A TIMBER PRESERVATIVE.

REMARKABLE success is said to be attained with a new process of preserving timber lately introduced in England. The agent employed is melted napthaline, contained in a tank, in which the timber is immersed. The temperature of the bath is about 200 degrees Fahrenheit, or a little below, and is evenly maintained, the heat being derived from steam pipes passing through the tank. The timber is soaked from two to twelve hours according to the size of the piece. It is believed that wood which is thoroughly impregnated with napthaline, which takes the place of the sap and water it expels, will have peculiar advantages in its susceptibility to polish, for which merely rubbing with a cloth will be sufficient. In India where, owing to climate and other influences, not only wood but other products are prone to sudden changes and decay, an experiment like the above is worth adopting.

ECONOMY OF GAS ENGINES.

AN electrical paper says that "the waste involved by the intervention of the steam engine, with the clumsy modes of raising steam and the clumsier ways of utilizing it, is apparent to any one who looks into the calorific value of fuel." That is a sort of preface to the statement that gas engines are "beating the steam engine, both in fuel consumption and in general economy." Then it proceeds, "It is to be hoped that some central station in this country may be induced, at all events, to try a supplementary gas plant or two for day loads or for emergency use." If the gas engine is so very economical, why use it merely for emergency purposes? The position of the gas engine is well understood, and users of steam are quite aware that they do not get the full value of the fuel; but no "electrician" has yet attempted to improve on the "clumsy method of raising steam" except the man who was going to use electricity to raise the steam that produced the electricity. He is still "going to."—English Mechanic.

PAINT AND SHINGLES.

THE Timberman remarks that it has always seemed that in the use of paint to preserve wood exposed to the weather, the fact that a shingle roof was omitted from the catalogue was invariably the rule. This idea or oversight was one of the things in which custom becomes habit, and because every one else did so, all the rest followed suit. It is safe to presume that the custom of leaving the shingle roof unpainted originated in its angular form being less exposed to the after effects of rain and snow. A little thought will show the folly of such a conclusion when remembering the frail nature of a shingle and the slight fastening it has. If paint would be useful to any weather exposed surface it would certainly be so on a roof. The fact goes without telling, and in the present style of suburban residences the roof receives its share of paint along with the rest of the building, thus at once combining the useful with the beautiful. It is certainly singular that painting of roofs has not always prevailed, and it adds much to the finish and character of the building to see the roof painted. When the thin, slender nature of the shingle is taken into consideration, it will be plain to every one that sun cracks will easily go through the shingles, and to that extent render it worthless. The only way to overcome this is to paint, and always keep the shingles painted.

NEW HARDWOOD MACHINERY.

SOME ingenious mechanisms for the working of hardwood have recently been introduced. One of these is a boring machine adapted to making holes for blind nailing in hardwood floors, which works automatically, and accomplishes the object in view most perfectly: that is, the stock is carried forward by a fluted roll, and is stopped by a cam at proper distances from the boring of the hole by the bit which operates horizontally, the board being carried on an angle. Another efficient mechanism in this field is a hardwood flooring apparatus, which takes the rough stock, planes it on both sides and matches it, and has five cutting cylinders, the first having a flexible bar, which allows of the free passage of irregularities in stock and insures the presentation to the second cylinder of a uniform surface, and this followed by top, side and bottom finishing cylinders; the side finishing cylinders are equipped with a weighted chip-breaking bar, which prevents splintering the stock; the six feed rolls are nine and a half inches in diameter, being all geared, and the back rolls are placed beyond the last cylinder, thus carrying all stock clear through the machine—the largest size taking stock of some eighteen inches width by six inches thickness.

A MILL WHERE BELTS ARE NOT USED.

A NEW Belgium factory uses electricity to transmit its power instead of belting. The dynamo is of 500 horse-power, and forms the fly-wheel of the compound Corliss engine. The shop is supplied with sixteen motors, among them ten 16 horse-power, one 21 horse-power, and one 37 horse-power motors. Their average efficiency is 87.2 per cent. On some of these motors the load is very variable, and several are exposed to dust and dirt, so that with 90 per cent. efficiency of the dynamos, 98 per cent. of the conductors, 87 per cent. of the motors, the net result is 76.6 per cent. power delivered. As the lost work in belt driving is practically a constant quantity for all loads, or at least is usually considered to be, the power required to turn the shafting, pulleys, etc., at the normal speed when no work is being done on the machines, it follows that taking 79.4 per cent. as the final output in two cases, one of electrical and the other of mechanical transmission, we find that at a load of 20 per cent. the electrical system would still give 47.2 per cent. useful effect and the mechanical nothing at all. From careful experiments which have been made in actual practice, it has been clearly proven that to drive all the machines idle needs more power than to drive the shops in the ordinary course of work; whereas eleven electrical horse-power is required when driving all the tools idle, only about seven electrical horse-power is needed in ordinary work, of which four electrical horse-power is used to drive the shafts, belts, etc., alone; this clearly shows how small a part of the power produced by the engine is actually used in useful work at the tools.

Such satisfactory results of the application of electricity to factory driving must attract attention, and will doubtless lead to great changes in transmission. Whether in the case of large machine tools it would not be better to discard shafting and belts altogether and supply a special motor to each tool, is a question which must be settled for each individual case which may arise: the current could be switched on or off just as easily as the belt is now thrown from the loose to the fast pulley, and vice versa.

NEWS AND NOTES.

Fred. W. Bonness, a Minneapolis lumberman, is in New Brunswick, spending a few weeks with his brother, J. D. Bonness, of St. Stephen. Fred has been absent from the province for about 25 years.

It is stated that the property of the late John A. Morrison, of Fredericton, N.B., will not realize sufficient to liquidate the debts. For this reason his son, John A. Morrison, jr., has declined to accept the bequest of the will, which gave him the mill property contingent on his paying the debts. The mill property has been bought by James Murchie & Sons, of Calais, and Neil Murchie will move to Fredericton to take charge of the business.