

No. 612,813.

Patented Oct. 25, 1898.

C. R. BICKFORD.
GEM HOLDER.

(Application filed Nov. 22, 1897.)

(No Model.)

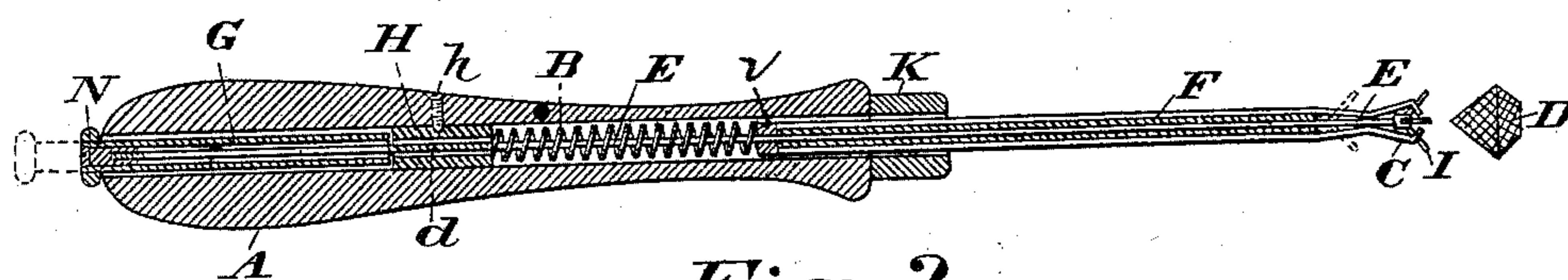


Fig. 2.



Fig. 3.

