

### Book Reviews

AGOSTINO RAMELLI, *The various and ingenious machines of Agostino Ramelli (1588)*, translated by Martha Teach Gnudi, London, Scolar Press, 1976, fo., pp. 604, illus., £50.00.

In 1588 Ramelli (1531?–c.1608), a military engineer, published in Paris his *Le diverse et artificiose machine*, a work that became one of the outstanding examples of Renaissance book production. It was written in Italian and French and with its remarkable sequence of 194 illustrations it is the most elaborate and one of the earliest pictorial technical works to be printed. Its very extensive influence lasted into the nineteenth century and machines of today have pieces in common with those of Ramelli.

In this superbly produced volume the text explanatory to the drawings has been translated by the late Martha Teach Gnudi, into English for the first time, and all of the original 194 engraved plates are faithfully and elegantly reproduced. Dr. Gnudi also supplied a scholarly biographical study of Ramelli, together with notes on his preliminary material and on linguistic and bibliographical matters. There is also a helpful analysis of the principal elements of the machines in a "Pictorial glossary" compiled by E. S. Ferguson.

Living at a time of almost continuous warfare, Ramelli as a military engineer obviously specialized in machines of war: military bridges, military screwjacks and breaking devices, military hurling machines, and appliances to breach defences, cross rivers, moats, etc. However, these constituted only about one-sixth of all his mechanical inventions. There were also mills, cranes, machines for dragging heavy objects, machines for raising excavated earth, cofferdams, and fountains. As far as the technological aspects of the history of medicine are concerned, grain mills and water-raising devices are of special interest. The latter consist of piston and rotary pumps, bucket-filling, and other ingenious devices.

As well as the practical public health issues, such as the provision of drinking, bathing, and irrigation water, and the draining of swamps with the reduction in the mosquito population and thus of malaria, there are also the analogies made between machines and parts of the body. Thus we are aware of the influence of the pump on developing concepts of heart action and blood flow, but others exist, which are less well known, or at present unsuspected. A detailed analysis of the interactions between technology and medicine is needed, and when this is carried out Ramelli's book will be of great importance.

The present edition of it can be awarded high praise as an outstanding, scholarly contribution to the history of technology and a masterpiece of publishing.

MARVIN ROSEN, GERALD R. CLARK and MARVIN S. KIVITZ (editors), *The history of mental retardation. Collected papers*, 2 vols., Baltimore, Md., and London, University Park Press, 1976, 8vo, pp. xxiv, 400, and ix, 453, £18.50.

Wishing to learn from the lessons of history in dealing with a deviant and disabled population, the authors have collected together papers which relate directly with present-day problems still unsolved. Others illustrate marked changes in attitudes. These old articles humble, intrigue and stimulate, and their presentation here is also to inspire others to commute by further study the raw materials they represent.