

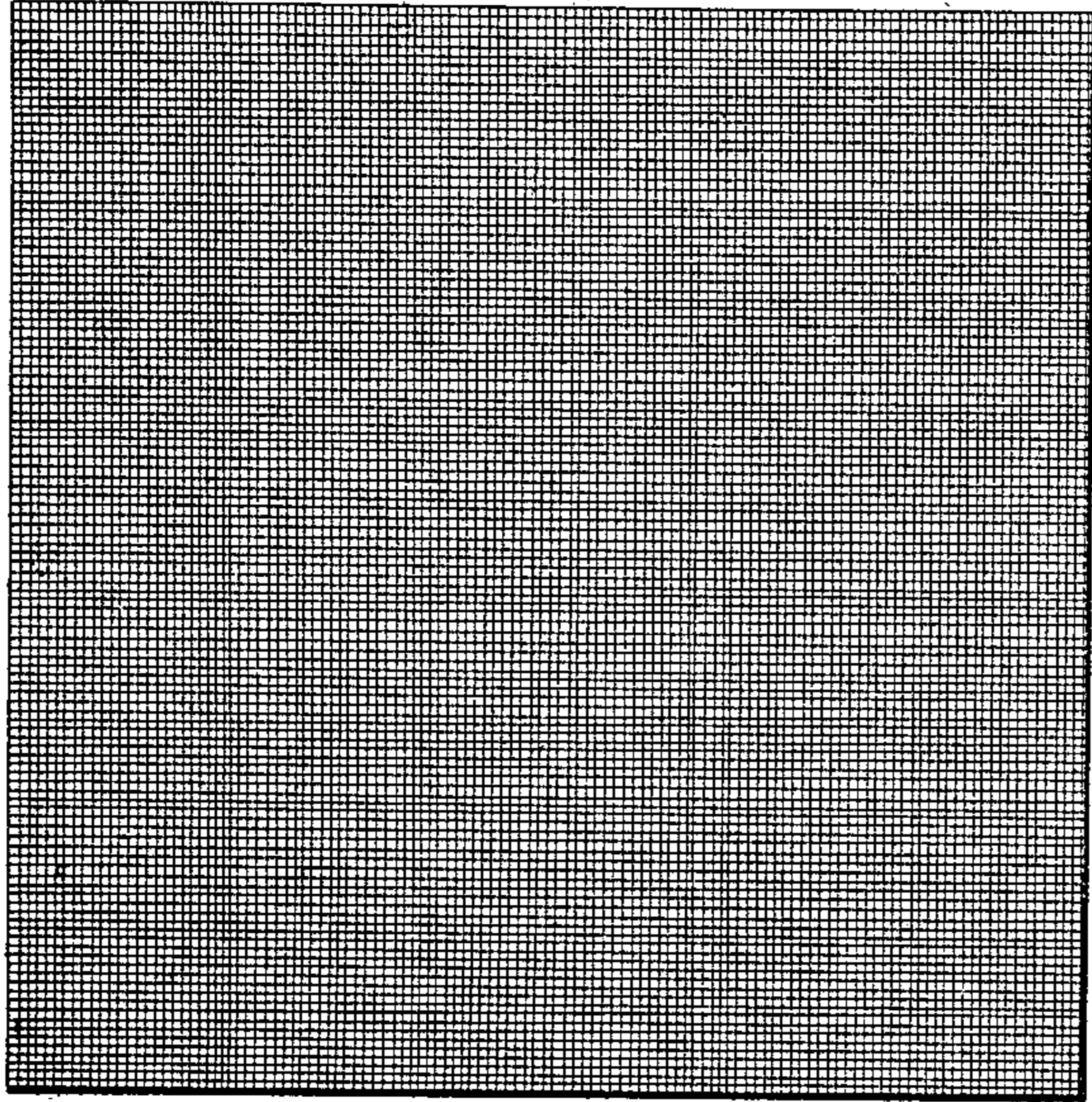
*P. J. Emery.*

*Making Metal Ornaments.*

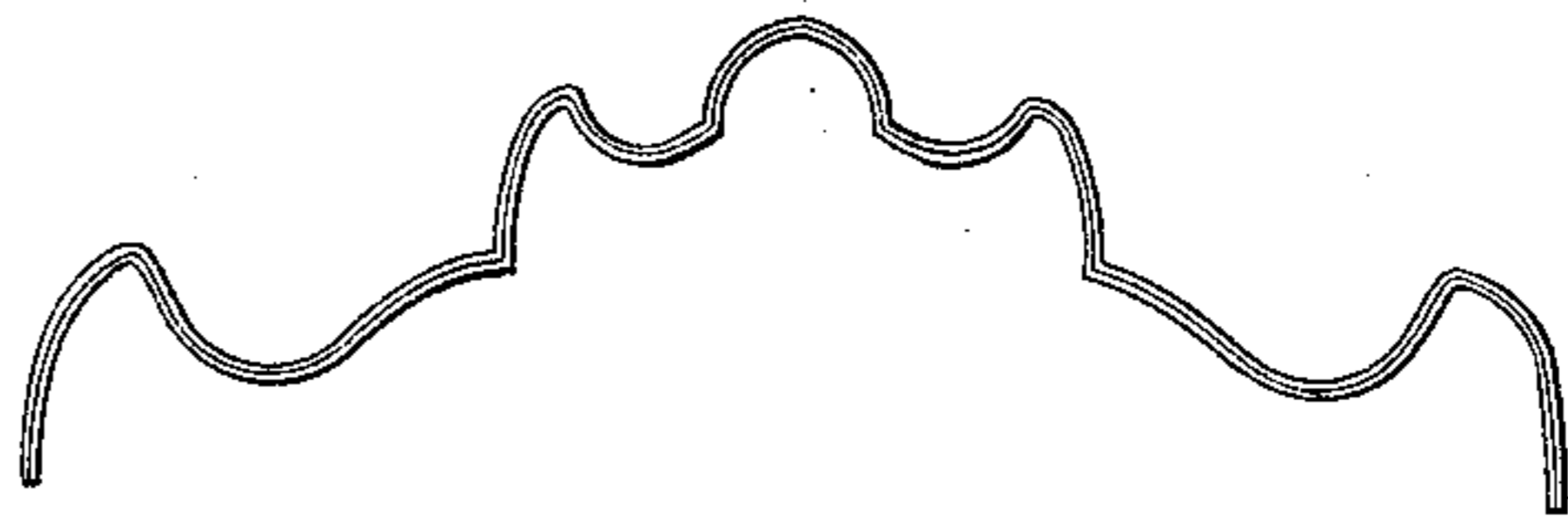
*N<sup>o</sup> 89,642.*

*Patented May 4, 1869.*

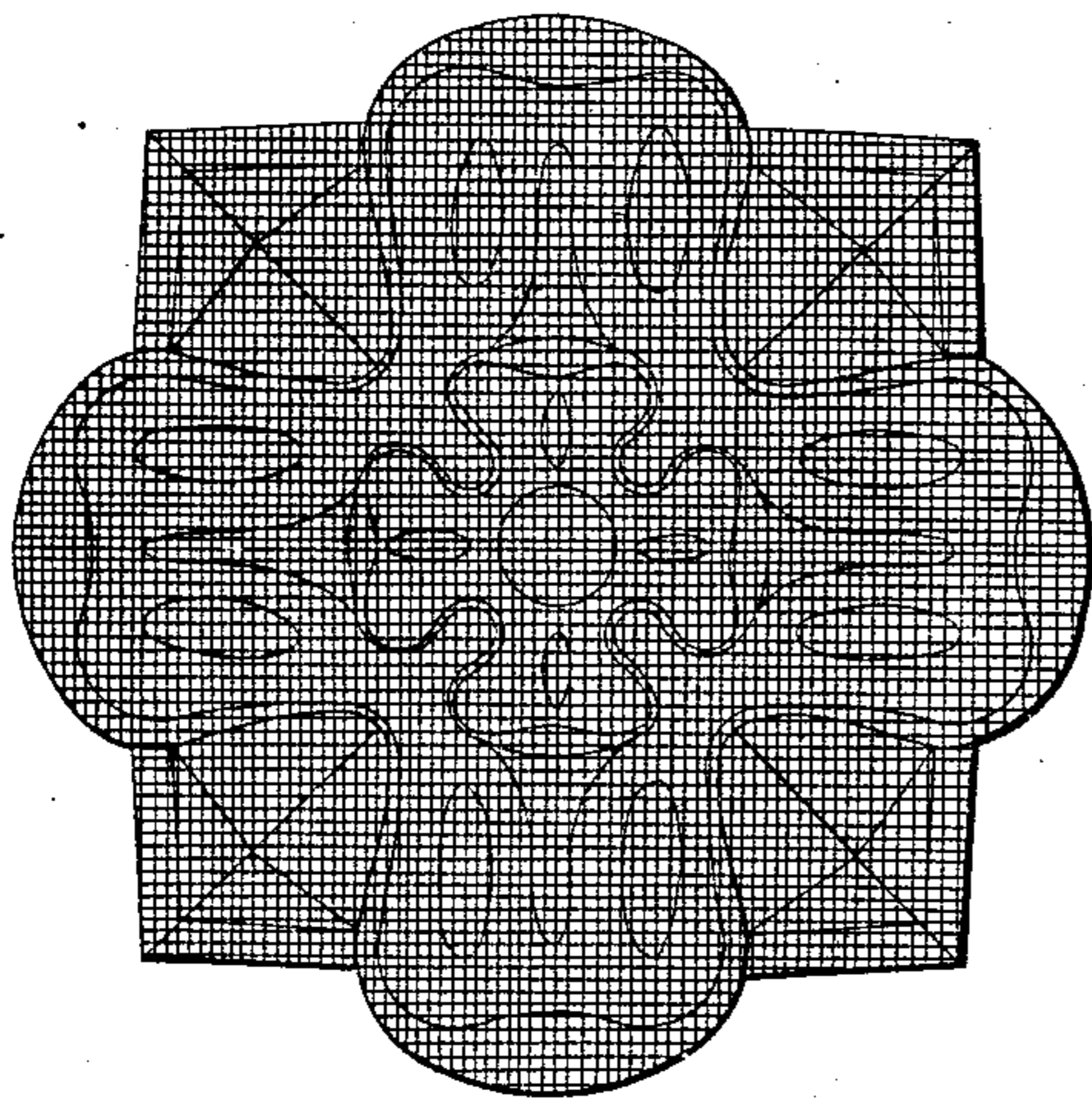
*Fig. A.*



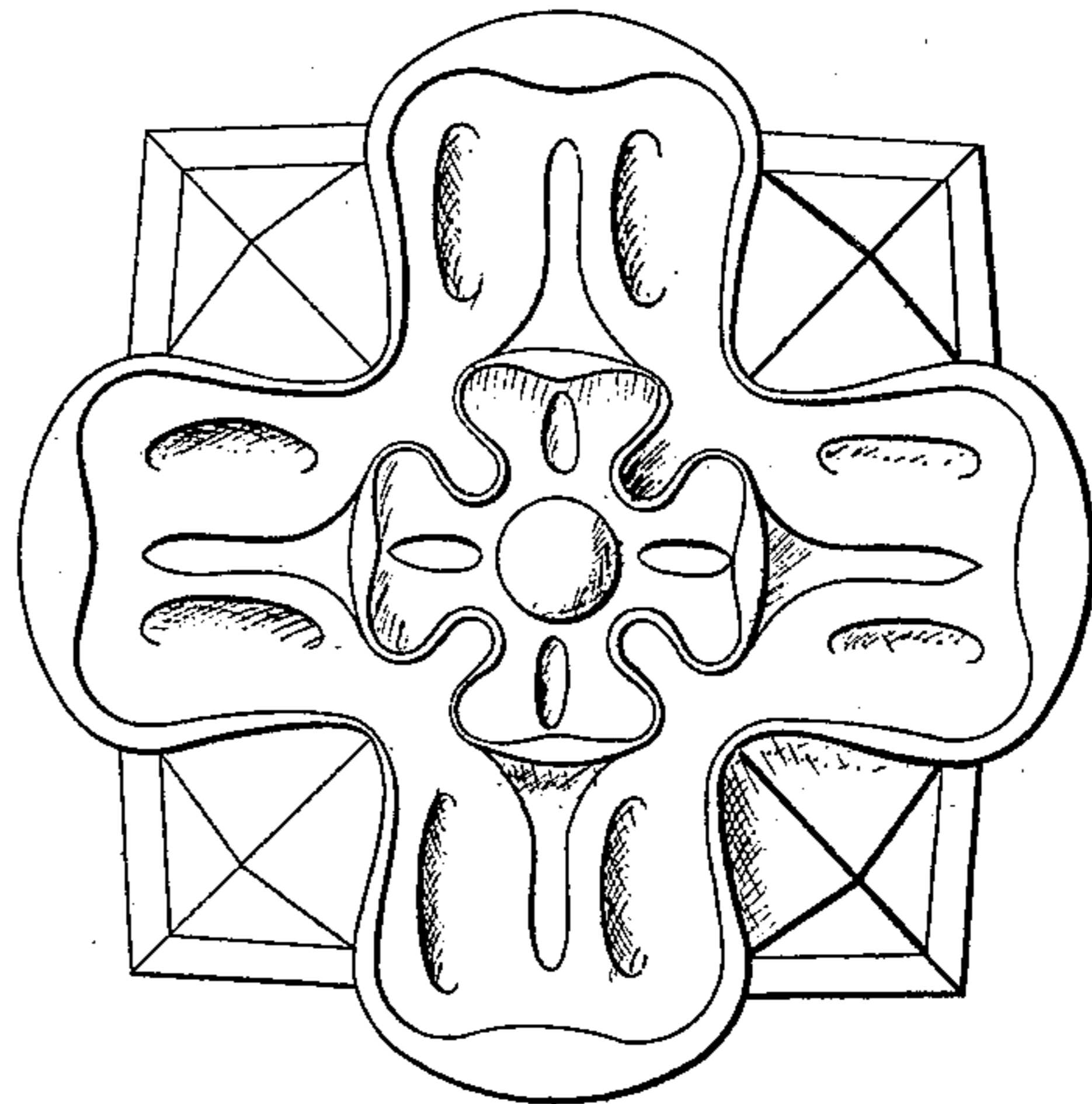
*Fig. D.*



*Fig. B.*



*Fig. C.*



*Witnesses;*  
*J. C. M. Garland*  
*Isaac Price*

*Inventor;*  
*Felix J. Emery*

# United States Patent Office.

FELIX J. EMERY, OF CHICAGO, ILLINOIS.

*Letters Patent No. 89,642, dated May 4, 1869.*

## IMPROVEMENT IN THE MANUFACTURE OF METAL ORNAMENTS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, FELIX J. EMERY, of Chicago, in the county of Cook, and State of Illinois, have