

THE CARE OF A PLANER.

By N. A. CURTIS, IN "WOOD WORKER."

ON entering a mill to run a planer, a new hand should first examine the machine to see that everything is all right; more particularly should he try the bolts that fasten the knives to the cylinder—for, not knowing the circumstances under which the man before him left, there is no telling what damage might be caused by starting it up before examination.

Should the knives need grinding, it is a good idea to start the machine and run it a short time, to find out how it works. While you have it running, get a piece of hard wood that will dress $1\frac{3}{4}$ inches thick by two inches wide, about four feet long; dress it both sides, being careful when running it through the last time to keep it straight in the machine, so as to make it one thickness the entire length.

You can then take the knives off. Before grinding, try them on a knife balancer. Finding the lightest one grind it first, then grind the others to it. A word here to knife makers: If you were more careful in cutting slots, making them all of an even width and depth; that is, in making a set of knives, either to order or standard size, make all the rest in the set like the first one, it would assist wonderfully in keeping the knives in balance, as they could be ground to an equal width by grinding the narrow one first.

When a knife is put on the grinding machine, take the point of a pocket-knife blade and make a mark along the back edge of the knife; also mark on the slide the position when the knife was ground. It can be taken off and the next one put on, being careful to put the back edge just to the mark made for the first one. Then in grinding care should be taken to only grind enough to bring the marks on the slide together. After grinding, whet the knives to put on a keen edge.

If there is none on the cylinder, you should put a single thickness of writing paper under the back edge of each knife, to prevent shavings working under the cutting edge. You may find knives that need more paper than this, but if the cylinder and knives are all right, this is sufficient; too much paper will cause the bolts to spring the knife and do more harm than good.

Before putting the knives on, take the piece you have dressed, cut in two in the centre, put the two pieces on the bed of the machine, under the cylinder, one on either side, about three inches from the end. Having measured the exact thickness of the piece, run the head down or the bed up, as the case may be, until the finger points to a trifle full thickness on the gage. Then put the first knife on, leaving all bolts loose, except the second bolt from each end; these tighten just enough so you can move the knife by tapping it with a hammer. Then turn the cylinder slowly until the knife touches the pieces or passes over them, being careful not to cut a shaving off. In case it is out too far, by the use of a hammer you can set the knife in or out until both ends just touch the pieces. Then tighten the second bolt from each end as tight as you want it; the rest of the bolts may then be tightened about as tight as the two were when setting the knife. Do not draw each bolt as tight as you want it the first over, but go over them three times, drawing them a little tighter each time until tight enough. You can rest assured that if the knife was straight before on, it is on the cylinder straight.

If you can see the knife touch the pieces, it is best to rub some chalk on them, then set knife to just clean the chalk off. It is a double surfacer, the lower knives can be set by taking a piece about a foot long with one smooth, straight edge, laying it on the back bed plate (that is, the part that receives the lumber after passing over the lower head) and setting knife out until, by turning cylinder forward slowly it will catch the piece and draw it forward not more than $\frac{1}{4}$ inch. Try the piece on each end of the knife, so the ends will be set alike.

Having the knives all set, the next thing to look after is the oil holes. Look the machine over carefully and find them all. If they have plugs in them it is not always safe to trust to the plugs to keep the dirt out, for no matter how careful you are, there will from time to time a little drop in while you are oiling, and if there is no attention paid to it the hole will become so

filled that in putting in the plugs the dirt will be packed so tight in the holes that no oil can get to the bearings.

Should there be no plugs in the holes, whittle some, or have the turner make you some; but by all means have plugs for all of them. Then get a piece of stiff wire, sharpen it at one end, and with this clean the holes out every few days. A whisk broom is a good thing to have handy when oiling, to brush the dirt from around the plugs.

Should your belts become loose enough to slip on an ordinary cut, don't get mad, jerk them off and cut an inch or two out of them the first thing, but use some judgment. See first if the pulley side is free from dust and dirt. If it is coated with dirt, take it off, get an old plane-bit or broad chisel and scrape the dirt off clean, then put the belt back on and try it; if it still slips, put a little castor oil on it. Never use resin on a belt. When a belt becomes so loose that castor oil will not keep it on the pulley, it is then time to cut it, but don't cut a belt when you are out of humor with it, for nine times out of ten you will take out too much; if you had stopped to think how much it needed out, you would have guessed closer. You will be surprised to see how long a belt will run without cutting at all if you will give it a scraping once in a while, keep it clean, and occasionally apply a little castor oil. This renders it pliable and causes it to adhere to the pulleys closely. Belts should not be allowed to remain strained on the pulleys from Saturday night until Monday morning. Short feed belts should be released from strain every night. It only takes a minute to do it, and lengthens the belt's life.

