THE Wood-Worker and Retailer

UTILIZING SMALL PIECES.

A writer in The Woodworker submits the following as the best means of utilizing pieces that seem too good for fuel yet hardly large enough for anything else. *I have a bin into which* I throw all cuttings 10 inches and over in length by 4 inches and over in width. By this I mean all cuttings that will not make short panels or stiles and rails for panel work, drawer slides, backs or bottoms. I have a place for each kind of wood, also for each thickness. The only place to sort ends and save handling is at the cutter.

When I get this bin full of common ends, I have a load of No 4 common pine run in for long pieces or bottoms for the core bundles. This is surfaced two sides to 7/8 inch and ripped to 4 and 6 inches wide. The common ends are also ripped and dressed to the same dimensions. I cut the long pieces to desired length and build up with these ends to desired thickness, being careful to place pine or other soft wood at both ends so it will be easy to mortise after the bundles are resawed and the stiles veneered. Am careful to break joints in building up the bundles, so as to make a strong stile.

SUGGESTIONS FOR THE PREVENTION OF ACCIDENTS.

A journal published in the interest of casualty insurance makes some practical suggestions, both to employers and employees, which, if adopted, would certainly lessen the awful list of casualties to life and limb caused by machinery in motion:

All belts passing through floors, or vertical shafting operating through floors, should be cased in to the height of at least 4 feet. See that belts do not have ragged places and that the lacing or hooking is O. K.

Shafting beneath machine tables and all other shafting operating on or near floor should be covered.

Loose pulleys should be used wherever possible, so as to throw a saw, jointer, shaper or other piece of machinery out of motion when not necessarily in use, and employees should be instructed to throw out of motion such machine when leaving same even temporarily.

Shifters should be used at all times for shifting belts, and no employee should be allowed to shift a belt with his hands or stick. Belts should be laced and adjusted when machinery is not in motion.

All flywheels of engines and belt wheels should be inclosed by casing in or placing substantial railings around them, either of wood or gas pipe. The latter is preferable and more substantial.

All bearings and other parts of machinery should be oiled and cleaned when not in motion, and no minor *under sixteen years of age should* be allowed to oil or clean machinery, or to sew or assist in sewing belts.

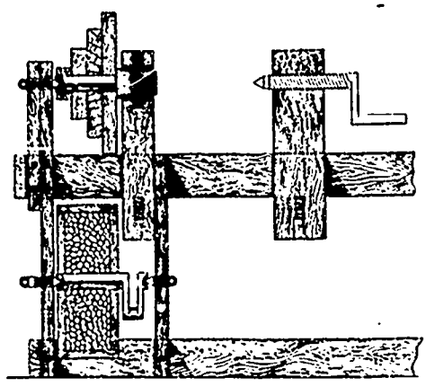
Low water alarm columns on boilers should be frequently tested to ascertain whether in good working order.

Setscrews in collars and couplings on line and counter-shafting should be covered, or, preferably, countersunk, so that the head of the screw shall not project above the surface of the shaft. Setkeys in hubs of fly or other wheels should be cut off flush with end of shaft or covered with tin casing or other materials fitting closely to shaft, forming a smooth surface.

All cog gearing should be completely cased in, casing to be so constructed that it can be easily removed when necessary to repair or oil; casing should be made of wood or metal.

A BACKWOODS LATHE.

The illustration herewith, taken from the American Machinist, shows what a correspond-



A BACKWOODS LATHE.

ent calls a backwoods lathe. It was built by an couple of Wisconsin pioneers—one a handy man with carpenter's tools, the other a blacksmith—some fifty years ago. The balance wheel was simply a round box filled with stones. The tools were made from old mill files. With this lathe they made about 400 feet of well-drill rods in one winter.

SOMETHING ABOUT DRY KILNS.

The practice of kiln-drying lumber has become well-nigh universal. People in this fast age cannot await the old fashioned slow process of air-drying lumber, and no mill of any great capacity either in the pine or the hardwood section is considered complete without dry-kiln facilities equal at least to about one-fourth or one-third its capacity. While kiln-drying of lumber is the common practice, yet opinions as to its effect upon the strength and other qualities of the material are very much divided, and there *are still many who prefer air-dried lumber.* Nor is opinion unanimous as to the best manner of constructing dry kilns and the best process of drying. The process most widely used is the method of forcing air heated to as high as 180 degrees Fahrenheit through the dry house by means of fans or blowers. This process has also come in for the largest share of criticism. There are many who insist that subjecting lumber or timber for many hours to a temperatue of 150 to 180 degrees F. "kills" it, by which term they mean in a general way that the bending and breaking strength and resistance to compression is lessened. Experiments made by United States government experts go to show that this objection is not well founded. The many contradictory claims about closing the pores of the wood by long subjection to a high temperature, and its chemical effects upon the sap and its constituent parts, as albumen, gum, resin, sugar, etc., are not substantiated by the government tests. Neither are the claims of increased checking, wraping, "case hardening," "honeycombing" and many others. Well-constructed kilns of the blower type, where the hot air is driven in at the discharging end of the drying room and out at the receiving end, are giving entire satisfaction. But it stands to reason that too high heat and too rapid drying of lumber is not the best. Nature's process of drying anything is a slow one, and nature does most things well, and it is advisable always to follow her plans as nearly as time will allow and convenience will permit.

The best class of dry kilns seems to be those in which the piping is amply sufficient to insure a uniform heat, not to exceed 180 degrees, in all parts of the kilns, with a steady and moderate circulation of the air among the material. For timbers of large size kilns of this type are most generally preferred. All the standard dry kilns now on the market possess individual and peculiar advantages and the selection of one is largely a matter of individual preference and experience and special requirements.

There is one class of dry kiln employed in some localities in which a temperature of more than 300 degrees F. is used under a pressure as high as 150 pounds, and it is claimed that such treatment results in increase of strength, durability, and absence of shrinkage. Teste made by the government do not appear to bear out these claims. Kilns of this type must needs be costly