



EFFECTS OF KILN-DRYING.

AFTER a long-range investigation of the subject, the Forestry Division of the Agricultural Department at Washington, sums up the evidence as to the effects of kiln-drying native woods as follows:

Although kiln-drying has become quite universal, opinions are still divided as to its effects upon the strength of the material and other qualities. Many objections and claims as to physical and chemical changes produced by the treatment remain unsubstantiated. The method most widely used and most severely criticised is that of the "blower" kiln, where hot air (180° F.) is forced into the drying room by means of powerful fans. Besides the many, in part, unreasonable and contradictory claims about closing or opening of pores, chemical or physical influence on the sap and its contents, albumen, gum, resin, sugar, etc., substances whose very existence in many cases is problematical or doubtful, the general claims of increased checking and warping, "casehardening," "honeycombing," etc., as well as reduction of strength, are still prevalent even among the very manufacturers themselves. The manner and progress of the kiln-drying may render this otherwise useful method of seasoning injurious. Rapid drying of the heavier hard woods of complicated structure, especially in large sizes and from the green state, is apt to produce inordinate checking and thus weakening of the material.

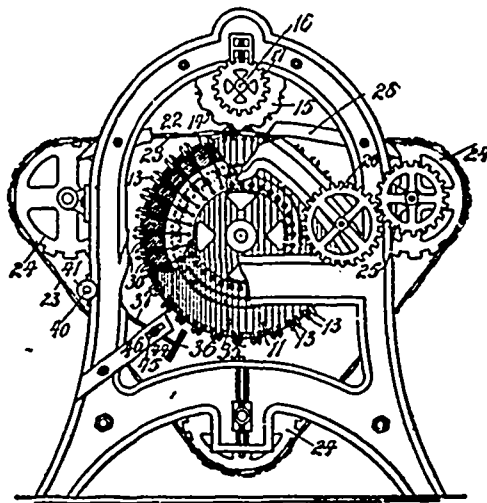
Well-constructed "blower kilns," where the hot air is blown in at one end and escapes at the other (this latter always the entrance end for the material) are giving satisfaction. The best kiln, however, seems to be one in which ample piping in the kiln itself insures sufficiently high (up to 180° F.), uniform temperature in all parts of the kiln, and where the circulation, promoted by a suction fan, is moderate and under perfect control. In such kilns even timbers of large size can be dried satisfactorily with a temperature not over 150° F.

The valve-gear of an engine should be oiled more than once for a five hours' run. The steam warms it up so that we can not tell whether it is running dry or not by feeling of it, and it should be oiled frequently in order to be on the safe side.

If you have a good direct-acting steam pump that will run at a slow speed, do not let your water level fall as low as safety will allow and then pump it up rapidly, but keep it at about the same height in the glass all day, except just at night, when it should be raised as high as is safe, in order to provide for waste during the night.

RECENT WOODWORKING PATENTS.

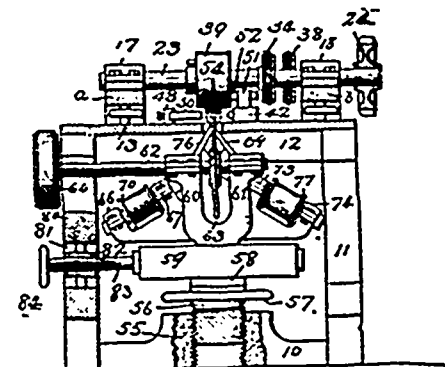
PATENTS for wood-working machinery have recently been granted in Canada as follows:



STAVE MACHINE.

Patentee: The American Barrel Stave Machine Company, assignee of Wm. F. Hutchinson, both of New York, U. S., granted 1st April, 1896; 6 years.

