

## SHOP HINTS.

Whenever J. H. Allen in *Dixie* indulges himself in shop notes or hints he generally produces something interesting. Here is his latest contribution, in part:

Moving machinery is about as dangerous a toy to play with as a boiler under steam. I have seen more bad knocks received from attempting to tighten some moving part than from any other source; and it is strange what men will attempt to do. I had an engineer once whom I was compelled to discharge, because he was forever adjusting the engine when under motion; he would tighten or loosen eccentric straps, adjust the length of the eccentric rod, the valve stem, try to tighten the crank pin brasses, with the result that he was forever getting a bang on the head with a wrench that was knocked out of his hand and the engine was crippled again and again. Let moving machinery alone. If it needs repairs it needs them enough to stop for a time, and if it does not need them, then "bide a-wee."

The attention of manufacturers is respectfully called to the system of differential piece-work that was advocated by Mr. Taylor at the recent meeting of the American Society of Mechanical Engineers, at Detroit. This system is diametrically opposite in all of its principles to that which is usually employed. The ordinary piece worker has a feeling, not far removed from the facts of the case, that, if he does too much work, the rate will be cut and he will be obliged to work harder than he has been accustomed to for the same pay. The system suggested, and which has been in actual operation for ten years, says, and in this it agrees with what has been so often advocated in these columns, that this is all wrong, and that the more a man does the more he should be paid for doing it. The differential system pays more per piece the greater the amount of work done. Thus in a case cited, the men were paid 35 cents per piece for a certain job, if they turned out 10 per day, but if they fell below 10 they were only paid 25 cents. It was shown that this resulted in actually lessening the cost to the manufacturer when the office and selling expenses were taken into consideration. The machines and men worked up to their full capacity, and the investment was returning the maximum dividend. Treat the men square, is the motto of the system and the best results will be obtained.

In the course of his observations, Thompson noticed that when a man had to stoop to the floor to pick up the material upon which he was, to work that it took longer than the actual distance traversed would seem to warrant, and this loss of time was especially noticeable where there were many pieces to be handled, as in the blacksmith shop. He, therefore, had a number of small wagons built that just filled the bill. They were on three wheels, two on a single axle and one pivoted. The floors of the wagons are 2 feet 6 inches from the floor of the shop, and the sides of the box are hinged so that they can drop down and allow long pieces to be placed across. When nuts or short bolts are to be loaded the sides are fastened up and there is the neatest kind of a box in which to put them. It is just as easy to haul about the shop as the low wagons that we usually see, and it saves all of that wearisome stooping and consequent loss of energy that would otherwise be put to some useful purpose.

A friend was recently troubled with the pounding of a pump that drew water from a level with itself and delivered it at a height of about 150 ft. The pounding did not occur all of the time, but only at intervals. The remedy that was applied is so simple that I mention it to help others who may be caught in the same way. He put a  $\frac{1}{4}$  inch check valve on the suction, setting it so that it opened inwardly. This admitted a small quantity of air at each stroke, with the result that the pump ran a trifle faster and lifted a little more water in the aggregate, though the amount delivered at each stroke was less.

I believe that I have advocated the cleaning of the windows of a shop on the ground that the better light thus obtained will tend toward the betterment and cheapening of the product. Sometimes, however, when the windows are broad the washer works slowly on account of the long reach that he must make from the side of the ladder. I saw a wrinkle the other day that just meets this case. The ladder was of such a length that it reached to a point about two feet from the top of the upper sash. Near the end there were bolted two straps, through

which a bar was loosely run. This bar was just the width of the window casing, and served as a support to the ladder, which could be placed at any convenient position across the width of the window, while the bar was itself held aloft by the sides of the ladder. This attachment to a ladder would probably cost 50 cents to apply, and would undoubtedly save twice that amount in the first washing that the windows received.—*Railway Review*.

## BANK DEFALCATIONS.

Bank defalcations have become so common of late that no particular attention is paid to the published report of a teller's defalcation. Chicago has suffered along with other cities, though probably New York banks have lost more through this means than those of any other city in the country. According to the report of the Comptroller of the Currency, the losses sustained by the banks of New York during the year ending last month amounted to \$9,147,379, or more than one-third of the entire amount stolen from all the banks in the United States by employes, officials and others. According to the report of the Comptroller the whole amount of the defalcations and embezzlements for the year in the United States amounted to \$25,234,112, and the aggregate for ten years reached the enormous total of \$104,989,556. The defalcation of Seeley, of the National Shoe & Leather Bank, amounting to \$345,000, was the largest single transaction recorded. The result of this condition of affairs is that bankers throughout the country are becoming more careful, not only as to the character of their employes, but also in the way of overlooking books and accounts, and having frequent examinations made of the bank records. This was due in part to the fact that depositors were making strong complaint, growing out of a fear that their own funds might suffer. Many of the New York bankers now think matters have reached a point where there will be no more large defalcations unless through a general conspiracy of the managers of the banks. There is one thing which all the rigid scrutiny in the world will not prevent. There is no way to stop a teller from leaving the bank's vault some afternoon with as much currency concealed under his coat as he can put there without fear of detection. That is one thing examination cannot prevent. There is no doubt, however, that a rigid scrutiny of books and accounts would prevent a repetition of much of the defalcation of the last few years. It will certainly serve to stop the petty thievery which extends over long years.—*Rand-McNally Banker's Monthly*.

