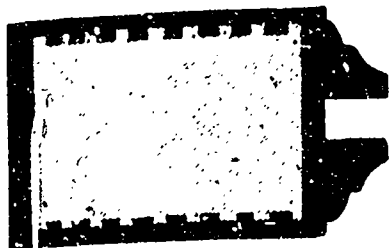


GILMOUR'S PATENT DOORS.

We give below a section of a stile of one of Gilmour & Co's. patent lumber doors. These doors are meeting with a large demand both in this country and abroad. They can be manufactured in many kinds of wood, such as pine or quartered white or red oak, cypress, chestnut, white pine, ash, elm, birch, cherry, maple, quartered sycamore, mahogany, etc., being 1/2 in. thick, with a solid core of wood of thickness according to that of the door. The sketch shows how the lumber is put together, and the manufacturers, Messrs. Gilmour & Co., of Trenton, Ont., claim it is equal



BEAD AND COVE SOLID MOULD.

superior to the solid wood, and in hardwoods of course much less in weight, and being a 3-ply cannot warp or twist. The price comes considerably under that of solid hardwoods, and also under that of any veneered doors owing to the quickness with which the lumber can be manufactured; there is no necessity of keeping it under weight except as it passes through the machinery.

The wood is first kiln-dried with moist air, and to insure perfect dryness is further subjected to heat up to 200 degrees. Waterproof treatment is used.

The doors can be manufactured 1 1/4 in. and 2 in. thick, and either square, single or double



P. G. SOLID MOULD.

flush mould, Bolection mould, also moulded to solid, as seen in section.

Three-ply panels can be used, which, of course, are much stronger than most solid woods of the thickness.

DRYING LUMBER IN KILNS.

By "SUMNER."

There was a time when one thought he must carry a stock of lumber sufficient for a year's supply ahead in order to satisfy the trade. That seemed to fill the bill then, but the demand increased to such an extent that the supply run short and there arose a demand for something to dry lumber quicker. From that time there has been a constant effort to develop a system for drying lumber that shall be quicker and better than the old system, and dry-kiln builders have succeeded in making a wonderful showing in the matter.

My object in writing on this subject is to show to some extent the different stages in

dry-kiln building and their effect on lumber. In the first place, let me say I never worked nicer stock so far as drying was concerned than the lumber dried under a covered open shed. This stock was sometimes two years old. You could put a finish on it with a set of knives, without damage, while some of the artificially-dried stock will turn the edge of a knife in a few minutes, especially hard woods. I used to think this must be the result of a harder kind of wood than I was used to, but changed my mind, as I find the fault is in the drying.

Why is lumber dried by the heat of a stove harder to cut than air-dried lumber? I studied the matter and kept experimenting and reading about the nature of wood, and found that wood is a complete network of pores or airholes through which the water evaporates. Where the lumber is dried out of doors, under cover, the process is so slow there is practically no change in these pores, giving the lumber a soft, light surface, while stock subjected to artificial heat tends to collapse by the pores drawing together, making a hard, glassy surface, hard to cut. This for a long time kept artificial methods in the background; it was only after much study and experimenting that kiln builders were able to overcome the difficulty and arrive at the present systems of drying.

The first artificial dryer I remember was a carpenter shop where the lumber was set up on end around a stove. This did not long satisfy the demand, so they built rooms suitable for piling the stock and put in a stove. Usually ventilation of these rooms was the last thing thought of, as that would let the heat out and heat was just what they wanted to retain. Still, this also failed to supply the demand, and they must try again. Then another point arose—the insurance companies began to complain and raise rates because of the danger of fire from the stoves, hence they must look elsewhere for heat to dry the lumber. Then steam was given a chance to show what sort of agent it would prove in that line. It proved to be the very best thing possible.

Still they clung to the same old method of building a closed room, ceiled tightly to retain the heat, with practically no ventilation. These would not dry green lumber; the lumber must first be piled a few months or the kilns ruined it. I remember some of this style of kilns that were built from 12 to 16 feet wide and 18 to 24 feet long, with a network of pipes on the floor proper and a slat floor to pile stock on over the pipes. The valve for regulating steam was located at the end opposite the door and the operator must pass through the length of the kiln to shut off steam when the stock was dry. I have seen men attempt to go into those kilns to shut off steam, but could not because of the heat, showing that it must have been pretty hot. I used to be able to stand heat very well, so was often chosen for this duty; by keeping near the floor and going quickly I could shut off steam and get back without being overcome with heat.

This style of kiln answered the purpose for some time, but was extremely hard on lumber. Green lumber would "honeycomb" badly. Then experimenting began on the line of air-drying, and knowing that lumber dried in the open air dried much faster during the months when the wind blew strongest, kiln builders began to introduce the blower in order to create a draft, thus initiating the air-drying process. They have succeeded to such an extent that to-day in a first class dry-kiln lumber may be dried nearly perfect in the shortest possible time and still leave the stock soft enough to be easily worked. But right here let me tell you that some people could take the best dry-kiln in existence and spoil lumber in drying, while others could take one of these old back-number kilns and get fairly good results from it. Don't run away with the idea that anybody can operate a dry-kiln successfully. It requires as much knowledge and judgment as any other branch of wood-working. The Wood-Worker.

A MAHOGANY CROTCH.

Mr. Arthur Rushforth, mahogany merchant, of Liverpool, England, has sent the CANADA LUMBERMAN a photograph of a mahogany crotch, which is herewith produced. The log



SPECIMEN OF MAHOGANY CROTCH.

was 15 feet long and about 30 inches wide, the crotch extending to 12 feet in length. Mr. Rushforth states that in his experience of about 25 years in the mahogany business it is the longest crotch that he has ever seen.

SAWING FROZEN LOGS.

"Are you going to do winter sawing this year?" inquired one lumberman of another. "We are planning to keep the mill running," replied the other. "You were inquiring some time ago regarding our experience in handling frozen logs. As you know, we have arranged to use all our exhaust steam in keeping our pond open. We have besides a closed box in which the water is sufficiently warm to take the frost out of most of the logs. We are figuring on utilizing all the waste material from the mill by converting it into steam and sending it into the pond direct. This ought to thoroughly thaw the logs.

Occasionally, however, the first few logs sent up after a new consignment has been received by rail are pretty thoroughly frozen. After a good deal of experience we have found that these logs can be sawed providing we have the right sort of a filer and the sawyer will reduce his feed.