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not trade. One of these is the method of arranging faces, or gauges, that guide the timber. In respect ger fat estil may be noticed that in all of the European has these gauges do not extend much beyond the eat the front edge of the saw, and it is not easy to If two any reason for making them longer. Evidently the e froz ber should be free laterally after it is sawn, or behind four br culting teeth, because no guidance or direction of its a these ne beyond that point is possible or required, and a 'S are ge extending back past the saw, if straight, must be tent. 7 obliquely to the saw, to prevent crowding the teeth at

MIL. be a a Europe the saw gauges are made with a loose, or · fast & astable face, which can be set parallel to the saw, ind eiz. pored forward or back to suit large or small saws, that the gauge will not extend beyond the teeth at the sal fas cland that a piece, as soon as sawn through, will be a phai eat both sides of the saw and can be removed without bug? dingerous operation of pulling it out from between ner we gauge and the saw. ) order 6

eleace some features in European saw benches that

tadhadvantage be adopted by American makers,

will have to be, if saw benches ever become an article

wher feature is what are called packing boxes at book diside of the saw, in front of the saw collars. It is 7316 830 cause of this device that circular saws are made much ruld ben eser in Europe than in America, and are driven with vareste s power. Saws 36 inches in diameter are sometimes deasthinas No 14 by the wire gauge, and are rarely are 21 sker than No. 12. The packing boxes have two a best cions: they support and steady the saws, and keep and aday em lubricated. If a saw is crowned laterally, or is shed by the timber, it instantly heats, and this melts i, there, thins the oil in the packing just when it is needed. Europea

Considerable space is taken up by illustrations of Euroansaw benches, and a good many readers will be at a stoknow why these machines have such prominence, dareso heavily constructed. An explanation of this ny contain useful suggestion. In America most esbishments using timber in their manufactures purchase e material sawn into boards, planks, and scantlings. Europe timber is commonly purchased in the log, by embicfoot, and is sawn as wanted to the particular sizes wied; hence the necessity of these powerful saw benches.

The writer has reason to believe that the European In is the best, and might be adopted in the United ates, with many advantages, and in this belief he mestohis aid an experience as mechanical manager of large company at Columbus, Ohio, that consumed early about 60,000 to 100,000 cubic feet of hard-wood imber of various kinds. Experiments were made in furthasing a portion of this timber, after it had been um at the mills, with the result that the cost was nearly fabled and the quality obtained was decidedly inferior. subseendall the stock consumed was cut from logs of uk, beech, luckory, maple, and ash woods, and, strange say, experince and "natural selection" led to the use dspecially designed saw benches, closely corresponding othose in the last five figures of the illustrations, but less aplete and efficient.

The logs were received in short lengths, split when too arge, and were sawn with the grain, and also with reect to the growth—a method which produced better saterial; they also could be selected, and apprortioned suitable purposes. Two men could easily saw into mall sizes five cords, equal to 6,000 feet, board measure, a day, cut accurately to the dimensions wanted. The raste furnished fuel for the works and left a surplus that oold be sold for \$300 to \$500 a year.

It is possible, in almost any part of the United States, purchase hard-wood timber by the cord, or cubic foot, atalow price compared with that of sawn material. It s evident that the hauling to saw mills, the sawing larges, and the hauling again to a place for shipping, cost about half as much as the timber. It is also eident that quality must be inferior when the material is um into flinches without regard to growth or grain. In the case spoken of, and in others at the same place, where extensive manufactures in wood were carried on, it would have been preferable to purchase the timber in the log, if sawn stuff could have been obtained at the same price per cubic foot.

It is common to hear it said by consumers of hardwood timber: "We do not want to trouble with a saw mill;" but, as the illustrations of European saw benches will show, a saw "bench" is all that is required, if it be properly made and strong enough for the work.



Mr. J. M. McLaurin, of Montreal, Canadian agent for the great Boston lumber firm of Skillings, Whitney & Barnes, with yards at Arnprior, Gravenhust, Midland, Ottawa, etc., was in Toronto recently, and discussed the present strained relations as to lumber between Canada and the United States. The proposal of the Michigan men, Mr. McLaurin said, to prohibit entirely the importation of Canadian lumber, would meet with the opposition of all the Eastern States. The supply of white pine in the United States was exhausted, excepting in the Northern States, and a prohibitive tariff on Canadian lumber would simply place the dealers and consumers in the Eastern States at the mercy of the American mill-owners. Mr. Mc-Laurin stated that in Montreal it was anticipated that if the international conference met again the question would be settled on the basis of free lumber for free logs.

