

United States Patent [19]

Wolfram et al.

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[45] Date of Patent: Feb. 13, 1990

- [54] OPTICALLY PUMPED LASER
- [75] Inventors: Thomas Wolfram, Wheaton; Bruce A. Vojak, Naperville; Edward T. Maas, Jr., Batavia; Robert D. Burnham, Wheaton, all of Ill.
- [73] Assignee: Amoco Corporation, Chicago, Ill.
- [21] Appl. No.: 221,670
- [22] Filed: Jul. 20, 1988
- [51] Int. Cl.⁴ H01S 3/091
- [52] U.S. Cl. 372/75; 372/46; 372/50; 372/71
- [58] Field of Search 372/43, 45, 46, 50, 372/69, 70, 71, 75

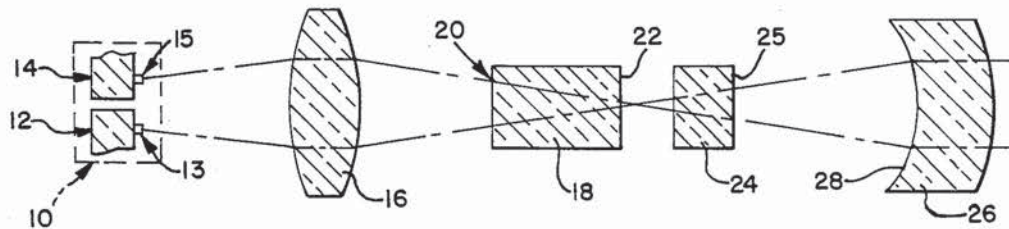
- [56] References Cited
- U.S. PATENT DOCUMENTS
- 4,751,711 6/1988 Welch et al. 372/46
- 4,791,631 12/1988 Baumert et al. 372/75

Primary Examiner—William L. Sikes
Assistant Examiner—B. R. R. Holloway
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William H. Magidson; Ralph C. Medhurst

[57] ABSTRACT

An optically pumped laser which includes a laser diode array for generating optically pumped radiation having a uniform intensity distributed over a broad band-width, and a lasing material with an absorption band for receiving radiation within such bandwidth.

27 Claims, 6 Drawing Sheets



ASML 1217

FIG. 1

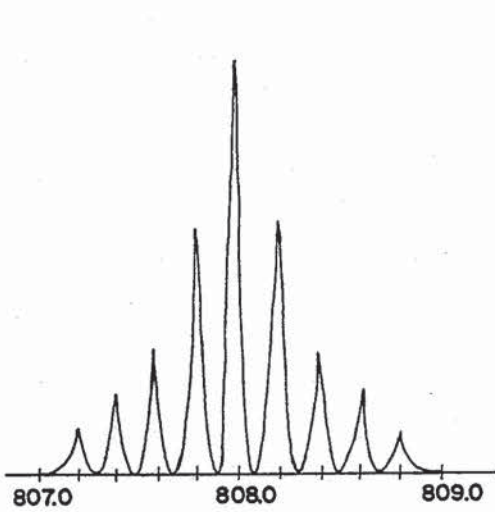
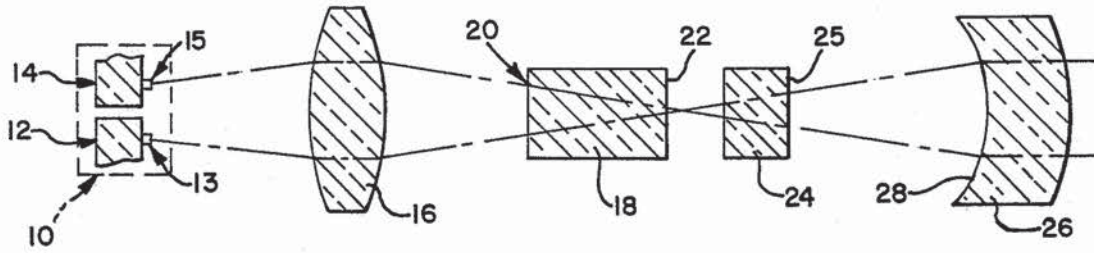


