

After having the cutters sharpened and set securely in position, they are ready for use. The first cut is made only about half way through—see A B C. For the second cut it is necessary to have some kind of a holder to hold all parts in place and in line while the cutters cut through. If this were not done, the separate parts would be thrown into confusion and probably break or bend the cutters the moment they become separated, and possibly do other damage. During the making of the blocks above referred to, a metal holder was used, and being made at the mill, it was of course out of the question to use iron. Babbitt metal was used, and in this manner a first cut was made in the wood.

This block was then plugged, babbitt metal poured into it, and a small frame made of strips nailed around the block. Of course, an exact pattern was thus made, which exactly fitted all blocks. When making the second cut, the cutters should cut from the sides, as shown, as well as from the bottom end; in this way a very desirable piece of work can be obtained.

CORE STOCK.

Core stock for doors and other built-up work that is to be faced with veneer, is steadily growing into a more important item in almost every planing mill, and at times no doubt everyone gives more or less speculative thought as to how and from what sources this core stock can be made to the best advantage, all things considered. We all know that the usual plan is to rip the lumber into strips, using scraps as far as they will go, then matching and gluing these strips together for the core body of whatever dimensions are desired. Sometimes, but not always by any means, the standard thickness of lumber will furnish the thickness desired for the core stock, and when this is the case the work of making the cores is comparatively simple; it is just a matter of ripping the strips to whatever width is desired. At other times though—and such times are quite frequent, too—the thickness wanted for the finished core doesn't conform to the standard thickness in lumber, or at least will not fit the class of stock on hand of which one has the most scraps.

This fact has led some people into making cores for door frames out of strips just as wide as the thickness of standard one-inch lumber. Making them in this way enables one to rip the strips to whatever width is desired in the core. By following this plan one can take one-inch stock and readily work it into cores of any thickness desired. Of course, the width of the built-up core may not come out exactly even, but the waste need not be heavy on the edge of the core, because when made up this way the strips are decidedly narrow, and the loss of a strip or half a strip doesn't mean a great deal of waste. Moreover, it is both possible and practical to put up these strips in cores of what might be termed multiple widths, then rip them to any dimensions desired, just as one would rip a wide board. In fact, there are so many points in favor of this method that unless some contra argument can be offered, it looks like there might be a more general turning towards it, the trade benefiting considerably thereby.

SPEED FOR PONY PLANER.

If machine has good, large cylinder and shaft is good size, say, 2-inch or 2½-inch, it should do good work at 4,600 r.p.m., and perhaps best work at 4,500 r.p.m. If

cylinder is small and shaft not over 1¾-inch., 4,000 r.p.m. is about right. The reason a planer cylinder changes ends when in operation is, the belts oscillate enough on the pulleys to give the cylinder an oscillating motion.

THE BELTING OF PLANERS.

I have heard some people claim that, as the pull of the knives is downward, and more than that of the belt, it does not matter which way the head is belted. This argument recalls the case of a planer with which I was once acquainted, which was belted down, and which did good work till it was found that it was planing thin on one edge—the edge toward the belt side. Examination showed that the box on that side was considerably worn and that the shaft had not touched the cap for some time.

Now, if that planer had been belted up, while the pull of the knives was mainly down, bad work would have been done the moment the box began to wear. Of course, it may be quite justly argued that the box should have been attended to and the wear taken up; but a man can't stand over a box with a wrench all the time, and I still hold that belting downward conduces to steady running. As to the strain on the cap and bolts, they ought to be strong enough to hold either way; but there are often cases when the knives are dull, or when they strike some obstruction, where having the pull of the belt downward might save the machine, and mayhap the operator.—O. L.

STEEL-FACED OR ALL-STEEL CUTTERS.

A correspondent of the London (England) "Timber News" says: "I have used both, and in my opinion the steel-faced cutter is the best and safest. In the first place, I contend that a bent cutter is better than a broken one. When cutters break on a top head, as a rule they fly in a line with the machine unless they meet with some obstruction in their flight, but when a cutter breaks on a side head or a circular moulding machine its flight is exceedingly dangerous to anyone who may be about. A machinist can tell in a minute when anything is wrong. He can detect the sound of a bent-cutter or any change in the cutting sound, and stop his machine before a foot or two of the stuff has been spoiled by the bent cutter." With regard to grinding all-steel and steel-faced cutters, he claims all-steel to be the best, as the steel-faced cutters glaze the emery wheel. "Steel-faced cutters ground to suit the work in hand for moulding, square turning, scribing, etc., and given the required bevel, will give satisfaction to the most critical of experts," he says.

CURE FOR CHIP MARKS.

I had a lot of trouble with chip marks on finished stock at one time, tried about every remedy I could think of, and at last discovered that it was because the exhauster didn't take up quite all the shavings, some of them catching on the edge of the knives and denting the board just before the knife cut. Or, if shavings are left on the board where the knife strikes, they are sure to leave dents in the finished surface. It makes no difference what bevel the knives have, nor how far the knives project beyond the cylinder, the result will be the same. I suggest more suction; or, if there