

[54] **WIDE-ANGLE LENS**

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[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

This patent is subject to a terminal disclaimer.

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[21] Appl. No.: **08/757,192**

[22] Filed: **Nov. 27, 1996**

Related U.S. Application Data

[63] Continuation-in-part of application No. 08/590,725, Jan. 24, 1996, abandoned, which is a continuation of application No. 08/251,623, May 31, 1994, abandoned, which is a continuation of application No. 07/738,854, Jul. 31, 1994, abandoned.

[30] **Foreign Application Priority Data**

Aug. 28, 1990 [JP] Japan 2-225975

[51] **Int. Cl.⁷** **G02B 13/18**

[52] **U.S. Cl.** **359/717; 359/739; 359/793**

[58] **Field of Search** 359/642-648,
359/664, 670, 708, 713-717, 744-753,
793

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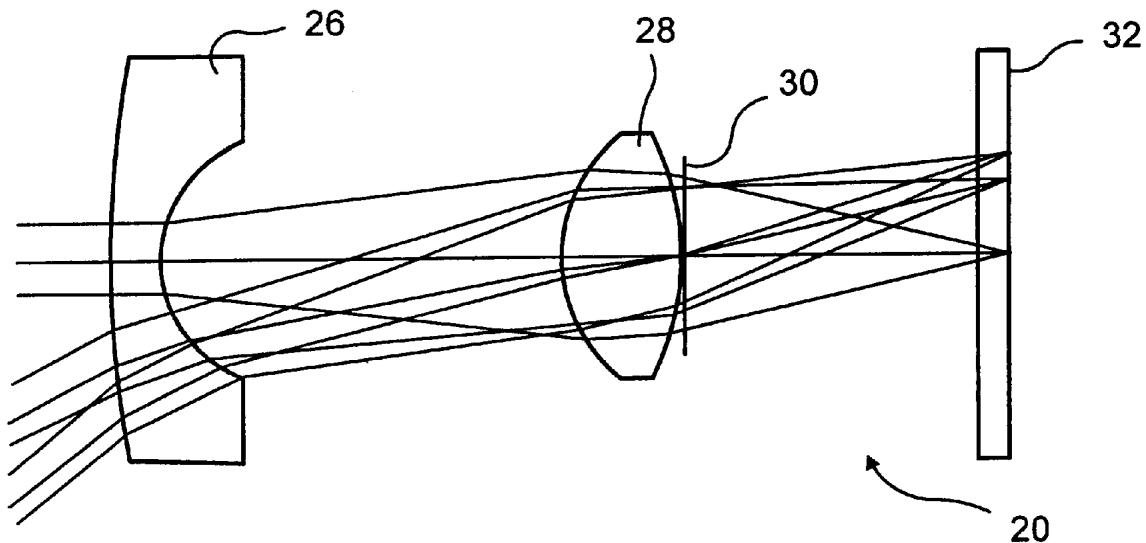
3346785	6/1982	Germany	359/708
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Attorney, Agent, or Firm—McAulay Nissen Goldberg Kiel & Hand, LLP

[57] **ABSTRACT**

The present invention is directed toward a wide-angle lens. Because of a small quantity (two) of lens elements, the wide-angle lens facilitates size and weight reduction and permits low-cost manufacture. The lens is made from plastic, which permits further cost reduction. The lens is particularly useful when employed in CCD cameras.