## THE QUEBEC CASTLE.

In describing the antique castle, several writers have mixed up dates and incidents, referring to the Fort St. Louis begun in 1620, with those relating to the Chateau St. Louis, which, after several changes and transformations, assumed that name only in 1647, under Governor de Montmagny. Hawkins is quite correct in saying that: "The Castle of St. Louis was in early times rather a stronghold of defence than an embellished ornament of royalty. Seated on a tremendous precipice—

"On a rock whose haughty brow  
Frown'd o'er St. Lawrence's foaming tide."

and looking defiance to the utmost boldness of the assailant, nature lent her aid to the security of the position. The cliff on which it stood rises nearly two hundred feet in perpendicular height above the river. The castle thus commanded on every side a most extensive prospect, and until the occupation of the higher ground to the south-west, afterwards called Cape Diamond, must have been the principal object among the buildings of the city.

"When Champlain first laid the foundation of the Fort, in 1620, to which he gave the name of St. Louis, it is evident that he was actuated by views of a political, not of a commercial character. His mind was in better keeping with warlike enterprises than the acquirement of wealth. He was perfectly disinterested in all his proceedings. Foreseeing that Quebec would become the seat of dominion and invite a struggle for its future possession, he knew the necessity of a stronghold, and determined to erect one in opposition to the wishes of the Company of Merchants." The building was commenced in July, 1620.—J. M. LeMoine in the *December Canadian Magazine*.

## WOOD IN BRITAIN.

Farnworth & Jardine's wood circular, dated Liverpool, 1st December, 1895, says the arrivals from British North America during November were 30 vessels, 26,715 tons, against 46 vessels, 43,935 tons, during the corresponding month last year, and the aggregate tonnage to this date from all places during the years 1893, 1894 and 1895 has been 384,494, 433,297 and 384,826 tons respectively.

The business during the month has been fairly satisfactory, imports moderate, and the deliveries about an average of the season of the year. Values generally have been maintained; in a few of the leading articles a further slight advance has taken place, still, as this improvement has been more than met by the higher rates of freight and insurance, shippers should act with prudence, as the present improvement is caused more by the supply being limited than by any actual increase in the demand; stocks are moderate though generally ample.

CANADIAN WOODS.—The import has consisted of one steamer cargo, the bulk of which will probably go direct into consumption. For Waney there is a fair enquiry, and prices are firm. Square is difficult to move even at low rates; the stock of both is moderate. Red Pine has not been imported; there is no change in value to report, and the stock is light. Oak:—The import has been ample, still first-class wood is in fair request and maintains its value; the stock is sufficient. Elm has been imported moderately; there is a good demand, and prices are firmer. Ash has come forward too freely; the deliveries have been good, but the stock is too heavy. Pine deals have moved off fairly well, and values have slightly advanced; the stock is ample.

NEW BRUNSWICK AND NOVA SCOTIA PINE DEALS.—Of Spruce the import has again been moderate, viz., 8,159 standards, against 13,830 standards in the corresponding month last year, and 8,430 standards in the previous year. The deliveries, although less than last year, have kept pace with the arrivals, and the present stock is moderate; values generally have ruled steady; latest sales showing a still further slight advance. Of Pine deals there are no sales to report.

BIRCH.—There has been no import of logs; the deliveries have been fair, but the stock is ample; prices are steady. Of planks the import has been moderate, and, with more enquiry, values have advanced; the stock is now light.

UNITED STATES OAK.—Of logs the import has consisted of a few small parcels, prices have ruled very low and the stock is too heavy. Planks: The import has been fairly moderate and the consumption satisfactory; there has been rather more enquiry and prices are steady. The total stock is reduced to 166,500 cubic feet, against 266,000 cubic feet same time last year.

PITCH PINE.—The arrivals during the past month have been 2 vessels, of 2,821 tons, as against 2 vessels, 2,591 tons, during a like period last year. Of hewn the import consists of 967 logs; there has been a fair consumption, leaving us a moderate stock. Of sawn there has been a moderate import and a good consumption. Of planks and boards the import has been little more than half of same month last year; the consumption has been good, and stocks are now within a moderate compass.

SEQUOIA (CALIFORNIA REDWOOD).—There has been more enquiry, though the recent advance in value has somewhat checked sales, and importers are holding for higher prices.

BRITISH COLUMBIAN AND OREGON PINE.—There have been no arrivals; there is little improvement in the demand to record and no change in value; the stock is too heavy.

United States staves have again been imported on a fairly liberal scale; the demand continues steady, and prices have been well maintained; stocks are ample for present requirements.

BALTIC AND EUROPEAN WOODS.—The arrivals during the past month have been 15 vessels, 7,507 tons, against 28 vessels, 14,706 tons, during the like time last year. Fir timber has not been imported; the demand has been very limited, and the stock is too heavy. Red and white deals have been imported very moderately; the demand has slightly improved, and values are steady, but the stock is still ample. Flooring Boards.—The import has been light, the consumption satisfactory, and the stock is now moderate. Recent sales have again been at advanced prices, but there is little movement in contracting for next season.