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DEVICE FOR EXAMINING SMALL ARTICLES.

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1,120,421. Patented Dec. 8, 1914.

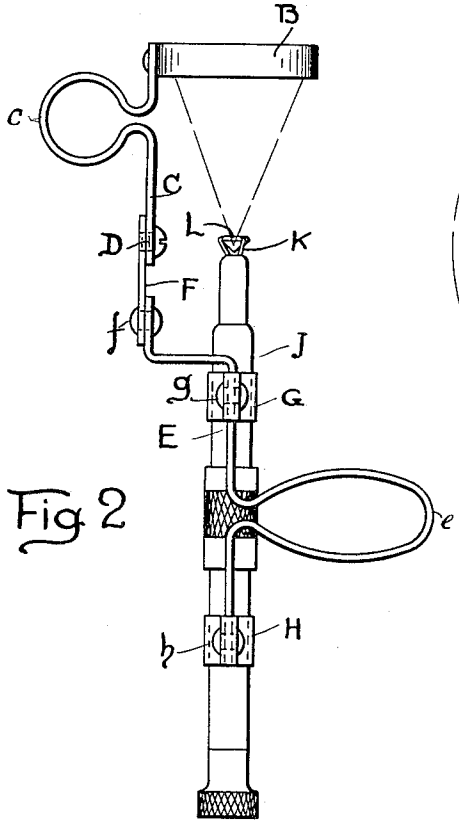


Fig. 2

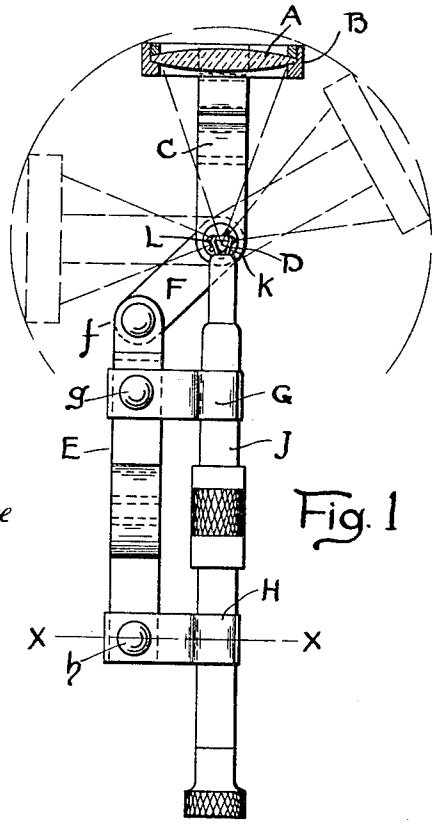


Fig. 1

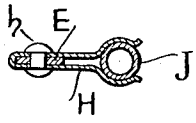


Fig. 3

WITNESSES

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DEVICE FOR EXAMINING SMALL ARTICLES.

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To all whom it may concern:

Be it known that I, ELWIN M. STRICKLAND, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Devices for Examining Small Articles, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to devices for handling and examining small articles, especially precious stones, by means of magnifying glass. Its object is to facilitate such examination without disturbing the relation of the glass itself, its focus, and the object to be examined, when it is examined from various directions, and it consists in the combinations and arrangements hereinafter pointed out and specified in the claims.

In the drawings,—Figure 1, is an elevation of the device showing the lens and the lens frame in section. Fig. 2, is an elevation of the device taken at a position ninety degrees removed from the position in which Fig. 1 is taken. Fig. 3 is a cross sectional view on the line x—x of Fig. 2.

Similar letters refer to similar parts.