15 Claims, 7 Drawing Sheets



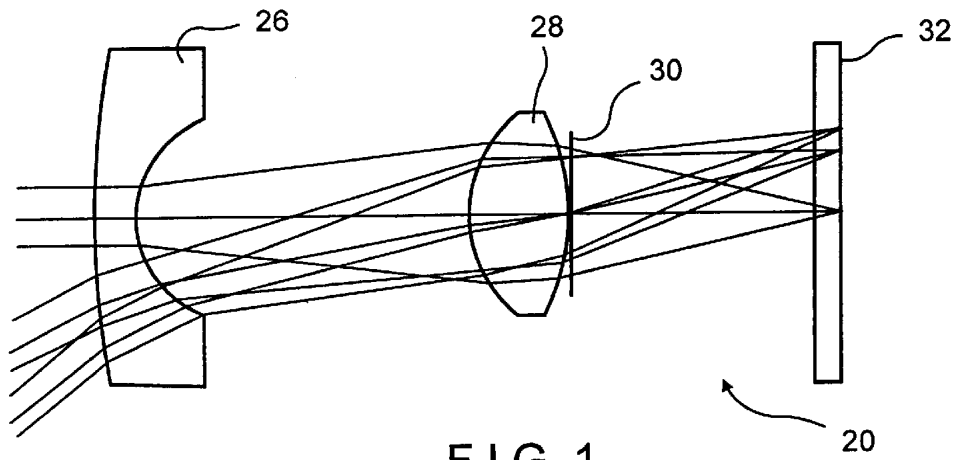


FIG. 1

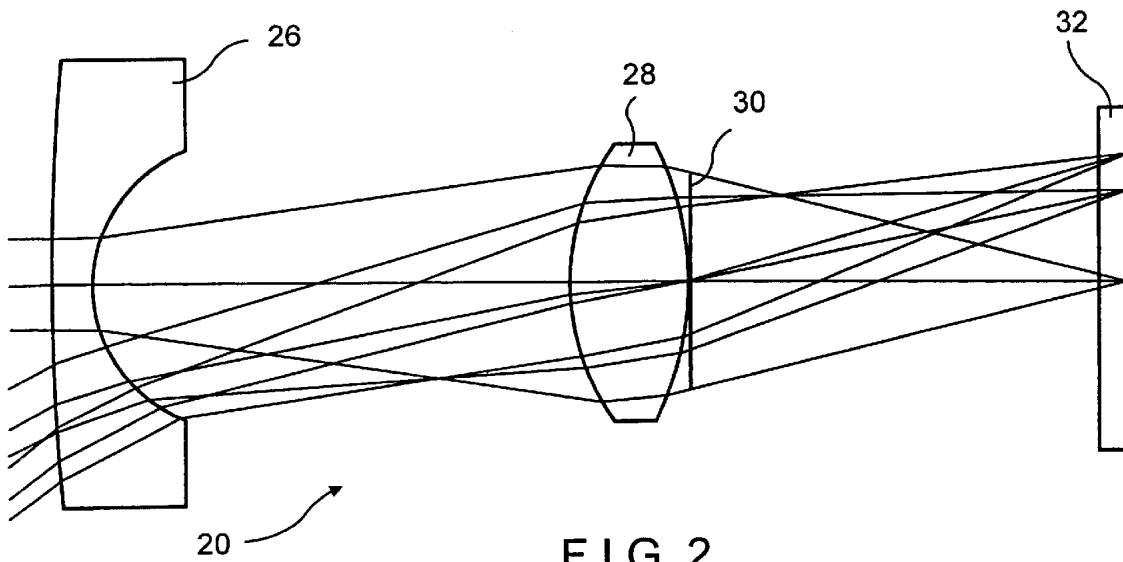


