No. 791,827. PATENTED JUNE 6, 1905.

P. SEMMER.

PROCESS OF SHEARING GLASS MOSAICS OF IRREGULAR SHAPES.

APPLICATION FILED DEC. 24, 1903.

Fig. 1.

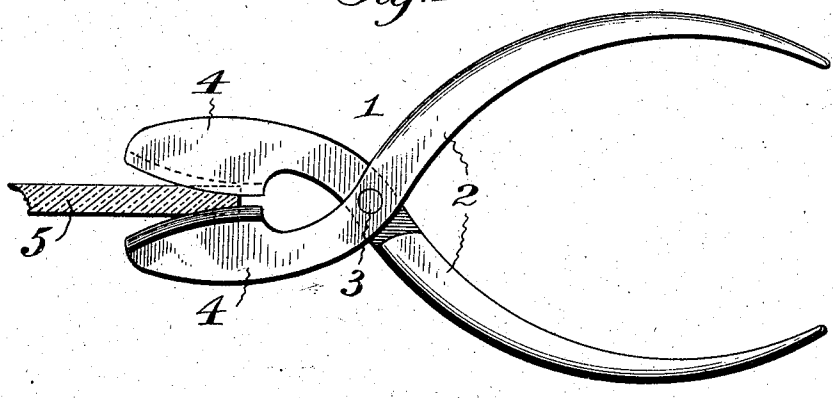
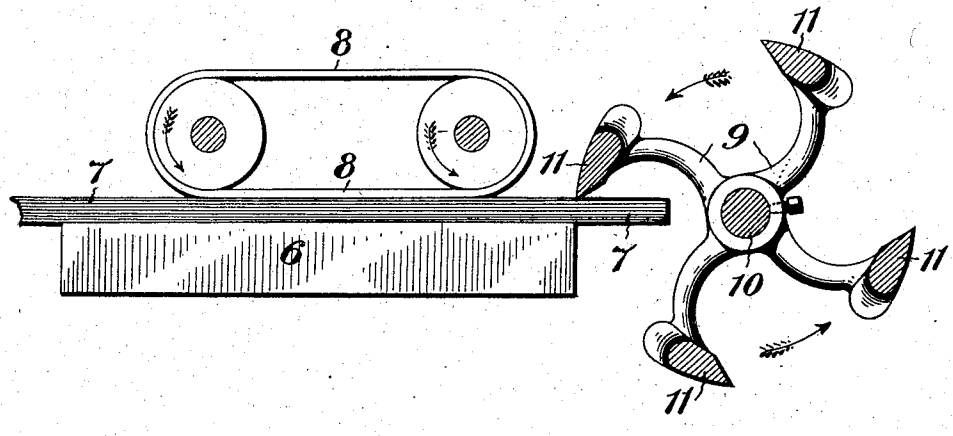


Fig. 2.



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No. 791,827. Patented June 6, 1905.

UNITED STATES PATENT OFFICE.

PHILLIP SEMMER, OF PITTSBURG, PENNSYLVANIA.

PROCESS OF SHEARING GLASS MOSAICS OF IRREGULAR SHAPES.

SPECIFICATION forming part of Letters Patent No. 791,827, dated June 6, 1905.

Application filed December 24, 1903. Serial No. 186,419.

To all whom it may concern:

Be it known that I, PHILLIP SEMMER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Processes of Shearing Glass Mosaics of Irregular Shapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved process for shearing glass mosaics of irregular shape.

In the treatment of mosaics for imparting to the same irregular shapes to adapt them for use in artwork it has been customary to cut the mosaic with a diamond or other suitable glass-cutter to the required design and then to break or chip off the edges outside of the line of cut. This breaking is accomplished by exerting pressure on the edges; but the separation is distinctively a break, and consequently no clean and even line of separation takes place. The mosaic is frequently crushed under the pressure, and in many instances the design cut by the diamond is not followed, but the mosaic breaks on lines not intended.

It is therefore the object of the present invention to provide a process whereby the objections noted may be overcome and by the employment of which the mosaics may be cleanly and effectually cut or sheared in contradistinction to breaking or chipping.

With these general objects in view and others, which will appear as the nature of the improvements is better understood, the invention consists, substantially, in the novel process hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the appended claim.

In the drawings, Figure 1 is a view in elevation of a hand-tool for practicing the present invention. Fig. 2 is a side elevation, partly in section, of a machine for practicing the process by power.

As before premised, the present process is designed to act upon the mosaics by a shearing action in contradistinction to breaking or chipping, thus insuring a clear cut to the mosaic and preventing crushing or fracture of the same within the line of cut. To this end when the invention is to be practiced by hand a suitable implement 1 is employed, the same comprising a pair of handles 2, pivoted at 3 and terminating at their forward ends in cutters 4. The effective edges of these cutters, however, are slightly curved, as clearly shown, the purpose of which is to attack the edges of the mosaic (designated by 5) at successive points, but with a shearing action, and not to permit all parts of the edges to engage the mosaic simultaneously. Thus it will be seen that when the tool described is operated by hand the cutters 4 thereof may be caused to engage the edges of the mosaic, and by shearing such edges the mosaic may be cleanly cut to the desired configuration and in a quick and easy manner. Furthermore, liability of the mosaic being fractured, as is commonly the case in the methods ordinarily employed where breaking prevails, is reduced to a minimum.

As shown in Fig. 2, the process may be practiced by power, and, referring to this figure, the numeral 6 designates the table of the machine for supporting the mosaic 7, the latter being fed over the table 6 through the medium of an endless band 8, this feeding advancing the mosaic 7 to the shearing action of a rotating cutter 9, journaled upon a suitable axis 10 and including a series of cutting-blades 11, arranged in a substantially spiral manner in order to act upon the mosaic 7 with a shear cut. The blades 11 coact with the edge of the table 6 to shear the edges of the mosaic 7 in a manner, as is clearly apparent.

From the foregoing it will be seen that the herein-described process enables mosaics being cut by a shearing action in contradistinction to breaking or chipping off the edges, and consequently a clear and even line of separation takes place, thus preventing crushing of the mosaic.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

In the art of producing mosaic art-shades and the like, the process for the formation of glass mosaics of irregular shape, which consists in subjecting the glass from which the mosaics are produced to cuts having a shearing action upon the glass, whereby an individual mosaic is obtained after each cut.

In testimony whereof I affix my signature in the presence of two witnesses.

PHILLIP SEMMER.

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