The operator should have among his tools a sharp hatchet, to cut the lugs from the ends of boards, knock out loose, dead knots and raft pins, etc., before putting the board through the machine. Nor should the care of a machine be confined exclusively to the operator. It should be given a thought outside. The yard foreman should see that the lumber taken from a pile or shed is not allowed to strike on end on the ground. All hands should be given to understand that there must be a piece of old board laid on the ground for the ends of boards to rest on. If there is no yard foreman, these orders should be given from the office, for one board run into the machine that has the end filled with sand and small gravel, will ruin the knives for nice work until they are ground again.

None but an operator who is concerned in the appearance of his machine and the nice work that can be done on it, knows the hard work it takes to keep a planer in good running order.

JOSIAH ALLEN AS AN EXPERT IN FORESTRY.

WALL seein' we wuz right there, we thought we would pay attention to the Forestry Buildin'.

And if I ever felt ashamed of myself, and mortified, I did there; of which more anon.

It was quite a big buildin', kinder long and low—about two and a half acres big, I should judge.

Every house has its peculiarities, the same as folks do, and the peculiar kink in this house wuz it hadn't a nail or a bit of iron in it enywhere from top to bottom—bolts and pegs made of wood a-holdin' it together.

Wall, I hadn't no idee that there wuz so many kinds of wood in the hull world, from Asia and Greenland to Jonesville, as I see there in five minutes.

Of course I had been round enough to our woods and the swamp to know that there wuz several different kinds of wood—ellum and butnut, cedar and dog-wood, and so forth.

But good land! to see the hundred and thousand of kinds that I see here make anybody feel curious, curious as a dog, and made 'em feel, too, how enormous big the world is—and how little he or she is, as the case may be.

The sides of the buildin' are made of slabs, with the bark took off, and the roof is thached with tanbark and other barks.

The winder-frames are made in the same rustic, wooden way.

The main entrances are made of different kinds of wood, cut and carved first-rate,

All around this buildin' is a veranda, and supportin' its roof is a long row of columns, each composed of three tree trunks twenty-five feet in length—one big one and the other two smaller.

These wuz contributed by the different States and Territories, and by foreign countries, each sendin' specimens, of its most noted trees.

And right here wuz when I felt mad at myself, mad as a settin' hen, to think how forgetful I had been, and how lackin' in what belongs to good manners and polite ness.

Why hadn't I brung some of our native Jonesville trees, hallowed by the presence of Josiah Allen's wife?

Why hadn't I brung some of the maples from our dooryard, that shakes out its green and crimson banners over our heads spring and fall?

Or why hadn't I brung one of the low-spreadin' apple trees out of Mother Smith's orchard, where I used to climb in search of robins' nests in June mornin's?

Or one of the pale-green willows that bent over my head as I sot on the low plank foot-bridge, with my bare feet a-swingin' off into the water as I fished for minnies with a pin-hook.

The summer sky overhead, and summer in my heart.

Oh, happy summer days gone by—gone by, fur back you lay in the past, and the June skies now have lost their old light and freshness.

But poor children that we are, we still keep on a-fishin' with our bent pin-hooks; we still drop our weak lines down into the depths, a-fishin' for happiness, for rest, for ambition, for Heaven knows what all—and now, as in the past, our hooks break or our lines float away on the eddies, and we don't catch what we are after.

Poor children! poor creeters!

But I am eppisodin', and to resoom.

As I said to Josiah, what a oversight that wuz my not thinkin' of it!

Sez I, "How the nations would have prized them trees!" And sez I.

"What would Christopher Columbus say if he knew on't?"

And Josiah sez, "He guessed he would have got along without 'em."

"Wall," sez I, "what will America and the World's Fair think on't, my makin' such a oversight?"

And he sez, "He gussed they would worry along somehow without 'em."

"Wall," sez I, "I am mortified—as mortified as a dog."

And I wuz.

There wuzn't any need of makin' any mistake about the trees, for there wuz a little metal plate fastened on each tree, with the name marked on it—the common name and the high-learnt botanical name.

But Josiah, who always had a hankerin' after fashion and show, an talked a sight to me about the "Abusex-celsa," and the "Genus-salix," and the "Fycus-sycar-morus," and the "Atractylus-gummifera."

He boasted particular about the rarity of them trees. He said they grew in Hindoostan and on the highest peaks of the Uriah Mountains; and he sez, "How strange that he should ever live to see 'em."

He talked proud and high-learnt about 'em, till I got tired out, and pinte him to the other names of 'em.

Then his features dropped, and sez he, "A Norway spruce, a willer, a sycamore and a pine. Dum it all, what do they want to put on such names as them into trees that grow right in our dooryard?"

"To show off," sez I, coldly, "and to make other folks show off who have a hankerin' after fashion and display."

He did not frame a reply to me, he had no frame.—From "Samantha at the World's Fair," by Josiah Allen's wife.

A MOVING SPIRIT.

"What is your line of business?" whispered the editor to a man he was about to introduce to northern capitalists.

"I hauls furniture," huskily came the reply.

"Here, gentlemen, continued the editor, 'is Mr. Jones' one of the moving spirits of our city."