

sion of the results obtained. The booklet is interspersed with illustrations, and concludes with a comparison of results of tests of different test pieces.

Efficiency in the Use of Oil Fuel.—A handbook for boiler plant and locomotive engineers. By J. M. Wadsworth, of the Bureau of Mines, Department of the Interior. The pamphlet is a handbook of information on oil fuel, giving the results of investigations made by the department in co-operation with the United States Fuel Administration. It is shown how fuel consumption may be reduced in the operation of plants. Tables and formulae are presented, and the method of developing these can be obtained by consulting the authority quoted.

Report on the Clay Resources of Southern Saskatchewan.—The Department of Mines, Ottawa, have issued a report on the clay resources of southern Saskatchewan, prepared by N. B. Davis, assistant engineer, Ceramic Division. It is based on recent field work and laboratory tests, and is a further contribution to our knowledge of the economic minerals of Canada. The report contains information regarding the geological position, locality and availability of each deposit, and a scientific analysis of each, together with its adaptability for use in the clay-working industry.

Directory of the American Association of Engineers.—The American Association of Engineers, 29 South La Salle Street, Chicago, have recently issued a revised and comprehensive directory of its members. The book contains 190 pages, and in alphabetical order gives the address and a brief synopsis of the experience of each member. The constitution and by-laws of the organization are embodied in the publication, and a resumé is included of the objects and scope of the association.

British Engineers' Association Official Directory.—This association is composed of manufacturing engineers, the object of which is to provide a central national organization in the engineering industry for the promotion of the interests of British manufacturing engineers and British engineers generally. This directory of 420 pages contains a list of members, arranged alphabetically, and also as to their product. It is printed in three languages, English, French and Russian, and will be found exceedingly useful to those in Canada who may desire to purchase British engineering plant or machinery, or who are interested in British connections generally.

METHODS OF MEASURING TEMPERATURE

Reviewed by Prof. G. A. Guess

By Ezer Griffiths. Chas. Griffin & Co., publishers. 8/6 net, 176 pages, illustrated, 81 figures from photographs and drawings.

This volume is a complete treatise, a monograph on temperature measurement. It deals with the subject thoroughly. The book is written rather for the physicist than for the engineer, and presumes a previous knowledge of the subject. The engineer interested in temperature measurement will find the principles underlying the various types of pyrometers discussed and methods given for calibration. If he is interested in extreme accuracy in temperature measurement he will find this book particularly useful.

The very complete bibliography at the end of each chapter is a valuable addition to the book.

TOWN PLANNING IN RELATION TO PUBLIC SAFETY*

By Thomas Adams

DANGER to human life in city streets is not caused by the growth of the cities, but by the haphazard and unregulated manner in which that growth takes place. Canadian cities are not congested, as a whole, but have badly congested spots; their streets are more than adequate in their total capacity for traffic circulation, but they are not of adequate width in the right place. The fault lies in the lack of proper distribution and control of the density of building, on the one hand, and in the lack of scientific planning of the street system to secure the best means of circulation of the traffic, on the other hand.

In a properly planned city, consideration has to be given not only to the needs of through circulation of traffic between its different parts, but also to the building density on the lots fronting on the streets, and both these things have to be regulated together, or planning will prove ineffective as a means of preventing congestion. Many European cities with comparatively narrow streets have better and safer means of circulation for traffic than some Canadian cities, because of the lower density and lesser height of buildings. City planning must govern, among other things, the relation between the width of street and the height of buildings thereon, and the ideal to aim at, however difficult of attainment it may appear to be, is that the height of a building should correspond to the width between its front wall and the front wall of the building facing it. Until we can reach that seemingly difficult standard we shall not be able to obtain the space in our streets necessary to overcome congestion of traffic and its consequent dangers to life and loss of valuable time to its citizens.

Three Problems of City Planning

Three distinct but related problems, each having a bearing on public safety, have to be dealt with in our city planning schemes. There are:—

1. **Regional Planning.**—The problem of regulating new development in open or partially built-upon lands within and surrounding the city, including the control of all new forms of growth and the planning of a comprehensive arterial highway system for the purpose of securing adequate means of access and egress for traffic to and from the city and the surrounding country.

2. **City Re-planning.**—The problem of re-planning areas already built upon within the city, where changes in the character of buildings or in the use to which they are put, are taking, or are likely to take, place, including adjustment, as far as practicable, of this change of character to the existing street system.

3. **Reconstruction.**—The problem of remodelling the street system to suit the existing building densities and traffic where these have already become congested and where buildings are permanent in character or unlikely to be reconstructed in the near future.

Some of the Objects to be Sought in Schemes

In planning, re-planning and re-constructing cities an effort should be made, as far as practicable, to carry out the following, among other, objects in regard to streets, buildings and open spaces for recreation:—

Streets.—Heavy-traffic streets should be wide, and those which carry street railways should not be less than

*Abstracted from article in "Conservation of Life."