

**SIMPLY A LUMBER PILE.**

In every business in which a man can engage there are opportunities for exhibiting distinguishing peculiarities, that of themselves indicate, to a very great extent, the success of the business.

The practical business men, and one who thoroughly understands the necessities of a successful manufacturing industry will have his buildings and machinery so constructed and arranged as that he can produce the articles of manufacture at the least expense and with the least amount of labor. His employees will partake somewhat of the spirit of their employer, and a neat clean work-shop or factory will be the result. The various tools for daily use will be conveniently arranged in drawers, on tool racks prepared for the purpose. The machinery will be clean, the floor about it will not be covered with an accumulation of chips, shavings, or dust, from the work of the day before, but everything will be as clean as possible to have it, (the character of work done of course to be considered), a spirit of rivalry can easily be instilled into each employee, so that he will be always on the alert to out rival his nearest neighbor in doing nice work, and keeping his machine or tools in better condition. It was once my pleasure to visit a large planing mill and sash, door and blind factory, where a weekly premium was given to the employee who during the week turned out the most perfect work, and kept his machine or tools in the best order. It may perhaps seem like a stretch of imagination to say the work rooms, at the close of the days' work, were as clean as the office, but it was literally true, the last ten minutes of each day was occupied by each workman in cleaning his machine or tools and putting them in their proper places. The same system of order can be and should be practiced in every manufacturing and mercantile industry upon the basis of the axiom, "Whatever is worth doing at all, is worth doing well." In no industry do we find just such a collection of things with reference to system and order as in the lumber business. We find on going through the yards of the large manufacturer or extensive wholesale dealer of lumber that almost universally there is manifest great care in piling their lumber; their yards are regularly laid out with avenues or roadways on either side of which are huge piles of lumber, numbered, the date of piling stamped on many of them. Especially is this so in the case of hardwood. The end of every board is covered from a half to three-quarters of an inch with the stringer to avoid cracking or checking, the piles are uniform in size, grades and varieties are carefully kept secret and not unfrequently a map of the yard is on file in the office from which any information can be had that could be obtained by a personal visit, save the actual appearance of the lumber itself. The yard is clean, no piles of odds and ends are visible, and everything is in order. But with the yard of the retail dealer, how strange the contrast. We do not mean to say that all retail lumber dealers are careless, but it is a fact that the large majority of the retail lumber yards of the country are in a confusion that is inexcusable; drives and roadways are blocked with piles of lumber going to decay, thrown there when some customer, perhaps, was looking over stock and selecting such as he wanted, the culs thrown aside where they yet remain. It is not unusual to see in these same yards lumber piled solid; the result of which is moulded and discoloured lumber and if green when piled, or if it stands through a season of rain or snow it gathers water and very soon is unfit for use. So little care is exercised in keeping sizes and varieties separate, and it is not an unusual thing in a retail yard to see a pile of lumber made up of every conceivable size, length and shape, and the owner has no more idea of what is in it than he has of the cash value it represents. These things are the rule rather than the exception, and it is a remarkable fact that it is so. A retail lumber yard can be made as attractive to its customers as can a dry goods store; as a matter of profit it would pay, as a matter of reputation it would pay, as a matter of convenience it would pay.

Who is there that would not feel that he was getting a better quality of lumber if taken from a clean, straight pile than if the same was taken from a pile of odds and ends? The same rule applies to a lumber yard as to a store, and who is there that does not expect and is still willing to pay more per yard for cloth taken from the shelf than for a remnant of the same piece that would answer the same purpose? From every standpoint it will pay to keep a lumber yard in order.—*Lumber Trade Journal.*

**CARE OF BELTING.**

This is of the utmost importance in all factories, and they should go of the best material, and receive the best care. No belt should be allowed to sway from side to side on pulleys while running. Where leather is used, the belt becomes stretched on one side. The belt should be cut and spliced with a nice scarf lap, and well glued and fastened. Many times that would save the price of a belt, and much more than that in the necessary delay that follows, which would cover the expense of many belts. The best leather belting will stretch more in some places than others. All this class of belts are stretched and made from first-class leather, and when first applied, will run very well, and do well in a cold dry climate, but with use and atmospheric action, some portion will become stretched, and if allowed to run so, grow worse, and fly of the pulley, and many times wind around the shaft, breaking the belt, with other expensive machinery, which might have been avoided by a little labor at the right time. Rubber or canvas is not subject to the above trouble; but they have their faults. Many times a leather belt can be kept straight by using some soft dressing upon the hard places of the belt. Apply as often as there are signs of its stretching crooked. Always apply the dressing to the hollow edge of the belt; this will soften the leather and cause it to stretch and straighten. This should be done to all new leather belts, when first stretched, at any time when the belt becomes crooked, and will overcome one of the great troubles with leather.

