

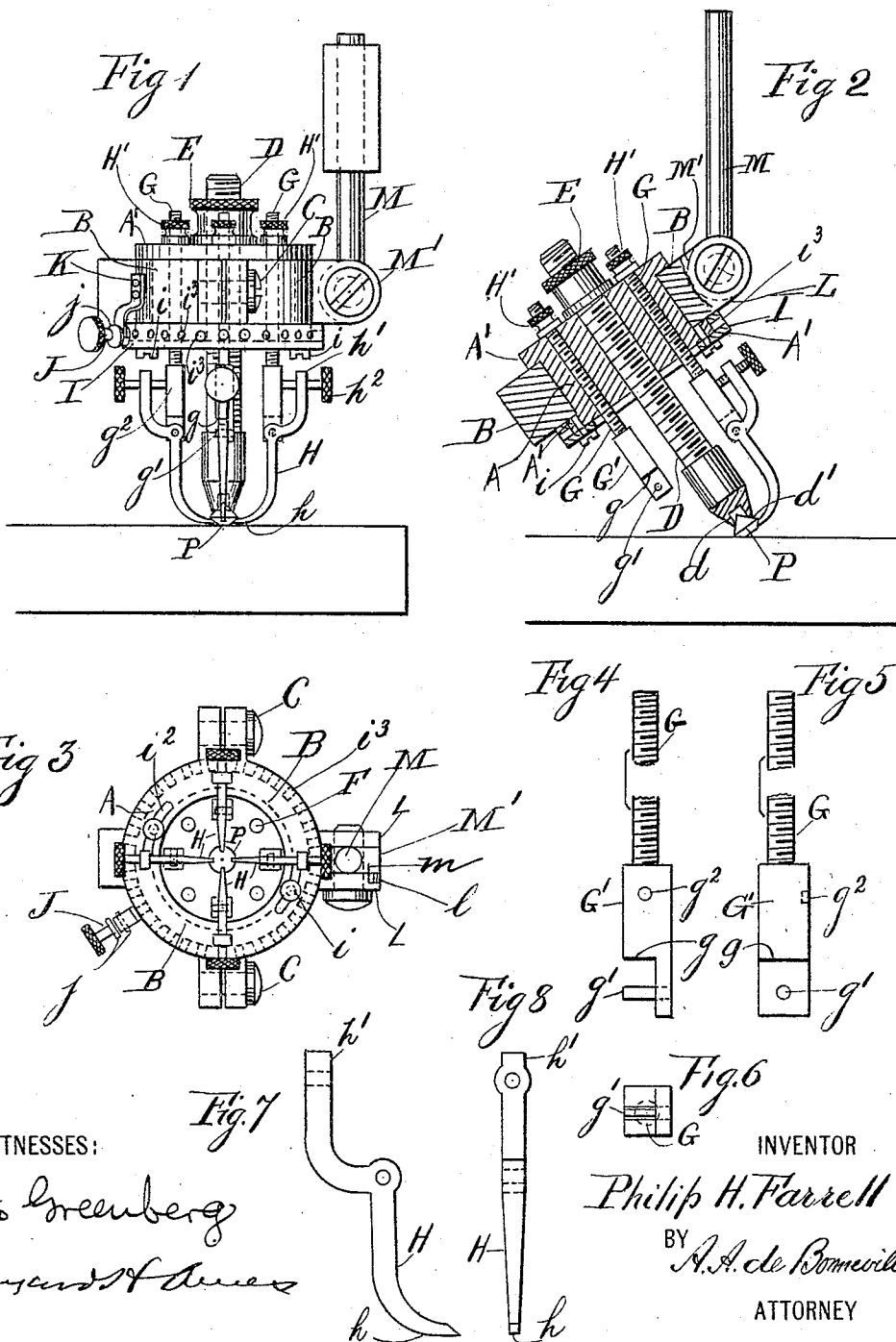
No. 774,383.

PATENTED NOV. 8, 1904.

P. H. FARRELL,
STONE HOLDER.

APPLICATION FILED MAR. 9, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

PHILIP H. FARRELL, OF FLUSHING, NEW YORK.

STONE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 774,383, dated November 8, 1904.

Application filed March 9, 1903. Serial No. 147,017. (No model.)

To all whom it may concern:

Be it known that I, PHILIP H. FARRELL, a citizen of the United States of America, and a resident of Flushing, in the county of Queens, State of New York, have invented certain new and useful Improvements in Stone-Holders, of which the following is a specification.

This invention relates to means for holding precious stones, diamonds, and the like while being ground and polished; and its object is the production of a holder by which diamonds and the like can be secured during the process of grinding and polishing and with which the faces of the stones can be accurately cut and finished with their proper angles.

