(No Model.)

# D. W. COSTIGAN.

## GEM SETTING.

No. 573,139. Patented Dec. 15, 1896.

Fig. 1.

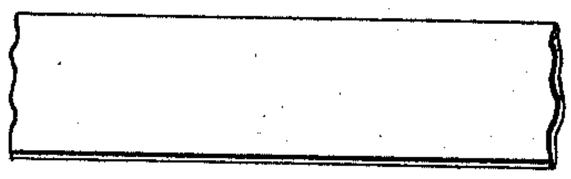


Fig. 3.

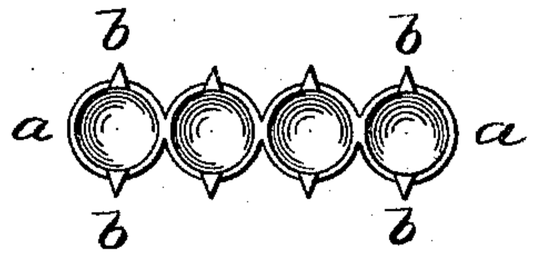



Fig. 2.

Fig. 4.

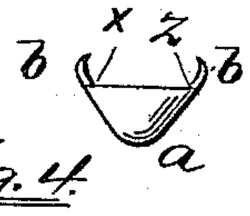



Fig. 5.


Fig. 6.

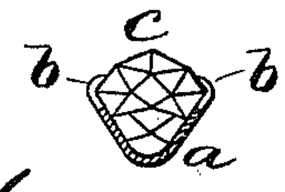



Fig. 7.

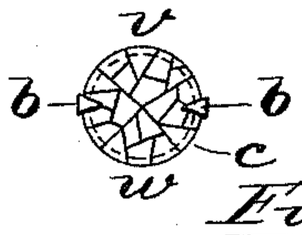



Fig. 8.

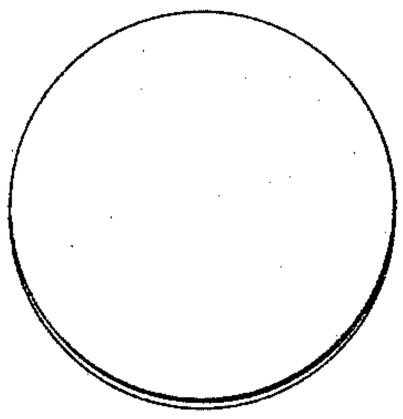


Fig. 9.

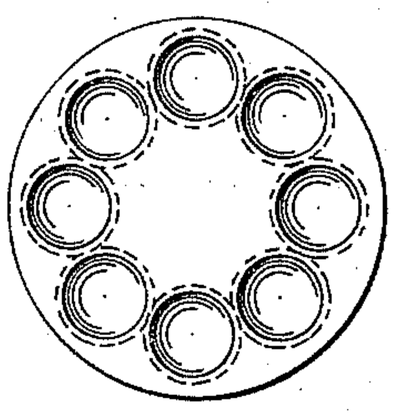
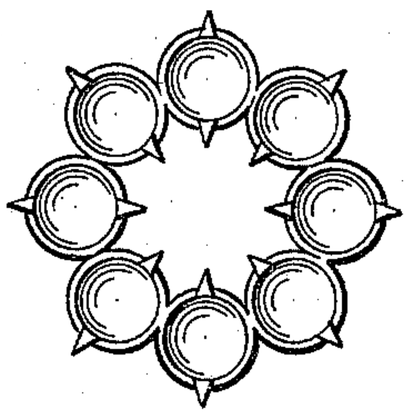


Fig. 10.



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# UNITED STATES PATENT OFFICE.

DENNIS W. COSTIGAN, OF PROVIDENCE, RHODE ISLAND.

## GEM-SETTING.

SPECIFICATION forming part of Letters Patent No. 573,139, dated December 15, 1896.

Application filed April 13, 1896. Serial No. 587,409. (No model.)

