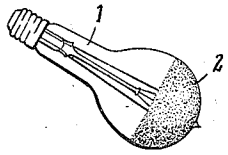
C. F. LORENZ.

FROSTED GLASS AND PROCESS FOR MAKING THE SAME.

APPLICATION FILED JAN. 28, 1920.

1,386,880. Patented Aug. 9, 1921.

Fig. 1



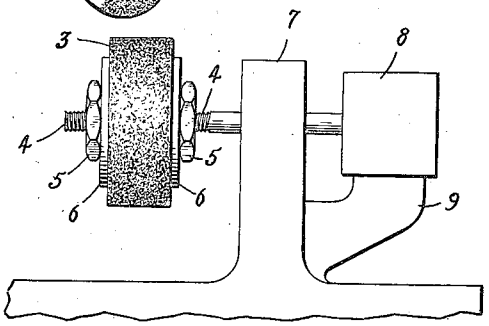




Fig. 2.

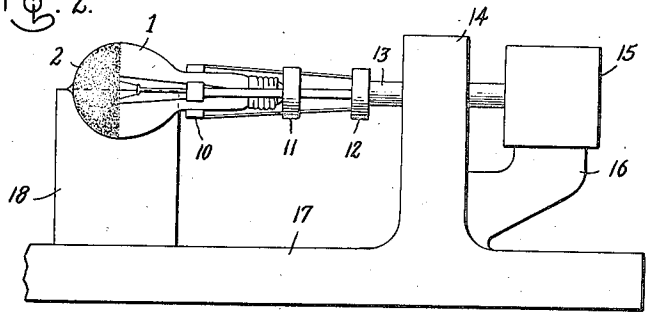



Fig. 3.

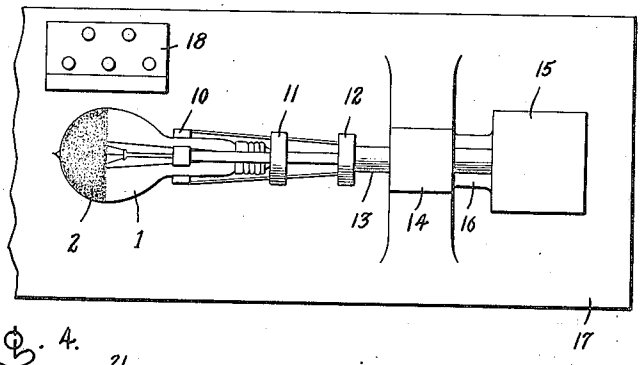



Fig. 4.

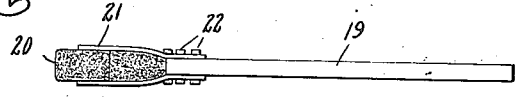
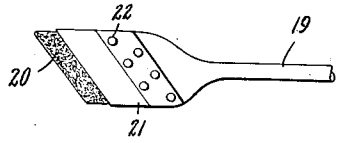



Fig. 5.




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HIS ATTORNEY.

# UNITED STATES PATENT OFFICE.

CHARLES F. LORENZ, OF CLEVELAND, OHIO, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## FROSTED GLASS AND PROCESS FOR MAKING THE SAME.

1,386,880. Specification of Letters Patent. Patented Aug. 9, 1921.

Application filed January 28, 1920. Serial No. 354,526.

*To all whom it may concern:*

Be it known that I, CHARLES F. LORENZ, a citizen of the United States, residing at Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Frosted Glass and Processes for Making the Same, of which the following is a specification.

My invention relates to methods of finishing glass or similar surfaces, and is particularly adaptable to the producing of frosted surfaces on incandescent lamps or other glass bodies to be used for light transmission. The object of my invention is to provide a finish for the glass surface of the lamp bulb which may readily be applied without injury to the surrounding surface, which will screen the light source from the eyes, which will not be readily affected by dirt, and which may be easily cleaned without injury to the surface.

