

Abstract of the Disclosure
FAST STRENGTHENING GLASS LENSES

This invention is directed to the production of transparent glasses which can be chemically strengthened within a period of time not exceeding four hours to develop a surface compression layer having a sufficient depth to survive the Drop Ball Test after abrasion, the glasses consisting essentially, in weight percent, of

SiO ₂	55-65	CaO	0-1.5
B ₂ O ₃	5-20	MgO	0-4
Al ₂ O ₃	4-10	TiO ₂	0-4
B ₂ O ₃ +Al ₂ O ₃	14-26	ZrO ₂	0-7
Li ₂ O	0-3	MgO+TiO ₂ +ZrO ₂	0-10
Na ₂ O	6-18	As ₂ O ₃	0-0.5
K ₂ O	2-10	ZnO	0-1.5 .
Li ₂ O+Na ₂ O+K ₂ O	13-22		

Where desired, 3.5-5.5% Fe₂O₃ may be included to yield glasses which, at a thickness of 2 mm, will not transmit more than 1% of ultraviolet radiation at a wavelength of 380 nm. Where an ultraviolet absorbing glass exhibiting a neutral gray, fixed tint is desired, 0.02-0.035% Co₃O₄ and 0.08-0.2% NiO will be added.

Figure 1