H. G. MACKINNEY.

Setting Gems.

No. 167,457. Patented Sept. 7, 1875.

Fig. 1.

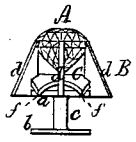

Fig. 4.

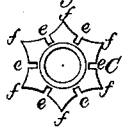

Fig. 2.

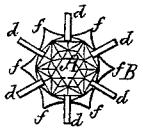

Fig. 7.

Fig. 3.

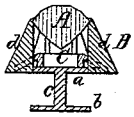

Fig. 5.

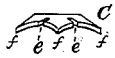

Fig. 6.

Witnesses.
S. W. Piper
L. N. Holler

Herbert G. Mackinney.
by his attorney.
R. H. Eddy

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C

UNITED STATES PATENT OFFICE.

HERBERT G. MACKINNEY, OF NORTH ATTLEBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN SETTING GEMS.

Specification forming part of Letters Patent No. **167,457**, dated September 7, 1875; application filed June 15, 1875.

To all whom it may concern:

Be it known that I, HERBERT G. MACKINNEY, of North Attleborough, of the county of Bristol, of the State of Massachusetts, have invented a new and useful Improvement in Jewelry; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, Fig. 2 a top view, and Fig. 3 a transverse section on an enlarged scale, of a shirt-stud provided with my invention, which has reference thereto, and to bosom-pins, and various other articles of jewelry.

Such invention consists in a polished pyramidal stellated reflector, arranged and combined with a jewel and its supporting-frame, as hereinafter explained, and as shown in the said drawings, in which the jewel (as a diamond, for instance) is exhibited at A, and its supporting-frame at B. Such frame consists not only of two disks, *a b*, connected by a short shank, *c*, but of a series of triangular and notched jaws or standards, *d d d d d d*, arranged at equal distances asunder, and erected on the upper surface of the upper of the said disks. The said standards grasp the perimeter of the stone or jewel and hold it in place. In order to heighten the brilliancy or increase the reflections of the stone, I place between it and the upper disk, and so as to extend into the spaces between the several standards, a polished pyramidal stellated reflector, C, which is shown in top view in Fig. 4, in edge view in Fig. 5, and in transverse sections in Figs. 6 and 7, the latter figure representing it as inverted. It has radial notches formed in it, as seen at *e*, midway between its points *f*, such notches being to receive, and fit closely to, the standards. The inclined star-point or facet between each two next adjacent standards serves not only as an ornament, but as a means of reflecting light to and into the jewel or stone, whereby its brilliancy is increased; and, besides, the polished reflecting stellated frustum serves also as a reflector to throw rays beyond the jewel or stone.

I am aware that it has been customary heretofore to "close-set" brilliants with a back of a black substance; also, to close-set stones with foil or thin leaf of metal, all of which differs materially from my invention, which has no reference to what is termed "close-setting," but rather to "open-setting," and involves a reflector not only star-pointed, but slotted radially to receive the jewel-sustaining standards of its supporting-frame, the star-points giving an effect that is not attainable by close-setting with foil.

I claim—

The polished stellated and slotted reflector C, as described, in combination with the open-set jewel A and its series of supporting-standards *d* of the frame B, all being arranged and applied substantially as specified.

HERBERT G. MACKINNEY.

Witnesses:

R. H. EDDY,

J. R. SNOW.