

VIEWS AND INTERVIEWS.

A Stone
In a Tree.

The LUMBERMAN adds to its many stories of curious "finds" in trees the following: Two men were at work with a big circular saw in Reading, Penn., recently, sawing up a white oak log, which came from a farm in the vicinity, when suddenly the saw struck something hard, and before they knew it every tooth was gone. They held an examination, and found a granite pebble some six inches in diameter, embedded in the solid wood. It is a question how the stone got into the tree. There are no such pebbles in the neighborhood where the tree grew, nor was there any sign of a hollow, by which it got inside the tree. The wood was perfectly sound all around it, and the rings of the wood would indicate that it had been there not less than two hundred years.

Smoke
Nuisance.

Washing air of its impurities by passing it through water screens or through chambers into which water is profusely sprayed is a well-known and much used process in heating and ventilating practice. A somewhat analogous method is being applied by an English factory owner to the much discussed smoke nuisance. According to the published description, somewhat indefinite, perhaps, in a few respects, the apparatus used by him consists of a large cast-iron tank, in which is a slotted barrel, which is fitted with perforated beaters, and the tank is partly filled with water. The smoke is drawn into the barrel from the machinery by a powerful fan, and undergoes a scrubbing process. The barrel rotates very rapidly, churning up the smoke with the water. On the top of the barrel are several semi-circular trays or sieves, which are perforated, and effect the purpose of further washing the smoke. The smoke which escapes from the beaters, is caught again by these sieves, and dashed down again by a very fine spray of water from the beaters. The black sludge of solid matter is forced to the top of the chamber, and thrown over into a chute, which conveys it to a wooden tank. The smoke which finally escapes from the machine is said to be comparatively inoffensive, and there is certainly good reason to believe that this should be so. It is interesting to note, however, adds a writer in Cassier's Magazine, that the use of the apparatus does not end with the cleansing of the smoke. The black deposit gathered by it is taken off in barrels to be used in the making of paint and printing ink, yielding an acceptable revenue instead of polluting the atmosphere, and the remaining liquid is said to have proved itself a most valuable disinfectant. Thus a two-fold purpose is accomplished, either one of which would seem to be quite sufficient to commend the process to manufacturing communities in which smoke suppression is a live topic.

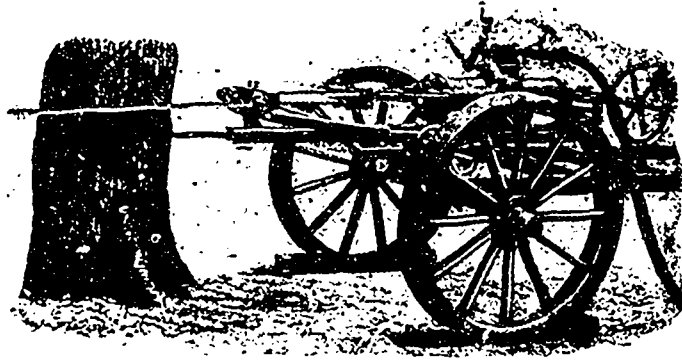
Forest
Moth Pests.

Recently, a most remarkable fact in the history of a forest plague has been reported. During 1880 a plague known as the "nonne" moth, wrought great havoc in the magnificent pine woods of South Germany, especially in the neighbourhood of Munich. The abnormal increase in number of the "nonne" moths was first observed in the summer of 1888, when the electric light in the industrial-arts exhibition in Munich attracted them in great swarms. But it was not till the spring of 1890 the alarming discovery was made of the ravages wrought in the forest of Ebersberg by enormous numbers of the caterpillar of this moth. The mischief spread with rapidity, and in a very short time the trees on large tracts were stripped of their needles and had to be removed with expedition. Every effort was made to stop the mischief. The population of the infected district took a hand in collecting and destroying the enemy at every stage of its existence, egg, caterpillar, chrysalis and moth. The electric light was used to lure the moths to their destruction, and millions were destroyed. The moths were drawn by the dazzling rays of the electric light into a huge funnel, whence they passed to a crushing machine, which speedily converted them into a

paste that made excellent food for poultry. The undergrowth of the infected trees was burned off, the top growth syringed with strong antiseptics and poisonous washes, and incisions were made in the bark of the tree and filled in with pitch. Every possible remedy known to the science of forestry, which has reached such perfection in Germany, was tried. The effect of these remedies in 1891 proved to be absolutely nil. The plague continued to make havoc in the pine forests all through that and the following year. Now comes the extraordinary fact in the story of the scourge. In 1893, which had been looked to with great anxiety, the plague suddenly and unaccountably ceased after a course of five years from its beginning. The cause of the cessation is still a mystery.

NEW TREE FELLING MACHINE.

