

### THE VICTORY OF THE S. A. WOODS MACHINE CO. AT THE NEW ORLEANS EXPOSITION.

It is generally acknowledged by persons connected with wood working business, who had the pleasure of visiting the New Orleans exposition, that what was called the wood working machinery annex contained the most varied and complete display of wood working machinery ever seen on the continent; and as the United States is far ahead of any other countries in the manufacture of this particular class of machinery it may be confidently stated that the exposition exhibit of wood working machines was the greatest the world has ever seen.

As almost all the prominent manufacturers of wood working machinery in the United States had their machines entered for competition, the keenest anxiety was felt as to its results, and no trouble or expense was spared by the competitors to make as good a display of their machinery as possible, not only from its advantage as an advertisement to the wood workers who visited the exposition from all parts of the country, but from the much more important advantage which would result from the securing of an award over so many well known competitors.

There was also, at the opening of the exposition, a struggle to secure the most desirable positions for a favorable display, and in this respect the concern which was most disadvantageously located was the S. A. Woods Machine

Co. A public street, which the exposition management found it impossible to close, passed directly through the machinery annex and cut off a large amount of space which would otherwise have formed a part of the S. A. Woods Machine Co.'s exhibit. This was a very discouraging state of affairs, but the company, although occupying such an unfortunate position for the display of their machines, made the best of their situation, and by cutting out a partition which separated their exhibit from the main exposition building, and by a good arrangement of their machines, overcame to a certain extent the disadvantages of their position, which were so great that at one time the company seriously contemplated retiring their exhibit altogether from the exposition. Their confidence in the excellence of their machines convinced them, however, that with any sort of a fair showing before an intelligent committee of judges they were bound to win; and the sequel proved that this confidence was well founded, as before an examining committee composed of some of the most intelligent machinery experts to be found in this country, and after a thorough examination and comparison with other machines of like nature, they obtained the highest award which could be secured—namely, a gold medal for superior excellence for each different machine exhibited by them. Eight different machines were exhibited for competition by the S. A. Woods Machine Co., Boston, New York and Chicago, viz., Fast Feed Flooring Machine,

Moulding Machine, Double Endless Surfacers, Jointing Machine, Circular Saw Machine, Planing machine for matching two boards at a time, Panel Planer, and Shop Surfacers, and eight gold medals of the first-class for superior excellence were received by them over all competitors, thus placing their machines, on a fair verdict from a committee of experts, at the head of the wood-working machinery manufacture of the world.

This award is well deserved, for there is no concern in the country which pays closer attention to the manufacture of its machines, or maintains a position nearer to the front in the matter of improvements. The verdict of the judges of award at the New Orleans exposition is one which had already been made by the most intelligent wood working firms in the United States and other countries, as evidenced by the large orders for their machines which the S. A. Woods Machine Co. have received during the exposition and since its close.

