#### PITMAN'S BOOKS ON ENGINEERING.

A SMALL BOOK ON ELECTRIC MOTORS. By W. PERREN MAYCOCK, M.I.E.E. In crown 8vo., with 128 illustrations. 5/-net,

WIRELESS TELEGRAPHY. By W. H. MARCHANT. A Practical Manual for Students. In crown 8vo., with 154 illustrations. 6/- net

BLECTRICAL INSTRUMENTS IN THEORY AND PRACTICE. By W. H. F. MURDOCH, B.Sc., & V. A. OSCHWALD, B.A. 126 net.

ELECTRIC TRACTION By A. T. DOVER, A.M.I.E.E., A.Amer.I.E.E. 21/- net.

ALTERNATING CURRENT WORK. By W. PERREN MAYCOCK, M.I.E.E. 7/6 net.

ENGINEERING DRAUGHTSMEN'S WORK. Hints to Beginners in Drawing Offices. By a Practical Draughtsman. With 80 illustrations. 2/6 net.

THE PRINCIPLES OF FITTING. For Engineers and Students. By J. G. HORNER, A.M.I.M.E. With 300 illustrations. 6/- net.

METAL TURNING. By the same author. For Apprentices and Students. Illustrated with 101 Engravings, and containing a glossary of the common terms employed in Patternmaking, etc. 4/- net.

PACTICAL SHEET
METALWORK By E. A.
AM.I.M.E. Second Edition,
With 450 illustrations. 7/6 net.

Complete List on Application. SIR ISAAC PITMAN & SONS, LTD., 1 Amen Corner, London, E.C. 4.

# **CANADIAN EXPEDITIONARY**

### FORCE

Wives and Families of Canadian Officers and Men can obtain the latest information as to the Best and Quickest Routes to all parts of Canada from-

### CANADIAN PACIFIC RAILWAY,

62-65, Charing Cross, S.W.1; 67-68, King William Street, LONDON, E.C.4.

6, Water Street, LIVERPOOL; f, Mount Street, MANCHESTER; 4, Victoria Square, BIRM-INGHAM; 18, St. Augustine's Parade, BRIS-TOL; 120, St. Vincent Street, GLASGOW; 41, Victoria Street, BELFAST; or Local Agents everywhere.

## FARMS AND FARMING

8

More Dairy Cows.

Realising the importance of the dairy industry the Manitoba Department of Agriculture is opening a very vigorous and popular campaign to increase the dairy output of the Province. This is a campaign to increase both number and quality of dairy herds throughout the Province. During the winter, Winnipeg was almost milkless at times, and as Europe must be supplied for several years to come the question of dairy products is a serious problem. As our present imported dariy products will go to Europe, this deficiency will have to be made up from within.

With the natural advantages of a good market and free access to mill feeds Manitoba should in a few years become an exporter instead of an importer of dairy products. Dairying will be a source of a steady and large income to the farmers of the Province, and add greatly to the general prosperity.

Painting Farm Buildings.

\*

It is just as important to save money as to make it, and yet scores of farmers will spend thousands of dollars on farm buildings and never touch them with paint. It is estimated that farm buildings that are not painted nor repaired extensively depreciate from two to four per cent. per year.

It is a fact conceded by everyone that painting more than pays for itself in lengthening the life of wood, to say nothing of the added appearance. It gives the farmer a pride in his farm and himself and increases

the value of his farm.

A good paint should last for six years, while a cheaper paint, which costs as much to apply, would have to be renewed sooner. It is cheaper in the end to try good paint. Now that the price of lumber is so high painting becomes still more important. This does not apply to farm buildings alone, but waggons, sleighs, etc., that are so high priced now, should never be allowed to get in the state that they need paint badly. Remember, paint is sufficiently a preservative to more than pay for itself.

Lost \$213,978,000.

This is the sum that the Dominion Farmers' Circular No. 55 estimates as the annual loss to the Canadian Farmers through exposure, leaching and heating of manure. This is more than the taxes paid by farm lands, 10 per cent. more than the value of our 1914 wheat crop, 25 per cent. more than our 1914 oat crop, and would counterbalance Canada's adverse trade balance per annum.

This means every load of manure loses \$1.00 from time of making till application, due to waste of liquid manure through bad floors, improper housing and heating. This loss is serious enough to demand attention; it is not good business and is a loss both to

the individual and the state.

There are several ways of at least lowering this enormous loss. Saving of the liquid manure by tight wooden or concrete floors, and sufficient litter to absorb the liquid. This is very rich in nitrogen and potash, both very important and costly fertilizers. Proper storage in a concrete basin and roof. to figure.

The floor sloping back so the liquid cannot run away, and roof to keep rain and snow from leaching the manure. Horse manure should not be stored in any amount separately as it heats and nitrogen escapes as ammonia. It should if possible be mixed with cow manure, which does not heat as readily. The best method is to apply when fresh, but in some districts owing to very steep slopes it is not advisable to do so in the winter.

#### New Element in Farming.

The Veterans' Mechanical Farming Company composed of returned soldiers is introducing a new element into farming in Saskatchewan. The company will commence operations in Weyburn district with four tractors and a travelling workshop at each of eleven bases.

One can usually judge a farmer by the hay

J. P. Sackville, B.S.A., has been appointed Associate Professor of Animal Husbandry at the Ontario Agricultural College. H. M. King, B.S.A., who has been on the staff of the Animal Husbandry Department, has resigned to accept a position in British Columbia.

Mr. R. C. Henders, M.P., has been unani mously elected President of the Manitoba Grain Growers' Association.

Ripe native raspberries were sold at Vancouver at Christmas. According to the "Free Press Prairie Farmer," this was an experiment which has proved a success. The berries were placed in cold storage in the fall when they ripened, and it appears as though the experiment will be continued in the

I believe, if we considered the ultimate object of cultivating land we would put more energy as well as wisdom into our attempts. That ultimate object is not merely more money from the crop now, but the ministering to civilisation just as sincerely as a man does who sacrifices himself to win this war that civilization may not perish.-Dr. J. W. ROBERTSON.

Expressed in terms of wheat, the value of the field crops destroyed annually in Canada by insect pests is sufficient to feed our entire population for a year.—" Conservation."

It was estimated in 1907, after a full enquiry, that the annual average loss caused in Great Britain by each rat was \$1.80, in France \$1, and in Denmark \$1.20.-" Con-

No less than 2,717 public and high school boys worked on Ontario farms last year.—
"Conservation."

A man who does not stop to figure on whether or not his business is paying, very presently does not have any business on which