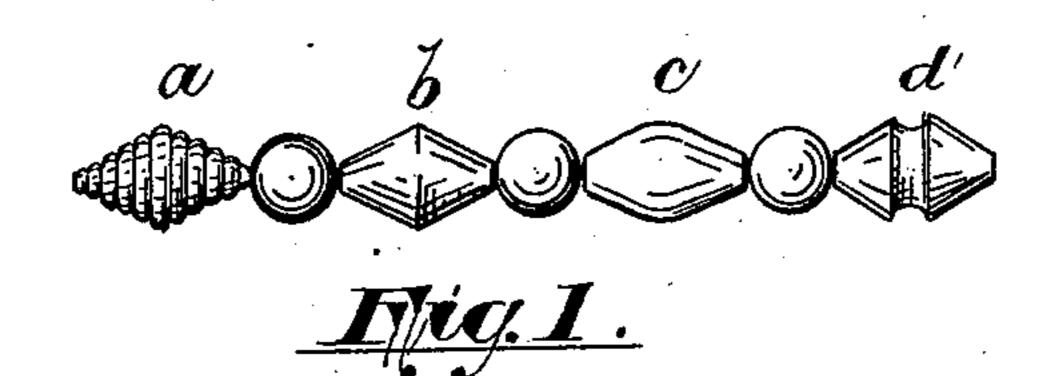
(No Model.)

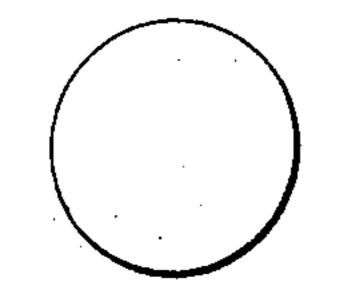
W. S. BROWN.

HOLLOW OVAL OR CONICAL BEAD.

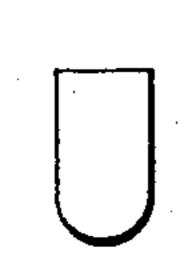
No. 363,885.

Patented May 31, 1887.









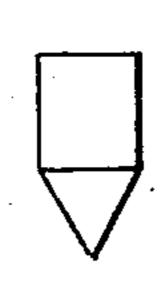


Fig.3. Fig.4. Fig.5.

--- WITNESSES:

C. R. Bennett, H.E. Rune

William S. Brown,

BY Drake + Co. ATTYS.

## United States Patent Office.

WILLIAM S. BROWN, OF NEWARK, NEW JERSEY.

## HOLLOW OVAL OR CONICAL BEAD.

SPECIFICATION forming part of Letters Patent No. 363,885, dated May 31, 1887.

Application filed July 29, 1886. Serial No. 209, 370. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. BROWN, a citizen of the United States, residing at Newark, in the county of Essex and State of New 5 Jersey, have invented certain new and useful Improvements in Hollow Oval or Conical Beads, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable oth-10 ers 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.

The object of this invention is to provide a hollow oval or diamond shaped (in outline) bead of gold or other precious metal for chains, necklaces, and other jewelry, which will be more durable as well as more beautiful 20 than those heretofore in use, and also be free from certain objections to which such beads

have formerly been open.

In the accompanying drawings, in which similar letters indicate like parts in each of 25 the several figures, Figure 1 represents a section of a chain having my improvements embodied therein. Fig. 2 represents a thin blank of metal from which the beads are formed. Fig. 3 represents the same piece of metal 3c formed by means of appropriate dies into a thimble or cup shape; and Figs. 4 and 5 show the same reduced in size and form, after which they are brought to the completed size and

form, as indicated in Fig. 1. Heretofore beads of this character or form have either been turned from a solid piece of gold or other precious metal, which is expensive, or, when made hollow, have always been made of two pieces and soldered to-40 gether at the center lengthwise, thus making two joints, the operation being very difficult and requiring a skilled workman to perform. Moreover, it has been almost if not quite impossible to prevent said soldered joints from 45 showing, and thereby marring the beauty and finish of the article. Besides, after being used a short time, the joints will frequently break or part, and under such circumstances it is a very delicate job to repair them, and some-

times quite impossible to do so, and a new 50 bead has to be substituted frequently, at great inconvenience and expense. All these and other difficulties are entirely overcome by my invention, which involves a hollow oval or diamond shaped bead destitute of any seam 55 or joint and formed from one piece of material—such as gold or other precious metal.

In carrying out my said invention I take a thin round metal blank, as in Fig. 2, the size being determined by the size of the bead to so be formed therefrom, which I proceed to draw or press, by means of suitable tools or dies, into a thimble or cup shape, as in Fig. 3, which, if necessary or desirable, I reduce by successive steps or operations and by similar 65 means to whatever size I require, leaving the closed end either rounded or pointed, as may be desired, as indicated by Figs. 4 and 5. I then, by the same or other appropriate tools or dies, proceed to reduce or compress by one 70 or more operations the open end into the same form as that of the closed end, thus completing a plain seamless oval or diamond shaped hollow bead, as indicated at b and cin Fig. 1. The bead being thus formed with- 75 out any seam or joint, may without difficulty. by means of appropriate tools or dies, be fluted or corrugated, as indicated at a and d in Fig. 1, or otherwise ornamented, as taste may suggest, a thing which would be vastly more dif- 80 ficult, if not impossible, to do if the beads were made with soldered joints, as heretofore.

The dies or tools and the process herein referred to and used by me in forming and ornamenting the improved beads I have not 85 thought it expedient to show and describe in detail, but have reserved the same for a probable future application. Neither do I wish to be understood as claiming herein a hollow seamless bead of a straight, tubular, spher- 90 ical, or cylindrical form either plain or corrugated; nor do I claim anything shown or described in patents numbered 207,158, of 1878, 71,042, of 1867, or 61,777, of 1867, or either of them; but

What I claim, and wish to have secured to

me by Letters Patent, is-1. As an improved article of manufacture, a hollow seamless oval or diamond shaped bead, as shown and described, and for the pur-

poses herein set forth.

2. A hollow seamless, corrugated, or other-5 wise ornamented oval or diamond shaped bead, as shown and described, and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of July, 1886.

WM. S. BROWN.

Witnesses:

OLIVER DRAKE, OSCAR A. MICHEL.