Another is the way in which the belt is joined together. This has been a great problem to solve; that is, to fasten a belt, so that it can be readily taken up, as all belts will stretch and become too slack. It seems to me what is required is a fastener light and strong, that the belt may be fastened together in the shortest space of time: One that will leave both sides of belt as near alike as possible. One that will present as little surface to the pulley as can be. One that will hold the belt the firmest. One that can be used where tighteners are used. One that will not cause the tightener to jump. Such a fastener would be of more intrinsic use to factories and mills than anything now in use. There are but few fastenings now in use, but what there are objections to. Lacing is about as old as anything that is used. The objection to this is its liability of stretching, allowing the corners of the joint to catch any obstacle that comes in contact with the belt, causing the lacing to give way, as some parts of the string will stretch more than others, and thus make the belt crooked. Then, there is the extra thickness to run over the pulley, and the less surface to come in contact with pulley, causing the belt to slip there more than elsewhere; this cuts the lace, and it gives way on one side tearing out the holes. When lacing is used, the joints should be closely watched, and as soon as the lacing becomes stretched, or to show signs of giving away, the joint should be tightened up. Many times new lacings would not be required, but by drawing up the lace, it would straighten the belt, and cause the wear to come on new places of the lacing.

Do this when the mill is shut down, thereby saving the expense of having a portion of the machinery idle in working hours. Rivets are good used in connection with the best glue, but rivets alone are objectionable, the same as of lace in making a thicker place in the belt, causing it to jump. To mend the belt, as it should be, with the above, it takes time and causes much delay. Then comes the expense, as they are more expensive than studs or hooks, as the belt requires to be cut or punched for them. This weakens the belt, causing it to give away in short time, by tearing out the ends, and in a short time the belt needs a piece spliced on, which should be done neatly. It never did

pay to handle belts in a slipshod way. Many men have been forced to close up business on account of the use of poor belts. They buy them because they are the cheapest at first, but they are dearest in the end. It is not always the dearest that is the best, or the best that lasts the longest; one man may use a thing as long again as another. Get the best, and take the best care of it, then it will be the cheapest. Belts should be watched as closely as any part of the machinery, as it is not alone the first cost, but the many delays they cause.—*Lumber Trade Journal.*

**SOUTH AMERICAN LUMBER EXPORT**

The export of lumber to South America, says the *Monetary Times*, is an important business. Forty-seven vessels laden with lumber cleared from Montreal during the season of 1885 bound for the River Plate. Six of them left in June, twelve in July, nine each in August and September, ten in October and one on November third. Their cargoes varied from 275 000 feet to 1,185,000 (carried by the *Gloaming*) and the total cargoes of these amounted to 26,465,543 feet, all pine. Twelve vessels sailed during the season from other ports on the St. Lawrence to the same destination, carrying 64,000 feet of pine, 4,825 000 of spruce and 666 spars, besides small stowage. There were, with two exceptions, loaded by the Export Lumber Company. We remark, besides, the sailing of the *Aspotogan*, on Oct. 20th, with 402,600 feet pine, for the west coast of South America. A recapitulation gives the following result:

Pine.....	26,519,543
Spruce.....	4,825,000
	31,344,543 ft.
Smallstowage.....	526,828 pcs.
Last year was the only one which equalled the palmy days of 1873 for this trade, but the present season is not far behind. We give below a comparison for the past sixteen years:—	
1885.....	31,344,543
1884.....	36,038,548
1883.....	18,768,652
1882.....	24,419,827
1881.....	16,147,941
1880.....	10,420,080
1879.....	12,476,150
1878.....	10,855,240
1877.....	8,787,928
1876.....	8,437,000
1875.....	10,123,000
1874.....	16,262,293
1873.....	36,073,919
1872.....	28,234,966
1871.....	16,005,933
1870.....	25,145,183

