

# THE CANADA LUMBERMAN

VOLUME XV. }  
NUMBER 5. }

TORONTO, ONT., MAY, 1894

{ TERMS, 1.00 PER YEAR  
{ SINGLE COPIES, 10 CENTS

## THE PARMENTER PATENT DRY KILN.

WE take pleasure in presenting to our readers a cut and description of what has—after three years' trial—been proven to be a kiln of very great merit, the invention of which is the result of several years of experience in lumber drying.

The object of the inventor was :—1, To produce a kiln that could be easily and cheaply constructed by ordinary mechanics ; 2, One that would be economical, simple and reliable in its operation at any season of the year ; 3, Also one that would dry all kinds of lumber and material, rapidly and in first-class condition.

The reader will observe that this kiln is very simple in construction and operation ; the air in the kiln becomes heated by the steam pipes and at once rises to the top of the kiln where it enters the galvanized iron condensing pipes which are placed outside of the kiln. It then becomes cool and relieved of a portion of its moisture by condensation, passes downwards and re-enters the kiln at the bottom below the steam pipes, the condensed moisture trickling down the inside of the condensing pipes and escaping through a small hole in the bottom elbow. The air again becomes heated by coming in contact with the hot steam pipes and rises up through the lumber, absorbing another supply of moisture, and again enters the condensing pipes and leaves a portion of its moisture on the inside of the pipes, and continues in this manner until the air in the kiln becomes dry. No cold air from the outside is allowed to enter the kiln, and no hot air is allowed to escape, consequently it is very economical in the amount of steam required to reach the desired temperature.

The condensing pipes are fitted with ordinary dampers which by opening or closing regulate the circulation and consequently the condensation. This feature is a valuable one, especially in cold weather, and one that is said to be possessed by no other kiln in the market.

The inventor claims it is a well-known fact that a current or hot blast of air coming in contact with undried lumber dries the outside first and causes checking, warping, case hardening and honey combing.

In the Parmenter system it is claimed this cannot occur as the air in the kiln does not become dry until the lumber is dry. The circulation of air is from the centre to the sides and not from end to end, consequently perfectly dry lumber can be taken out of the kiln at one end and green lumber placed in the opposite end at the same time.

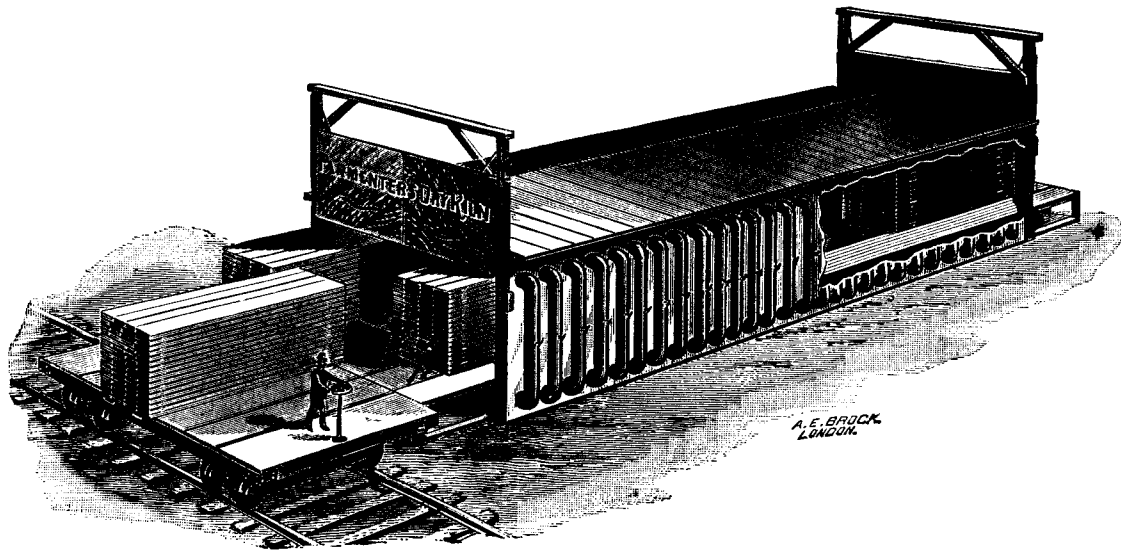
There are no fans, blowers or special engines required as circulation is entirely automatic.

Testimonials and all other information can be obtained by addressing the Patentee, Mr. J. S. Parmenter, Box 512, Woodstock, Ontario.

An interesting picture of mechanical engineering of a past generation—the “chalk age” of mechanical engineering, the author aptly terms it—is drawn by J. F. Holloway in the May number of Cassier's Magazine. To both the young engineer of the present day and to him of more mature years the reminiscences conjured up by the author must have a peculiar fascination, showing by what pluck, energy and untiring industry the achievements of early machine-shop days were accomplished.

