

Mine Rescue Apparatus in More General Use Government Should Place Such Apparatus on the Free List

Canadian coal mines have had a rather high death rate from accidents. In mining, perhaps more than in any other work, "accidents will happen," but that fact should not act as a hindrance to taking every possible precaution to prevent them. In the last two years, Canadian coal mine operators have expended considerable sums of money in establishing mine rescue stations and in equipping them with the latest and best apparatus for guarding against loss of life incident to mine fires and explosions. This lifesaving apparatus is not manufactured in Canada and, when imported, duty is collected upon it. This duty is refunded if the importer makes application in the proper form, but putting these articles on the free list would be more convenient and advantageous, particularly as business men have an antipathy to going through the required form to secure the refund.

The official figures showing the refunds of duty made on this account indicate the increasing interest being taken in mine rescue work in Canada. In the fiscal year ending March 31, 1910, no refunds were made, in 1911 they amounted to \$267, and in 1912 to \$4,580.14. The installation of equipment to save lives in mine accidents is a laudable work and deserves every possible encouragement.

Forest Conservation in Southern India

Southern India is doing much in the way of forest conservation according to a report on the commerce and development of that portion of the British possession made by Consul Jose de Olivares of Madras. This report says that the development of forest conservation within the last 25 years has been marvelous. From 10,000 acres the area of reserved lands under control of the forest department had increased to 20,030 square miles, in 1910-11, of which 18,769 square miles constituted actual reserved forests. During the same period revenue from forests has grown from \$389,200 to \$1,223,366 and expenditures on conservation and development from \$291,900 to \$1,043,884. In 1910-11, the net profits from the working of the forests amounted to \$179,482. The department devotes practically its total receipts to the improvement of the forests.

Among the products of the Madras forests are such commercial woods as teak, rosewood, ebony, mahogany, sandalwood, cedar, pine, bamboo, erool, muthu, jambae and orupoo. The timber removed from the forests in 1910-11 amounted to 3,041,426 cubic feet and of fuel extracted 22,157,061 cubic feet. There were cut also 89,216,767 bamboos. In addition the forests yielded minor products, including grass, to the value of \$431,238.

Facts and Figures for Farmers

The yearly profit from your business is the difference between the cost of production and the value of the output. To increase your net returns you must widen the margin between cost and selling value.

Large implements pay in so far as they reduce the cost of production without impairing the efficiency of the work done.

Thorough cultivation pays in so far as the resultant crop values are relatively greater than the increased cost of production.

At the Central Experimental Farm in 1911, there was spent on each acre of land under crop, over \$14 (including rent, manure, seed, twine and use of machinery) in order to get maximum net returns. Are you spending enough on the cultivation of your crops for best results?

Cost per Acre of Some Operations

Again, count the various operations required to prepare for and harvest a crop of grain, and calculate what larger implements would save you on a 10 acre field. Would it pay?

1.—Ploughing with single plough.....	\$2.00
Ploughing with two-furrow gang.....	1.25
2.—Discing with small disc (3 cuts necessary).....	0.90
Discing with large disc (2 cuts necessary).....	0.80
Discing with double cut-away disc (1 cut necessary).....	0.45
3.—Seeding with two-horse seeder.....	0.22
Seeding with three-horse seeder.....	0.18
4.—Cutting grain with 6-ft. binder.....	0.28
Cutting grain with 8-ft. binder.....	0.20
5.—Cutting hay with 4½ ft. cutting bar.....	0.31
Cutting hay with 6-ft. cutting bar.....	0.20
Cutting hay with 7-ft. cutting bar.....	0.18
6.—Cultivating roots with single cultivator (once over).....	0.62
Cultivating roots with double cultivator (once over).....	0.45
7.—Harrowing with two-horse harrow.....	0.15
Harrowing with three-horse harrow.....	0.12

Jack Pine for Pulp

Canada's Jack Pine Areas will Assume a New Importance

That jack pine pulp is entirely suitable for the manufacture of news print paper has been clearly demonstrated at the U.S. Forest Products laboratory, at Wausau, Wis., where experiments have been conducted in co-operation with the American Paper and Pulp Association. The rapid increase in the price of spruce makes the discovery of a satisfactory substitute of great im-

portance at this time. From 1900 to 1909, the price of spruce increased from \$4.83 to \$9.32, or 93 per cent. In Eastern Canada are large areas of non-agricultural land where the old forest has been cut over and burned over repeatedly, until the more valuable species have been driven out and jack pine constitutes a heavy percentage of the stand. These areas have, in general, been considered as waste lands. It now appears, however, that such lands will take on a new importance and will amply justify the expenditure of money for protection from future fires in view of the certainty that large revenues may be secured either now or later, from the utilization of the jack pine for the manufacture of pulp. The importance of this timber will necessarily increase with the exhaustion of the supplies of other species within reasonable distances of the markets.

