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PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements relating to the Manufacture of Moulded Heat-Resisting Glass Ware

I, ERNEST JOSEPH JOBLING-PURSER, of British Nationality, of Wear Glass Works, Sunderland, County Durham, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a process in the manufacture of moulded heat-resisting glass ware, e.g., oven ware, which is composed of glass known in the art as hard glass and which is produced by the operation of pressing a gob between a male mould and a female mould.

In the manufacture of moulded glass ware composed of hard glass it is found that shear marks which are formed by the shears in the operation of severing the gob from the glass mass persist through the moulding operation, so that surface irregularities including a sharply defined score or sharply defined scores appear in the finished product.

As is well known, moulded heat-resisting glass ware is liable to fracture when exposed to unduly rapid fluctuations in temperature or to high temperature on one side and relatively low temperature on the other side.

As a result of experimental research I have found that fractures in heat-resisting glass ware due to thermal shock originate mainly at the shear marks, and that, by so treating the glass ware as, in effect to seal up or round over the score or scores referred to above, thus removing or substantially removing the shear marks, the liability to fracture under thermal shock is materially reduced.

According to the present invention I reheat the moulded ware locally in the region of the shear marks, while the moulded ware is still in a plastic state, whereby it is brought locally to a state of fluidity and the surface irregularities including the score or scores constituting

the shear marks are sealed up, rounded over, or removed, or substantially removed. 50

Desirably, the re-heating operation is performed with the aid of an oxy-gas flame.

In practice, the reheating operation is effected as soon as practicable after the male mould has vacated the female mould and while the ware is in a state of plasticity such that it depends entirely on the female mould for its support. 55 60

The process herein described differs from the known process of fire polishing in that the latter is applicable mainly to soft glass ware and that substantially the entire ware is reheated by exposure to a flame but only after it has been removed from the mould. 65

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:— 70

1. A process of treating moulded heat-resisting glass ware composed of hard glass which process consists in reheating the moulded ware locally in the region of the shear marks while the moulded ware is still in a plastic state, whereby it is brought locally to a state of fluidity and the surface irregularities including the score or scores constituting the shear marks are sealed up, rounded over, or removed, or substantially removed. 75 80

2. The process according to claim 1 in which the reheating operation is performed with the aid of an oxy-gas flame. 85

Dated this 16th day of August, 1934.

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