

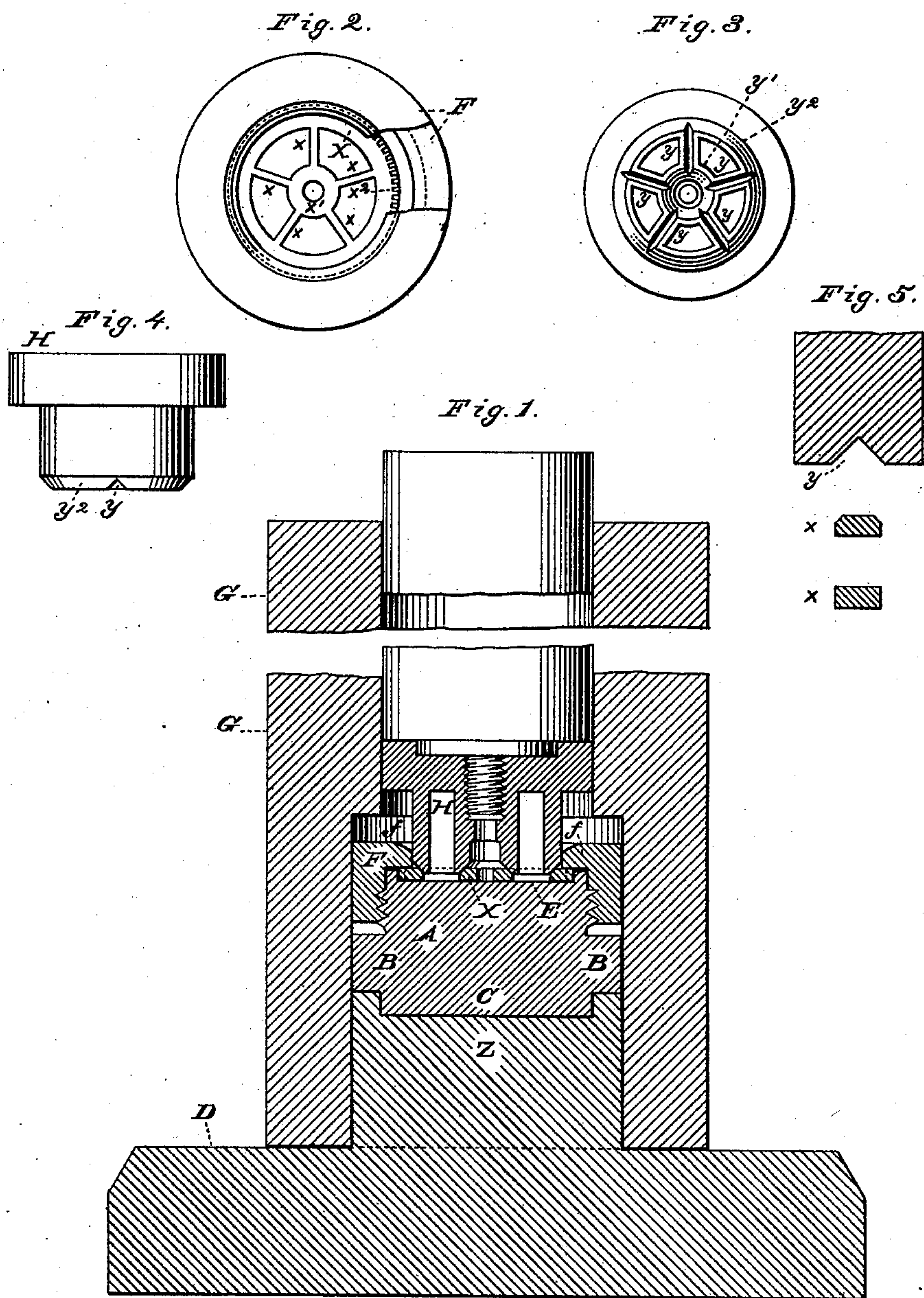
(No Model.)

H. HUGUENIN.

MEANS FOR BEVELING WATCH WHEELS.

No. 381,785.

Patented Apr. 24, 1888.



WITNESSES.

Villette Anderson.  
C. R. Ferguson.

INVENTOR.

by Henry Huguenin,  
E. W. Anderson,

Attorney.



