

## TALKS WITH WOOD-WORKERS.

TRADITIONS, however dear and venerable, must "go" when they collide with disproving facts and actual experience, says the Lumber World. Their gray whiskers will not save them, for science and investigation have respect only for that which is true, just, exact and reasonable. Woodworkers and users of wood in general have many traditions, some reasonable, but most of them absurd.

Last month a planing mill operative insisted on my believing him when he asserted that "it makes all the difference in the world, in planing wood, either by power or by hand, whether that wood is dried slowly or quickly, by heat or in the open air." When asked to prove his assertion, he confessed that he had no proof at all. He was working on tradition. He could not tell, when blindfolded, which he was planing with a hand-plane, wood heat-dried or wood air-dried. His tradition was shaky.

Another workman insists that wood planes easier and more smoothly when worked from the butt end towards the top. I asked him to make a trial of it with the common plane. I blindfolded him and placed a piece of pine on the bench. When placed into position with the plane in his hand, he made the regular cuts with the tool. To his surprise, he found out that he was cutting more easily and leaving a smoother surface when cutting from top to butt than when cutting from butt to top. He really could not tell which way he was cutting, from the "feel" as the plane moved. His tradition was at fault. He had held it for forty years without ever taking the trouble either to prove or disprove it.

A certain "professor" in a recent lecture made this assertion: "All farmers know posts set top-end down last longer than those set butt-end down." of course while many believe that theory, not a single farmer knows it to be untrue. A farmer gives some interesting testimony in connection with this tradition. He writes: "I helped to build about 50 rods of fence with chestnut posts and white pine and hemlock boards. We picked out three of as good posts as we could find, marked them with three hacks and set them about the middle of the fence top end in the ground. Twenty years and six months after the fence was built, I helped build it over, and found that the marked posts, which were set top-end down, were rotted off at the top of the ground the same as the others set butt-end down. It is said that one trial is not sufficient to determine a fact, but this one trial satisfied me. The pine boards were mostly sound enough to use again, but the hemlock were too dozy. The butt-ends of posts are usually put down because being larger, they are not so likely to be heaved out by the frost, and being larger, and stronger where strength is required." That is strong evidence against that tradition.

That same "professor" lecturing on "Preservation of Wood from Decay," mentioned as a "fact" another mere tradition about "water-seasoning" making timber more lasting, saying that he "had seen an old wagon on his father's farm the hubs of which (of the wagon, not of the farm!) where 'water seasoned elm,' that lasted 50 years." That would be a beautiful proof of the "water seasoned" tradition, but for one element in the case. Had those hubs been left the fifty years without the penetrating and preserving applications of grease and tar usual to wagon hubs, they would have been rotted in less than a quarter of fifty years. Every old observer knows old wagons, whose hubs are warranted not to be "water seasoned," that have been in use fifty years, all on account of the preservative tar and grease. The tradition is good as far as it goes, but it does not go as far through the hubs as the pores, grease and tar goes.

This same "professor" goes on to say: "Dry-rot is caused by a fungus which begins on the surface and pushes the threads of its spawn into the pores, and in time they ramify through the mass." Has not the "professor" got the cart before the horse, the effect confused with the cause? Does the fungus cause dry-rot, or does the dry-rot cause the fungus to grow? If dry-rot begins on the surface, why is it dry-rotted wood is generally sound, to all appearance, on the surface, and spongy and weak inside? Recently I saw some wooden joists taken out of a building. When in position they had been almost completely free from contact with the air.

They look bright and sound on the surface, but a man of ordinary strength could break one of them with his hands. Is "Professor" William H. Brewer very sure that his assertion concerning dry-rot and fungus is scientific? Why do not small timbers dry-rot? Why is it generally only large timbers, imperfectly dry in the center, that dry-rot? Why does not the dry-rot destroy the surface as well as the interior of the timbers? Why should this discriminating fungus attack only large timbers, and attack them only in the interior? Is not this tradition quite as shaky and fungus-infested as any one of the foregoing.

Workers in wood have heard the traditions connected with wood in countless ways, but they have only to test them to find them utterly ridiculous. One general tradition is that persons who use toothpicks from a white pine tree splintered by lightning, will never thereafter have the toothache. The stipulation in this tradition is that the splinters are to be used within three days after the lightning has converted the tree into toothpicks, and that they are not to be touched by any metal tool. I have known many cases of trial of this tradition, and in no case did it ever give the believer any immunity from toothache or any ailment. It is a tradition pure and proper.

One of the really singular traditions connected with wood is the tradition that wood fired by lightning will continue to burn in spite of all the water that may be poured upon the blaze. This tradition seems to extend over the world. According to its terms, the blaze started by lightning can be extinguished only by the use of milk or vinegar. Some of the traditionists, who claim to have tried it, assert that only sweet milk will put out a blaze started by lightning, while others claim it is buttermilk alone that can put it out. In countries where neither sweet nor sour milk is handy, this elastic tradition permits vinegar to do the work. Who does not know at least one farmer who has saved his house, when fired by lightning, by toting up from the cellars the well-filled milk-pans and pouring their lactic contents on the lightning-bred blaze?