FIG. 2

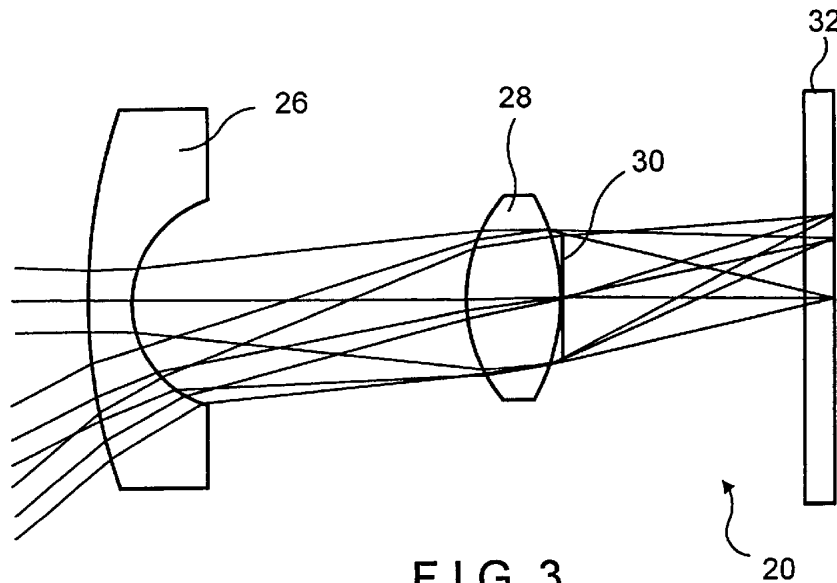


FIG. 3

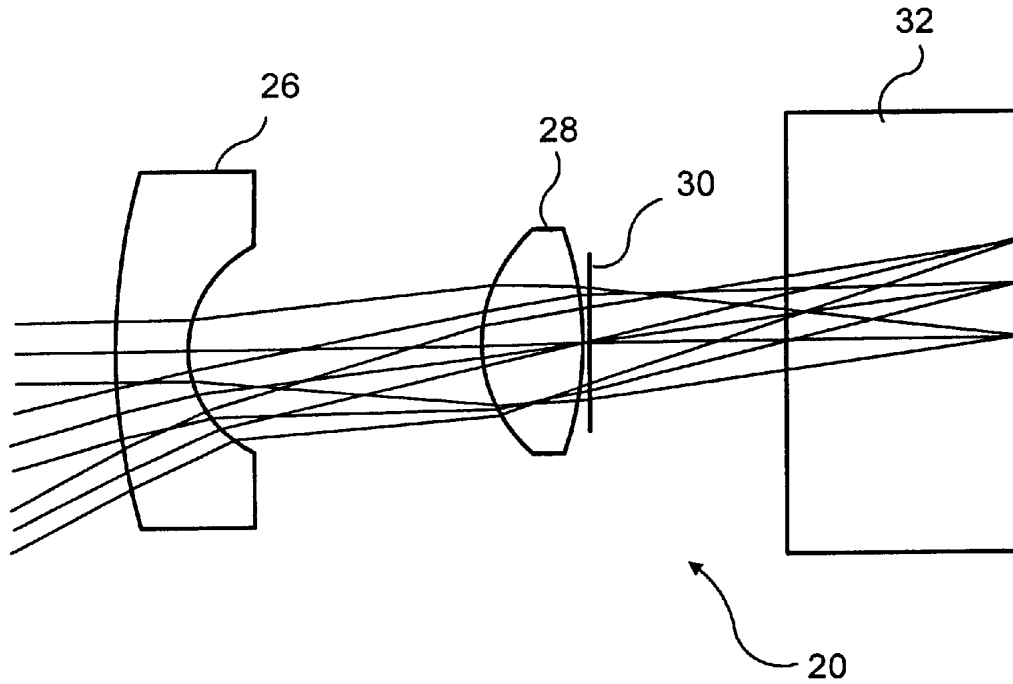


