which is designed to engage a radial recess s, formed in the watch-collet |

S, in the manner shown in Fig. 1, whereby 50 said collet may be turned to adjust the hairspring S'. This point  $d^2$  is inturned at an acute angle and in a radial direction with respect to the collet. The jaw or prong d' is formed with a wedge-shaped straight point 55 which is also adapted to frictionally engage the said slot in the manner shown in Fig. 5, whereby by a lifting movement of the tool the collet may be removed from the balancestaff.

The tool shown in Fig. 3 differs from that shown in Figs. 1 and 5 in that each jaw or prong is formed with an inturned wedgeshaped point  $d^2$ , whereby the tool may be used either right or left without reversing it. Fig. 65 3 shows the tool engaged either for adjusting the hair-spring or for removing the collet, the first being accomplished by a turning movement and the second by a lifting movement.

If desired, the bladed portion C may be off-

set, as shown at h in Fig. 4.

By the use of this tool hair-springs may be adjusted and collets removed without danger of injuring them or adjacent parts of the 75 watch.

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

A hair-spring adjuster and collet-remover, 80 comprising the handle, shank and blade, the said blade having an open slot therein which opens in the direction of the longitudinal axis of the shank and is adapted to embrace a collet, the walls of said slot terminating at 85 opposite sides in wedge-shaped points, one or both of which are turned inwardly at an acute angle in a radial direction with respect to said collet, and adapted to engage a wedgeshaped radial recess therein, to turn the col- 90 let and adjust a hair-spring and remove the collet, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES BASSETT.

Witnesses:

ALFRED ELLISON, THOS. BAGOT.