A, represents a lens; B, the frame therefor; C, is an arm or bracket which is pivoted at a point D, upon a supporter which consists of body part E, banded or constructed with an angular piece F, with a pivot D, upon which the bracket C, is pivoted and rotates. The parts E, F, may be made of one piece of the proper curvature, if desired. As shown I have indicated a joint f, which may be made rotatable under considerable force for purposes of adjustment. To the part E, is attached a spring clip G, and also a similar spring clip H, in any convenient manner. The preferred manner of attachment and the form of the spring clips is shown in Fig. 3, they being riveted to the part E, at H, G, and being of the form shown in cross section in Fig. 3. These brackets have a spring tension and are adapted to grasp a round object, as shown in Fig. 3 in section, and to hold it quite firmly yet adjustably.

J, is a shank or holder for holding small articles, consisting of small spring fingers K. The form of this device is not essential in itself; any means might be provided for holding, say, a jewel, such as is shown at L, but the spring fingers like K, are very convenient to use, and as they are quite a usual article of manufacture it is not necessary to describe them in detail. The shank or holder J, is usually round and is adapted to fit into the clips G, H, in the manner shown in Fig. 3, with sufficient tension to compel them to engage the clip whereby the shank or holder J, is held rotatably and also slidably therein. By means of the shank or holder J, the article to be examined, as L, may be slid instantly into axial alinement with the pivot D, and when so placed will be substantially in the focus of the lens A. It is obvious that when the bracket C, carrying the lens A, is swung from side to side, as shown in dotted lines in Fig. 2, it will swing about the focal point as a center of motion, and therefore while the article as a whole is so held the mere swinging of the lens from side to side will enable the observer to observe the article to be examined in the focus of the lens without any further adjustment, and without any trembling or uncertain movement due to ordinary hand holding of the article itself separate from the lens.

It will be noted that the bracket C, is curved at c, and that the part E, is also curved at e; the object of these curves is to facilitate the holding of the device as they afford handles by means of which it can be readily held.

By this device an article, as a small diamond, for instance, may be examined with great facility and without the difficulties heretofore stated inherent in the separate manual holding of the two things, the article to be examined and the lens by which it is examined.

I am, of course, aware that in large and expensive microscopes facilities are afforded for rotating the article to be examined, and also changing its angular position while still in focus, but the device as a whole is entirely different from the device herein described.

The operation of the device is clearly apparent from the foregoing description.

Having thus described my invention what I desire to claim is:

1. The combination of a body, as E, spring brackets, as G, H, angular extension of the body, as F, the outer end of such ex-

tension carrying a pivotally arranged arm, as C, said arm carrying a magnifying glass, the focus of which is on a projecting line of the axis upon which the arm C, swings, and a holder adapted to hold the article to be examined at the focal center of the magnifying glass, substantially as described.

2. The combination of a body having an angular extension, an arm carrying a magnifying glass pivoted to the outer end of said extension, and focusing on a continuation of its swinging axis, a holder for an article to be examined, and supporting connections between the body and the holder, the said holder, body, and supporting connections being arranged so that the article to be examined can be brought into and maintained at the point on the continuation of the swinging axis of said arm where lies the focal point of the magnifying glass.

3. A device for maintaining a focus, having in combination, a holder or shank for supporting an article to be examined, a body provided with an angular extension, spring clips attached to said body for engaging said shank or holder, an arm, a magnifying glass carried on the end of the arm, a pivot connecting the arm and the angular extension, the said pivot being arranged so that a continuation of its axis will intersect the article to be examined when the holder or shank has been brought into a given position, and the said magnifying glass being constructed so that its focal point will be on said article when the article lies upon a continuation of the axis of the pivot.

4. A device for maintaining a focus, having in combination, a body, a shank or holder for the article to be examined, connections between the body and the shank or holder, the said body comprising a bar that takes a lateral loop and that is provided on one end with an angular extension, an arm provided with a lateral loop and pivoted to the said angular extension, the continued axis of the said pivot being adapted to intersect the article to be examined when the holder or shank is brought into a given position, and a magnifying glass constructed and carried on the end of the said arm so that its focal point will strike the article to be examined when the latter lies upon the continued axis of the pivoting of the arm.

In testimony whereof, I sign this specification in the presence of two witnesses.

ELWIN M. STRICKLAND.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."