cal Society of America, and the Institute of Electrical and Electronics Engineers, will be held from April 12 to 15 at the Towne House in Phoenix, Ariz.

J. P. Gordon of Bell Telephone Laboratories and A. E. Siegman of Stanford University have been appointed conference chairman and program chairman, respectively. The Electronics Division of the Electrochemical Society and the Office of Naval Research are cooperating in the sponsorship of the meeting.

The program covers the three major areas of basic theory and basic physics, quantum electronic devices and technology, and applications of quantum electronic devices. The deadline for abstracts is January 3, and the deadline for manuscripts is April 15. Abstracts and requests for further details should be submitted to J. P. Gordon, Bell Telephone Laboratories, Murray Hill, N. J.

## Applied mechanics

Experimental and theoretical work on the mechanics of solids, liquids, and gases, and on thermodynamics and heat transfer will be discussed at the fifth US National Congress of Applied Mechanics. It will convene at the University of Minnesota from June 14 to 17. The National Congresses meet every fourth year and are intended to supplement the International Congresses of Applied Mechanics. The program will consist of survey lectures in selected fields and contributed papers on work in progress. Two-hundred-word abstracts are due by January 15.

Requests for the required abstract forms and inquiries regarding the meeting should be addressed to Prof. Robert Plunkett, Secretary of Applied Mechanics Congress, 107 Aero Building, University of Minnesota, Minneapolis, Minn. 55455.

## Quantum optics

Arrangements are being made for a second Rochester conference on coherence and quantum optics, to be held at the University of Rochester from June 22 to 24. Expected to be of somewhat wider scope than the first con-

ference (June 1960), the meeting is intended for scientists active in research on the basic physics of the field, with emphasis on statistical properties of electromagnetic fields and the interaction of the fields under conditions involving coherence effects. Related topics such as scattering of light will also be discussed, but subjects of purely spectroscopic interest will not be included.

Two copies of 1000-word abstracts, in English, are due by March 10. Abstracts and requests for further information and application forms should be addressed to Professor Emil Wolf, Second Rochester Conference on Coherence and Quantum Optics, Department of Physics and Astronomy, University of Rochester, Rochester, N.Y.

## Rarefied gases

The fifth international symposium on rarefied gas dynamics will be held July 4 to 8 at Oxford University, covering both practical and theoretical aspects of high-altitude aerodynamics.

General areas of interest are transition flow, including slip and low Reynolds-number effects; kinetic theory of gases, including studies of the structure of shock waves: free molecular flow and particle-surface interactions; ionospheric aerodynamics, including basic studies of rarefied plasmas; and experimental techniques relating to any of the above.

Prospective contributors are requested to send a title and a brief description of their work to Dr. C. L. Brundin, Engineering Laboratory, Parks Road, Oxford, England, by December 31.

## IUC

At the invitation of the Academy of Sciences of the USSR, the seventh general assembly and international congress of the International Union of Crystallography will be held at the University of Moscow from July 12 to 19, followed by a symposium on crystal growth on July 20 and 21.

The program of the congress will consist of five general invited lectures, sessions of contributed papers covering the main problems of experimentation and the theory of crys-



transformer (saturable core reactor type).

Can be converted to a ZONE REFINING FURNACE for zone melting grown crystals,

by equipping an up and down mechanism of

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crucible and two heaters.