invented a new and improved Mode of Making Metal Ornaments and Designs for Architectural Purposes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the use of wire cloth, from which, by the proper dies, a shape of the desired ornament or design is secured, using one or more thicknesses of wire cloth to suit the thickness of the ornament required. After securing the same, the form is cleaned in proper manner, and then galvanized, thus securing the thickness of shell and strength required.

To enable others skilled to make and use my invention, I will proceed to describe its construction and operation.

I take a blank of wire cloth, either of brass or iron, as shown at *a*, which, by means of the proper dies and mechanical appliances, I press into the required shape, as shown at *b*.

I then immerse the form in a pickle of dilute sulphuric acid, to remove the scale from the wire. I then rinse with water, to remove the sulphuric acid.

I then immerse the form in a muriatic-acid solution, to insure coating the same with metal. I then immerse the form in a bath, of melted zinc, or any composition of metals for galvanizing, thus galvanizing the same, the coating of metal filling the meshes of the wire, thus giving the required strength to the ornament, as shown at *c*.

I secure a greater thickness and strength of design required, by using two or more thicknesses of wire cloth, folded one upon the other, as shown at *d*, which, after being shaped in the dies, are galvanized as above.

I use wire cloth for the reason that the meshes give, and thus I am enabled to secure the shape without the aid of expensive machinery, being able to secure any shape by means of the dies, and a mallet; also the wire giving or slipping, enables me to secure a greater degree of boldness than I can secure in any other manner as cheap as this.

I galvanize the form to protect the wire form, as well as to give it strength and sustain the shape.

I claim, ornaments for architectural and other purposes, when made of wire, substantially as described.

FELIX J. EMERY.

Witnesses:

J. C. McFARLAND,  
ISAAC PRICE.