In the drawings, Figure 1 represents an elevation of my invention in position for grinding the top face or table of a diamond. Fig. 2 shows a partial vertical axial section of Fig. 1 with the apparatus inclined to cut one of the inclined faces of the stone. Fig. 3 is a bottom view of Fig. 1. Fig. 4 shows an enlarged elevation of a post. Fig. 5 is a side view of Fig. 4. Fig. 6 shows a bottom view of Fig. 4. Fig. 7 represents an enlarged side elevation of a clamp. Fig. 8 is an end view of Fig. 7.

Referring to the details of the invention, a barrel is represented at A, having flanges A', and which fits in collars B, that are held in place by screws C. The center of the barrel is threaded for the support D, which latter is held in place by the jam-nut E. The outer end of the holder is bored with a cavity d, which meets the inclined face d'. Holes F, generally eight in number, are formed in the barrel A and are threaded for the posts G, which latter are held in place by the jam-nuts H'. The post G contains the rectangular end G', that is cut away at g, and pivot g' projects from the portion remaining for a clamp H, which has a hole for engaging with said pivot. The clamp extends downwardly and is curved, as shown at the end h, while the other end, h', is tapped for a screw h², which bears against the rectangular end G' of the post G, a small cavity g² being formed in the end G' for the point of the screw h², by which means the clamp is prevented from slipping off the pivot g'.

An index-plate I fits on the lower face of the barrel A, being held thereto by screws i, that pass through openings i² in the said plate and are secured into the barrel A. Holes i³, generally thirty-two in number, are formed in the edge of the plate I, and they are engaged by a spring-actuated pin J, which has the collars j, between which latter fits a spring K, that tends to force the pin toward the index-plate I and into one of the holes i³ thereof.

On one of the collars B there are formed the jaws L, between which is gripped the arm M, the lower portion M' of which constitutes, with the jaws L, a hinge. An index-line m on the portion M' is made to engage with a scale l on one of the jaws L to indicate the inclination of the holder with its arm M, and thus accurately gage the angle for cutting the angular faces of a stone.

When using my invention, the end face or table of a stone is cut, as shown in Fig. 1, the four clamps H being all in position, and clamping the stone P on the end of the support D. When the angular faces are to be cut, the most appropriate portion of the stone for forming the first angular face is decided upon and then the clamp opposite the said face is detached, as shown in Fig. 2. Next the pointer J is made to engage one of the holes i³ of the index-plate I by moving the said plate so that one of its holes meet the said pin, after which the plate is clamped in position by the screws i. Then the face is cut on the polishing-wheel, and when finished the screws C are slightly unscrewed, to allow the barrel to be turned, the said turning being gaged by the index-plate by allowing a number of the holes i³ to pass the pin J, the angular face ground being always opposite the arm M. It will be noted that the stone by this means is always turned through the same angular distance for each angular face. After the barrel A has been turned and the pin J is engaged by the index-plate, the screws C are again tightened, and the clamp H now opposite the arm M is removed and pivoted to the post previously in position opposite the said arm. It will be noted that the stone P is never removed from the holder while being

cut, and when cutting the angular faces is always held by three of the clamps H. It will be further noted that when the stone is either to be secured or removed from the support
 5 D that the screws h^2 are turned so that their ends bear or recede from the faces of the post 3, and by the same means stones of various sizes can be fastened to the holder.

Having described my invention, I claim—

10 1. In a stone-holder the combination of an adjustable barrel, a central support secured therein, posts adjustably secured in the barrel, and detachable clamps on the posts.

2. In a stone-holder the combination of an
 15 adjustable barrel, a central support therein; means to adjustably secure the said support in the said barrel; posts adjustably secured in the barrel, and clamps on the post to secure a stone on the central support.

20 3. In a stone-holder the combination of a barrel, a central support therein, posts adjustably secured in the barrel, a pivot on each post, a clamp supported on each pivot, one arm of the clamp extending to the end of the
 25 central support, a second arm extending parallel to the post, a screw tapped through the second arm and bearing against the post.

4. In a stone-holder the combination of a barrel, flanges thereon, collars clamped on the

barrel between the flanges, a support and the
 barrel threaded therefor, a jam-nut securing the holder to the barrel, posts secured in threaded holes in the barrel, jam-nuts clamping the said posts to the barrel, pivots on the post, clamps held on the pivots and engaging
 35 a stone on the central support.

5. In a stone-holder the combination of a barrel, flanges thereon, collars clamped on the barrel between the flanges, a central support and the barrel threaded therefor, a jam-
 40 nut securing the holder to the barrel, posts secured in threaded holes in the barrel, jam-nuts clamping the said posts to the barrel, pivots on the post, clamps held on the pivots and engaging a stone on the central support,
 45 an index-plate with holes bearing on the lower flange of the barrel, screws clamping the said plate to the barrel by passing through annular openings in the plate, an arm forming a hinge with one of the collars, and an index
 50 formed between the said collar and arm.

Signed at New York, county and State of New York, this 2d day of March, 1903.

PHILIP H. FARRELL.

Witnesses:

MORTIMER E. JOINER,
 NEWTON HARRISON.