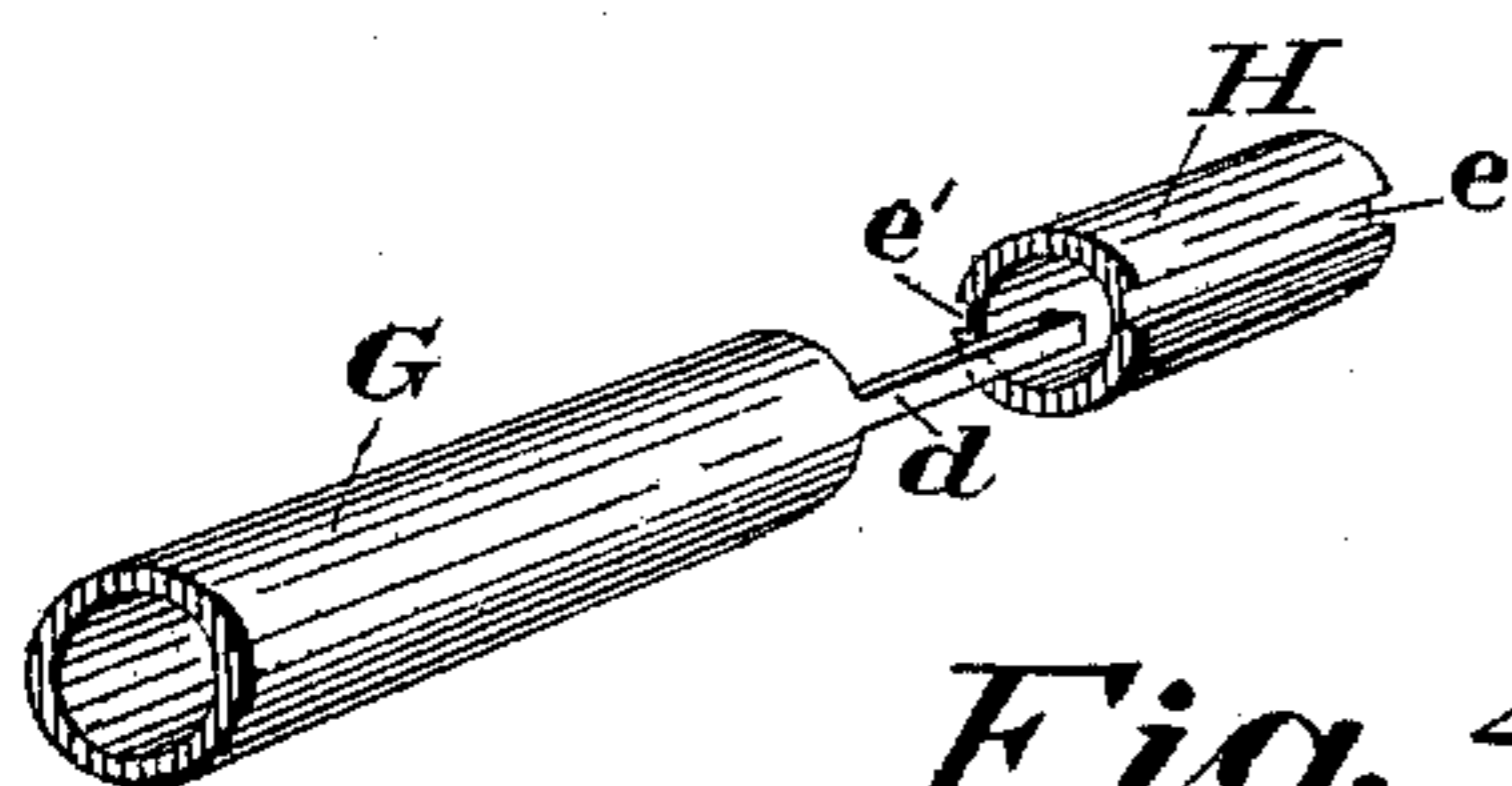


Fig. 4.

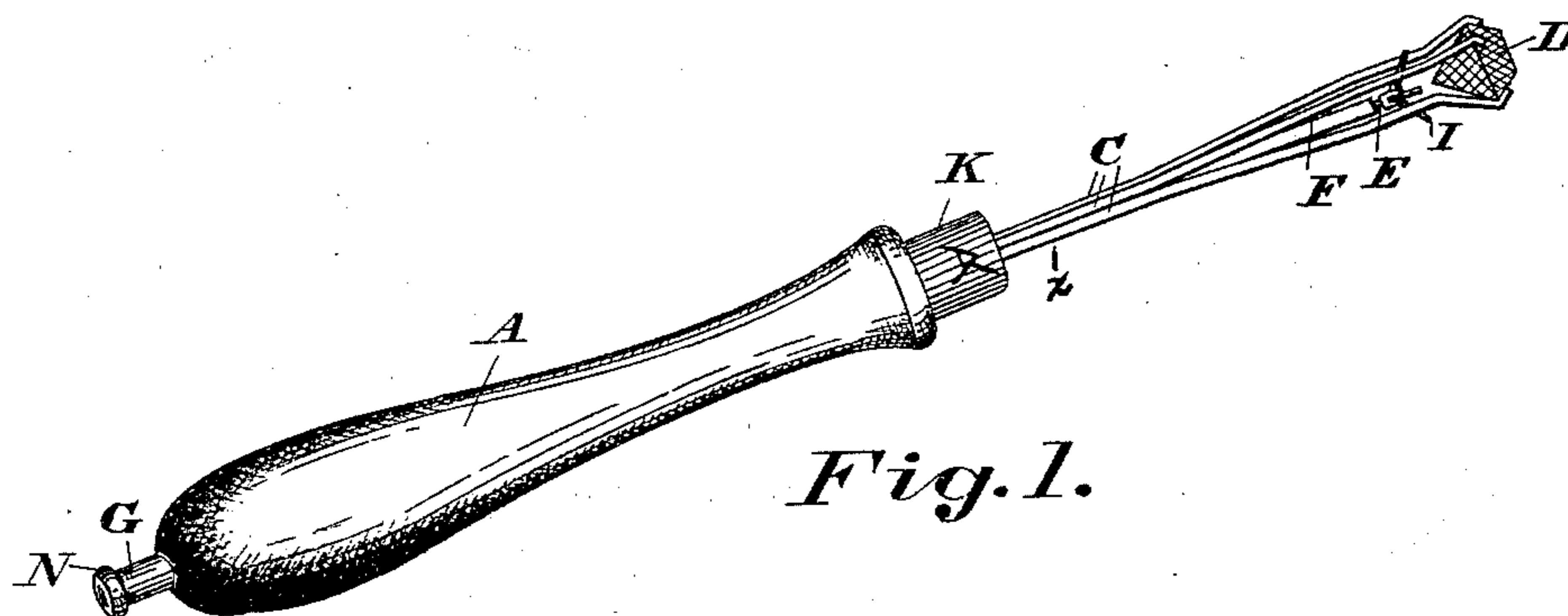


Fig. 1.

WITNESSES:
C. A. Sturtevant
E. C. Mantor

INVENTOR
Charles R. Bickford
BY
W. L. Fay.
his ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES R. BICKFORD, OF ELYRIA, OHIO.

GEM-HOLDER.

SPECIFICATION forming part of Letters Patent No. 612,813, dated October 25, 1898.

Application filed November 22, 1897. Serial No. 659,411. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. BICKFORD, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented a new and useful Gem-Holder, of which the following is a specification.

My invention relates to improvements in tools or instruments for holding gems and precious cut stones; and the object of my invention is to provide a tool that will provide a quick and convenient means of picking up and holding gems and precious cut stones and will form a positive grip on the gem without liability of dropping or releasing same until desired, but will retain same in a convenient and attractive manner for inspection and examination. I attain this object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of same, representing a gem or stone held within its claws. Fig. 2 is a longitudinal sectional view of Fig. 1 with the gem represented a short distance from the end. Fig. 3 is a transverse sectional view of Fig. 1 at a point opposite the letter *x*, as shown; and Fig. 4 is a view of the securing or locking device hereinafter more fully explained.

