J. N. ALLEN.

Art of Making Ball-Heads of Scarf-Pins, &c.

No. 212,297. Patented Feb. 18, 1879.

FIG. 2.

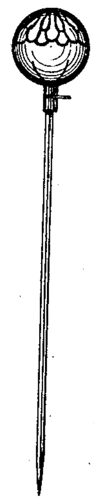

FIG. 1.

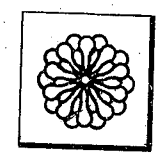

FIG. 3.

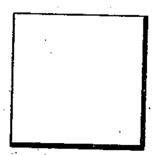

FIG. 4.

WITNESSES.

Augustus Stiller

[illegible]

INVENTOR.

James N. Allen

UNITED STATES PATENT OFFICE.

JAMES N. ALLEN, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF ONE-HALF HIS RIGHT TO CALVIN STONE, OF SAME PLACE.

IMPROVEMENT IN THE ART OF MAKING BALL-HEADS OF SCARF-PINS, &c.

Specification forming part of Letters Patent No. **212,297**, dated February 18, 1879; application filed January 4, 1879.

To all whom it may concern:

Be it known that I, JAMES N. ALLEN, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in the Art or Method of Making the Ball-Heads of Scarf-Pins, Sleeve-Buttons, Ear-Drops, and other like articles; and I do hereby declare that the following specification, taken in connection with the accompanying drawings, forming a part of the same, is a full, clear, and exact description thereof.

Figure 1 represents a scarf-pin having a ball-head. Fig. 2 represents a form which the metal assumes during the process of being shaped into a sphere. Fig. 3 represents the metal plate shown at Fig. 4 after it has received an engraved figure.

My invention has no reference to the mechanical means by which a square metal blank is, by the aid of dies and other mechanical appliances, worked into the form of a ball or sphere; but it relates only to an improvement in the process or method of making spherical-headed articles, ornamented by engraving.

Heretofore the method has been to engrave by hand the head of the pin, button, ear-drop, or other article, with the intended design after the article had been completed in form.

My improvement in the manufacture consists in taking a flat plate of metal, such as is represented at Fig. 4, and of the proper size to make the ball-head for a pin, button, or ear-drop, and, by means of any common machinery in use—as, for example, a rosette-engine, or by hand—engrave the central portion of the face of the plate with a preferred design, such, for example, as is shown at Fig. 3. This portion of the blank, so engraved, will constitute, when it is formed into a ball, the upper hemisphere; and after such plate has, by successive mechanical operations well known to the art, been shaped into a sphere, it will present the appearance illustrated by Fig. 1.

By thus performing the operation of engraving upon the blank while in the form of a flat rectangular piece, instead of engraving the formed sphere, I am enabled to effect a great saving in the manufacture of such articles. Besides, too, I can make available, by this improvement, a common rosette-engine to produce great varieties of complex designs, whereas any machine that would be capable of engraving the finished sphere with any great variety of design would be exceedingly complex in organization, and it would be almost impracticable to construct one that would be capable of engraving spheres of different sizes.

The blank or flat plate so engraved is afterward to be formed, by means of a succession of dies and formers already known to the art, into the form suitable for a spherical head. In this operation the metal is drawn, and the figures which compose the engraving are modified by being elongated in some parts and contracted in others; but the general effect of the design is not injured.

A marked advantage resulting from my improvement is, that a design of any size or intricacy suitable for the intended sphere, whether of large or small size, can be placed upon a flat surface without difficulty and at a trifling expense.

What I claim as my invention, and desire to secure by Letters Patent, is—

The improvement in the art or method of manufacturing engraved spherical balls for pins, ear-drops, &c., which consists in first engraving a design upon the flat sheet-metal blank out of which the sphere is to be subsequently formed, and afterward forming such engraved blank into a sphere by means of dies, whereby the design is uniformly modified in outline without being impaired in effect, substantially as described.

JAMES N. ALLEN.

Witnesses:
AUGUSTUS S. MILLER,
GEORGE FULLER.