Even lumbermen, most of whom have seen this tradition refuted in the woods, where the lightning-started flames are promptly and invariably quenched by the rain, will let themselves cling to this tradition. They may see water put out a hundred such fires in a year, and yet some of them will go on believing and asserting that "fire started by lightning can not be put out by water." The believers in this tradition generally have heads harder than lignum-vitae and denser than lead. They are believers in spite of all visible, audible and tangible proofs of the falsity of their fad. Great is tradition. Particularly great is tradition relating to wood.

## NEW USES FOR BABBITT METAL.

I SHALL attempt in this article, says a writer in the Tradesman, to give some of the numerous uses to which babbitt metal can be applied around the mill and workshop outside of its accustomed place in journal boxes. The writer of this was employed to fire a saw mill, and when I went and took charge of the machinery I noticed that the shaft of the rival pump that fed the boilers with water was sprung, caused by the plunger unscrewing from above, consequently lengthening it till it struck the bottom in running; the result was that when we started up the wobble of the eccentric soon broke that rod in two. As it was thirty miles to a machine shop we were in a dilemma. I took the broken parts and shaft out and took them to the proprietor and told him I would take them to the blacksmith and perhaps he could fix it. I told him also that if they could not, I thought I could make one-out of babbitt metal. I took them to the shop and had the shaft straightened, but when they commenced work on the eccentric rod they broke it and it could not be repaired there. I then took the pieces with me and took a key hole saw and made my moulds out of wood. I then cast the broken parts out of the babbitt metal and got back to the mill in time to put it together and be ready for sawing the next day. I ran that mill two years and that babbitt machinery was just as good when I quit as when I first put it up.

I do not advise the use of babbitt metal in every case, nor where a person is close to a machine shop, but in

cases like the above, where it would take a week or longer to get the repairs from the shop.

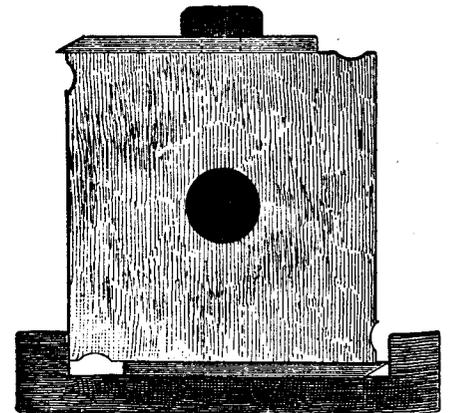
If you have a shaft to put up and have no cast bearings for it you can make them out of babbitt metal. I put up a two and one-quarter inch shaft and made the whole bearings out of babbitt metal, and it has been running six years and the bearings are apparently as good as when first made. I first made my bents and put them in place, having the top of the bents about one inch lower than the bottom of the shaft, when it was in place. I then put my shaft in place and got a cap block and cut a square notch in it about two inches larger than the diameter of the shaft. I placed this notch down over the shaft, the cap block resting on the bent with the shaft in the center of the notch. I then pinned the cap block solid to the bent. I then bored a hole down through the cap block to the notch to put a pin down against the shaft in order to have an oil hole when the box was run. We now fix the shaft in the center of the notch resting on outside supports. We now get some good clay and paste board to fix the ends of the notch ready to run, leaving a place at the top to pour the metal. If you have been careful, you will get a good boxing.

If your shafting is not perfectly round it is best to tie one thickness of paper around the shaft and run the metal around that, turning the shaft a few rounds by hand, when the babbitt gets nearly cold.

## SETTING PLANER KNIVES.

A WRITER in Lumber tells of the following plan for setting planer knives, which he says he has used for a long time and found to be excellent:—

Simplicity in construction is the highest point in anything that has anything to do with the construction or



handling of machinery. Planing knives have for a long time been eyesores to many operators of planing machines. While we all know the good there is in making every knife cut alike, there are almost as many different ways of setting them as there are persons running machines. I never use this gauge on more than one wing, and the other knife or knives I set by the first one by holding the end of a stick up to the knife and, after throwing both belts off, turning the head by hand until both knives cut exactly alike. You don't want to screw your last knife down solid till you know that both knives do cut alike, for the bolt may draw the knife a little, or the knife may be sprung a trifle, so that, when the bolt draws the knife down, it will alter it a little. Draw down the knife a little and try it, and when it comes just right draw it down tight. For setting out the first knife I use the simple tool shown in sketch, made of a piece of three-sixteenths by one and one-fourth steel plate. I am always particular to use the same wing every time.

I challenge the wood-working fraternity for any tool more simple or more easily made than this one. The beauty of it is, there are no bolts or screws in it to get loose or break. I don't pretend to say, nor can any man say, positively, that every knife, however set, will cut alike, be there two or more. If they are set this way, however, they will cut so nearly alike that after once or twice sharpening and taking care to see which knife cuts, the operator can get them to cut very evenly. I never use but two knives on a four wing head for any kind of pine work. For oak it is well enough to add two more.