Claim.—A stave machine, comprising a revoluble cutting drum having circumferential knives, a bearing for the knives, and a flexible belt-like carrier moving tangentially across the face of the drum, the said carrier having cross bars to fit between the knives and serve as ejectors, rollers journaled on the carrier, and guides at the drum ends to support the rollers, with means for preventing the tipping of cross bars. The combination with the cutting drum, having peripheral knives, of the radially movable ejectors between the knives, the arms pivoted to the drum and the ejectors, the rods secured to the arms and projecting from the ends of the drum, and means, as the circular cam tracks and the tracks on the rods, for actuating the arms and ejectors by the turning of the drum, substantially as described.

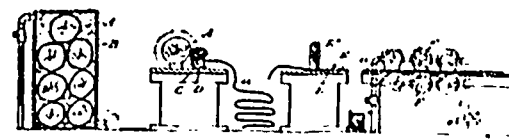


WOOD-WORKING MACHINE.

Patentee: John Richard Schelosky, St. Louis, U. S., granted 21st April, 1896; 6 years.

Claim.—The improved-dovetailing machine constructed with a series of circular saws (as two or three) mounted in differential planes, and a single saw frame upon which all the arbors of said saws are mounted, and said saw frame simultaneously adjustable, vertically and horizontally with respect to the main stationary frame of the machine, in combination with a suitable main stationary frame, whereby all of the saws and their arbors may be

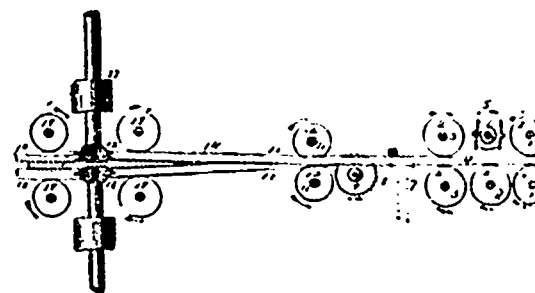
simultaneously adjusted either vertically or horizontally, substantially as herein specified.



MANUFACTURING CLOTH BOARDS.

Patentee: Wm. H. Marcon, Toronto, Ont., granted 21st April, 1896; 6 years.

Claim.—The method of producing cloth boards herein shown and described, consisting in first slicing the wood from the periphery of a log rendered soft in a continuous wavy or undulating flexible form of length of desired thickness, then gauging and cutting cross-wise into strips of desired width the flexible length of wood, and then subjecting each strip so separated cross-wise from end to end to pressure, then applying suitable cutters to the edge of the board, so as to round off the corners and finally sand-papering the board as set forth.



MATCHING MACHINE.

Patentee: Wm. H. Bullock, Oswego, N. Y., granted 28th April, 1896; 6 years.

Claim.—The combination with suitable cutters arranged alternately above and below a given plane of suitable separating rollers whereby alternate strips of lumber are spread vertically into the planes of the cutters, whereby the opposite edges of the respective strips are simultaneously tongued and grooved, with a slitting saw to cut the lumber into strips, and guides 22, which engage with the edges of said strips to hold them relatively to said cutters against lateral deflection.

When feeling of a crank-pin of an engine, while in motion, stand at the end of the frame and let it touch your hand as it passes. Never try to catch it when at about one-half stroke, for there is danger of getting caught on a set-screw, or of letting the hand pass in between the crank and the connecting-rod, where it will be injured.

Because an engine shows a fine exhaust, throwing out the puffs of steam with sharply defined lines of division, it is not conclusive evidence of a sharp cut-off, for one of the best looking exhausts that I have ever seen came from an engine that took steam from center to center. If an unequal amount of steam is admitted to the two ends of the cylinder, the exhaust will show it by throwing out puffs of unequal size, or what is known among the craft as a "short leg and a long one."

When packing the manhole cover of a boiler, it is a good plan to cover the inner edge of the plate around the hole with graphite, so that the iron may be kept from coming into contact with the gasket. Then when it is desired to remove it, it is quite possible to save the gasket and use it over again. I have pieces of a gasket that were used ten times by taking this precaution. Put none on the cover, but allow the packing to stick fast to it, which will prevent it from blowing out. If no graphite is at hand, use common white chalk.