

and recourse has, therefore, been had to a system of desiccating which, when properly carried out, produces the desired effect in from three to six weeks, according to the nature of the timber. But when all this has been done, and without it the making of a permanently close jointed floor is impossible, there still remains the fact that wood exposed to damp will swell under all circumstances, and contract when the damp is removed, and that the more seasoned the wood is the more rapidly will it absorb moisture. This coming and going of wood, as it is technically termed by wood-workers, continues until the timber has become acclimatized, when it will remain in a practically quiescent state. In order to remove the hitherto lasting defect in floors made of any kind of wood, and to provide against the effect of the natural laws of expansion and contraction, a patent has been taken, and the Impermeable Flooring is being manufactured by Howard & Sons, of Berners street, London, with the result that their new or old buildings can have in the future floors made of any woods, either singly or in combination, plain, or elaborately inlaid, which will be permanently close jointed, and as a consequence impermeable and free from dirt receptacles. The desired object is gained by very simple means, and at a cost so low, that there can be no reason for entirely covering floors with perishable carpets, as the outlay for covering an old floor with Impermeable Flooring or parquet, would soon be saved in the reduction of outlay for carpets.

By observation and experiment, it is found that if twelve lengths of

flooring board, each six inches wide, be planed, they will each shrink transversely with the grain one-sixteenth of an inch, supposing the timber to have been well-seasoned before working, but to a much greater extent if the wood be unseasoned, as is almost always the case in new buildings. Now, as each board shrinks towards its own centre, it follows that on the twelve prepared boards being separately nailed to the joists of a building in the usual way, there will eventually be eleven joints, each open one-sixteenth of an inch.

In the patent flooring, the eleven joints are made perfect before the boards are laid on the joists, each board being secured to each adjacent one by dog nails stretching over each joint, making one compact panel, the shrinkage on which will be three-quarters of an inch, presuming the length of each panel so prepared to be six feet, and two are joined together, making a length of twelve feet. The wood is not fastened together at any point, but where the two panels (which are kept in position by rebated fillets) join there will be a shrinkage from each end to that point of three-quarters of an inch. In a room not over fifteen feet wide, this can be allowed to come from under the skirting, so that there will be no opening in the main floor; in rooms of greater width, say twenty-four or thirty feet, there will be an opening of three-quarters of an inch at the end of each 12 or 15 feet panel, provided for by the insertion between each of slips of wood of various widths, which would only require shifting in position, the wider taking the places of the narrower, an operation which in a room