Sea-Fisheries of Eastern Canada

The Commission of Conservation has just issued a report on the "Sea-Fisheries of Eastern Canada" that is of more than passing interest to all who are interested in the fisheries of Canada. The volume, which is bound in cloth and illustrated in colors, consists of a report of the proceedings of the Committee of the Commission on Fisheries, Game and Fur-bearing animals, which was held in Ottawa on June 4th and 5th last. At this meeting, a number of experts delivered addresses on different subjects relating to fisheries, and these were thoroughly discussed by the members of the Committee.

The following is a list of the addresses which the report contains:—

- Chairman's Address, by Dr. C. C. Jones;
- Whitefish of the Great Lakes, by M. J. Patton, M.A.;
- Conservation of the Oyster, by Joseph Stafford, M.A., Ph.D.;
- The Lobster Fishery of Canada, by W. A. Found;
- Oyster Fishery of Prince Edward Island, by Hon. J. A. Matheson, K.C.;
- Needs of the Fisheries of Nova Scotia, by Dr. Howard Murray;
- Sea-Fisheries of Eastern Canada, by J. J. Cowie;
- The Shark Fishery of Canada, by E. E. Prince, LL.D.;
- Fish Culture in Canada, by W. A. Found;

The appendices contain a number of useful statistical tables respecting fisheries, especially whitefish and shad.

FOREST CONDITIONS OF NOVA SCOTIA

"Forest Conditions of Nova Scotia" is the title of the latest report issued by the Commission of Conservation. It is based on information gathered from a reconnaissance forest survey of the Province, made by Dr. B. E. Crompton, assisted by Dr. C. D. Howe and Mr. J. H. White. The work is unique in so far as Canada is concerned, and will doubtless prove of value and interest to those concerned with Canadian forestry.

Heat and Power from Sawdust

Utilizing a Product that has Hitherto Been Wasted

An application has been made to the city of Vancouver by ten prominent saw-mill owners for a franchise to sell steam heat, and electric light and power generated by burning saw-mill refuse. The application came immediately after the report of a committee of the City Council dealing with the smoke and saw-dust nuisance due to burning mill refuse in the city.

It is proposed to install plants for burning the refuse at each of the various mills, thus permitting a wide zone of distribution and enabling steam heat to be furnished at much lower pressure than from one central plant. The intention is to establish an auxiliary oil-burning apparatus at each mill for use in case of accident to the main plant and also whenever the supply of refuse runs low.

The problem of disposing of refuse without a loss has confronted mill owners for years and with coal selling at \$7.50 a ton retail in Vancouver, it is thought that this scheme for utilizing it will prove successful. It is estimated that these mills have 114,000 cords of refuse and sawdust to burn each year. The approximate cost of installing each burner is placed at \$30,000, and the annual operating cost at \$5,000.

Harmonizing Mining Statistics

Greater Co-operation between Dominion and Provinces Would be an Advantage

While Canadian statistics respecting minerals are more accurate and complete than those respecting some other resources, an improvement in their compilation could be made by better co-operation between the Provinces and the Dominion. At the present time, statistics are collected by the several Provincial Departments of Mines and by the Federal Mines Branch. Unfortunately, there is a lack of uniformity in the schedules of the various Provinces and, the Provinces do not require the same information from the mine owners as the Dominion. Consequently, the statistics collected are not uniform in character and cannot be compared on a common basis.

The Federal Mines Branch secures statistics from all mine operators in Canada, but the returns are made voluntarily and are, therefore, not as complete as if they were required by law.

If a conference of the Federal Mines Branch and of the various provincial Departments of Mines were called, it is possible that a uniform system for all the provinces could be adopted by mutual consent. Such an arrangement would permit of comprehensive national mining statistics and would remove the present anomalies and apparent contradictions.