## THE AGED BOILER.

THE life of a boiler, says the Age of Steel, like that of a horse, has its limit. The number of its birthdays depends, of course, on its original stamina, and the use or abuse of its service. If sound in material and construction, and intelligently handled, its term of life is prolonged into a respectable old age, and to this on these conditions there is necessarily a limit. It is possible, however, that any arbitrary limit is beyond absolute calculation, and is likely to overlap dates that at the best can only be approximate. The biography of a boiler is one of strain and tension, and is subjected to sudden transitions from a high degree of heat to the temperature of cold air or water suddenly admitted. That iron should lose its qualities as a boiler plate in the course of years it is reasonable to assume, and that when age and service have reached a certain point the conditions of safety are weakened, is equally reasonable. The basis of calculation must, however, necessarily vary, as the qualities of the metal used may not be uniform, nor the intelligence of service always at the same standard. From tests made



THE PARMENTER PATENT DRY KILN.

of plates taken from iron boilers, varying from fifteen to thirty years of service, it has been found that there has been not only a loss in tensile strength, but also a marked loss in ductility. A plate that originally stood a test 45,000 pounds tensile strength after about twenty years of service, shows a deterioration of tensile strength to about 38,000 pounds. On this basis alone the conclusion is that the boiler, if weaker, is still good for considerable pressure, with the fact, however, left that the plate under certain conditions would act as a piece of cast iron would act, and also suddenly give way at a certain pressure. It is obvious that a boiler constructed of plate of this character would never tempt the money of a steam user. It might have a higher tensile strength than cast iron, but in the matter of brittleness the advantage would be scarcely apparent. As most, or many, boiler explosions are caused in whole or in part by a sudden shock, a boiler plate of a brittle nature is broken by a blow, which would be as ineffective as a drum tap on a plate of lower tensile strength. Here the quality of ductility asserts itself as indispensable to boiler safety, allowing it to sustain heavy shocks or strains without giving way. The presence or absence of this quality determines the value of old boilers so far as their safety goes, and for this reason it is the opinion of many engineers that boilers of the cylindrical-shell type are in their dotage at about twenty years of service.

J. F. Waldell will start a planing mill at Newdale, Man.

## MANITOBA'S OPINION ON LUMBER.

IT has been made a matter of remark in our editorial columns that the placing of lumber on the free list is a question of serious concern to Northwest and British Columbia lumbermen. The Commercial, of Winnipeg, gives this view of the situation: “The lumbermen have been holding meetings and communicating with each other a good deal the last couple of weeks, but no definite announcement has been made yet. One object for which the lumbermen have been working hard, is to secure a reduction in freight rates, as an offset for the tariff changes, but so far no change has been made in freight rates. The dealers say that any reduction in freights will be entirely to the benefit of the consumers, as they (the dealers) will reduce their prices to the full extent of any cut in rates which may be given. No changes in prices have been made yet as an outcome of the new tariff. The disposition is to make no changes until the tariff debate in Parliament is finally disposed of. It is understood that pressure is being brought upon the government to induce them to put

dressed as well as rough lumber on the free list, and as further changes may be made in the tariff, no changes will be made in prices until it is known for a certainty how the tariff will finally stand. A city lumberman has been twice to Ottawa, no doubt to represent the views of the manufacturers to the government, though it is denied that he represents any one but himself. There is some uncertainty as to the interpretation of the new tariff. Rough lumber is to come in free, and a duty of 20 per cent. is fixed on dressed lumber, but it is said that the duty will be collected only on the cost of dressing. Thus, for example, rough lumber costing

say \$14 per thousand would come in free. The same grade dressed costing say \$16 per thousand feet would be subject to the duty of 20 per cent., but it is said that the duty will be collected only on the \$2, being the difference between the cost of the rough and the dressed commodity, instead of collecting duty on the full cost of the dressed. If the 20 per cent. duty on dressed lumber is interpreted in this way, the duty collected on a thousand feet of lumber, as above, would be only 40 cents, instead of \$3.20, if it were collected on the full cost of dressed lumber. If this interpretation of the duty is carried out, the government might just as well make dressed lumber entirely free at once, for a duty collected on merely the difference between the cost of rough and dressed lumber of the same grade, will be such a trifling matter as to be hardly worth bothering with. There is talk of yards being started in the city to handle imported lumber, but nothing definite has been done yet in this direction. As prices are likely to be advanced in Minnesota, there will be less disposition to cut prices in this direction. At the recent meeting of the Mississippi Valley Association, at Minneapolis, it was represented that stocks were not excessive, and that better prices should be obtained. Steps were taken to advance prices. The meeting of the Western Retail Association held in the city this week was to consider applicants who wish to open new yards, of which there are a number. There was also some informal talk in regard to tariff changes.”