

# UNITED STATES PATENT OFFICE.

ERNEST EDWARD KIPLING, OF ROSELLE, NEW JERSEY.

## ARTIFICIAL DIAMOND.

SPECIFICATION forming part of Letters Patent No. 321,302, dated June 30, 1885.

Application filed March 27, 1885. (No specimens.)

*To all whom it may concern:*

Be it known that I, ERNEST EDWARD KIPLING, of the village of Roselle, county of Union, State of New Jersey, in the United States of America, have invented a new and useful Improvement in Artificial Diamonds, which is fully set forth in the following specification.

The surfaces of diamonds have been cut into facets to increase their brilliancy for centuries. My invention has reference to an imitation of a diamond that has received what is known as the "rose-cut." The rose-cut has been long well known to lapidaries.

The most ordinary cut is what is known as the "brilliant." As a general rule, the back of the diamond that is inclosed in the setting has double the depth of the face and is known as the "culasse," and the back is cut into facets exactly corresponding with the position of the principal facets on the front of the stone which is known as the "biset," which is one-third of the whole depth of the gem, and the angles which the facets at the back make with the axis of the stone are required to be such that all the light reflected from their surfaces may fall within the central flat surface on the part of the stone called the "table." The different parts of a cut gem are the front, which is the face or exposed portion, the back, which is the rear portion, the table, which is the central plane in the face, and the girdle, which is the extreme margin of the stone by which it is retained in the setting. The plane of the table is generally parallel, or substantially parallel, to the plane of the girdle. The top is the beveled portion between the table and the girdle. The collet or lower table is a small central plane on the back. The pavilion is the chamfered portion of the stone between the girdle and the collet. The brilliant-cut generally consists of lozenge-shaped facets alternating with triangles, and is used for the front of most stones that are sufficiently thick to allow of being cut into facets on both the front and back. There are numerous varieties of this cut which it is not worth while to enumerate.

The rose-cut generally consists of triangular facets arranged upon and around a central hexagon, and this cut is employed with advantage upon such stones as are thin and large on the surface, as the rose-cut is only applied

to the surface and the back is left flat. There are numerous variations in the rose-cut, which are familiar to lapidaries and need not be specified. In the rose-cut heretofore the gem has no culasse, no pavilion, and no collet.

In making an imitation of the "rose" diamond it has heretofore been customary to use glass or strass, the bottom or flat surface being coated with silver in the ordinary way, the silver coating being generally varnished to protect it from discoloration. The objections to the artificial rose diamond thus made are that it soon loses its brilliancy by wear, and that it cannot stand the burnishing process in setting it in gold and other metal, the edges being frequently thus destroyed or injured.

To remedy these defects I have used crystals, white topaz, Brazilian topaz, white amethysts, and different classes of flint-stone, pebbles, white sapphires, and white rubies; or, in fact, any other precious stone which is transparent, and which either has no color or from which the color can be taken, leaving it transparent and colorless, so that it bears resemblance to the real diamond, and which has sufficient hardness to be durable, giving to the same the well-known "rose" cut known to lapidaries as the class of cut distinguishing the rose diamond. After the cutting has been done the flat back should preferably be covered with silver-foil and varnished in the ordinary way; but this may sometimes with advantage be dispensed with. The result is, when the stones above referred to have been selected with proper care, that an imitation of the "rose" diamond is produced which is so much like the real in its appearance as to make it almost impossible to distinguish the same from the real rose diamond, even with the aid of a glass, and which at the same time is sufficiently hard and durable to wear for a long time, the cost being about one-fifth the cost of the real rose diamond.

The class of stones that I have referred to, so far as I am aware, has never been used to imitate the rose diamond before; and, so far as I am aware, it has never been known in the art that such an effect could be thus produced, or that the class of stones referred to would, upon receiving this style of cut, produce the brilliant effect that I have discovered is thus produced.

The method that I have just described of making artificial rose diamonds is especially effective in regard to diamonds of the smaller sizes—say diamonds of one twenty-fifth of a  
5 carat and smaller.

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

As a new article of manufacture, an artificial rose diamond, either with or without the re-  
10 flector coating, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ERNEST EDWARD KIPLING.

Witnesses:

ROBT. M. HOOPER,  
JOHN J. HOFF.