

By-product Coking of Coal

Its Great Development, and its Value in Peace and War

The great development of by-product coking of coal in Germany has assured her an uninterrupted and adequate supply of modern explosives. The value of this development may be measured by the importance of munitions in deciding the outcome of the war.

In the past the whole world has been dependent upon Germany for dye-stuffs and other substances prepared from the derivatives of coal tar. Thus both in peace and war Germany possessed a great industrial advantage over other nations.

British plants are now being established to cope with the demand for picric acid and trinitro-toluene, while the United States is also profiting by the lesson learned from the war. Before the war there was but one company in the United States producing distillation products on a large scale, while the latest statistics show that over 8,000,000 tons of coal were carbonized in by-product ovens last year, yielding over 4,800,000 gallons of benzol and 1,300,000 gallons of toluol. The full annual capacity of the benzol recovery plants now in operation and in course of construction is estimated to exceed 20,000,000 gallons.

Although Canada has the third largest reserves of coal in the world, beehive coke ovens, wasting the by-products, are still used in some sections and not a single additional by-product oven has been installed since the war. The war should teach Canada the obvious lesson that, whether for war or peace, it is criminal folly to neglect the utmost utilization of those resources which are lying latent in her bounteous supplies of bituminous coal.—W. J. D.

Accumulations of empty boxes and barrels should not be permitted.

Premises should be kept free from rubbish inside and out. Rubbish heaps are dangerous.

A Danish invention, recently announced, consists of the preparation of birch whereby it can be used to replace mahogany, teak and nut-tree, possessing also the lasting qualities of these expensive woods.

School teachers should warn their pupils against rushing suddenly out into the roadway when released from school. Vehicle drivers as a rule are careful, but the pupils must also exercise caution to avoid accidents.

Daylight in Farm Buildings

One of the commonest mistakes made in planning Canadian farm buildings is the small number of windows in the stables. In the placing of the buildings, in their relation to one another or to other surroundings, care may have been taken, but in so many instances there has been an utter disregard of the proper lighting of the stables. Many fine barns and stables, well painted and of excellent outward appearance, are



Cut No. 29.

A convenient, well built barn with the most up-to-date fixtures, shut almost in darkness.



Cut No. 35.

A well light-ed, as well as well built, barn, healthy and well ventilated.

miserably lighted and are dark and gloomy within.

Prevention is better than cure, and light is the cheapest preventive measure known against disease. Dark and dingy stables are much more favourable for the development and spread of disease than a stable flooded with light. In working it is both difficult and unpleasant to grope one's way around in a stable which is dark when the sun is shining. The work can be done better, in less time and more cheerfully in a well-lighted stable than in one where at the brightest time of the day a dismal twilight reigns. For the sake of comfort and health, which means, incidentally, greater profits, let us have more light in our farm buildings.—F. C. N.

The Cost of Fires

Canada Pays Dearly for Indifference and Carelessness with Fire

The Dominion Superintendent of Insurance has issued an abstract report of fire insurance business in Canada for 1915. The report gives an interesting insight into what Canada is paying as the price of her indifference and carelessness with fire.

departments, extra water-supply, private fire protection, etc.

That much the greater portion of this loss may be avoided is shown by a report of the fire chief of Vancouver, B.C., for March, covering the causes of fires in the cases of the 36 alarms responded to by the fire department in that city, as follows: Children playing with matches, 2; lamp thrown on stove, 1; chimney fires, 9; overheated stoves and furnaces, 3; unknown origin, 5; electric heater left turned on, 1; smoke scare, 1; backfire in carburettor, 1; grease on stove, 1; defective chimney, 1; hot ashes, 2; spontaneous combustion, 1; gasoline explosion, 1; electrical origin, 2; overheated coal oil stove, 2; defective fire-place, 1; overheated chimney, 1; smoking in bed, 1.

Canada cannot afford to continue this sacrifice of money, materials and labour, especially when every effort should be made to husband her resources.

White Pine Blister Rust

Energetic Action being Taken to Stamp out the Pest

An outbreak of the white pine blister rust has been discovered in the Niagara peninsula of Ontario. The Dominion Botanist and the provincial Department of Lands and Forests are co-operating in the work of detecting and eradicating this pest, which, if allowed to spread, will cause enormous loss to the country. E. J. Zavitz, provincial forester, is in charge of the field work, assisted by several inspectors.

In the United States, the situation has become very serious, the infestation having already been discovered in the New England States, and in New York and Pennsylvania. A federal and state campaign is being waged to prevent the further spread of the disease.

The white pine blister rust is a disease very destructive of all white pines. Ninety per cent of the infections came from a single German nursery, but further danger from this source has been averted by a quarantine against all shipments of five-needle pines from Europe. The U. S. Department of Agriculture, in co-operation with state Horticultural Boards, is now taking steps to prevent the spread of the disease to the western states. While the attacks of the rust have thus far been confined chiefly to the white pine of the east, it is known to be an enemy also of the western white pine and the sugar pine.

The importance of the white pine in Canada demands that all necessary support be given the federal and provincial authorities in their defensive campaign against this destructive enemy of one of our most important timber trees.—C. L.

In 1915 Canada had an approximate fire loss of \$15,500,000. Fire insurance companies paid out for fire losses \$14,130,208, or approximately \$1,500,000 less than the fire loss. The owners of destroyed property consequently had to bear the latter loss.

Fire insurance companies collected from the people in premiums \$26,530,293, which, added to the margin of \$1,500,000, gives an approximate total of \$28,000,000. This latter figure represents only the actual cash outlay as represented by insurance protection, and value of property consumed in excess of insurance. To this must be added the loss in disruption of business, damage through hasty removal of property, the expense of upkeep of fire