

Her animal industry will be an increasing support to her chemical industry. The packing houses produce hides, and the hides require chrome compounds to be obtained from our deposits of chromite, and tanning extracts derived from our oak and hemlock.

In the medical world to-day, much importance is given to the physiological effects of extracts and dried portions of certain glands from the carcasses of freshly killed animals, especially the hog. Among these are adrenalin, pancreatine, pepsin and the dried thyroid gland. These substances and others from the same sources, have great value in digestive and nervous diseases, and, as soon as the number of animals slaughtered in any one place becomes high enough these valuable and high priced medical products will be recovered and prepared in Canada. Many pharmaceutical products are made by extracting active principles and alkaloids from the roots, stems, bark and leaves of plants. These plant substances have been largely derived from the Central European nations. Quite a fair number of the same plants, shrubs and trees are indigenous to Canada. Some have been gathered here, but are of poor quality, due in great measure to lack of experience on the part of collectors. Valuable gums, resins and balsams are obtained from Canadian trees. More than thirty different commercial products can be obtained from wood by destructive distillation. Eleven plants are engaged in this business in Ontario and Quebec.

When we engage the possibilities which lie in the development of chemicals from Canadian minerals, we are in a very Tom Tiddler's ground. We have mentioned pyrites, feldspar, salt and limestone.

Chromite, a mineral containing oxide of chromium, has been mined and sold, but not worked up in Canada except as ferro chromium in blast furnace work. Its products are valuable as dyes and pig-

ments. Bright yellows and greens in various shades are obtained by chemical reactions with chromium compounds. Lead, iron and zinc, in addition to being of great metallurgical importance are the bases of numerous pigments. Canada, with her own supplies of linseed oil, should be a great paint-making country. Paint beautifies, protects and educates. The unpainted community is ugly, temporary and mentally defective. The products of our mines figure not only as sources for industrial chemicals, but as means for their manufacture. Lead resists the action of acids, but is very soft. Antimony added in small quantities to lead has the effect of making it hard enough to use for piping and containers in the handling of acid liquids. Our tile industries produce earthenware pipes and tiles for the same industries.

War conditions have contributed tremendously to the recovery of by-products from our coals; these will never be allowed to revert to the neglect they suffered before the war. Our cities and towns are now large enough to reclaim these by-products, and send them for refining to some central point.

The spring of 1917 welcomed "The Canadian Chemical Journal," a well edited monthly review of markets conditions and current topics. Its immediate absorption has been indicative of the present interest in chemical industries.

Two-fifths of the world's water power, producing heat, light and electricity; wide belts of fertile lands; great stretches of forests; mountains of minerals; these are Canadian truisms so often spoken that we scarce realize that in them destiny spells our greatness to be.

The stimulus given and the constructive effort compelled by the war must not and will not be lost to Canada. They have found a natural equipment for even greater things than the present.