TWO months ago we gave an account of tree felling by electricity, a successful experiment in this line having been made in Sweden. The following account of an English effort to fell trees by other than manual labor is given in the current issue of Cassier's Magazine. The new machine of which we furnish an illustration is the invention of Mr. Allen Ransome, of Chelsea, and reminds one very much, in appearance, of the now so familiar rock drill, the drill proper, of course, being supplanted by a reciprocating saw blade, substantially in the manner shown in the accompanying sketch. The piston to which the saw blade is attached works in a cylinder of small diameter but rather long stroke, pivotally supported on a pair of wheels, so that the whole arrangement is readily portable. Steam is intended to be supplied to the machine from a portable boiler



NEW TREE FELLING MACHINE

through a long steam hose, so that the boiler can remain in one place until the machine has felled all the trees within a considerable circle around it, the place cleared, of course, depending upon the length of the hose. Cutting down a tree, however, is not the only function to which the machine is limited. By partially rotating on its axis the saw can be set to cut in a vertical direction, or at any angle between the horizontal and vertical positions, so that, having been felled, a tree may be quickly cut up into desired lengths. It generally happens that when a large tree falls it does not lie flat, as its branches hold the upper part of the trunk from the ground, and in order to squarely cross-cut trees lying in such a position it is necessary to incline the saw somewhat from a direct vertical line. This is readily done by the adjusting capacity just mentioned. Suitable adjustments also are provided to enable elevation or depression of the saw to accommodate high or low-lying trunks, as the case may be. It is not uninteresting to note that Mr. Gladstone, whose prowess as a woodman, in addition to his better known talents, was so widely exploited two or three years ago, has honored the machine with a very favorable comment, being reported to have said, after seeing it in operation, that it would do as much work in a minute as a woodsman could do in an hour.

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber," as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

THE BRITISH BOILER EXPLOSIONS ACT.

IN Britain there are acts of Parliament relating to the use of steam boilers known as The Boiler Explosions Acts, 1882 and 1890. Under these Acts the owners of steam boilers must report every accident of the nature of an explosion within 24 hours of its occurrence. From the last report to the Secretary of the Board of Trade by the Solicitor having charge of the workings of these Acts, we learn that the year ending June 30th, 1893, there were 72 investigations held. Some of these were merely preliminary inquiries, but 26 were formal investigations. Of the 72 accidents, 32 were from deterioration, or corrosion or some part of the apparatus having become defective. 23 were from ignorance or carelessness on the part of the attendant, 8 were from defects in design or workmanship, and in 9 cases the causes could not be definitely placed under any of these divisions.

It is interesting to note that the English law does not compel a boiler owner to place his boiler under the charge of a man holding any kind of a certificate, but the law holds the owner responsible, and in event of an accident he must prove that he employed a "competent" man. It goes further, and if at any of these formal investigations, it is proved that the accident was due to negligence on the part of anyone, whether attendant or owner, maker or seller of the boiler or its attachments, the law is strong enough to reach him, and inflict some form of punishment.

Here are samples from the report before us. No. 582.—Manufacturing engineers blamed for reckless conduct, and to pay £20 costs; No. 590.—Managing director blamed for neglect and ordered to pay £40, costs; No. 608.—Owner blamed for not employing a competent person and ordered to pay £85, costs; No. 623. Owner blamed for want of proper supervision, and attendant blamed for neglect. Owner to pay £20, and attendant £5, costs; No. 651. Owner held responsible for negligence of his engineer, and a blacksmith who ignorantly advised owner as to the working pressure was blamed. Owner to pay 20 shillings and the blacksmith £20, costs.

We commend this to all parties interested in steam boilers. The acts have been in force a number of years, and have given good satisfaction. A similar act in Canada would do much to improve the steam appliances, and would make owners careful as to what kind of a man they employed.

The investigations refer not merely to what are usually called boiler explosions, but cover accidents to any connection of the boiler which is under steam pressure. The breaking of a steam pipe, the rupture of a tube or the bursting of a blow-off pipe must be reported, hence owners are much more careful.

Some of the accidents investigated were of boilers which were insured. The report says: "As regards the Boiler Insurance Companies, no cause has arisen in connection with the working of the Acts which shows any serious neglect on the part of their inspectors, nor has any blame been attached to them by the Court in any formal inspection which has been held during the year."

A NEW INVENTION.

A NEW crank, which does away with the dead point, is the asserted invention of a French engineer. The crank-pin works in a slot cut in a steel disc fastened to the end of the shaft, and is pressed upon by a spring, which is so adjusted that at the ordinary working steam pressure it is held firmly in place. If, however, the crank be at a dead point, when the full pressure of steam is admitted into the cylinder, the spring is compressed, the crank-pin slides in the groove so as to assume an angular position to the shaft, and the latter begins to revolve. As the pressure of the steam in the cylinder, while the engine is in motion is less than in the boiler itself, as soon as the shaft begins to turn the pressure against the spring is relieved, and the crank-pin flies back to its usual position. The tension of the spring is adjusted as necessary.