

get along with much less belting, besides having much nicer running belts. I use all of the belts in the mill on this principle. One time I had a belt 64 feet long and seven inches wide running a 44 inch resaw. This belt was in four pieces, and had three or four bad slices which had started to tear and been fixed up with belt hooks. I thought of ordering a new belt, but on looking it over and the old belting on hand, concluded to fix it up. I cut out all the poor slices, putting in new ones and joined all pieces in the same way, putting in five inch splices. Then I picked out some of the best pieces I had and lengthened it out to the required length, making a belt all in one piece. It ran just as well as a new belt, and, as it is running yet, I cannot say as to its lasting qualities.

It would be very expensive, indeed, to put up shafting rigid enough to absolutely prevent all deflection, and any deflection disarranges a short belt more than a long one.

I believe all shafts deflect some, but if the load on the belt was absolutely constant the shaft deflection would adjust itself as soon as started, remaining adjusted until a different tension of the belt permitted another deflection of the shaft. Any deflection of a shaft will disarrange the alignment of a pulley thereon, and at the same moment give slack to the belt to the extent of the deflection of both shafts, and the pull is all on one side of the belt; that is, the side of the belt which travels to the driving pulley pulls and stretches, while the side of the belt which travels towards the driven pulley sags and takes up the slack caused by this stretch on the other side.

Very short belts or belts running vertically ought to be provided with a self-adjusting tightening device on the slack side. In case of long horizontal belts the weight of the slack side is of more value to take up the slack caused by the stretch of the full side, than the weight of the same side of a short belt. Then the slack of alignment caused by shaft deflection or otherwise, is not so injurious with long belts.

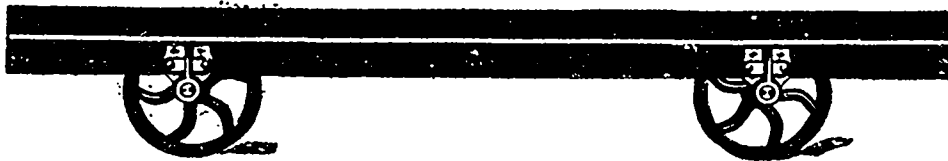
So, where it is not convenient to use long belts, the shaft should be larger and have close, strong bearings; if the shaft bearings, etc., must be weak, then use belts as long as possible.

Another thing about belts: The tight or pull side ought to be at the bottom and the slack side on top; then, when the belt pulls and stretches at the bottom, the top sags and takes up the slack thus made and laps more on both pulleys. But if the loose side is at the bottom, the sag will cause the belt to leave both pulleys to some extent and have less lap.—The Wood Worker.

METAL TRUCKS FOR LUMBER DRY KILNS.

THE Huyett & Smith Manufacturing Company, of Detroit, Mich., have applied for a patent on a dry kiln truck, a cut of which is herewith presented.

The advantages possessed by this truck over the ordinary wooden bunk, or any other metal truck on the



METAL TRUCK FOR LUMBER DRY KILNS.

market, will be more apparent upon an examination of the truck itself, but we shall endeavor to point out some of the reasons why it seems destined to displace the others.

The ordinary bunk which is usually made up by mill owners themselves, they simply buying the wheels, axles, boxes and bolts, in the first place weighs 120 lbs., and is a very cumbersome and clumsy thing to handle, requiring two men to carry it back from the dry to the green end of the kiln; not only that, but as it is subjected to such a high temperature and dry atmosphere inside the kiln, when coming out into the open air and being exposed to all kinds of weather, it is soon checked and split, requiring constant repairs.

On the other hand this truck weighs only seventy pounds, the sides being made of heavy sheet steel formed

into their peculiar shape by a very heavy press designed especially for this work. The wheels and boxes are made of malleable iron, and although weighing less than half what they would if they were made of cast iron, they are stronger and will stand any kind of a blow without breaking.

The light weight of the truck makes it possible for one man to carry it without difficulty. The material of which it is made up is, of course, in no way affected by sudden changes of the temperature and humidity of the air to which it is subjected, so that the life of these trucks is almost unlimited, and in case of a fire, should the kiln burn down, these trucks would be very likely to be preserved in perfect condition.

The manufacturers of this truck are getting them out by the thousands, having special machinery adapted for their manufacture, and in this way are enabled to put them on the market at an extremely low figure, so that they are within the reach of all mill owners, and although costing a little more than the ordinary wooden bunks, the difference in price is bound to be saved within a few months.

DISHES MADE OF WOOD.

THE oval scooped-out dishes of wood, which have become so familiar at the grocery for doing up butter, lard, and other commodities, and at the Sunday-school picnic as a receptacle for pie and pickles, are manufactured in Traverse City, Mich., and the factory turning them out is the largest in the world. The company buys the standing timber on a tract of land and works up everything in it. The factory consumes about 12,000,000 feet of lumber annually.