**FORESTS AND CLIMATE.**

The third number of *Petermann's Mittheilungen* for this year contains an article by A. Woeikof on the influence of forests on climate. The commencement of a scientific investigation of this subject was made when the Bavarian forest meteorological stations were established, and when Prussia, Alsace-Lorraine, France, Switzerland and Italy followed the example. As a general rule it may be laid down that in the warm seasons, as between forests and places close at hand which are treeless (1) the temperatures of the earth and air are lower in the former, (2) their variations are less, (3) the relative humidity is greater. After examining observations as to evaporations, Herr Woeikof states that the influence of forests in diminishing evaporation from water and the soil is so great that it cannot be accounted for alone by the lower temperature of the hot months, the greater humidity, or even by the shade. An important influence which has hitherto been but little appreciated is the protection from the wind afforded by the trees, and this the writer regards as more important than all the others together in reducing the degree of evaporation. With regard to the influence of the forests on rain and snow fall, there is yet only a single series of observations supplying comparative statistics and extending over a sufficiently long period. These were taken in the neighborhood of Nancy, and they show an important influence of forests in increasing the rain fall. It might appear that the effects of forest on rain in the climate of central Europe in winter would be

small, for the difference between the temperature and humidity of the forest and the open is very little, and quantity of moisture in the atmosphere is small. But the observations show that it is at the time of the year that forests get much more rain. This the writer attributes to the clouds being lower, the resistance which the forest offers to the movement of the air and to the moist west wind. Forests retain rain by the undergrowths of grass, moss, etc., much better than open ground, and let water off superficially only after a heavy rain fall; the remainder filters upward slowly, and much of it is used for the evaporation of trees. Although forests, especially thick, luxuriant forests, cannot exist without certain supplies of moisture, yet it is the same to them when the supplies come, for they retain what they get, and use it over a long period. One example of it is the Lenkoran forest, on the west coast of the Caspian, where the vegetation is more luxuriant than in any other part of Europe, yet very little rain falls in summer; but the rain fall in autumn and winter is great. The water is stored up by the forest, and is used in evaporation during the heat of summer. Humidity of the atmosphere, however, is not consistent with a high temperature, as the Red Sea shows; but in the forests the humidity is due to the evaporation of the leaves—in other words, to a process by which heat is converted into work, and hence the coolness.

Herr Woeikof then endeavors to ascertain the influence of forests on the climatic conditions of their neighborhoods in the western parts of the Old World, between the 38th and 52nd degrees north latitude, the places selected being in all cases in the open. Thus for the 52nd degree eight stations are taken between Valencia in Ireland on the west and the Kirghiz steppes on the east, for the 50th, Guernsey on the west, Semipalatinsk on the east, and thirteen stations, and so on for each two degrees of latitude, to 38°. The general result of observations in fifty stations in six different degrees of latitude is that in Western Europe and Asia large forests have a great influence on the temperature of places near them, and that by their influence the normal increase of temperature as we travel eastward from the Atlantic ocean to the interior of the continent is not merely interrupted, but they give places far removed from the coast a cooler summer than those actually on the sea. A striking example of this is Bosnia. An examination of the statistics show (1) that in Bosnia the summer is 1.5° to 4.5° cooler than in Herzegovnia; (2) even on the island of Lissa, in the full influence of the Adriatic sea, the summer temperature is more than a degree higher than that of Bosnia, which is separated by lofty mountain ranges from the sea. Bosnia owes this comparatively cool summer to its great forests, while Herzegovnia is almost disafforested. To sum up: Forests exercise an influence on climate which does not cease on their borders, but extends over a larger or smaller adjacent region according to the size, kind and position of forest. Hence man by afforestation and disafforestation can modify the climate around him; but it is an extreme position to hold that by afforestation the waste places of the earth can be made fertile. There are places incapable of being afforested, which would not give the necessary nourishment to trees.—*Et.*

**AN OLD NORWEGIAN WOODEN BOOK.**

From Scandinavian regions we sometimes hear of wooden antiquities being disinterred, which ages have swept over obliviously, but which when brought to light are of great interest, as connecting links between the present and the past. Sometimes it is a ship but the latest discovery, though infinitely smaller, is even more curious and admirable. The description is from *St. James' Gazette*: "The process of restoring a characteristic old wooden church at Hoppersted, in the Hardes district of Soynge, in Norway, has brought to light an interesting Norwegian mediæval relic. In a closed niche a book, consisting of six wax tablets, was found carefully enclosed in a casket of wood and leather. The tablets are of boxwood, covered with wax, each tablet having a thin border, so as to hinder the tablets from