

Physics of simple liquids. Edited by H.N.V. TEMPERLEY, J. S. ROWLINSON & G. S. RUSHBROOKE. Pp x+713. Amsterdam: North Holland Publishing Company, 1968. Price Dfl. 108.

This book gives a complete survey of present knowledge about simple liquids both from the experimental and theoretical points of view. The liquids are 'simple' in the respect that attention is restricted to monatomic liquids and liquids whose molecules are approximately spherical (*e.g.* carbon tetrachloride).

There are sixteen chapters all written by different authors covering a wide range of topics including theories based on distribution functions, statistical mechanics and kinetic theory; studies of liquid models; critical phenomena; experimental work with ultrasonics, light scattering, X-ray and neutron diffraction; the study of liquid metals.

With so many contributors there is obviously a range of styles and quality of presentation. The overall quality is high and the material interrelates well, which reflects great credit on the editors.

The emphasis of the book is on the theoretical side although this is the result of the nature of the subject. It is intended for readers with an existing interest in liquids and, despite a well-written introductory chapter, it would not be easy reading for a newcomer to the field. However a brief introduction through an elementary textbook (*e.g.* J. A. Pryde, *Theory of Liquids*, Hutchinson University Library) would be preparation enough.

This book is recommended reading to all who are interested in the liquid state.

M. M. WOOLFSON

Department of Physics
University of York
Heslington
York
England

The graphic work of M. C. Escher. Second impression: Oldborne, 1967. Price 42 s.

This is a revised and expanded edition of a book, originally published in 1961, presenting reproductions of the work of

the graphic artist Maurits Escher. There are now eighty-four prints, four of them in colour, and a dozen or so pages of text in which the author explains his aims and describes individual reproductions.

Many crystallographers will be familiar with Escher's periodic drawings through the monograph prepared by Professor MacGillavry for teaching crystallographic symmetry. Anyone who finds delight in the artistry of the periodic drawings and in the ingenuity with which Escher manages to fill completely periodic space with animals and birds will surely be fascinated by this wider range of examples of his work.

Each picture incorporates some specific idea and more often than not this is closely analogous to one of the intrinsically beautiful forms or laws of mathematics and physics. One finds, for example, visual expression of convergent series, topology, projections, gravity, relativity, and optical phenomena in addition to, and often in combination with, the author's more familiar expressions of periodicity and symmetry.

Escher is particularly interested in the presentation of three-dimensional objects in a two-dimensional print. He exploits various devices which suggest the third dimension and he sometimes combines several viewpoints in one print with the inventiveness of a Picasso. But he also makes fun of the limitations of two-dimensional projections by drawing objects which are susceptible to visual reversal and by using projections which are not self-consistent over the whole print. These ideas are developed in his drawings of impossible buildings which incorporate such features as an endless rising stairway in a finite space and an interesting demonstration of a perpetual-motion machine.

Some of the pictures are very beautiful, some approach the horrific; nearly all of them have a vivid and original impact on the viewer. Altogether this is a fascinating and attractively produced book. It will occupy a proud place on many home bookshelves.

A. HARGREAVES

Department of Physics
University of Manchester
Institute of Science & Technology
Manchester M60 1QD
England