The logs, as they are cut in the forest, are floated down the Boardman River to the mill booms and, as they are wanted, are hoisted into the saw mill, where they are cut. For the butter dishes, maple is the only wood used. The outer slabs of the maple logs are slashed off and cut to dimensions of firewood. Then a few layers are sliced off for lumber. After the slabs and lumber are cut, a piece of timber, about six inches in thickness and eight inches wide, is left the length of the log, and this is the part reserved for the butter dishes.

The heavy timber is cut into blocks ten or twelve inches in length and boiled in huge vats until thoroughly softened. The hot blocks are placed in machines, which scoop out the butter dishes at the rate of 200 a minute. A curved knife revolving on a spindle does the work, the block being automatically advanced with each revolution of the spindle, and a knife working up and down taking off a slice just the thickness of the plate, so as to leave the surface the same as before. The dishes are scooped out of the solid wood exactly as they are found at the grocery.

As the dishes fall from the machine they drop into a funnel, which carries them to the dry kilns. Through the drying process they pass automatically and finally fall upon a long table, where a row of girls sort them and prepare them for packing. It takes about twenty

minutes for the plates to go through the drying process, and not a hand touches them until the girls sort them for packing. Ten machines are working constantly on the oval butter dishes and the capacity of the works is approximately 600,000 a day.

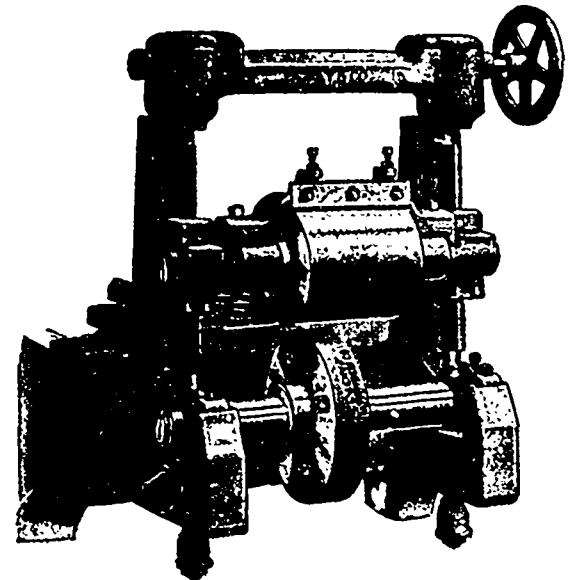
The most wonderful machine in the shop is that which manufactures the wire end dishes. For these the logs are cut into bolts, boiled, and then converted into veneers the thickness of the material used in the plates. Still hot and steaming the veneers are fed through a machine which cuts the veneer to the required shape and size, marks the folus, folds them and sews the ends of the dish with wire, and finally delivers the dish complete at the other end. The machines turn out the wire-end dishes at the rate of a 100 minute, and the factory facilities are for 200,000 a day.

LUMBER STAMPING MACHINE.

WE present to the readers of the CANADA LUMBERMAN an illustration of a new lumber stamping machine, which appears to be an improvement on anything of the kind that has been used in the past. It has been placed on the market by J. A. Fay & Co., of Cincinnati, Ohio.

Manufacturers of lumber pursue the proper course who affix to their products a private stamp or mark as a means of identification, but up to the present time the methods pursued have been crude and expensive in application. The impression left by a hammer on the end of a piece of flooring, ceiling, moulding, etc., gives that piece an individuality which it retains until a saw removes the end, after which it may be the product of any mill which suits the dealer's purpose. A pot of paint may inartistically proclaim the maker of certain flooring until the saw is again brought into play.

In the following illustrated description is revealed the remedial invention designed to impart to the product of any particular mill an individuality which cannot be obliterated, the product being indelibly stamped or branded with the maker's name and other distinguishing marks



LUMBER STAMPING DEVICE.

at short distances throughout its entire length, so that, in case of any division of the piece, each length will still bear the brand. Each piece of flooring, ceiling, moulding, etc., may by this invention be so marked that the customer can know at a glance whose manufacture it is and of what grade, thus preventing other mills and dealers from foisting on him inferior stock, or stock of one mill for that of another, and also enabling the manufacturer to identify his stock when occasion may arise. The mill making the stock may also provide each machine in use with some particular mark or number, thus identifying the product with the machine and locating the blame for inferior workmanship upon its author.

The improved method and apparatus, which is adapted to use on any make of machine, consists of a die, of any particular desired name, mark or number, supported on a shaft mounted on bearings adjustable in recesses, these bearings being provided with lips to prevent lateral displacement and the shaft with shoulders to prevent endwise movement. The die is provided with set screws to adjust it to different heights, and set nuts to hold it firmly in place. An idler roll, mounted on a shaft supported in bearings on a housing gibbed to standards, above the die, holds the lumber or other stock against it, so as to insure a proper impression on the material as it passes over the die. Screw rods, properly ground, and with a hand wheel to operate them, are provided to raise and lower the roll for different thicknesses of stock.

The device, attached as a general thing, to the feeding out end of the machine, is automatic in its action and does not operate to the detriment of the speed of the machine, the stamping being done while the lumber is being dressed by the machine.

Lumber manufacturers will at a glance realize in this the solution they have long sought for avoiding the unpleasant controversies which frequently arise.