Similar letters refer to similar parts throughout the several views.

The handle A may be of any suitable material, size, and shape, and may be provided with a ferrule K at its lower end. This handle is provided with a suitable longitudinal hole extending throughout its entire length. Inserted and secured into the lower end of the handle A is a hollow wire or tube F, which I prefer to make square on the outside. This tube extends a suitable distance beyond the lower end of the handle and is surrounded by suitable spring-arms C C C C, also inserted and secured within the lower end of the handle. Preferably I make these spring-arms flat on the inner side and one-fourth round on the outside and so constructed and formed as when not in use to lie flat against and close to the tube F. The lower end of each spring-arm is first bent outwardly and then inwardly or shaped in any manner to form suitable hooks or claws for engaging the sides of a gem or precious cut stone. Extending

through the hole in the tube F and the entire length of the handle is the rod E, provided with suitable prongs or guides I I for capping over the pointed or collet end of a gem or precious cutstone. The upper end is pivotally secured to the cap N by means of a screw or other suitable device that will permit of the rotation of the cap N. On the inside of the handle and surrounding the rod E is secured a short tube H, provided on one side with a groove *e*, extending its length or any suitable distance for the end *d* to freely slide in, and on the opposite side with a notch or groove *e'* only deep enough to form a place for the end of the point *d* to rest in. On the inside of the handle and above the tube H is another suitable tube freely turning and sliding in the hole in the handle, the upper end provided with the cap N, secured rigidly thereto, and the lower end provided with a projection or piece *d*. Inside the handle A and impinging against the lower end of the tube H is a spiral spring surrounding the rod E, the lower end impinging against a stop V, secured to the rod E.

When several of these holders are used in the inspection of gems of the same kind but of different qualities, a distinguishing mark may be placed on the ferrules—as, for instance, A'—to denote first quality and other characters for the other qualities.

The operation of my invention is as follows: When it is desired to pick up a gem, the gem should lie on its table or face end. The prongs or guides on lower end of the rod E are placed over the upper end. The handle then being pressed gently down will bring the gem or stone to the center of the prongs or guides, and the rod E will be pushed upward through the tube F and handle, compressing the spring B and forcing out or back the tube G. At the same time the claws or hooks on the ends of the spring-arms C C C C will be forced outwardly by the inclined sides of the gem until the hooks grasp the sides of the gem, and it will be held fast until forced out by pressing down on the cap N and rod E. To provide a less obstructed view and also against accidentally releasing said gem or stone by pressing on the top or cap N, the cap N being secured to the tube G, the tube G may be further withdrawn, thereby withdrawing the

rod E, and until the projection or piece *d* is withdrawn from the groove *e*, and then by revolving the tube G one-half turn the lower end of *d* will drop into the notch *e'*, where it
5 will be held until it is desired to release same, and the gem inspected as long as desired without danger of loss. When it is desired to release the gem, the tube G is revolved
10 until the projection *d* drops into the groove *e*, when the spring B forces the rod E forward and the prongs or guides I against the end of the gem or stone, and by further pressure by the operator on the end of the cap N the gem or stone, with its face resting against
15 a suitable surface, is forced from the grasp of the hooks or claws on the ends of the spring-arms C C C C.

Having fully described my invention and its operations, what I desire to secure by Letters
20 Patent of the United States is—

1. The rod E, provided with prongs or guides I, in combination with spring-arms C, all as set forth and substantially as described.

25 2. The combination of the spring-arms C, provided with hooks or claws at their lower ends, the rod E, and tube F, all as above set forth and substantially as described.

3. The combination of the tube F, and rod

E, provided with guides I, all as above set forth and substantially as described. 30

4. The rod E, in combination with the tube G, provided with the projection *d*, and the tube H provided with the groove *e*, all as above set forth and substantially as described.

5. The combination of the rod E, provided 35 with guides I, spring B, stop V and tube H and handle A, all as above set forth and substantially as described.

6. The combination of the tube H, provided with groove *e*, tube G, provided with the 40 projection *d*, and the rod E, provided with prongs or guides I, and the spring-arms C, all as above set forth and substantially as described.

7. The combination of the handle A, spring- 45 arms C, provided with hooks or claws, the tube F, rod E, provided with the prongs or guides I, spring B, tube H provided with the groove *e* and notch *e'*, tube G, provided with projection *d*, and cap N, all as above set forth 50 and substantially as described.

CHARLES R. BICKFORD.

Witnesses:

E. C. MANTER,

C. A. STURTEVANT.