FIG. 2a

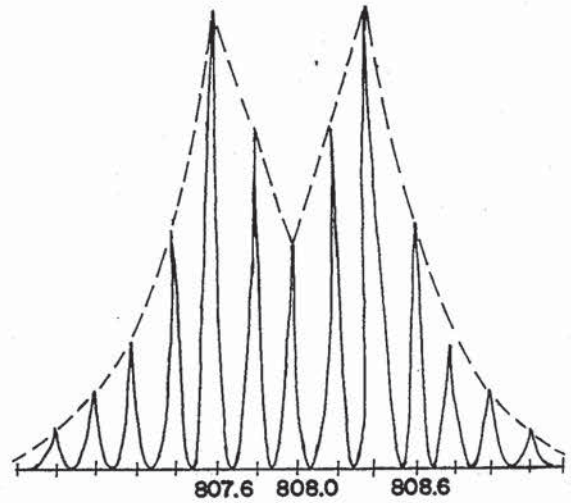


FIG. 2b

FIG. 2c

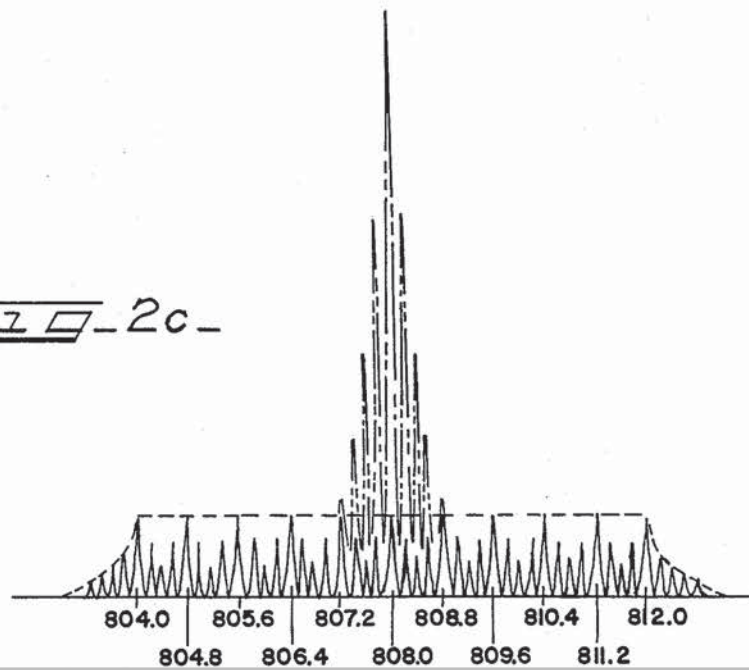


