

LUMBER, PULP AND PAPER

YESTERDAY AND TO-DAY.

The "fallacy" of yesterday often becomes the "actuality" of to-day. One of the by-products of John Law's South Sea schemes of two centuries ago was the sale of stock in a company which it was claimed would turn sawdust into boards without knot or crack. An industrial concern in Van Buren, Maine, is about to turn the sawdust mills and wood refuse heaps of the Maine woods into pulp, paper, and paper boards, thus utilizing a by-product of the sawmill which, up to the present time, has been regarded as worthless.

MATCHES FROM INDIA.

It is stated that a solution to manufacturing matches of the first quality in India lies in the use of the Himalayan silver fir and spruce. The difficulty in the way of such a proposition is extraction, as the species occur at high altitudes in the Himalayas, while many of the trees are of great size. To overcome this it is probable that mechanical means of extraction, such as wire ropeways or light tramways, will have to be adopted, combined with the erection of portable split-making machines in or in the vicinity of the forests, whence the splints will be exported to central places in the plains and there made up into matches. — Family Herald.

CANADA'S GREAT PULP AND PAPER EXPORTS.

In the rapid advancement of the pulp and paper industry in Canada since 1910, when total values of exports of pulp and newsprint have leaped from \$7,000,000 to over \$43,000,000 and may reach \$60,000,000 in 1918, Canadian financiers and public leaders recognize one of the most promising avenues for overtaking part of the country's adverse trade balance, particularly in the United States.

Nearly \$80,000,000 of new capital has been invested in the Canadian pulp and paper industry during the last seven years. The value of exported newsprint paper has advanced about one thousand per cent. While some fears have been expressed that the most serious check would come through exhaustion of the timber limits, the recognition of this possibility by the mills themselves has introduced greatly improved fire guarding, and assure the adoption of more conservative woods operations in future.

As not more than 10 per cent of the total newsprint of mills in Canada is used by Canadian publishers, the main problem of all the mills is to find a profitable market for the remainder, almost 2,200 tons a day. Hitherto the United States has taken about every pound of pulp or paper that the industries could produce, and with the exhaustion of Eastern States forest supplies, this pressure upon Canadian mills is bound to become more acute.

Canadian mills have made no attempt to sell Uncle Sam anything but newsprint, content to take the big share of the home market in the finer grades, such as book and writing papers. The latter trade has been turned toward Canadian mills more and more since British competition was made more difficult from shipping interference of recent years.

One of the great hopes of the Canadian pulp and paper trade is that the peace arrangements will include a preferential tariff scheme allowing them a privileged entry to the United Kingdom, Australia, South Africa and elsewhere. Australia makes very little paper of her own and imports heavily from almost every European country as well as Canada and the United States. Scandinavian factories, and those of Holland and Germany enjoyed a heavy share of Australian trade for many years past, while Canada received a trifling total.

South Africa offers a market chiefly in wrapping and bag papers, book papers and cheap bonds, which have hitherto been supplied from England cheaper than the Canadian mills could figure. In India only the most elementary grades of paper are used and have been brought from Germany, Australia, Belgium and England.

In the market of the United Kingdom, Canada's paper manufactures as well as the raw materials of wood pulp have been heavily outclassed by Scandinavia. For example, in 1913 Sweden sold the United Kingdom \$11,500,000 and Norway \$6,000,000 worth of wood pulp against Canada's \$900,000 worth. In paper for printing or writing Canada's sales to John Bull amounted to about \$600,000, while the Scandinavian countries took total orders of over \$6,000,000.

PAPER IN SURGERY.

The increasing scarcity of cotton and linen for surgical dressings, compresses and bandages has resulted in experiments with a paper pulp fibre tissue substitute. An Oregon manufacturer has specially prepared a ton of such tissue which is now on its way to a noted surgeon in the war zone. If the experiments with this paper are successful it will result in an enormous saving in tonnage and shipping costs, since it could be manufactured in any quantities in France. — Textile World Journal.

USE OF THE WALNUT-TREE.

Most of the oldest walnut-trees in England were originally planted, not for the sake of the fruit, but because the wood makes the best gunstocks, being light, strong, and not easily warped. The largest walnut-grove in England is at Kempston, near Bedford. It contained at first three hundred and sixty-five trees, one for each day of the year, which were planted about a century ago by the then owner of the farm, who remarked that wars would never cease and the timber would always be wanted for gunstocks. — Family Herald.

WOOD CELLULOSE FOR EXPLOSIVES.

The successful use for the first time in the United States of wood cellulose as a substitute for cotton in the manufacture of explosives, a scientific achievement that may have far-reaching results, was announced at the convention of the American Paper and Pulp Association in New York. The importance of this discovery is indicated by the fact that had German scientists not made a similar discovery under stress of circumstances the Germans to-day probably would be without means of producing explosives in necessary quantities, since cotton imports have been shut off. The chemist making the discovery was W. F. Byron Baker, of Lock Haven, Conn.

FUEL VALUE OF WOOD.