FIG. 4

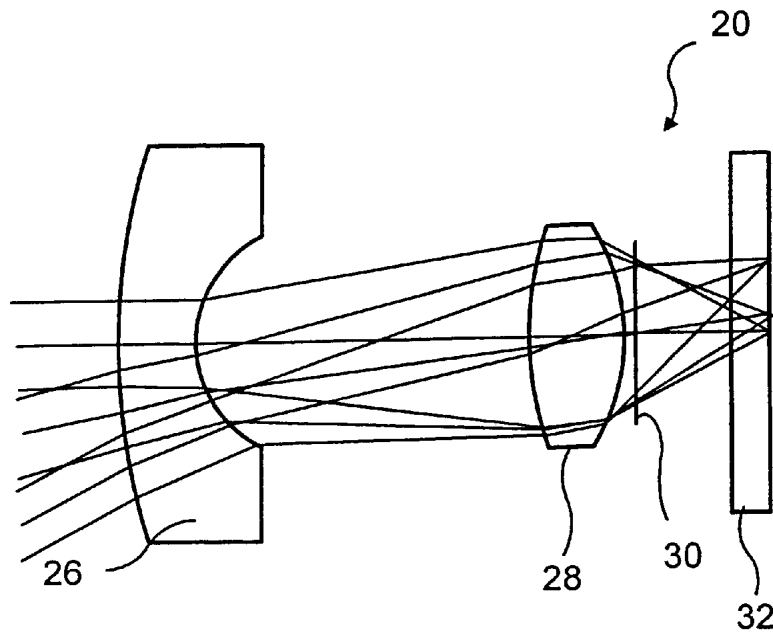


FIG. 5

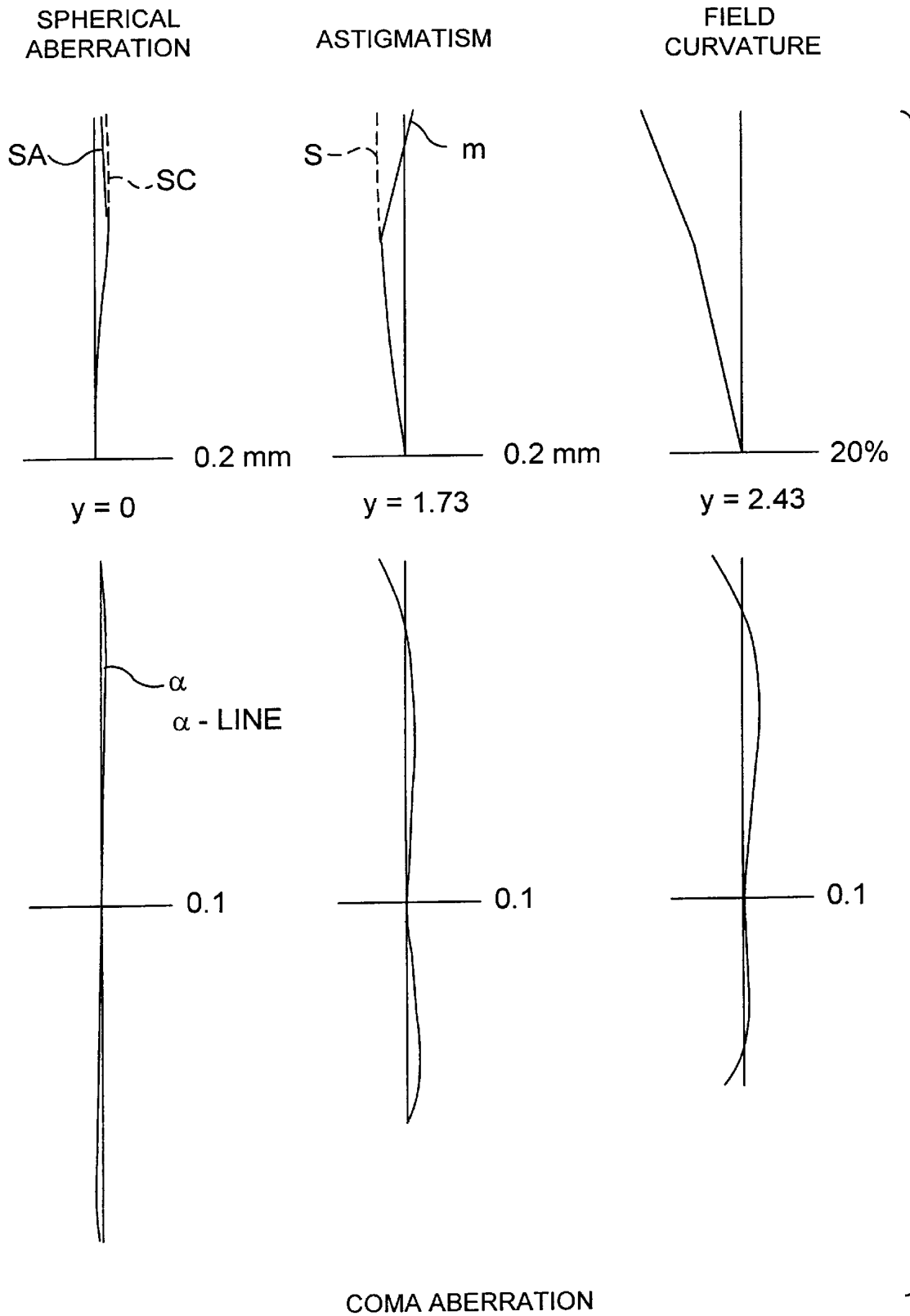