FIG. 3

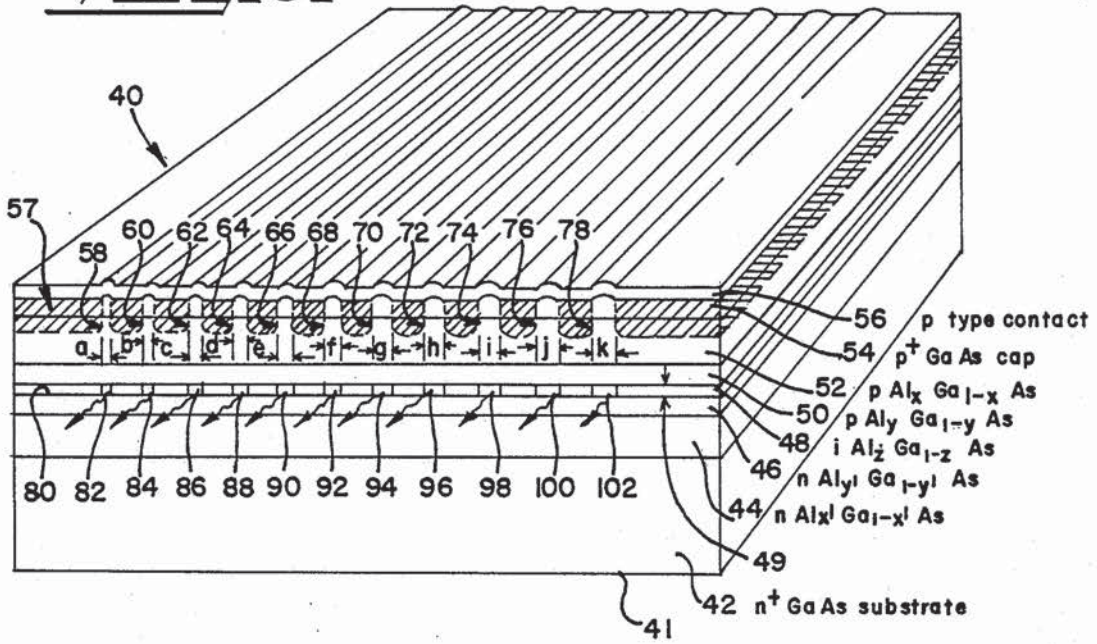


FIG. 4

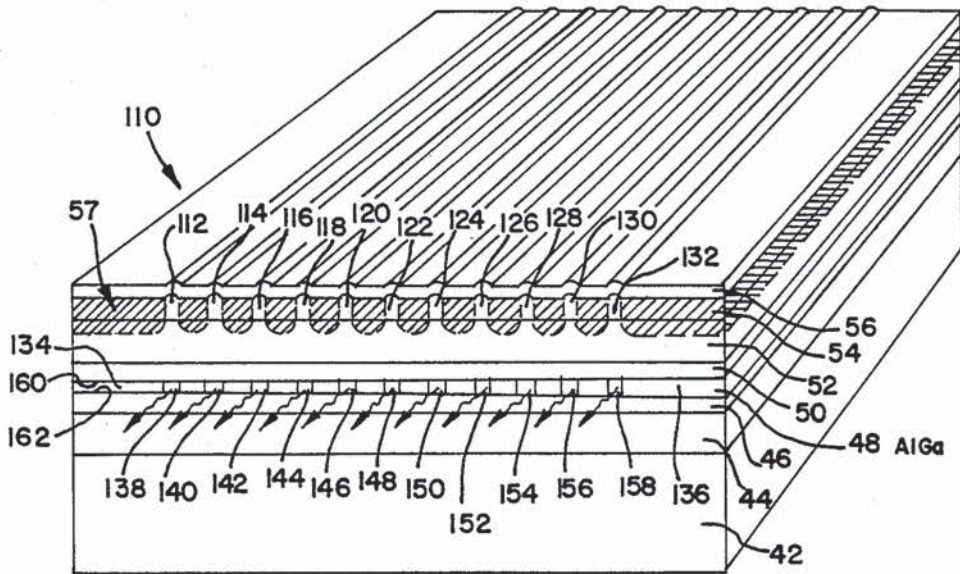


FIG. 5