# UNITED STATES PATENT OFFICE.

HENRY HUGUENIN, OF WALTHAM, MASSACHUSETTS.

## MEANS FOR BEVELING WATCH-WHEELS.

SPECIFICATION forming part of Letters Patent No. 381,785, dated April 24, 1886.

Application filed November 12, 1887. Serial No. 255,002. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY HUGUENIN, a citizen of Switzerland, and a resident of Waltham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Beveling Watch-Trains; and I do 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a vertical section. Fig. 2 is a top view of the wheel in place with the cap over it broken away at one point. Fig. 3 is a face view of the die. Fig. 4 is a side view of the die. Fig. 5 is a detail view.

The invention relates to improvements in the art of beveling and polishing the wheels of watch-trains; and it consists in the hereinafter-described means by which said method is performed, as hereinafter described, and pointed out in the claims hereto appended.

The wheels of which the trains of watches are composed have in very fine watches—such as those of the best Swiss manufacture—the edges of their spokes and the facing edges of their rims and bosses beveled on one side and very highly polished. This beveling and polishing has heretofore been done by hand and has proved so tedious and expensive that it has been applied only to the most costly watches.

The object of this invention, therefore, is to bevel and polish the wheels by a method that will economize in time and will at the same time produce a better polish than that given by hand.

Referring to the accompanying drawings by letter, A designates a tapped end provided with the circumferential flange B, below which is the boss C, by means of which the tapped end is attached to a suitable base-piece, D, the boss C fitting in a recess in the stem or standard Z of the base-piece. The tapped end is provided with the circular recess E, of suitable size to receive the wheel X of a watch-

train, with the points of the teeth of the wheel resting against the sides of the recess, as shown.

F is a screw thimble or sleeve engaging upon the tapped end A, so as to hold the said wheel firmly in place by means of its overhanging flange f, and yet to permit the tool, die, or plunger H to descend upon the wheel.

G is a sleeve which surrounds the spindle of the die H and guides its descent, the lower end of the said guide-sleeve resting on the base-piece D. The die may be secured to the lower end of the spindle by any suitable means and is made of very hard steel. The face of the die is formed to correspond to the face of the wheel.

For instance, as the wheel has five spokes,  $x$ , a central boss,  $x'$ , and a toothed rim,  $x^2$ , the die has on its face the five V-shaped radial grooves,  $y$ , the beveled edge  $y'$  around the central opening, and the circumferential bevel  $y^2$ . All these bevels,  $y$ ,  $y'$ , and  $y^2$ , are very hard and very highly polished, so that when the die descends on the wheel the V-shaped grooves  $y$  bevel and polish the edges of the spokes  $x$ , the edge  $y'$  bevels and polishes the edge of the central boss,  $x'$ , and the edge  $y^2$  bevels and polishes the inner edge of the rim  $x^2$ . The die does its work at one stroke, and does it more evenly and perfectly than can be done by hand. The die may be depressed by a stamping-machine of any character, by a hammer, or other well-known and available means.

The wheel, by being held closely in the recess of the tapped end by the screw-sleeve, cannot spread or bend under the blow of the die.

Dies and other parts must be made of various sizes to suit the various sizes of wheels in a watch-train.

Having thus described my invention, I claim—

1. The combination, with the tapped end having the wheel-recess, of the die having the proper bevels on its face, substantially as specified.

2. The combination, with the tapped end having the wheel-recess, and the screw-sleeve having the instanding circumferential flange at its upper end, of the die-spindle and die secured to the lower end thereof, substantially as specified.

3. The combination, with the tapped end  
having the wheel-recess, and the screw-sleeve  
having the instanding flange, of the die-spin-  
dle, the die secured thereto, and the guide-  
5 sleeve for the said spindle, substantially as  
specified.

4. The combination, with the tapped end  
having the wheel-recess and circumferential  
flange, the base-piece D, and the screw-sleeve  
10 having the instanding circumferential shoul-

der around its upper end, of the die-spindle,  
die, and guide-sleeve for the die-spindle, sub-  
stantially as specified.

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

HENRY HUGUENIN.

Witnesses:

GUSTAV A. BENZ,  
JOHN STARK.