THE CANADA LUMBERMAN

We have a very suitable lot of goods for camp supplies. We make this kind of trade a specialty. You who are not getting suited just as well as you would like, try us for your next order, and give us a chance to demonstrate our ability to give you satisfaction in this very important department of your business.

ECKARDT & CO. H. P.

Wholesale Grocers

TORONTO

33

1.-

n

QUARTER TURNS.

The quarter turn systems are frequently resorted to in cooperage and other shops, particularly those shops in which high-speed modern machinery has been installed in recent years. Most of the newest designs of machinery require adjustments of power service for higher speed than the older designs. It happens now and then that the quarter or the half turn is needed to comply with the power systems, and Fig. 6 illustrates the process of setting the same. When a belt is needed to connect two wheels whose respective planes of revolution are at an angle with one another, as in the cut, it is necessary to do some setting. The adjustment should be such that the center line of the length of the belt shall approach the pulley in the exact plane of the revolution of the pulley. The line of motion of the belt in receding from the wheel is not important. It is when advancing on the pulley that the line must be right. In some of the shops recently visited by the writer, cases were found in which the adjustments could not be secured with sufficient accuracy, and to make up for this, a wider pulley "v" was used. Thus the wheel "t" of ordinary width could pay the belt to the cylinder-like wheel "v" at various points, and still the belt would remain on, because of the wide surface. But this is not the mechanical or wormanship way to do the thing. The one wheel should be no wider than the other, nor need it be if the setting is right. Let "t" and "v" represent the wheels of the quarter-turn system. The lower part of wheel "t" turns towards the wheel "v." The center line of the belt is on the plane of rotation of "v," and will of its own accord find the center line, and hold to it so long as the wheels turn in the one direction. If reversed, the line of rotation is altered and the belt will seek a new plane and perhaps run off. The rule is that the advancing line of belt must travel in the line of rotation of the pulley. After finding this line of rotation, and setting the wheels accordingly, no trouble will ensue with regularly made pulleys.

FOR FAST SERVICE ON SHARP TURNS.

In the cooperage shop, as in most manufacturing places, there are always cases in which special turus at high speed are needed in belts. To make the common splice for this quick service on wheels of small diameter would mean that the laces would be bent often, and in a short while would wear off and tear out.

Therefore the type of union exhibited in Fig. 7 has been adopted by many. First you mark off the line for punching the holes. The holes are punched practically the same as in the usual kind of belt joint. But instead of using the two ends of the lace leather and going across the union from hole to hole, the single end of the lace is taken, and entrance is first made at "1." To get a grip on the leather, a double is made here, coming up at "2," with the lace. Then, instead of crossing over the joint, the lace leather is passed through the lips or butts of the belt, coming over to hole "3," going down through the same, to come up at "4." Then down through between the ends of the belt again to "5," and thence to "6," and so on to the end. At "7" the lace begins to make its final grip to hold in position, going to "8," and then out at "9." The one strand, therefore, answers the purpose, and a light, flexible, clastic, hinge-like lacing results that can circuit the wheels of small size with rapidity without straining the union .--- National Coopers' Journal.

FIGURING COST.

"The matter of figuring cost is one which enters so largely into the problem of successful manufacturing that even the most profitable business can hardly afford to disregard it. Where keen competition draws the dividing line between profit and loss so closely that it is difficult to say on which side a firm will find itself at the end of the fiscal year, it becomes an absolute necessity, says "C.W.L." in The Wood-Worker. Various systems, good, bad and indifferent, have been devised, but so much depends upon circumstances that it is impossible to formulate one which will meet all requirements without making it so cumber-



some and costly as to defeat the very object which it was intended to attain. The simpler and more direct that it can be made, the better, because less expensive.

As a rule, I have found that cards kept by each man, showing the amount of time ex-

pended on each job, are unreliable and take too much time. Very tew workmen, especially where they have several changes a day, will keep their time with any degree of accuracy. Where many hands are employed, the work of entering and tabulating the cards is considerable and means an increased force of clerical help. However, I did not start with the intention of criticizing others, but of outlining a simple system which costs little and has proved itself well adapted to our needs.

In the first place, we keep an accurate account of the daly production of each department, which is a simple matter, as our line of goods is fairly uniform in size and grade. The cost book is lined up as appears from the copy. At the end of the week the output of each department is entered and compared with the previous week, as shown. After the pay-roll is made up, that is also entered, and dividing the pay-roll by production gives the average cost per piece absolutely. The total pay-roll, divided by the output of the factory, of course, is the average labor cost of the finished goods. Materials are figured separately. At the end of six months the footings are compiled, and the average labor cost of each article appears as a fair basis of co parison for future use.

Of course, there is more or less fluctuation from week to week, but any department showing a marked or continual increase in cost is due for an overhauling. While it is evident that this method of cost keeping would not be adapted to all kinds of manufacturing business, yet its simplicity, accuracy and inexpensiveness commend it to us as the most feasible and practical plan we have ever tried.