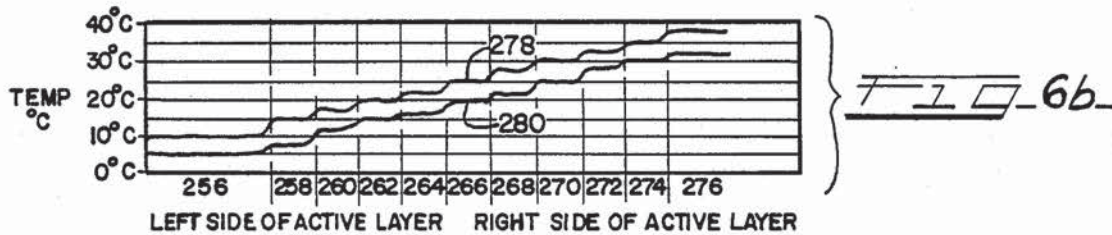
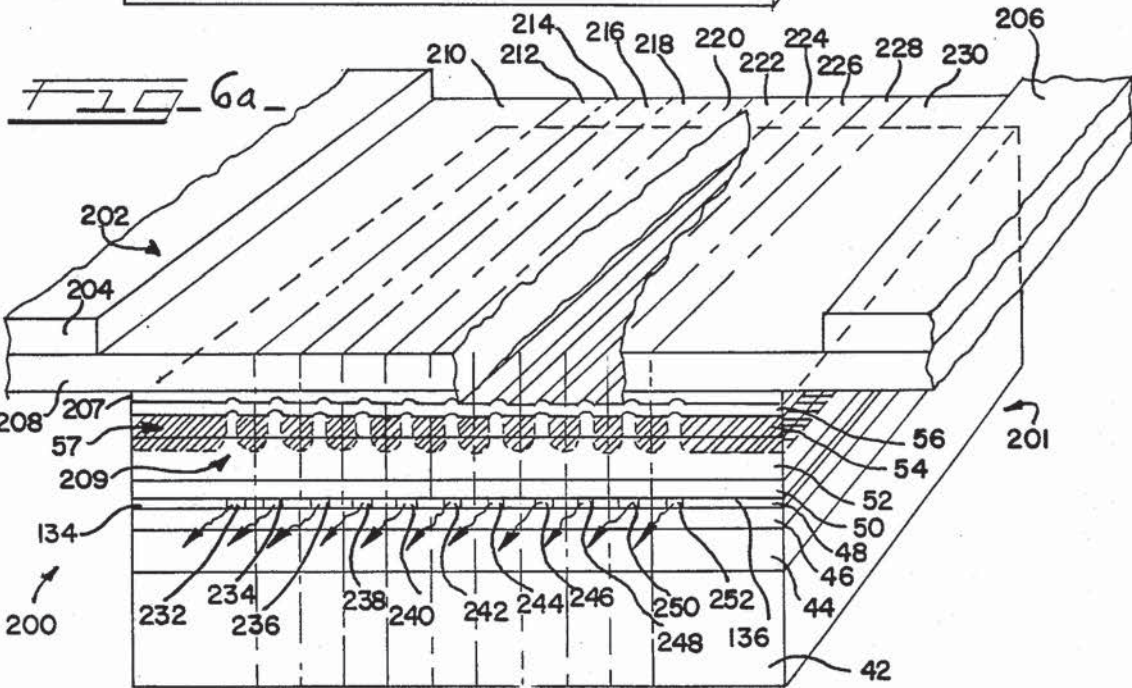
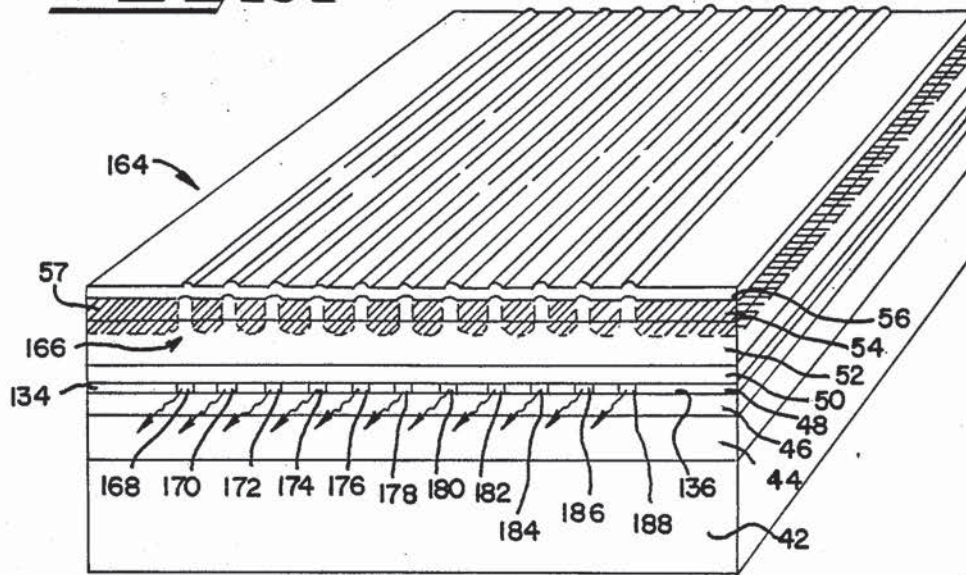