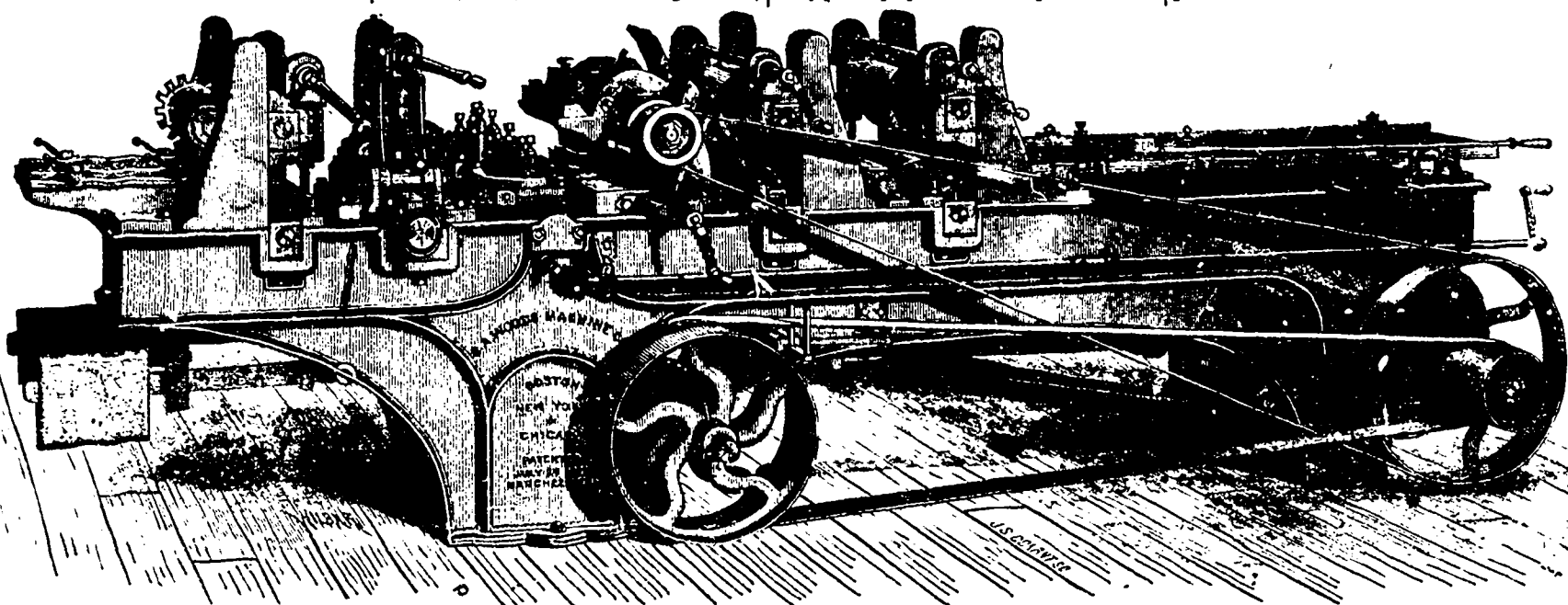
One of the most important and widely used machines in the exhibit referred to above, is the new heavy pattern flooring machine, an illustration of which we present with this article. This machine has been designed by the S. A. Woods Machine Co. with special reference to high speed and fast feed, to meet the requirements of mills doing a large amount of business, and at the same time producing the very best work. It embodies many new features, and every part is proportioned with special reference

to convenience and durability. One of the special features of this machine is the feed rolls, which are heavily weighted and provided with expansion gears, and are so mounted with expansion gears upon both ends of the shafts that an equal pressure is obtained upon both edges of the board, causing it always to "hug the guide" and feed through straight.

The method of suspending and weighting the feed rolls is entirely new, and the machine possesses many valuable and novel features which cannot fail to make it popular with practical wood workers.

#### Leather Belt Cement.

An ordinary cement for this purpose is wheat flour boiled in oil of turpentine, but the ends must be secured by rivets, or it is not reliable. A better cement is made by soaking six ounces best glue in one pint of ale, then boil, add one and a half ounces of boiled linseed oil and stir well. Another prescription is to take dissolved glue in the same as the cabinetmakers use it, and add tannic acid till creamy and rosy. Make the leather surfaces to be united rough, apply the cement hot, let it cool and dry under pressure, and it will not need riveting. For rubber belting take pure rubber in thin slices, two ounces, dissolve in one pound of bisulphide of carbon. This is a good cement, but if it thickens very soon. In order to prevent this add a solution of pure rubber, rosin and turpentine. — *Exchange*.



THE S. A. WOODS HEAVY PATTERN FLOORING MACHINE.

#### GRINDING WOOD.

Out among the Adirondacks the soft woods of that region are being ground into a fine pulp flour for mechanical purposes, which can not only be used in a manufacture of paper, card-board and oil-cloth, but can be thrown in with the feed of horses and other animals, that make a meal of almost any thing that is tasteless, provided it is sweetened up with a little nutritious matter. How far the fibre of the fine grains of spruce has found its way into the eatables of the human family remains only for the chemist to decide. For the purpose of soft wood flour, however, the trees are cut down and trimmed of their branches, and the bark removed by a gang of workmen who are familiar with the use of the draw knives, when the trees are ready to feed onwise through a hollow auger that is turning about as rapidly as a buzz saw. This hollow paring machine contains a number of knives that plane off in its circular path the fine shavings for the grinding machine similar to that of a lead pencil sharpener in bringing a conical point on a pencil. This operation reduces the fibres of the tree into lengths no longer than the thickness of a shaving, and soon reduces a log of wood into miles of ribbon that can easily be broken into flour by the millstones, as the grain of the wood runs nearly crosswise. This process differs in many respects from that employed in reducing wood to pulp to be filtered into paper. The

