SEASONED WOOD FOR FUEL.

In some way or other the notion has got abroad that it is more economical to burn green than seasoned wood. The reason for the practice is said to be to make the fire burn longer, and accordingly it is not an unfrequent thing to see people mix green wood with dry, with a view of making the materials "go further." That green or wet wood, which are precisely the same thing, is more difficult to kindle, and will continue longer in the fire than when dried and well-seasoned, is patent to every one, and it must surely be equally apparent, that such fires afford but little heat compared with the time and amount of fuel consumed, and are most difficult and tedious in their operations, most sadly taxing the temper and patience of females to whose lot the management of these matters generally falls.

The preference shown for green wood, however, is generally found in the country where wood is plentiful and cheap and burnt in large quantities in open fire places. In towns where fuel is dear and has always to be bought, it is rare to see green wood used when dry and seasoned can be got. Most people thus situated cut and split their wood under cover, instead of exposing it as is commonly the case in country situations to all the changes of the weather. Parties connected with steam-boats, railroads, factories, &c., where large quantities of fuel are used, and profit and economy systematically studied and calculated, dry seasoned wood is invariably preferred; showing thereby that the common notion in this matter in our farm houses is a popular fallacy.

Let us, however, go a little into the philosophy, if we may use such a term, of the matter. What is the object of kindling a fire but to eliminate *heat?* Now, if is found that combustible bodies will not readily burn when saturated with moisture, which has first to be evaporated before combustion fairly acts. Green wood has a large amount of water (sap) which has to be driven off into vapour before the material will readily burn, and in this process of evaporation a large amount of heat becomes latent—that is concealed—or, in other words, does not raise the temperature of surrounding bodies, such as the air, &c. Newly cut wood will, according to the variety used, contain from 20 to 50 per cent of water. Trees contain more sap during the season of growth than in winter, and soft woods more than hard. Wood kept dry and exposed to the action of the air for a year, will in general part with something more than half of its moisture, particularly if it be split or divided. More of its moisture may be expelled by subjecting it to artificial heat, and before it parts with the whole of its moisture it will begin to decompose or char. Thus we see that green or wet wood is tedious and uneconomical in using, as it hinders and delays the combustive process, and wastes heat by evaporation. Suppose that 100 pounds of wood contain 20 of water, they have then but 70 of true combustive material. When burned one pound of the wood will be expended in raising the temperature of the water to the boiling point, and six more in converting it into vapor; making a loss of seven pounds of real wood, or one tenth of the combustive force. Besides this dead loss of 10 per cent of fuel, the water present is an annoyance by hindering free and rapid combustion."

Different species of wood, it is well known, possess different degrees of density or specific gravity, and they vary as much in their relative quantities of natural moisture or sap. Wood is generally sold by measure, but equal measures or bulks yield very unequal amounts of heat. Mr. Bull, some time ago, made a number of carefully conducted experiments to determine the relative heating values of the following American woods, taking Shell Hickery as the standard represented by 100:—