FIG-7-

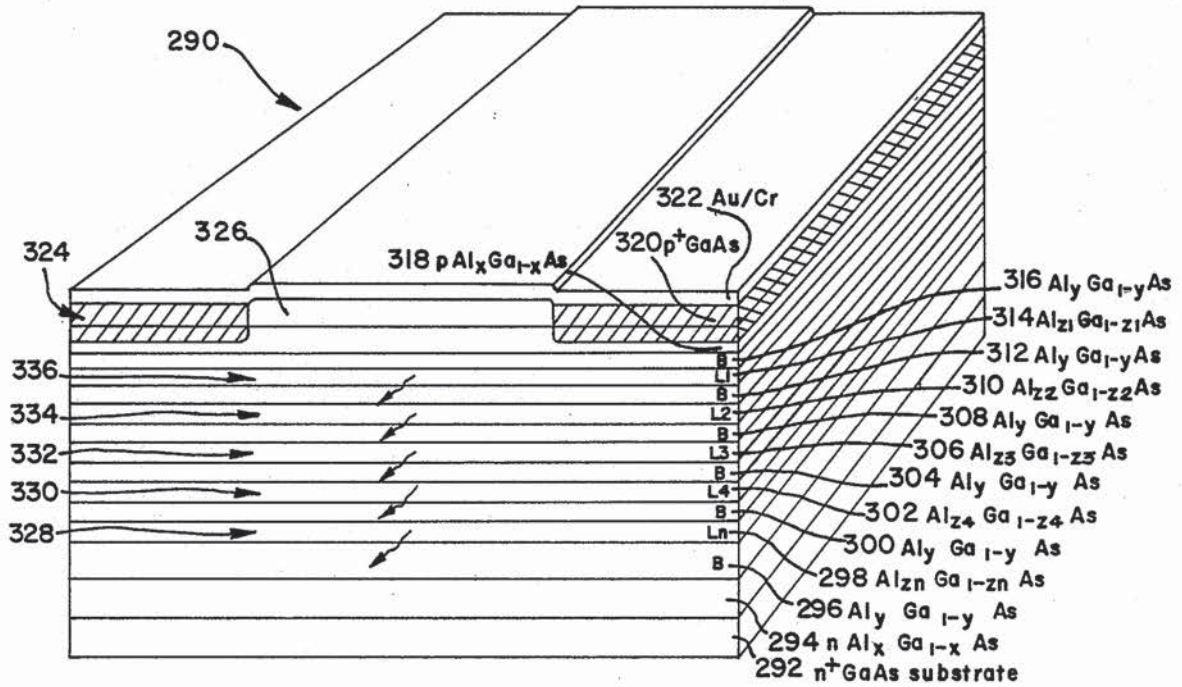
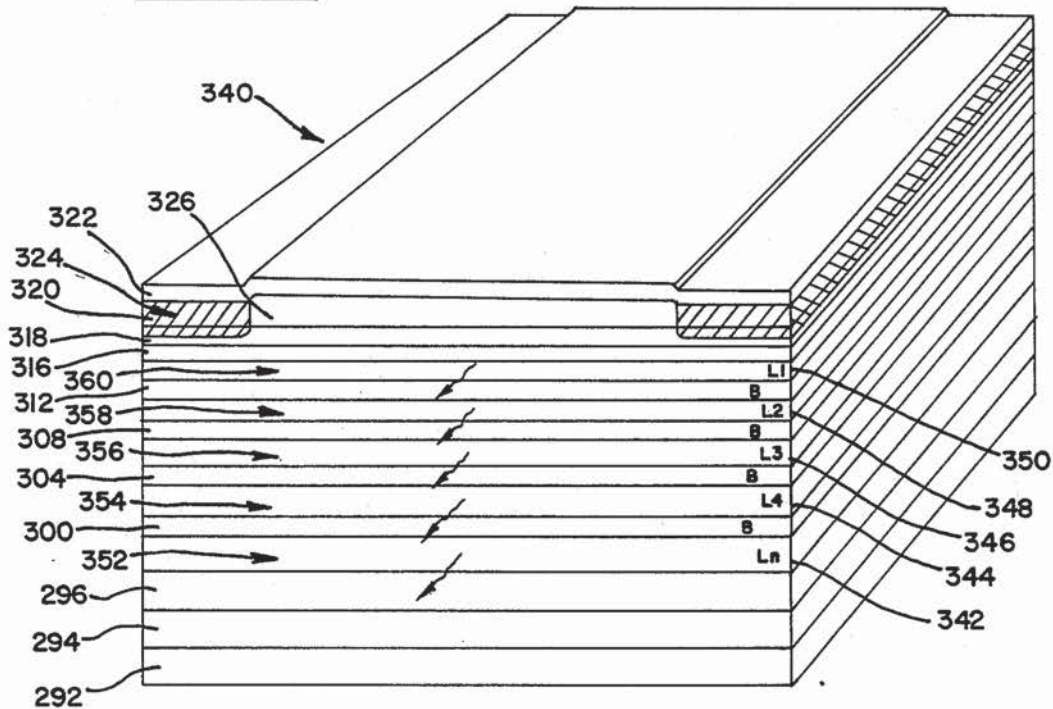


FIG-8-



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