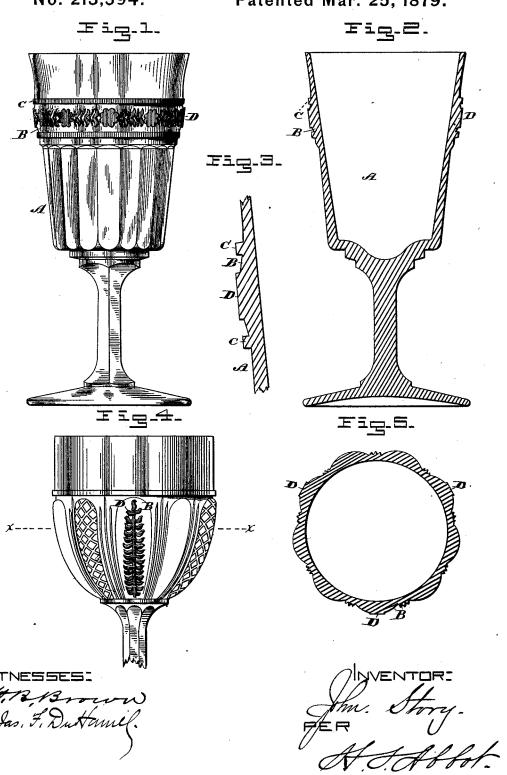
## J. STORY. Grinding Glass for Ornamentation.

No. 213,594.

Patented Mar. 25, 1879.



## UNITED STATES PATENT OFFICE.

JOHN STORY, OF ALLEGHENY COUNTY, ASSIGNOR TO ADAMS & CO., OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN GRINDING GLASS FOR ORNAMENTATION.

Specification forming part of Letters Patent No. 213,594, dated March 25, 1879; application filed November 7, 1877.

To all whom it may concern:

Be it known that I, John Story, of the county of Allegheny, and State of Pennsylvania, have invented certain new and useful Improvements in Glass-Grinding; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain improvements in the art of glass-grinding; and the invention consists in providing a convex or other raised surface, on which the desired figure is molded in relief, and then ground to resemble "cut" or "frosted" glass, which will be hereinafter more fully set forth.

Heretofore the figure has been molded on the plain surface of the glass and then frosted, which is expensive and extremely difficult to accomplish, without touching the ground or plain surface of the article, and to obviate this difficulty is the object of my invention.

In the drawings forming part of this specification, I have shown a goblet having the border and figures ground down to represent engraving, and in which-

Figure 1 is a side elevation, showing, near the top and around the goblet, frosted figures and border. Fig. 2 is a central vertical section of the same. Fig. 3 is an enlarged sectional view, showing the raised ground of the plain surface upon which the figures are formed. Fig. 4 is a view showing frosted figures down the side of the goblet, and Fig 5 is a section taken on line  $x \tilde{x}$  of Fig. 4.

A represents a goblet, showing, near the top, a raised band, B, having a convex surface ex-

tending around the same, having a raised band, C, upon either side of it, and upon the apex of the convex surface of the band any suitable design, D, may be placed; the effect of this arrangement being that the sides of the band B slope downward and away from the figures of the design, by this means preventing the grinding wheel from striking other than the raised figure, and by means of the inclined surface preventing the clogging of particles of sand or glass, which, under the rapid revolution of the grinders, will scratch the plain surface and mar the article unless a free outlet is provided.

The grinding of the surface of the figures of the design is done by any of the well-known means to represent frosted or cut glass, care being taken not to grind off too much of the surface of the design.

In the drawings, Figs. 4 and 5, I have shown how my invention may be applied to vertical lines of figures upon a cylindrical surface.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent as of my invention is-

A convex or other raised surface as the ground on which the figure is molded in relief, for the purpose of grinding or frosting to represent cut or engraved glass, substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN STORY.

Witnesses:

DANIEL WENKE, Jr.,

D. WENKE.