

THE QUESTION OF FOREST SUPPLIES.

The following paper is by Franklyn B. Hough, Ph. D., author of "The Elements of Forestry," etc.:-

A matter of serious importance with every one engaged in dealing in any material, or in working or using it, is that he should know as to how extensive is the supply, the probability of its maintenance, and the possibilities of its renewal. In the case of the minerals and the metals, although there are instances of local exhaustion, the amount produced has never yet failed to meet the growing demands of commerce and the arts; and although some of them are being replaced by any process of nature, when one taken, we seldom or never hear of any anxieties expressed, that a time will ever come when they will be entirely gone, and when the world must get along without them. Perhaps some exception to this statement might be made, in respect to the theories of some economists, who have estimated upon the durability of coal beds, and the like; and a little may be going on in the way of restoration, from the deposits of mineral waters, etc., but without any exception worth noticing. The statement is true, that we are using the supplies that were created before man had existence, and which after some thousand years still appear sufficient for human wants.

With the commodities in use from vegetable growth, although the natural supplies may in some cases appear to be abundant, and to some who reason only from what comes within the horizon of their own personal observation, they may seem to be inexhaustible, there is no word in our language that has been more abused than this; and where accepted as literally true, there is none that is more liable to lead to dangerous results.

Limiting our thoughts for the present to the question of timber supply, we will consider the facts as every one must admit them, and see as to what conclusions they lead us.

At the time when American colonization began, by the English in our present Atlantic states, and by the French in Canada, the importance of the woodlands in the public economy was already beginning to be felt in Europe, and traces of this may be found in the records of that period. Sir William Penn, in the very beginning, appears to have realized this, when he inserted the provision in a law, two hundred years ago, requiring that five acres in every hundred should be retained in woodland; although it was not, so far as we know, made a condition in any of his conveyances of land.

In various New England patents, trees fit for use in the Royal Navy were expressly reserved from cutting, and commissions were issued to agents authorized to look after these reservations, and supply from them the timber needed for public use. A war in Europe having cut off the supplies of tar and other naval stores from the Baltic ports, efforts were made to obtain these materials from our northern forests, before the wealth of southern pines in these resources had become known, and before the fact had been proved that none of our northern pines can, in their climate, be depended upon for yielding these commodities in any profitable degree.

While the commission appointed under Colbert for studying the forestry question in Canada was engaged in preparing the Ordinance of Waters and Forests, of 1669, the French governors in Canada were instructed to except the valuable timber of that country in their grants of land, evidently regarding it probable that it might be needed for home government.

These measures indicate that from our beginning the forests of America have been looked upon as necessary for supplying the wants of Europe, and not a year has since passed (excepting as our ports may have been closed by an embargo or a war) without there being large shipments of timber and lumber to meet a foreign demand which Europe could not supply.

Our consumption at home began, everywhere throughout the timbered regions, with the wanton waste of everything to make room for agriculture, and for many years with no product of value, excepting what came from the ashes.

Later along the manufacture of lumber and the development of new industries have kept pace with our progress in population and wealth, every year increasing the demand, and steadily reducing the supply, until many of the states once heavily timbered throughout, when this spoliation began, have scarcely enough left to meet their local wants for many years to come.

The amount of sawed lumber now used in the country cannot be less than 2,000,000 feet a year. This would girt the earth at the equator with a flooring of two inch plank nearly 100 feet wide. If piled in a solid mass, without a particle of vacant space, it would cover a square mile nearly 75 feet high. If we add to this estimate the amount of wood used for fuel, and for hewn timbers, shingles, cooper stock, ship-building, railroad ties, charcoal, and the thousands of industries in which this material forms a part, and often the greater part, of their stock, we shall be able to form some idea of the amount, although figures are wanting to state even approximately the general aggregate.

To this we should add what is wasted by fires, an amount which in some years, as in 1825, 1871 and 1881, was many times greater than that actually used for the supply of all our wants, and which never falls less than several millions of dollars in the best of years. We cannot overlook this waste in our estimates of the future, any more than the manufacturer can his losses, in calculating the profits of his business in a given time. - *Journal of Progress.*

WESTERN LUMBER SUPPLY

Many well informed persons are worrying about the supply of timber for the future of the now great prairie regions of the west. Many anxious fathers are wondering what their grand children will do for fuel to keep them warm and lumber to build their houses. Appalling statistics of the number of cubic inches of timber (used annually in making matches, clothespins, shoe pegs, railroad ties and other equally monstrous things until, in imagination, they see the last stunted tree down, leaving a vast treeless desert on this continent. They can see no escape from the horrible dilemma which awaits their posterity in the near future, and so are ready to mourn their being in advance of their creation. They can easily figure out the entire consumption of the coal and oil supply, following quickly the disappearance of wood, and this in turn brings a long train of painful things closing with the finale of the human family. It is useless to remind them that densely populated China and Japan and even in some of the older countries of Europe, man has been hewing away for thousands of years in a vain endeavor to exhaust the supply of woods, or cite the fact that our prairies will soon be largely timber from natural causes. Nothing less than exhibition of sufficient timber to last until millennium will drive away the nightmare which afflicts them. There are yet many thousands who are so fully impressed with the near approach of a timber famine that they are exceedingly anxious to buy all the timber land possible within their means and credit on speculation. The pine land mania the last few years originated with, and is still kept alive by, this crowd who, after investing their last dollar in pine land, were astonished to learn that there were any more acres left unoccupied anywhere, and are still more so at the fact that years bring little or no increase in the market value of timber. Hundreds of residents of the east, seeing what they regard as the final destruction of the timber from Maine to Florida in from 25 to 40 years, rushed out to Michigan, Wisconsin and Minnesota and bought up the timber and have been paying taxes and agents year after year until it is doubtful if they could realize the amount invested if neither fire, storm or trespass have interfered with it. All these are astonished that there is any other timber besides their own, which has been so carefully husbanded, left standing on the continent. Nothing could convince them that the supply of timber in Maine, Canada, New York or Pennsylvania is ample to log for another winter. Notwithstanding these regions have been throwing out hundreds of millions of feet every year for a hundred years, and similar sections of