Upon a recent visit to Buffalo, in part to learn of the mysterious ways of the Hoo-Hoo or Black Cat Order (the concatenation, however, being unavoidably postponed), I chatted with a representative of the Buffalo Hardwood Lumber Company regarding trade matters. Of Canadian business, he said that they were buying practically nothing across the border, but were receiving quite a number of enquiries for lumber from Ontario, and were selling some in that direction. He regarded this as one of the indications of the improved times. "But," said he, "in the years of depression we sold nearly as much lumber as we are selling now. The trouble was there was no profit in the business; we were tumbling over each other to get orders, and seemed to think we had to sell so much lumber whether there was any money in it or not. Now we are doing about the same amount of trade and making lots of money." This seemed to be the opinion of other Buffalo dealers, who were all agreed as to the scarcity of hardwood stocks.

It afforded the writer much pleasure to meet in Toronto a few days ago Mr. M. H. Glover, a director of the firm of C. H. Glover & Co., box manufacturers and timber importers, of London, England. Being Mr. Glover's first visit to Canada, he had something to say of his impressions upon leaving the steamer at Quebec. "I expected to find," he remarked, "great yards filled with deals, but scarcely a deal could be In England we always favor Quebec goods, the name having become established in earlier years, and look upon shipments from Montreal as likely to be of inferior quality, but now that I understand the conditions I am prepared to purchase deals from any of the St. Lawrence ports, there being really no difference in quality." Mr. Glover's firm import annually in the vicinity of 6,000 standards, or nearly 12,000,ooo feet, of spruce, pine and whitewood deals,

and in the past about one-quarter of this supply has been of Canadian manufacture, the balance being obtained chiefly from Scandinavia. These deals, which are re-sawn for box-making and other purposes, are of the average widths, that is, seven, nine and eleven inches, but Mr. Glover is inclined to the opinion that, just as the log has given place to the deal of to-day, so will the present sizes live place to narrower dimensions, and that perhaps in the near future. He thinks there is now a tendency in that direction, so that freight will be paid on as little refuse as possible. Anticipating some changes in the business, Mr. Glover was on the look-out for modern woodworking machinery for their factory, and to that end left Toronto for Brantford and other western points. It was his purpose to spend a few weeks in the United States before returning.

Mr. R. Howland, senior member of the firm of R. Howland & Co., chair manufacturers, High Wycombe, England, visited Canada last winter for the purpose of placing orders for chair stock. At a banquet, after his return to England, he took occasion, while responding to a toast, to refer to his visit to Canada in the following words: "I have been accused of going away to foreign parts for supplies of raw, or partly converted material. Well, I have been in Canada recently, and I found that the people there look upon themselves as Englishmen. They are under the rule of the Queen, and I do not see the difference in obtaining supplies from Englishmen in Canada and Englishmen in Wiltshire, or any other part of the home country, but the main thing to remember is that it is impossible for the manufacturers of Wycombe, who now number some 130 or 140, to be supplied as they were in the old days from the immediate neighborhood, where timber is getting scarce. If we could not get it from other sonrces we could not compete with other places, and we should lose the trade, and workmen would lose their employment. I might say that my experience abroad was that in many things the Canadians are a hundred years ahead of us; and if we intend to keep our trade we must be up and doing, and take advantage of everything that lessens the cost of production. So far from Wycombe manufacturers being foolish in buying turned stuff from Canada, where the timber is almost valueless except for the labor spent upon it. I think if there is foolishness at all it is in Canadians selling the stuff so low that English manufacturers can beat their goods in the home market. This importation has kept down the price of English timber, and has enabled us to compete with makers in other towns. When Wycombe travellers go to Liverpool, Manchester, Birmingham, or other large towns, they have to meet the competition of manufacturers on the spot, who have no carriage to pay. We must have some advantage to enable us to meet the cost of carriage, or we should not be able to do any business."

For the benefit of their large and constantly increasing Canadian trade, the Magnolia Metal Company, of New York, have recently opened an office in Room 524, Board of Trade Building, Montreal.

Messrs. Hamelin & Ayers, manufacturers of tweeds, blankets, felts, etc., Luchute Mills, Que., have found it necessary to again increase their works. They make a specialty of felts for pulp and paper mills.