*To all whom it may concern*

Be it known that I, DENNIS W. COSTIGAN, of the city and county of Providence, in the State of Rhode Island, have invented a certain new and useful Improvement in Cluster Gem-Settings; and I declare the following to be a specification thereof, reference being had to the accompanying drawings.

Like letters indicate like parts.

Figure 1 is a top plan of the strip of metal from which the gem-settings are struck up, and Fig. 2 is an edge view of the same. Fig. 3 shows a series of gem-settings struck up from said metallic strip, the same being in top plan. Fig. 4 is a side elevation of one of the gem-settings of the cluster. Fig. 5 is a diametrical section of the same. Fig. 6 shows the manner of setting a gem in each of said settings. Fig. 7 is a top plan of the same. Fig. 8 shows the form of the sheet-metal blank when it is desired to make a circular cluster of my improved gem-settings. Fig. 9 shows the result of the first cupping operation. Fig. 10 shows a circular cluster of gem-settings made according to my invention.

My invention relates to cluster gem-settings.

It consists of a series of said settings struck up from a sheet-metal blank and cut therefrom, so as to have two diametrically opposite prongs on each setting, and so that the settings are united to each other, respectively, at points midway between said prongs, as hereinafter particularly described.

In the manufacture of cluster-settings for jewels and precious stones it has heretofore been common to strike or cup up the settings from sheet-metal blanks and at their points of contact with each other on the under side thereof to strengthen them by solder, and also to provide a separate supporting strip or base of metal to which the settings at their bottoms or apexes are soldered. It is the purpose of my invention to dispense with said supporting piece or base.

From a plain strip of gold, gold-plated, or other metallic stock (shown in Figs. 1 and 2) I form, by means of a suitable die and plunger, a cluster or series of gem-settings. (Shown in Fig. 3.) Each setting of the cluster or series has a cup-shaped portion *a*, solid throughout, with two prongs *b b* on the edge diametrically opposite each other. The gem *c* is placed with its smaller end in the cup portion *a* of the setting, and the prongs *b b* are then bent over the edge of the gem to secure it in place.

The advantage of the use of two prongs is to reduce as far as possible the quantity of gold or metal exposed when the gem is looked at from above, and so I prefer to make each setting with its inside diameter *x z*, Fig. 4, shorter than the diameter *v w* of the gem, Fig. 7. In Fig. 7 the dotted circle indicates the edge of the cup *a* of the setting. In this manner the gem is finely displayed with more of its crown exposed than is usual when the setting has a diameter larger than that of the gem and is provided with many prongs. Moreover, the setting being less open than usual is less liable to be clogged with dirt or foreign substances or to be disfigured or tarnished and thus detracting from the beauty of the gem which it incloses.

Each setting of the series is united to and integral with the contiguous or next adjacent setting by a narrow neck or connecting portion, as shown. Thus the whole series or cluster of settings is made of one piece of stock and does not require any soldering of one with another, nor any supporting metallic strip or base at all, although a drop of solder may be, if desired, put beneath the portions of the settings which are adjacent in order to insure greater strength.

If the cluster is to be circular I, strike up the series of settings from the circular metallic blank or disk shown in Fig. 8. Fig. 9 shows the result of the cupping process, and Fig. 10 the whole cluster as finally cut from the blank. In this way I make by a simple method cluster gem-settings equal and superior in appearance and strength to those in which each setting is separately formed and laboriously set and soldered in place upon a supporting plate or strip, and I can use a finer grade of stock for the purpose and util-

ize the original strength or fiber of the metal at the portions where the several settings respectively meet.

I claim as a novel and useful invention and desire to secure by Letters Patent—

The improved cluster gem-setting herein described, consisting of a series of circular cups made from one piece of sheet metal and each united integrally with the next adjacent member of the group or series by a neck or connecting portion and provided with prongs projecting outwardly between said neck or connecting portions, substantially as specified.

DENNIS W. COSTIGAN.

Witnesses:

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