

UNITED STATES PATENT OFFICE.

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METHOD AND MEANS FOR MAKING GLASS LAMP-SHADES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CLARENCE C. SIBLEY, a citizen of the United States, residing in Perth Amboy, Middlesex county, New Jersey, have invented certain new and useful Improvements in Methods of and Means for Making Glass Lamp-Shades, of which the following is a specification.

The object of my invention is to simplify and improve the method of manufacturing glass lamp shades and analogous glass goods to the end that the pieces of glass comprised in such articles may be uniformly cut to the proper shape to readily conform to the curvature or contour of the completed article, and in carrying out my invention I first cut strips of glass in tapering form, of suitable length and width, in such shape that when a series of said strips are placed upon a plane surface, edge to edge, they will assume a circular form substantially in the shape of a flat plate, and I cut or scarf the glass strips in circular lines described around the center or axis of said series of strips, and in a plurality of places at distances apart, so that relatively small pieces of glass, all having similar complemental curves at their ends or corresponding edges, are produced, and whereby such relatively small pieces of glass may be fitted together in any suitable or desired manner and secured to form the desired shape of lamp shade or analogous article.

My invention further comprises the novel details of improvement that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming part hereof, wherein, Figure 1 is a plan view of an apparatus adapted for carrying out my invention, Fig. 2 is a cross section thereof, on the line 2, 2, in Fig. 1, Fig. 3 is an enlarged detail section on the line 3, 3 in Fig. 1, and Fig. 4 is a perspective view of a lamp shade made in accordance with my invention.

In the accompanying drawings, in which similar numerals and letters of reference indicate like parts in the several views, the numeral 1 indicates a suitable table or support having a substantially flat top surface, and at 2 is an annular frame or ring secured edgewise upon support 1, as by means of outwardly extending lugs 3 screwed to support 1, whereby an annular space 4 having a substantially plane or flat bottom is pro-

vided. At the center of the space 4, within ring or frame 2, is suitably supported a pivot or shaft 5 carrying a radially disposed arm 6 that is provided with a cutting tool 7, which is shown in the form of an annular cutter pivotally supported at the lower end of a hand piece 8 that is secured upon arm 6. The cutter 7 is adjustable radially within the space 4 and for this purpose I have shown the pivot or shaft 5 as provided with an aperture 5^a through which the arm 6 may be adjusted, a binding screw 9 carried by pivot 5 serving to hold the arm 6 in positions of adjustment.

For convenience of use I have shown pivot or shaft 5 as adjustably connected with its bearing 10, as by being adapted to be freely placed in and drawn out of the bore in said bearing to enable the ready adjustment upon the bottom of space 4 of the glass strips 11 that are to be cut. The bearing 10 is shown provided with a flange or head 10^a on one side of support 1 and a nut 12 on the opposite side of said support to hold said bearing in position. I have also shown a soft piece of material 13, such as felt or the like, within space 4 upon which the glass strips 11 are placed.

At 14 is a radially disposed stop and gage secured within space 4, as by being screwed to the support 1.

At 15 are adjustable stops or holding devices, shown provided with slots 15^a receiving screws 16 entering support 1.

The glass strips 11 are cut in tapering form, as indicated in Fig. 1, so that their side edges will lie substantially radially with respect to the axis of cutter 7, such as radially with respect to the pivot 5, and said strips are laid upon support 1 within space 4 so that their outer ends abut against the ring or frame 2, and their edges are placed contiguous, the edge of one of the strips 11 bearing against the guide 14, and the stops 15 at the opposite end of the series are adjusted firmly against the last strip 11 of the series and firmly secured, whereby the series of strips are firmly held in flat plate-like form upon the support 1 so as not to move during cutting. The cutter is then adjusted with respect to its pivot 5 at a suitable distance therefrom, as at the outer mark 17 of the gage, and then the cutter is swung around its pivot 5 in contact with the strips 11 whereby a circular cut or line *a* is made in the strips 11, and then the cutter may be adjusted nearer its axis the desired

distance and again swung around the strips in contact therewith to make a second circular cut in the strips 11 described around the same axis as the first cut *a* and so on for as many circular cuts in the series of strips secured upon support 1 as may be desired. Of course the circular cuts in strips 11 could be made by commencing near the center and working outwardly if preferred. When all the required circular cuts are made in the glass strips 11 said strips may be removed from the apparatus and broken apart in small pieces *b*, which will all have correspondingly tapering sides and correspondingly curved ends adapted to be fitted together for producing the lamp shade A, or other analogous articles. The small pieces of glass *b*, made as above described, may have their edges secured together by interposed metal strips secured together by solder in well known manner of forming glass lamp shades, bodies, and other similar ornamental goods, and by reason of the correspondingly curved end portions of the small pieces *b* globe like and analogous shaped shades, bowls and the like may be readily constructed in which the curved ends of the pieces *b* will readily match each other, and the curved or annular joints at *c* of the lamp shade may be made uniform as well as the radial or longitudinal lines of the shade, whereby highly artistic and finished shades may be made in which the joints between the glass pieces *b* will be uniform and regular. The shade may have the usual or suitable ring or collar B at its upper end secured to the parts of the shade in any well known manner.

Having now described my invention, what I claim is:

1. The method of producing pieces of glass for the production of ornamental glass goods, consisting in preparing a plurality of glass strips having converging side edges, in placing said strips upon a flat surface with their converging edges side by side and edge to edge, holding said strips firmly together in flat form upon said surface, and in making an annular cut in said strips upon a circle described around the center of said series of strips, whereby said strips will all be cut at an equal distance from said center and on the same arc to enable them to be secured together in an ornamental glass article.

2. The method of producing pieces of glass for the production of ornamental glass goods, consisting in preparing a plurality of glass strips having converging side edges, in placing said strips upon a flat surface with their converging edges side by side and edge

to edge, holding said strips firmly together in flat form upon said surface, and in making a plurality of annular cuts in said strips at distances apart all described around the center of said series of strips, whereby said strips will be divided into small pieces having their ends curved upon a corresponding axis and their sides correspondingly tapered to enable them to be secured together in an ornamental glass article.

3. An apparatus of the character described comprising a support, a pivot carried thereby, an arm carried by said pivot and provided with a cutter, a guide upon said support disposed radially with respect to the said pivot, and means for holding strips firmly upon said support surrounding said pivot to enable the cutter to make an annular cut in a plurality of strips upon said support at the same distance from said pivot.

4. An apparatus of the character described comprising a support, an annular ring or frame thereon providing a space to receive strips to be cut, a pivot carried by said support at the center of said ring, a cutter adjustably carried by said pivot, and means for holding a plurality of strips within said space upon said support in position to permit said cutter to make annular cuts in said strips at equal distances from said pivot.

5. An apparatus of the character described comprising a support, an annular frame or ring carried thereby providing a space to receive strips to be cut, a pivot at the center of said space, a guide disposed radially within said space and secured upon said support, means for holding said strips against said guide upon said support, and a cutter adjustably carried by said pivot adapted to make annular cuts at distances apart in strips held upon said support within said space.

6. An apparatus of the character described comprising a support, an annular frame or ring 1 secured thereon providing a space to receive strips to be cut, a pivot at the center of said space, a radially disposed guide within said space, a stop to hold a plurality of tapering strips against said guide, an arm carried by said pivot, a cutter carried by said arm, and means to permit adjustment of said cutter radially with respect to said pivot, whereby annular cuts may be made at distances apart in strips held upon said support.

CLARENCE C. SIBLEY.

Witnesses:

T. F. BOURNE,
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