

CARE OF BOX MACHINERY.

There is quite a variety of planers in use among the different box manufacturers that, aside from their individual peculiarities and differences in detail, are conveniently divided by machinery manufacturers according to their sizes and shape into several general classes. There is the big double surfer, which is found in both the endless belt style and the roller feed type, there is the big single surfer, and then there are numbers of pony planers and panel planers of a more compact type, calculated generally to make a smooth finish and not dress as much lumber in a day as the larger machines.

Among all the different types, however, there are certain general principles to be followed in fitting up and operating the machines to get the best results. Generally, it is either ignorance or neglect of some of these, probably not in the main essential, but in many of the details, which result in poor work at the planer and in the box factory. You can find plenty of evidence of this from the fact that sometimes the shops which have the most expensive and up-to-date planers do the poorest work. Not that the best work can always be done with the poorer machine, for it is really difficult to do good work with a poor machine, but the point that it is desired to bring out for the purpose of emphasizing the importance of looking after the many details in the care of a machine is, that the quality of the product depends more on the handling of the machine than on the machine itself. This is considering, of course, that all the machines are of the kind that can be made to give good service. So without regard to the specific make let us consider in some detail the different faults that can be found with planer work in a box factory and the things that it is necessary to look after and adjust about the planer to get better results.

There was found one day in a progressive box factory, says "Packages," a big new double surfer, of which the owner was somewhat proud, and it was dressing lumber to beat the band, shooting it through so that both the feeder and the man taking it away had to hustle. But the lumber didn't look good, and close examination of it showed that it not only had some washboard effect, common to lumber dressed rapidly, but the face was marred up considerably by chips and shavings sticking to the surface of the lumber and passing under the pressure-bar. This fact was so prominent that attention was called to it, and the proprietor said that he noticed it, and had made some effort to cure the fault, but somehow he had not been able to do so.

Now, do you know what this little fault means? It means two things: First, that there was a deficiency in the blow piping system, and it tells us, in the second place, that one of the first essentials to good work with a planer is to have all the heads well hooded and a good fan for taking away the shavings, so that they may not stick to the lumber and pass through under the pressure-bars.

It is about as bad a mistake as a man can make to buy a good planer, for which he necessarily has to pay a good price, and then put up a cheap rig to take away the shavings. It is like buying a pair of good horses, and then hitching them to an old, rickety wagon that won't carry a load. You couldn't get the service out of the horses in that case, and neither can you get the proper service out of a planer until it is well hooded and has a good fan to take away the shavings. The best thing to do with a job of this kind, unless you have some man in the factory who is a known expert at it, is to let the job of piping the planers and other machines to people who make a specialty of this class of work. There are several of them advertising right

along, and generally you can find some that are near enough to you to have them come and attend to your work, and even if it is quite a distance away it is better to pay the extra cost and have the job well done. You may not be able to see from a glance enough difference in the appearance of a piping system put up by experts and one put up by some clohopper, and for this reason it may be hard for you to realize that there is so much difference in the value. Yet, it is there just the same, and if you want to see the difference, just visit awhile and make a study of the different plants and note how much more satisfactory those are which had their blow piping system and fans well put up by people who are experts at the work.

Among the simpler defects found in planer work is the tearing out of the wood in splinters or slivers, the eating in of wood as some call it, or digging into the grain where the grain runs against the cut.

Where this occurs in the finished product it is most commonly caused by dressing lumber before it is thoroughly dry. This is not the only cause, however, but it is one, and it is one that should be looked after. No man can get smooth work out of a planer, that is work that will remain smooth and look nicely after it is finished, if the lumber is dressed green. Most box factories are provided with dry kilns, which make it unnecessary to dress green stock ordinarily, but here and there are some factories which have no dry kilns, and these quite frequently get stock into the planer that is not dry enough for proper dressing. Factories of this kind should really buy all their stock kiln-dried, or else they should carry their lumber on the yard for two or three years.

The better plan, however, is to equip a kiln of some kind, even though you don't need it all the time, for it is worth the investment to have a small kiln or hot room of some kind where you can thoroughly dry cut lumber before dressing it, if you want to get a smooth job. In fact, for any kind of job and on any kind of lumber it should be dry before it is worked on the planer. If it is rough crate stock it doesn't hurt it, but makes it look better to have it well dried, and if you can't do the dressing properly you might about as well use the lumber rough. Of course, you can make a bluff at fulfilling some specifications on rough boxes that call for one side surfaced, or both sides, by shoving rough green stock through the planer, but it is a poor makeshift, and in the end gets the shop a bad reputation for quality of work. In short, it is better to dress the stock right or not dress it at all, no matter even if it is going into cheap packages. It doesn't cost much more, and is well worth the additional expense.

When lumber is thoroughly dry and still there is this rank cutting or eating into the grain of the face, it is time to examine the knives, chip-breaker and pressure-bar for the source of trouble. If knives are set too rank they will sometimes cause this effect. Sometimes it may be caused from the knives being dull, but generally when knives are dull this fact becomes apparent from the noise and hard pulling of the machine; it pounds or "hollers," and pulls heavy and don't cut clean. Sometimes, too, when the chip-breaker is not close enough to the knives or isn't properly adjusted, there may be a little tearing of the grain. It is more than likely, however, that the cause is from having the knives set too rank; that is, the edges extending too far beyond the lip of the cutter-head. It is pretty hard at times to get some people to understand the theory or the result of setting the knife so that the edge extends beyond the lip of the cutter-head certain distances. It is, however, a very simple matter, one that practically every carpenter