

Published May 11, 1943

Serial No. 423,037

## ALIEN PROPERTY CUSTODIAN

### DECOLORIZING AND REFINING AGENT FOR GLASS

Hans Kohl, Frankfurt A. M., Germany; vested in  
the Allen Property Custodian

No Drawing. Application filed December 15, 1941

In the glass melting process it has proved very difficult to remove the residual reaction blisters from the molten glass by a thermic treatment only. This is the reason why a so-called refining agent is added to the glass batch or the already molten glass whereby in general arsenic compounds have been employed. Now the raw materials used in the glass melt are not as free from iron as it is needed to obtain an absolutely white, i. e. colorless glass, which necessitates a decolorization of the molten glass.

In the chemical decolorization process oxygen evolving substances are used whereby the green coloring ferro iron is oxidized to the yellow coloring ferric iron. The other method to decolorize glass is a physical one using the effect of the complementary color. In this case coloring metal oxides, for instance, nickel, cobalt, manganese and the like are principally employed.

Now it was found that glass fluxes may be refined and at the same time decolorized if alkali-meta-antimonates are added to the batch. Excellent results have been obtained by the utilization of alkali-meta-antimonates containing hydrate water (water of crystallization).

The new agents for decolorization and refining may be employed either in a pure state or in mixture with other known decolorizing and refining materials.

The alkali-meta-antimonates are distinguished by an excellent refining and at the same time decolorizing effect. Surprisingly enough these effects have also been observed in lead (crystal) glass.

HANS KOHL.