



[THIS DEPARTMENT IS DESIGNED TO FURNISH INFORMATION SUITED TO THE REQUIREMENTS OF THE BUILDING TRADES. READERS ARE INVITED TO ASSIST IN MAKING IT AS HELPFUL AS POSSIBLE BY CONTRIBUTING OF THEIR EXPERIENCE, AND BY ASKING FOR PARTICULAR INFORMATION WHICH THEY MAY AT ANY TIME REQUIRE.]

Finishing Pine. IF a room is to be finished in pine, and the wood to be left in its natural state—which is decidedly the best way to

finish pine—care should be taken that no oil, or grease of any sort, animal or vegetable, should touch it, nor should any of the so-called fillers be used, as they stain the wood, and so far as pine is concerned, do no good. The pristine freshness and beauty of pine can only be preserved by first finishing the woodwork with a plane very finely set, and avoiding all plane marks or other blemishes, and when the wood has been properly prepared and cleaned, done without using sand or glass paper, it should receive a coat of pure white shellac varnish, which, after drying, and being properly rubbed down, should be coated with two or more coats of transparent varnish, and rubbed down with hair-cloth to polish desired. Pine finished in this manner gives to either furniture or interior trimmings a handsome and desirable finish, that will preserve the grain and lustre of pine in all its mellow golden lightness.

Concrete. A CONCRETE is used in France for building purposes that possesses the necessary qualities of solidity and hardness.

It is composed of 8 parts of sand, gravel and pebbles; 1 part of common earth, burned and powdered; 1 part of powdered cinders and $1\frac{1}{2}$ parts of unslaked hydraulic lime. These materials must be thoroughly beaten up together; their mixture, when properly moistened, gives a concrete which sets almost immediately, and becomes in a few days extremely hard and solid, properties which may be still further increased by the addition of a small quantity—say 1 part—of Portland cement. It is stated that many large buildings have been constructed of this material in France—in one case a house three stories in height, 65×45 feet, standing on a terrace, having a retaining wall built perpendicular 20 feet high and 200 feet in length. Every part of this structure was made of hard concrete, including foundations, vaults of cellars, retaining wall, and all walls exterior and interior, as well as the cornice work, mouldings, string courses, parapets and balustrades, and the building has no band iron in the quoins or other plan to bind it together. All lintels over doors and windows, and all sills, are composed of the same materials, being cast in moulds.

Windows and Doors. ONE of the most important features in an interior arrangement is the actual and relative height and width of doors and windows. The question is whether the apparent proportions of apartments cannot be greatly modified

by the treatment of the necessary openings. A window in the center of one side of a room gives more light than if at one side of the center, but it has the effect of shortening the length of that side. The same is true of doors in similar positions. The higher a window is the more light it will give, but the lower a room will appear. In doors, nothing is gained by increasing the height beyond the regular proportion; sometimes, however, it may be necessary to keep a narrow door the same height as other doors in the same room in order to prevent an uniform appearance. Their relative height to that of the windows is a nice question of balance that can only be determined by the height of ceiling and size of room. Wall space to suit furniture often has to be considered, and when conditions will admit, it is often advisable to place two narrow windows in a wall, with the required space between them, than to put a large window in the center of the room. In the disposition of doors much can be done in the way of providing wall space by arranging closets and openings so that the desired results may be attained.

Stable Floors. FOR reasons that are obvious, a stable floor should be durable, not too hard or unyielding, impervious to moisture

or vermin, adherent to the feet and not slippery, smooth and a non-conductor of heat. Wood is the most common material in use, and its cheapness, ease of working, and non-conducting qualities, go a great way to make up its want of durability. But there are several kinds of wood, and some are better than others for this purpose. The hardest woods are not the most durable, nor the most desirable. Three-inch basswood plank has made a more durable floor than one of three-inch white oak plank, and it was warmer, softer, and gave a much better footing because it wore shreddy instead of smoothly, as the harder wood did. This timber has many useful points about it, as it will stand rough usage and wear, and as we have plenty of it in Canada, it might be used more frequently for barn and stable floors than it is. Hemlock and spruce come next in this respect. But a plank floor is an absorbent of the urine, and soon becomes rank with ammoniacal odors. Then some process is required to make the planks water proof, this may be done by saturating the planks with hot gas tar, when the floor becomes a most desirable one for such stables as can not have a ground floor. For a plank floor of the best kind, it is best to lay the planking double, that is, the first floor of soft three-inch plank, which must be thoroughly soaked with coal tar, filling the joints well; then, while the tar is hot and soft, lay a two inch plank floor over, taking care to