cutting of the knives would be injurious to the minute fibres as some of them would be severed in the operation. In the mountainous districts noted for their water power, where wood can be ground on large revolving stones without the aid of steam in any form, and where the cost of power is not limited, the timber is cut up in lengths of about four feet and rafted down the streams to the mills, where it is taken into a side channel and raised out of the water by an endless chain that carries each length of wood into the storehouse, and piled up for use. They are then taken to a large circular saw and cut up into four pieces crosswise that leaves the bolts one foot in length. The bark is then planed off very rapidly on a revolving side cutter, the long knives on the face of a large wheel pass of the bark lengthwise of the bolt while it is being slowly turned about on a table by the workmen, when they are ready for the splitting machine. This machine is nothing more than a blunt wedge which is driven up and down by a crank motion. The bolts are placed beneath this stamping wedge that cracks them in halves in an instant, and the knots split out, if any are to be found, and the bolt reduced into pieces sufficient for the grinding machine. This is the machine that requires so much power to keep the mill in motion. The pieces of wood are laid crosswise of the stone and act as a break to keep the grinder from turning. The stone is kept well saturated with

water, and its rough surface scrapes and grinds the fibres crosswise with the grain and mashes them into a pulp for the paper mill. The blocks of wood are placed in a rectangular box, so arranged that the grinding surface forms the bottom of it. The cover or follower is forced down by a feed screw, having a friction nut to guard against an over pressure on the stone. With five or six of these grinding pits arranged in the circumference of the revolving stone a large amount of power is absorbed in converting wood into pulp. The pulp being mixed with water in grinding is easily conducted in pipes down the stream to the next water privilege, where it meets with a chemical process, consisting of baths in superheated steam and alkali, under high pressure, in boilers that free the cellulose tissues of the pulp of all the impurities that find their way into the mass as well as into the lumber when the trees were grown. From this process, with the assistance of a few white rags, it is made available for the finest book and writing paper. In the paper industries of the world there is already to be found as much wood pulp in use as that from rag, and the uses of the former is very rapidly developing. — *Exchange*.

#### Throw Away Trusses

and employ the radical, new method, guaranteed to permanently cure the worst cases of rupture. Send two letter stamps for pamphlet and references. World's Dispensary Medical Association, Buffalo, N. Y.

#### WOOD STAINS IN A DRY FORM

Andes (Erfindungen und Erfahrungen) gives the following formulae for some wood stains, which may be put up in a dry form, and when wanted for use may be readily dissolved in water:—

**OAK WOOD.**—Five kilos, of Cassel brown, 0.5 kilo. of potash, and 10 kilos. of rain water, boiled together for an hour, the whole strained through a linen cloth, and the clear, dark-colored liquid boiled to a syrupy consistency.

**WALNUT WOOD.**—A decoction of Cassel brown, 3 kilos.; potash, 0.5 kilo.; and water, 7 kilos.; the whole strained through linen, and during evaporation to syrup, 2.5 kilos. of extract of logwood added.

**MAHOAGANY.**—A decoction of extract of Brazil wood, 3 kilos.; potash, 0.25 kilo.; and water, 3 kilos.; to which, before evaporating to syrup, 160 grs. of cosine are added.

**EBONY.**—Five kilos. of extract of logwood boiled with 11 kilos. of water, and when near the syrupy state, 300 grs. of iron nitrate added; evaporated to syrup under constant stirring.

All the above stains are brought into a dry condition by running the respective syrups into trays of sheet iron, with low rims, in which the syrup hardens, and is afterwards broken up and ground. — *Exchange*.

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