THE EVOLUTION OF THE SAW MILL.*

By H. S. SEAGE, SPECIAL AGENT TRADERS INS. CO., Lansing, Mich.

MR PRESIDENT AND GENTLEMEN OF THE FIRE UNDERWRITERS' ASSOCIATION OF THE NORTH WEST:

For the past five or six years, from the Underwriter's standpoint, the saw mill has been regarded by many as a source of evil. It might be a thing of strength and beauty, but it could bring no joy or profits to the treasury of the insurance company. So we find that as early as 1892, immediately following the report of the Saw Mill Committee of the Michigan State Association, many companies sent to the local agent at Ukase, placing saw and shingle mills on the prohibitory list; such a cry was raised against the saw mill that the writer was induced to inquire somewhat into its history and learn if possible from whence it came.

The first mention I have been able to find of the saw-mill, and by this is meant a saw used for cutting plank or boards, operated by power, is with the ancient Egyptians, who operated a ponderous blade of bronze with serrated edge. The log was placed on end and secured to posts driven in the ground; to the ends of the bronze blade were attached ropes, and the heavy blade was drawn back and forth, and by attrition, wore its way into and finally through the log; but this gave way in time to improved methods and as the practical benefits of the saw mill became demonstrated, rewards were offered for its improvement, and it reached such a degree of perfection that the Greeks deified the inventor of the saw and called him "Perdix."

A manuscript of the Thirteenth century describes a saw mill operated by oxen treading a horizontal wheel; in 1322, a saw mill operated by water power was constructed at Augsburg, Germany, but was opposed by the hand sawyers, who feared that the machine would ruin their occupation, and consequently a mob burned it and then carried off the iron parts and each piece was buried or disposed of secretly, so that the thing should die and never be heard of again; but this did not stop the saw mill, and it slowly spread, notwithstanding it met with opposition from parliaments and people.

In the Fourteenth century England, by parliamentary enactment, made it a criminal offence against the King to erect a saw mill, because "The trees which might goe to make ye masts for ye King's ships would be destroyed," and in consequence, for over an hundred years the Dutch furnished England with all its lumber. The Dutch operated saw mills by wind power as early as 1410, the vast timber districts of Norway and Sweden invited the introduction of the saw mill as early as 1530. By this time the saw mill had become such an important factor that the Bishop of Ely, then British Ambassador to Rome, thought it his duty to give a minute description of a saw mill operating at Lyons in 1555; but such was the opposition in England to its introduction, that no one could get permission from the Crown to build a mill, but in 1663 a Dutchman secretly built a combined saw and grist mill—the first saw mill in England, near London—but it was never operated, as an infuriated mob of ship carpenters destroyed it and sought to kill the poor Dutchman, but he escaped. But so urgent was the demand for building lumber in England that one Houghton set before the public in speech and press, the advantages offered by the use of power saw mills. But it was not until 1767 that, at the request of the Society of Arts, a special decree was issued by the King, giving permission for James Stanchfield to build a mill at Limehouse. But the King refused to give it his protection, so great wss the prejudice of the people, and it was destroyed by a mob, two years later.

So England continued to buy its lumber of the Norseman and the Dutch.

The colonies, in the New World, feeling the need of sawed lumber, sent to Holland for the machinery for a saw mill, the contract price for which was about $180, exclusive of the charges "of ye ship which should transport it." This arrived and was set up at the falls of the Piscataquay, in 1620, and this is said to be the first saw mill in the new world. Shortly after, the Dutch West India Compnny constructed three saw mills in New York, to be operated by wind; one of these was located on Nut, now Governor's Island, and was leased for five hundred boards yearly, one-half to be paid in pine and one-half in oak. The colony of Massachusetts Bay, feeling the need of lumber, made application to "The Court of Assistants" in London for the construction of a saw mill, and in a letter to Governor Endicott dated 1628, he is directed "to give approbation and furtherance to Francis Webb in setting up his saw mill, to be sent over in the goode ship Lyons Whelpe."

Although hindered by restrictive and exclusive conditions of laws, the saw mill slowly extended over New England, and we find it entering the wilds of Maine and New Hampshire in 1634; into Vermont it went in 1636 and into Rhode Island in 1639. The state of the Wooden Nutmeg did not feel its presence until 1654, and New Jersey not before 1682. William Penn and Caleb Pusey brought over from London a saw mill ready framed, and it was set up on Chester Creek, and in a letter to the "Free Society of Traders" they declare that "the saw mill has been of great use and comfort in the colony in the cutting of planks and staves for the better construction of meeting houses and other buildings." This was in 1683 and is the first recorded saw mill in Pennsylvania.

Previous to 1645 all the saw mills in use in the colonies had been brought over from Holland or England, but in that year the Court of Massachusetts adopted a system of laws called the "Body of Liberties," which provided that "there should be no monopolies, but for new inventions a patent should be granted for a short time only." One of the first to apply for exclusive privilege under this first New England code was Joseph Jenckes, of Lynn, and on the 6th of May, 1646, the Court resolved that "In answer to the petition of Joseph Jenckes for liberty to make experience of his abilityes and inventions for ye making of new invented saw mills to goe with water, for ye more speedy dispatch of worke than formerly, this petition is granted for fowerteen years, without disturbance by others, so that his study and cost may not be in vayne or lost."

