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CHICAGO FURNITURE EXPOSITION

under the auspices of

THE CHICAGO FURNITURE MANUFACTURERS' ASSOCIATION

at the

EXPOSITION BUILDING

During all this lengthy period, or rather during all these epochs of eras, which in their aggregation go to make up the complete history of the furniture industry in the New World, the strides which have been made in furniture manufacturing machinery have kept pace with the growing importance of that industry, and in some instances may indeed be said to have outstripped it. To enter at detail into a description of such mechanical improvements it would be necessary to devote a good-sized volume to the subject. A mere summary of the more important will have to suffice upon the present occasion.

We will mention first the improvements in wood turning. This, which at one time was classed among the most expensive and tedious portions of the work was formerly done by hand. Now, a most ingenious machine, working automatically, is capable of turning out the most intricate and beautiful designs. Not only is an immense saving in cost of construction thus effected, but work of a character so elaborate and fanciful is done that under the old system no practical manufacturer catering to the demands of ordinary trade would have dreamed of attempting it.

Closely allied with the lathe and next in importance to it, we may rank also one of the latest inventions--the wood-carving machine. This machine may be said to have been perfected only within the last three years. It has, of course, dispensed with the services of many hand-carvers; but has in the main, worked no hardship to this deserving class of men, owing to the rapid extension of the demand for carved furniture, popularized by the cheap price at which the new machines have enabled manufacturers to place it on the market. This truly remarkable machine displays an almost human intelligence in its work. In the hands of a skilled carver, it is capable of executing the most elaborate designs. A

sample of the work to be done is made by hand, and working by this model the knives or cutters of the machine make four cuts at a single time. A machine is promised, in the near future, which will cut eight duplicates thus simultaneously. This machine works somewhat on the pantographic principle.

A machine of somewhat older invention, but of no less importance, to the manufacturer of furniture, is the sand-papering machine. Working upon the principle of a sliding planer, with double surfaces, one of these machines will sandpaper a piece of wood on both sides with great speed, producing surfaces as smooth as glass, and thereby saving an immense amount of manual labor.

A machine now regarded as indispensable, is that which now performs the once tedious work of dovetailing. With chisel and mallet, the cabinet maker and joiner of the past wrought with excessive toil to fittingly and strongly join his different pieces of wood together. Today, at one blow, the modern joiner accomplishes the object sought, nay more, he excels the work of his predecessor in the perfection of fit, which the machine he calls to his aid insures him.

The use of the automatic clamp has now become indispensable in all large factories. Few of us but will remember the multitude of small hand screws formerly employed to keep freshly-glued pieces in position. It was an infinity of twisting, and swaying and screwing and unscrewing. Now, the object having once had the glue applied to it, is placed in the automatic clamping machine, and with the simple motion of a lever all the parts are brought together. Reviewed in the light of the past, it seems like magic. Presto! and the work of an hour is performed in one minute.

Returning to the subject of wood carving for a moment, mention should be made of a machine recently invented by a Milwaukee gentleman, which engraves upon surfaces geometrical lines. The wood is drawn through the machine and subjected to the operation of knives moving in concentric

circles. The result approximates in beauty the fine engraving which we use upon the backs of bank notes. The finished product is now used largely for interior decoration and generally for furniture and decorative purposes. The geometrical figures produced by the "walking knives" of this machine are fitly singularly beautiful.

A machine seeking to attain the same object as the above, in the maximum of decoration with the minimum of labor, is the hydraulic wood press, which, however, seeks to accomplish the end sought by an entirely different process. The wood sought to be decorated, having been properly prepared, is placed in the press, and dies of various forms produce the desired impression, either in intaglio or vice versa.

A host of smaller inventions, such as rip-saws, gig-saws and band saws, surface-planers and side planers, have come to the assistance of the furniture manufacturer since the early days. Among these we may mention a very useful machine for mortising holes for locks.

There has been a large addition to the special machinery hitherto employed in furniture manufactories during the last few years. These constitute investments of considerable value.

Among the branches which may be called germane to and kindred with the manufacture of furniture, the making of furniture hardware, embracing the production of casters, brass work for ornamental purposes, woven wire goods and the weaving of materials for upholstering may be ranked. Furniture springs, even now, are generally made singly; but a recent invention by a Chicago gentleman, now turns our springs at wholesale, the machine being fed automatically with wire and continuing to produce results as long as thus fed with surprising regularity. A complete revolution may therefore be looked for before long in this branch of business.

The cost of the production of what is known to the trade as woven wire has been greatly reduced in recent years by the use of machinery, so

much so indeed that there is now but an inappreciable difference between the cost of the wire before and after it is woven. The natural consequences of such a condition of things have followed. This special branch of trade will continue to compete until low prices compel the weaker to retire, when their competitors will once again raise the price of the product of their factories to a living standard.

The method of producing bent-wood furniture in this country is substantially the same as that employed in Austria, in its general principles; but the superiority of American machinery is a powerful factor in offsetting whatever advantages may be derived abroad by a plentiful cheap labor market, and has been largely instrumental, hitherto, in enabling the home product to hold its own in American markets.

Of course, so much machinery has not been produced and put at the disposal of manufacturers, without, at times, strenuous rivalry exhibiting itself. Two, three, and even more, claimants to priority in some special machine have frequently arisen, and the courts have had to step in and settle the rights of such rival claimants. Especially has the wood-carving machine been the object of litigation. The appearance of the first of these machines was the signal for the almost simultaneous advancement of the claims of a large number of inventors. The claims are now in litigation.