Persons who plan to relieve the coal shortage this winter by burning wood can figure, roughly speaking, that two pounds of seasoned wood have a fuel value equal to one pound of coal, according to experts of the Forest Service. While different kinds of wood have different fuel values, the foresters say that in general the greater the dry weight of a non-resinous wood, the more heat it will give out when burned.

For such species as hickory, oak, beech, birch, hard maple, ash, locust, longleaf pine or cherry, which have comparatively high fuel values, one cord, weighing about 4,000 pounds, is required to equal one ton of coal.

It takes a cord and a half of shortleaf pine, hemlock, red gum, Douglas fir, sycamore, or soft maple, which weighs about 3,000 pounds a cord, to equal a ton of coal, while for cedar, redwood, catalpa, Norway pine, cypress, basswood, spruce, and white pine, two cords, weighing about 2,000 pound each, are required.

Where wood is to be burned in a stove or furnace intended for coal, it will be found desirable, the foresters say, to cover the grate partly with sheet iron or fire brick, in order to reduce the draught. If this is not done the wood is wasted by being consumed too fast, and makes a very hot fire which in a furnace may damage the fire box.

It is pointed out, however, that heat value is not the only test of usefulness in fuel wood and since 95 per cent of all wood used for fuel is consumed for domestic purposes, largely in farm houses, such factors as rapidity of burning and ease of lighting are important. Each section of the country has its favored woods and these are said to be, in general, the right ones to use. Hickory, of the non-resinous woods, has the highest fuel value per unit volume of wood, and has other advantages. It burns evenly, and, as housewives say, holds the heat. The oaks come next, followed by beech, birch, and maple. The white pines have a relatively low heat value per unit volume, but have other advantages. They ignite readily and give out a quick hot flame, but one that soon dies down. This makes them favorites with rural housekeepers as a summer wood, because they are particularly adapted for hot days in the kitchen. The same is true of gray birch, or "white birch," as it is often called, in the regions in which it abounds. With the resinous pines a drawback is their oily black smoke.

FOOLSCAP PAPER.

The fact that the British government, on economy bent, has discontinued the use of foolscap paper for official correspondence, has called forth a mild discussion as to the origin of the name, says the Christian Science Monitor. Most authorities are agreed that it is due to the watermark, a fool's cap, with which this size of paper was adorned, but when it comes to the question of who first introduced it, authorities differ. Some say it came from Germany, and point to the fact that German paper, bearing a foolscap watermark, and dating from 1479, was exhibited in the Caxton exhibition of 1877. Others credit the claims of Sir John Spielmann, who had paper mills at Dartford, towards the close of the sixteenth century. And yet others lay it all to an order made by the rump parliament, which enjoined that the royal arms in the watermark be removed from the official paper of the house, and "a fool's cap and bells substituted." So, after all, one takes one's choice.

PENCIL STUBS.

What do you do with your pencil when it has worn down to say, four inches? You probably throw it over your left shoulder into the yawning waste basket.

Yet, have you ever thought of the number of pencils you thus dispose of in a year? In this manner the people of this country alone annually waste several hundred thousands of good dollars, as well as great quantities of the materials — at present none too plentiful — of which pencils are made. A wood most satisfactory for pencils, and, consequently, most frequently used, is a kind of Mexican cedar. Owing to the existing conditions in Mexico this wood is not so easily obtained as formerly. The war has cut off the supply of graphite from the mines of Germany and Lorraine, as well as the great number of finished pencils formerly furnished by Germany and Austria.

Several methods of reducing the pencil waste are in practical use. One is that of removing the wood of the pencil stub and using the remaining lead in the metal "pencils" now in general use. A pencil may be obtained which has three inches or so of a more common wood attached by a metal band to one end, representing the stub generally wasted.

One banking house in the financial district has been able to save more than a third of its pencil bills by having its employees use a metal top which is placed on the end of the pencil when it can no longer be conveniently handled. — The Wall Street Journal.

WOODLANDS SECTION PULP AND PAPER ASSOCIATION.

Of great general interest is the recent organization of a woodlands section of the Canadian Pulp and Paper Association. This section has for its objects the stimulation of interest in more economical and efficient methods of protection and utilization of raw materials for pulp, paper and lumber industries; the providing of means for the interchange of ideas among its members, and the encouragement of investigation of woodlands problems.

It will concern itself definitely with the production of the forest crop, just as the technical section of the same association concerns itself with the manufacture or utilization of the crop, after it is produced. This is a notable step in advance, since it involves definite recognition, through specific action on the part of the private interests most directly affected, that the forest is a crop which may be reproduced time after time upon the same soil; that the rate of production of this crop may be stimulated or retarded, depending upon whether the methods of cutting are favorable or unfavorable; that the determination of such methods may be facilitated through investigation, co-operation and free discussion; and, finally, that such action is made necessary by the depletion of the most accessible supplies of pulpwood over large areas in all of the provinces of eastern Canada. It is to be anticipated that the Commission of Conservation will be able to secure valuable co-operation from the new section, in connection with the continuation of Dr. C. D. Howe's investigation of conditions on cut-over pulpwood lands in Quebec.