FIG. 6

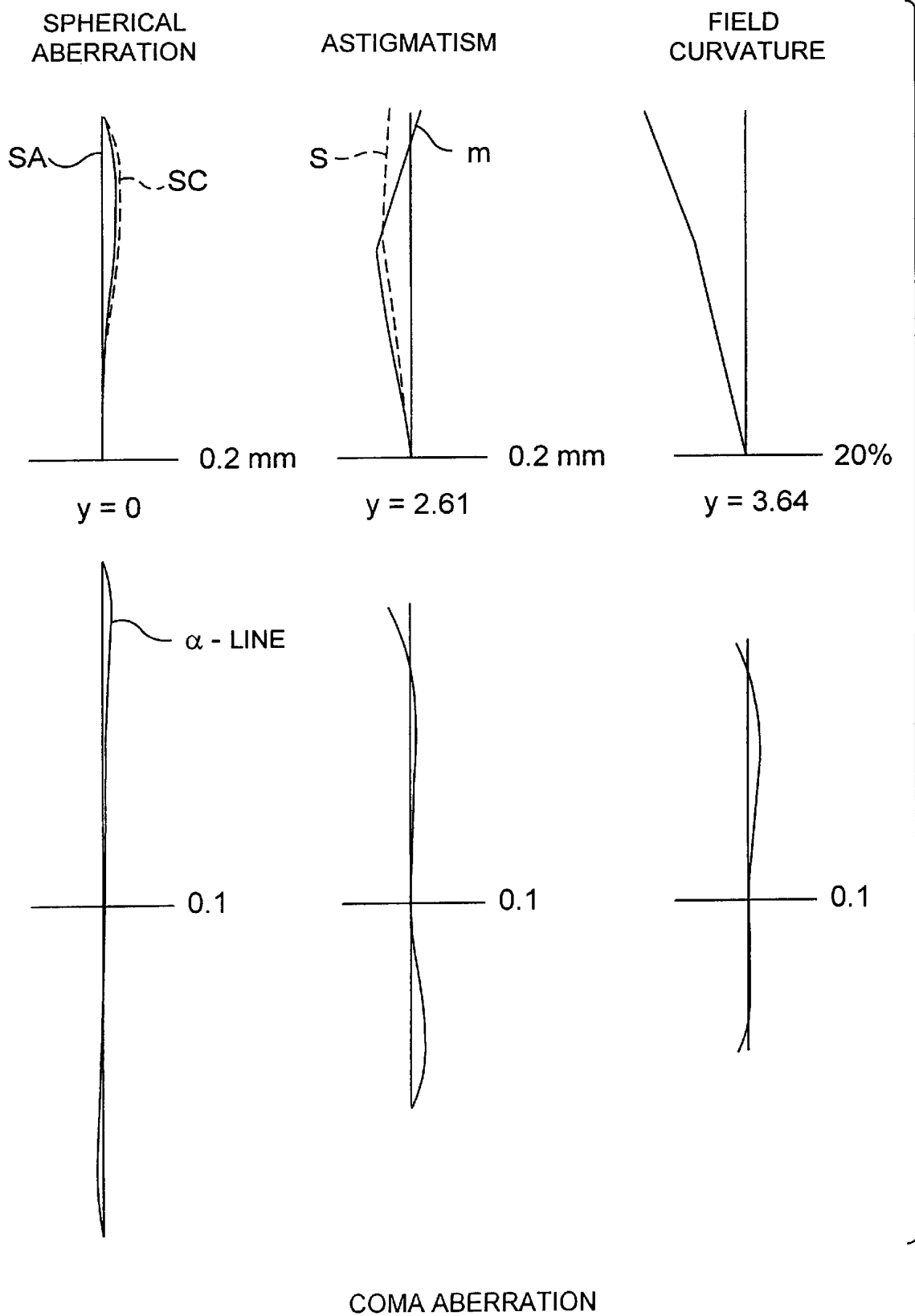


FIG. 7

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