NATIONAL PUMP WORKS.

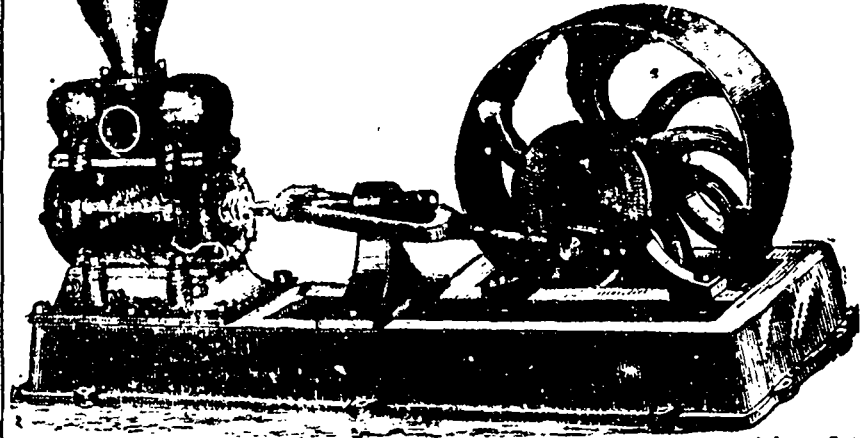
J. A. McMARTIN & CO.,

SOLE MANUFACTURERS OF THE

McMartin Patent Double and Single Acting Lift and Force Pumps

For Ships, Barges, Railroads, Factories, Mills, Cisterns, Deep Wells (non-freezing), and Hand Fire Engines, and Wind Mills for pumping water. Also geared windmills for cutting straw, roots and grinding grain for feed.

Factory and Office, 637 Craig Street, MONTREAL.



The above cut shows our Double Acting Brass-Lined Horizontal Suction and Force Pump, mounted on a Cast Iron Bed Plate with tight and loose pulleys, 4 inch face, 18 inches diameter. This is one of the most compact and powerful pumps of the kind yet cut, with Bed 4 feet long and 2 feet 2 inches, where the pulleys are placed, all being in good proportion. The pump has a guide to the piston rod, and is driven by the connection rod attached to the disc with Steel pin and wrought iron connections. The valve seats and valve are made of gun metal, and easily got at by bolts on either side of the pump, so that access to the bottom or top valve can be had without any difficulty. We make two sizes of these pumps, each adapted for mills, factories or tanneries. We make these pumps with a clutch to drive them direct, when so ordered, and dispose of the pulleys and belt. All inquiries will be promptly answered, by addressing the above, and catalogues of our pumps sent out. 20

ROBIN & SADLER

Have been awarded Three Years in succession at the Provincial and Dominion Exhibitions in Montreal, First Prizes

for
LEATHER
BELTING

BELTING

Fire-Engine
Hose, &c.

Send for Price Lists
and Discounts to the Factory

594, 596, 598, St. Joseph Street,
MONTREAL.

Europe have been doing the same thing for a thousand years, there are probably over 250,000 square miles or 123,000,000 acres of timber lands east of the Rocky Mountains in the United States, to say nothing of the incalculable amounts in the British possessions and on the Pacific slope. - *Muskey on News and Reporter.*

Reciprocity in Lumber.

The New York Sun says:- If there is any one article which should be placed on the free list, it is lumber. Everybody agrees in this with the exception of certain manufacturers of lumber in the extreme northern states. Mr. Morrison, nevertheless, proposes to retain the duty upon lumber.

The duty upon lumber is aimed at Canadian spruce and pine. No other lumber is imported from Canada, and spruce and pine cannot be imported from any other country. Such woods as are not produced within the limits of the United States are already admitted into the country free of duty. The object of this duty, then, is perfectly obvious. It is to increase, as far as possible, the profits of manufacturing lumber in Maine, Michigan, and other states in

the northern part of the country where pine and spruce for its occur similar in character to those growing beyond the Canadian boundary.

Mr. Dorshheimer of New York has introduced a bill into the house of representatives placing lumber upon the free list; it should be promptly and favorably acted upon. It is a duty Congress owes to the country.

FOR ALL AGES. - The aged, debilitated and infirm will find renewed vigor and strength by taking Burdock Blood Bitters. The young hastening to early decay will also find in this revitalizing tonic a remedy worth trying.

GOLD for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied we will send \$1 to pay for the trouble of writing us. Full particulars, direct one, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address **BRUNN & Co., Augusta, Maine.**