

THE CANADIAN LUMBERMAN

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THE timber and wood manufactures exported from the United States to Australia is officially given in the consular reports as follows:—

Timber, dressed.....	\$722,227
Other.....	64,831
Doors, sash and shutters.....	88,409
Shooks and staves.....	2,979
Total.....	\$868,446

ARKANSAS lumber is becoming a very prominent factor in the commerce of some of the western cities. The yellow pine attains great size there, and forests of it cover about 1-10th of the State. Among other valuable woods which grow plentifully and to large proportions are several varieties of oak, the black walnut, cherry, bois-d'arc, holly and maple. Besides these the cedar, beech, poplar, cypress, hickory and ash are common. Seventy different kinds of timber grow in this state.

A HEAVY deal in hemlock bark has been made by Hoyt Bros., who are now engaged in building the largest tannery in the world on Babb's Creek, near Willsboro, Pennsylvania. The location chosen is right in the heart of an almost unbroken wilderness. The equipments of the establishment will be complete, including six bark mills, which will grind a hundred cords of bark a day, and a large sawmill. The firm, to carry on this immense establishment, have made contracts for all the hemlock bark on about forty thousand acres of land.

THE white birch manufacture is attracting considerable attention in Maine. The stock is used largely for the making of spools. New mills for sawing birch are to be erected at Salem, and Scott & Hopkins, at Madrid, are using a large amount of birch in their mills, besides poplar, their stock being worked up into spools and salt boxes. This industry enables the farmers in the vicinity to make sale of timber that would otherwise have no particular value. B. F. Bachelor, of Fayette, Kennebec county, is sawing large amounts of birch, and the use of both birch and poplar in Oxford county, and other sections of the state, is becoming an important source of wealth.

THE American Ship says that in the case of eighteen timber and lumber laden vessels reported at Lloyd's as lost between the nights of October 12 and 17, not a life was lost. Some were water-logged and abandoned at sea, but the crews were taken off or otherwise saved. Of those abandoned some were afterwards picked up near land and brought to port. A water-logged vessel, laden with timber or lumber, though it may become unmanageable in severe weather, cannot sink, and the people aboard can take to the rigging, and thus have some chance for rescue. Often the vessel and cargo are saved by a passing steamer, that takes the distressed ship a tow and brings her into port.

AN IMPORTANT INVENTION.

On Saturday last, at the Alexandra Palace, London, the first public trial was made of "Wilson's Combined Low-water and Steam Safety Alarm." The operations of the apparatus are two-fold. Firstly, to give warning of the fall of water below the water line in a boiler; and, secondly, to indicate any generation of steam pressure in excess of the registered pressure. The alarm is constructed with an inner and outer cylinder, containing a float and valve spindle, safety valve, loading spiral spring to safety valve, and an alarm whistle. Should the water in the boiler be allowed to recede below the determined minimum low water line, the float immediately descends with it, causing a vacuum through which the steam passes into the alarm whistle, and so giving notice of the condition of the water in the boiler. So sensitive is the regulation of the apparatus that if as small a quantity as one quart of water is injected into the boiler the alarm at once stops and safety is restored. Again, on the other hand, should there be the slightest (half lb.) generation of steam in excess of the Government register, the pressure immediately overcomes the loading spiral spring and allows the steam to escape through the outer cylinder into the alarm whistle, thereby giving notice that too much heat is being used and fuel wasted. Simply opening the furnace door, or setting the engine in motion, is sufficient to overcome this neglect. The experiments were carried out by the inventor, and in every particular were most successful. The apparatus can be regulated and fixed to any size of boiler, marine, locomotive, or otherwise—at a very low cost. It is impossible for the valve to be in any way tampered with, as the outer casing is melted down, pegged, and sealed.

TERRA COTTA LUMBER.

One of the most important of recent practical inventions is that of the manufacture of lumber from fire clay, patented by Mr. C. C. Gilman, of Eldora, Iowa.

The process is fully described by his letters patent, from which we extract the following:—The composition consists of kaolin clay, free from grit, one part; resinous sawdust, from one to three parts, as porosity may be required; water sufficient to thoroughly incorporate the above, by machinery, into a plastic mass.

