

W. HENIGST.
Improvement in Method of Producing Metal Ornaments.
No. 133,029. Patented Nov. 12, 1872.

Fig. 1

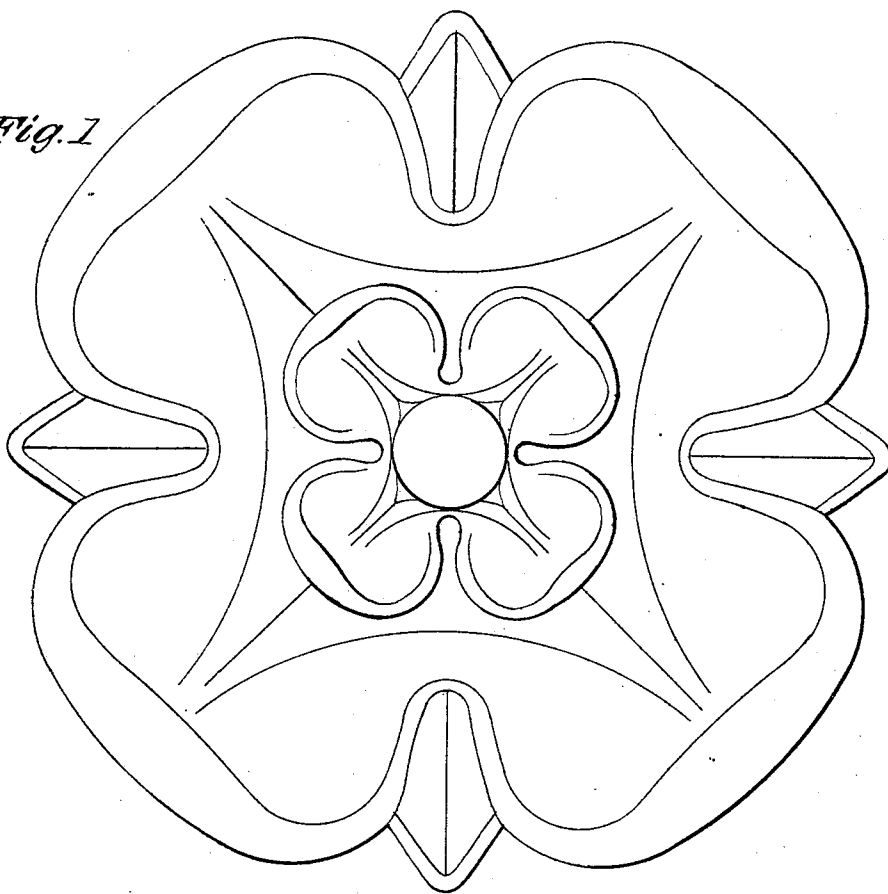
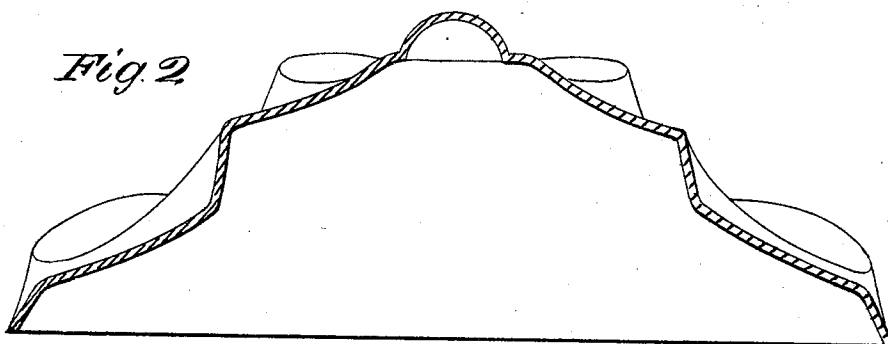


Fig. 2



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IMPROVEMENT IN METHODS OF PRODUCING METAL ORNAMENTS.

Specification forming part of Letters Patent No. 133,029, dated November 12, 1872.

To all whom it may concern:

Be it known that I, WILLIAM HENIGST, of Columbus, in the county of Franklin and State of Ohio, have invented an Improved Method of Producing Metal Ornaments; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a front view of a rosette produced of metal, and Fig. 2 is a diametrical section of the same.

This invention relates to a new and improved method of producing thin metal ornaments for decorating the exterior and interior of buildings and for other purposes. It consists in the employment of an open metal mold made of cast-iron, representing, in intaglio, the ornament which it is desired to produce, into which mold the metal to form the ornament is first poured, and then immediately thereafter the mold being emptied of so much of the molten metal as will flow out, a shell composed of the metal poured in will remain, which will be an exact counterpart of the mold, and which, being removed therefrom, constitutes the ornamental metallic design desired to be produced.

The following description of my invention will enable others skilled in the art to understand it.

In the practice of my invention I prefer to use cast-iron molds, and to produce the ornaments of the metallic zinc. I arrange the cast-iron block into which the desired mold is formed between two furnaces, on which are vessels containing the zinc in a melted state, and commence the operation by pouring from one of the vessels—say the one on the right-hand furnace—a sufficient quantity of the metal to fill the mold. The mold is then tilted and the surplus metal poured from it, when it will be found that a thin shell has set therein which is the exact counterpart of the mold. The same operation is again repeated, using this time the left-hand vessel of melted metal, and in this way always keeping a vessel of metal ready for use.

It is obvious that the operation could be conducted with one vessel of melted metal; but it is greatly facilitated by the use of two vessels, as above described.

Metal ornaments have been produced before my invention in various ways; the most common are, viz., to press the metal from sheets by using male and female dies, using what is denominated a drop-press for this purpose. The objection to this is that the metal requires more or less reheating, which involves much time and labor, and under this process the metal is liable to cut or tear, and thus the ornaments be more or less defaced. The ornaments thus produced are also necessarily very shallow—that is to say, they do not have that prominence or boldness which is necessary to make them appear to the best advantage when applied in elevated places; whereas by my process the mold may be made of any desired depth which may be necessary to give prominence or boldness to the ornaments when used in elevated positions.

Another method of producing metal ornaments is by casting them in sand molds. This involves the necessity of the use of so much metal that the ornaments are too heavy. They are expensive, and the process is slow and requires expert workmen.

Another method is to cast the ornaments by pouring the metal between male and female metal dies, and is objectionable for the reason last named.

By my improved process of filling an open mold, and then suddenly pouring out the surplus metal, I simply coat the interior of the open mold with the metal, which sets or chills almost instantly and leaves a thin shell, which is a fac-simile of the mold, and which may be made of any degree of boldness requisite to exhibit clearly the beauty of the design.

Having described my invention, I claim—
Metallic ornaments produced substantially as described.

Witnesses: WILLIAM HENIGST.

E. L. DE WITT,
A. P. MITCHELL.