The usual sand-blasted finish which is applied to the surface of a lamp bulb, or other illumination device, is coarse and becomes quickly coated with dirt which is not easily removed. By the use of the method of my invention, the coarseness of the ordinary sand-blasted surface is removed while the unfrosted portion is not affected, the line of demarcation between the frosted and unfrosted portion being practically as distinct after as before the rubbed emery finish is applied. The resulting smooth surface is found to shield effectively the light source while at the same time it does not readily accumulate dirt and any dirt which does collect is easily removed.

By my invention, the surface to which my finish is to be applied is first sand-blasted in the usual way. An abrasive such as emery is then applied to the surface by means of a rotating moist brush or pad, or the article may be rotated and the abrasive applied by means of a moist pad or brush. No special care need be taken to prevent the moist pad or brush from coming in contact with the unfrosted surface of the article as by my method only the frosted portion is acted upon by the abrasive. After the emery has been applied or rubbed on for a sufficient length of time to remove the coarseness of the previous sand-blast, the emery pad or brush is removed from contact with the surface. The surface is then cleaned.

Referring now to the drawing, Figure 1 is a side elevation showing a method of producing a rubbed emery surface by means of a moist rotating brush; Fig. 2 is a side elevation showing a method of producing the finish by means of a moist pad held against the rotating glass article; Fig. 3 is a top plan view of Fig. 2; Fig. 4 is a side elevation of the moist pad used in the method illustrated in Figs. 2 and 3; Fig. 5 is a top plan view of Fig. 4.

In Fig. 1 is shown an incandescent electric lamp 1 which has been previously sand-blasted on the bowl 2. A cloth brush 3 is attached to the spindle 4 by means of the nuts 5 bearing against the plates 6. The spindle 4 passes through a bearing in the standard 7 and is directly connected to a motor 8 resting upon a bracket 9 integral with the standard 7. In operation, moist emery is placed upon the cloth brush 3. The motor 8 is started and the lamp 1 brought against the cloth brush 3 so that the sand-blasted bowl 2 comes in contact with the moist emery. The lamp 1 is turned slowly so that all of the sand-blasted portion 2 comes in contact with the moist emery on the brush 3 at some time during the operation. The bowl 2 is now washed and upon examination the surface will be found to be smooth to the touch while previously it had been rough.

In Figs. 2, 3, 4 and 5, I have shown another method of producing a finish according to my invention. In this method, the lamp 1 is held by spring fingers 10 closed by a clamping ring 11. The spring fingers 10 are attached to the spindle 13 by means of a collar 12. The spindle 13 passes through a bearing in the standard 14 and is direct connected to the motor 15 resting upon the bracket 16 which is an integral part of the standard 14 which has a large base 17. An L-shaped rest 18 is attached to the base 17 in such a position that it may be used to support the handle 19 of the cloth pad 20 when the cloth pad 20 is held against the sand-frosted portion 2 of the lamp 1. The working end of the cloth pad 20 makes an angle with the axis of the handle 19 to which it is attached by means of the metal strips 21 and the bolts 22. In operation, moist emery is placed upon the working end of the cloth pad 20 which is held against and manipulated so as to come in contact with

every part of the sand-blasted portion 2 of the lamp 1 by means of the handle 19 supported by the rest 18, the lamp 1 being rotated by the motor 15. The finish produced is the same as that produced by the preceding method.

While I have used a bowl sand-blasted lamp in my description, any sand-blasted glass article may be given a similar finish according to my invention. For instance, an all sand-blasted lamp, a sand-blasted glass reflector, lamp chimney, etc., may be given such a finish. There are also a variety of designs which may be made upon reflectors or other glassware to be used for light transmission by sand-blasting using my rubbed emery finish in combination. The rubbed emery finish on the sand-blasted portion or design improves the appearance and desirability of such work.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. The process of finishing a glass surface which consists in sand-blasting the glass surface and afterward rubbing said surface with an abrasive.

2. The process of finishing a glass surface which consists in sand-blasting the glass surface and afterward rubbing said surface with emery.

3. The process of finishing the surface of a glass body to be used for light transmission which consists in sand-blasting said surface and afterward rubbing it with an abrasive.

In witness whereof, I have hereunto set my hand this twenty-second day of January, 1920.

CHARLES F. LORENZ.