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(54) **HIGH-POWER FUSED COLLIMATOR AND ASSOCIATED METHODS**

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219/121.63

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See application file for complete search history.

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(57) **ABSTRACT**

A method for making a high-power fused collimator, and a fused collimator made thereby, are provided. A fused collimator is provided that includes an end of a stripped end portion of an optical fiber fused to a proximal face of a silica lens. In an embodiment, a toroidal element is positioned in surrounding relation to the fiber's stripped end portion, and a joint formed by the fiber end and the toroidal element proximal face is substantially surrounded with a solder glass in a melted form. A cross-sectional area of the solder glass decreases proximally from a distal edge adjacent the lens to a proximal edge located along the fiber's stripped end portion. Then the solder glass is permitted to harden, forming a fused collimator.

**24 Claims, 2 Drawing Sheets**