Removed from the grinding tube, where it has been ground, the spongy product is forced by plungers driven by steam through iron or steel cylinders to express the superfluous moisture therefrom, and issues forth in the shape of long blocks or logs, of length, form, and size best fitted for handling, usually eight to twelve inches in thickness, and four to six feet in length. When sufficiently dry to render handling safe, these logs are moved into kilns or clamps calculated for the purpose. After the steam and

vapors are driven out by a slow, steadily increasing fire, the temperature is rapidly increased to nearly a white heat, which not only consumes the sawdust, but brings the clay itself into the first stages of vitrification. On cooling, the logs are removed to the mill and sawed into planks, boards, and dimension stuff, as lumber from wood is manufactured, and subsequently fashioned in the workshop into such forms and articles as are demanded by purchasers. This material, being free from grit and tough in texture, can be cut, sawed, bored, planed, and carved with edged tools, and before or after such treatment can, after slipping and glazing, be submitted to a second firing, with fine results in ornamentation obtained.

Kaolin is the upper stratum of fire or feldspathic clay beds, and owing to the absence of sand or free silica is unsuited to common pottery uses, as its warpago in drying and firing unfits it for moulding purposes.

Mr. Gilman's invention overcomes this trouble, inasmuch, as the material is reduced to form with edged tools subsequent to firing.

New York's greatest present want is a fire-proofing, cheap and undoubted in its capacity for every emergency. Her stately ten-storied buildings can in a conflagration receive but little aid from the fire department, especially when Croton is as scarce as it is now.

Terra cotta lumber is indestructible by fire, gases or acids; it is a poor conductor of heat, sound, and electricity; and possesses molecular attraction to an extent which allows of plastering without first lathing.

Its weight is one-half less than common building brick, and it is erected with nails instead of cement and mortar, virtually rendering fire-proofing a work of carpentry instead of masonry as heretofore. Mr. C. C. Gilman's present address is room 71, No. 71, Broadway, New York. —Scientific American.

THE TIMBER SUPPLY OF EUROPE.

From an approximate summary of the timber production and trade of Europe, as given by the *Journal of the Agricultural Society of France*, may be drawn some lessons, which may be of benefit in showing the dangers threatening our timber supply, and the advantages of an intelligent public policy of preservation. A man in business cannot be expected to sacrifice himself for the benefit of posterity, but the government should see to it that such great resources should not be sacrificed in one generation. The policy of Austria has also a counterpart in that of this country. Sweden and Norway have exhausted their oak as we have almost our walnut, and, according to the *Journal*, their pine is going the way of ours. The following are the figures given by the paper mentioned above. Sweden and Norway, which still do a large export trade in deals, are now compelled to buy their oak in Poland; and in Russia the forests along the

shores of the Baltic, in Finland and in the southern provinces, are so rapidly thinning that the forest acreage of the empire is now only one in ten. There are about 34,000,000 acres of forest in Germany (of which 20,000,000 are in Prussia), estimated to be worth £500,000,000, and bringing in an income of £10,000,000 per annum. The state forests are taken great care of in all parts of Germany, in Prussia alone £100,000 being spent every year in replanting; yet the imports of timber exceed the exports by over 2,000,000 tons. The oak and the beech are the kind of trees which do best in Denmark, but the timber trade of the country is very small. Austria and Hungary have upwards of 43,000,000 acres of forest; but in Austria proper the state does not possess more than seven per cent. of the wooded area, as owing to the wasteful policy of the Ministry of Finance from 1855 to 1872 more than 5,000,000 acres were sold for sums so far below their value that there was a popular saying in Vienna, "If you want to become rich, buy state forests." The speculation came to an end in 1873, but Austria is now obliged to buy most of her timber in Bosnia and Montenegro. Servia and Roumania have no very fine forests; but Italy, though her forest area extends over nearly 14,000,000 acres, does not do much in the way of a timber trade, as the roads leading to the forests are so bad that it is almost impossible to move the timber when cut. Much the same is the case with Spain, which has 8,500,000 acres of forest; while Portugal, which has only 1,000,000 acres, finds a good market for her timber. Sweden and Norway export about £32,000,000 worth of timber every year, and at this rate their fine forests will soon be exhausted. —Northwestern Lumberman.

New Use of Buffalo Skins.

An inventor proposes to make machine gear wheels of raw buffalo hides by cementing and pressing together as many layers as are required for the breadth of the wheel. The blanks thus prepared are cut to form the teeth in the usual manner with suitable tools. The advantages claimed are smooth and noiseless action at high speeds and greater durability without lubrication.

River Improvement.

The *Bellefonte Intelligencer* says that at the forthcoming session of the Legislature application will be made—on behalf of the lumbermen, we presume—for power to erect dams on the streams in the townships of Tudor, Madoc and Marina, for the purpose of storing water to facilitate the driving of saw logs, etc. Would it not be possible to form a company for the improvement of the river, with the object of furnishing water power continuously to manufacturing factories here, to enter into this scheme with the lumbermen and so to attain the desirable object herein indicated? We commend the matter to the attention of all who are interested.