You will see by this brief outline that the saw mill had hard work for existence; it was opposed by the hand sawyers, who thought it would take away their occupation and deprive them of labor, kings and parliaments enacted or declared laws against it, but so necessary and useful a thing to the people had it become, that it overcame all prejudice and law and took up its march with the pioneers who turned their faces toward the untrodden wilds of the west, and it was destined to cut its way through the vast forests and transform these into fields of grain and gardens of flowers.

General Lewis Cass in 1814 (then Territorial Governor of Michigan), with three others, built a small saw mill on a creek tributary to the Muskegon river, but this was short-lived, being destroyed by the Indians the year following. The first mill in Wisconsin was erected by consent of the Sioux Indians near Prairie du Chien, in 1819, but in one of the raids of the Winnebagoes this was burned a year or two later.

But Michigan, Wisconsin and the Great Northwest was to be populated, and the saw mill was to be an important factor in the work of building its towns and cities, and its growth and improvement has been general and sure, and from the bronze saw of the ancient Egyptians, the evolution and growth has been constant, until to-day we see the great creations, the result of modern science and skill; from the slow process of attrition we now see the saw cutting its way merrily through the log at the rate of three hundred feet per minute.

No element in the development of the Northwest has had greater influence than the saw mill. It has constructed nearly all its railroads and it has built its towns and cities. It populated the east and west shores of Michigan and opened up its northern limits. It built the great cities of the Saginaw Valley, of Muskegon, and laid the foundations of the second city in the State, Grand Rapids.

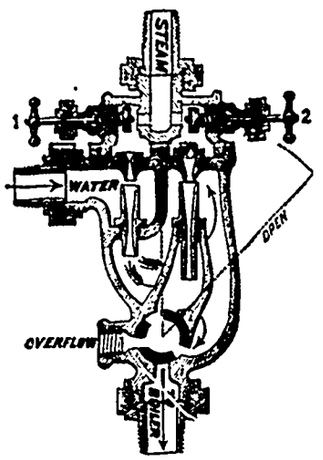
It built the cities of Oshkosh, Fond du Lac, and opened up the vast territory of Green Bay; it took up its line of march down the Father of Waters and laid the foundations of Moline, Rock Island and Davenport; in its march it has carried a boom of success and in its wake it has left its blackened trail; it has created more millionares and in turn has been the cause of more poverty and suffering than any other industry; it has built more cities and towns, it has peopled more counties as it advanced, and in its decline has left these to decay or blackened ruins.

Within the jurisdiction of this Association we are now feeling the influence of this declining industry, not only in the loss of premiums, but in losses by fire as well. This industry has always faced us with a moral hazard, even in its palmy days, but now in its decline, to many it bristles with sparks and is lurid with flame.

*Paper read before the Fire Underwriters' Association of the North West at Chicago, October, 1895.

THE "NIAGARA" INJECTOR.

BELOW is a sectional cut of the "Niagara Injector," an injector which is rapidly becoming popular among steam users. This boiler feeder is manufactured in St. John, N. B., by W. H. Stirling. The machine has only been on the market one year and is now in actual use in most of the cities and towns throughout Canada.



THE NIAGARA INJECTOR.

The machine is complete in itself requiring no valves as will be seen by cut.

It can be throttled by means of valve No. 1 on suction side, so as to supply from full capacity down to required quantity, thus reducing the quantity of steam used, and delivering the water 90° hotter. The manufacturer states that this feature will save the price of the injector many times over in fuel alone, and that this fact has been demonstrated beyond doubt by the "Niagara" Injector being connected where other machines have been taken off.

Mr. Stirling has shipped these injectors to nearly every western city in Canada as far west as British Columbia.

The "Niagara" Injector is sold in Montreal by Samuel Fisher, 57 Sulpice street, and other dealers.

THAT PULLEY ACCIDENT AT AYLMER.

ON Saturday last The World published an account of a fatal accident at Aylmer, Ont., whereby Mr. J. D. McDiarmid of that place was instantly killed by the bursting of a poorly-constructed "wood split pulley." The Dodge Wood Split Pulley Co., of Toronto, while very much regretting the accident, are glad to say that the pulley in question was not one of their manufacture, and take this opportunity of advising the users of pulleys of the importance of seeing to it that they get a well-made, reliable article when purchasing. Every "Dodge" pulley manufactured is guaranteed strong enough for the heaviest double leather belt any width. To avoid accidents or mishaps ask for the "Dodge" patent and avoid inferior imitations.—Toronto World.

NO TIME TO READ.

THE following epistle from Messrs. Smith & Henderson, of Blenheim, Ont., has been given a conspicuous place in THE LUMBERMAN'S curiosity shop:—"Sir,—find inclosod Thirty Three cents in payt of Lumberman to Date pleas cancell our name of you list as the paper is no use to us we do not remember of Subscribing for it if you continue sending your paper we will not pay for it as we have no time to be bothered with such trash they have Just been thrown aside and left for the waste basket so do not bore us with it any longer."