J. Dean,

Daguerreotype-Case Mat,

No. 34,035, Patented Dec. 24, 1861.

Fig. 1.

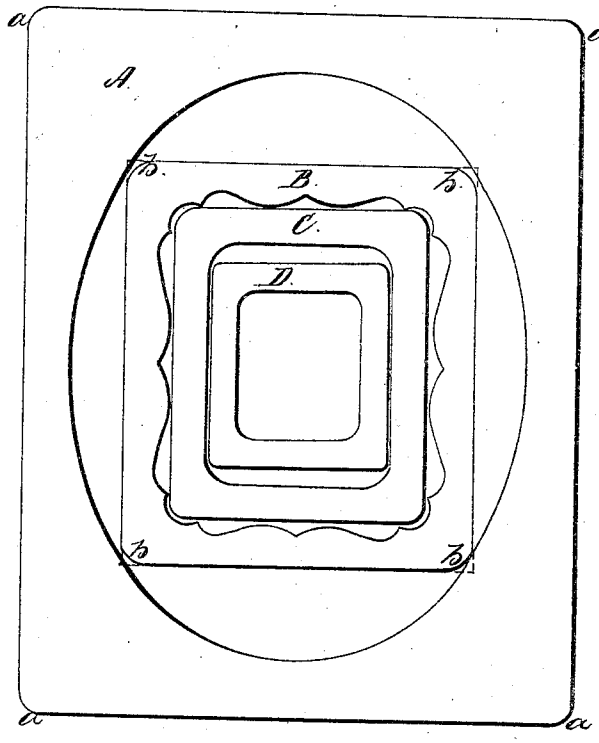
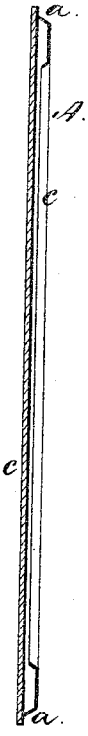


Fig. 2.



Witnesses:
John W Pierson
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by his attorney
I P Pierson

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

JOHN DEAN, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN MATS FOR DAGUERREOTYPES, &c.

Specification forming part of Letters Patent No. **34,035**, dated December 24, 1861.

To all whom it may concern:

Be it known that I, JOHN DEAN, of the city of Worcester, and State of Massachusetts, have invented certain Improvements in Mats Employed in Photograph, Daguerreotype, and like Picture Cases; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan of a series of said mats as cut from a single sheet of metal, and Fig. 2 is a section through the largest of the mats.

Similar letters indicate similar parts throughout the figures.

In consequence of the vast extent to which photographing and daguerreotyping has been employed a number of manufactures and arts have risen into importance connected with the supply of the various materials required by the operator of the art itself. Among the most necessary and valuable is the manufacture of the "mats" or metallic pieces for furnishing the ornamental border for the inner lining of the cases. In order to be enabled to bring the cost of this class of pictures within the means of the greatest number of persons, it is necessary not only to economize labor and materials, but care must be also taken to preserve the quality of those materials. The mats are squares of metal, usually of copper or brass, and cut from their sheets by stamps. The external shape is usually square, while the inner opening is either oval, square, or scalloped. From the large mat the piece left from the center opening when made in the old way will serve to cut a lesser-sized one but not the next smallest in order. The waste of metal is therefore a large item of cost.

My improvement has for its object the economizing of material, and at the same time to produce a superior quality of mats.

The new feature consists in the shape given to the outer corners of the mat, whereby I am enabled to cut out of a given sized plate a larger number of regular-sized mats than heretofore has been possible, thus diminishing the "scrap" or waste metal to the least possible quantity.

A second feature of my improvement, growing out of this, consists in supporting the mat upon the clipped corners of the same, so that the inner edge or bevel of the opening will not unduly press upon the plate or surface of the picture. This is important, as in the old mats the pictures are constantly liable to get scratched and injured not only when first placing the mats upon the plate, but from every slight movement afterward. This formation of the corners also facilitates the putting in of the mats and reduces the liability to their getting injured, as there are no sharp corners to catch in the cases.

The mats are made as follows: A square of sheet metal, of suitable size for the intended series of mats, is first submitted to an ornamenting-press, whereby the flowers or other figuring is impressed upon the surface, as usual. The first or largest mat is then cut and shaped by another proper press, which, while cutting, also turns down the outer and inner edges to give an appearance of thickness and also for stiffening the mat.

In the process of bending down the four corners are cut off, as shown at *a*, Fig. 1, instead of being left square, as in the old way. Thus the first or larger mat A is formed. In the figure this has an oval opening. There is consequently left a piece of metal of the shape and size of that opening. From this piece I am enabled by my improved plan of forming the four outer corners rounding to get that size of the series as seen at B, the forming of the corners, as at *b*, enabling the operation to be performed. It will be seen that a square-cornered mat, as B, could not be formed out of the oval taken from A, as the dotted lines at *b* clearly show. I therefore clip the corners, or rather form the mat from pieces deficient in metal for forming square corners, and submit them to the action of dies shaped so as to cut, turn down, and shape the corners at the same time. The third mat, or one next in size, is then taken out in like manner from B, as shown at C, and finally the smallest at D. It will thus be seen that all the metal that is possible has been made into mats.

The second feature is in the manner of supporting the mat upon the plate. In Fig. 2 is shown a section of the mat A, resting upon a daguerreotype or photograph *c*. It will be seen that although *c* is of the same size as A, yet by reason of the improved finish of the corners *a* of the latter the mat rests by those

corners upon the square corners of the picture *c*, and thus prevents the sinking down of the outer bevel over the edge of the plate and causing an under pressure of the inner bevel upon the frame or picture, in the manner already described.

What I claim is—

Forming from sheets of metal mats with their corners clipped or cut off and finishing the said corners so as to conform with the outer bevel and to form supports for sustaining the said mats upon the photograph or other plates, in the manner and for the purposes herein set forth.

In witness whereof I have hereto set my hand and affixed my seal.

JOHN DEAN. [L. S.]

Witnesses:

F. E. WETHERELL,

GEO. A. NEWTON.