

## EDITORIAL

The rewards to be obtained from the development of a commercially successful secondary battery with greater specific output than is available from the lead-acid, nickel-iron and nickel-cadmium batteries which have been familiar articles of commerce for many years has long been apparent. The mounting pressures for reduction of atmospheric pollution and the problems raised by the energy crisis have caused these rewards to become even greater. It is no surprise therefore that the present decade has seen an unprecedented activity in battery research and development. Many systems have been investigated, or re-investigated, but some of the initial optimism which led to forecasts of new batteries being commercially available this year has now faded and it is generally accepted that the lead-acid battery will continue to play the leading part in the secondary battery field for the next ten years, and some tipsters raise this figure to twenty years.

The present time is therefore appropriate to review the progress made in the science and technology of the lead-acid battery during approximately the last twenty five years (the several editions of Vinal's classic book *Storage Batteries* published in 1924 to 1955 cover the earlier period of development) to obtain perhaps some insight into the reasons for its outstanding success, and possibly also to learn some lessons which may be applied to, and help with, the development of its potential new rivals.

In recent times the lead-acid battery has not only maintained its predominant position, but progress in its development has widened its field of application so what was once a rather general purpose battery can now be produced in special forms for particular applications. At the same time because its present pre-eminent position appears unlikely to be challenged for some years to come and for economic reasons, as well as a result of the energy crisis, production of lead-acid batteries is being started in many parts of the world which previously had little need of batteries or relied on imports of them. Consequently there is a need for information on their production in a concise, readily available, form.

It is hoped that this issue of the Journal will be of help in meeting these several requirements.

D. H. COLLINS