

A GOTHIC PULPIT.

The architect had to solve the problem of building a stone pulpit worthy of the time-honored Church of the Holy Cross on a comparatively small space. For this reason they deviated from the ordinary design, and obtained the desired breadth by the balcony-like broadening of the platform. The platform of the old pulpit was about eight feet above the floor of the church, and the beginning of the staircase was in the massive foundation.

The center of the pulpit has a breadth of 4 feet, and it is 35 feet high, while the radius of the staircase is 4 feet. The foundation and the cluster of pillars is made of "Grisignano," and the back wall and the baldachin of "Savoniere" stone. The variegated sounding board is of wood. The dimensions of the latter are moderate, in accordance with the design, but it answers its purpose perfectly. The entire cost is about \$4,600.—*Architektonische Rundschau*.

Hints on Building.

Put up the frame and get a roof over it as soon as may be, say in May or earlier. Then let it stand until the first of September to season. This is the old fashioned way, and it has advantages which those who have had experience with shrinking timber will not be slow to appreciate. In this part of the country the timber for a frame is always green when it is put up. Indeed, hemlock could not be worked very well dry. It is much better to have the shrinkage done before the inside finish is on than after.

All floors should be double. A layer of sheathing paper between them would not be a bad idea, and would pay for itself. The upper floor ought to go down after the mason work is done. A smooth, nice floor is a great preserver of carpets.

Back of the wash boards the space should be filled in with bricks. The ends of the floor timbers ought to be filled in such a way as to prevent rats and mice from having a free passage. Such a filling greatly diminishes the danger from fire.

Do not let the tinman or the contractor persuade you that the gutters should be left until red with rust before they are painted. It is a plan which is designed to benefit them exclusively. The paint goes on more easily after the red rust begins. The tin, however, has begun its own destruction, and will go on rusting under the paint just as steadily as though it had no protection, though perhaps not quite so fast. Tin roofs should not be allowed to get red. They can be cleaned and painted on one side in the shop. The objection to this is that the resin or acid (none of the latter should be used) needs to be cleaned off by the rains, so that the paint will stick. The best plan is to have the cleaning done at once, without waiting for the rain.

All piping should be put into the house while it is in the frame. This saves expense and much cutting of woodwork. Alongside each chimney it is a good plan to have a space extending from floor to floor in which pipes can be run if desired. The chimney breasts and the spaces which they cover ought to be plastered on wire lath, for safety, and thus avoid shrinkage.

Have a spare flue in each chimney, to be used for ventilation. The open fireplace, as a ventilator, however, is a delusion. Make openings into the flue at the base board, and by proper management of doors and windows, perfectly pure air can be secured in every room.

Heat by a big hot air furnace several sizes larger than the furnace makers recommend. This furnishes

the means for perfect ventilation, by providing an ample supply of warm, pure air. Keep the pipes and registers perfectly clean, or the smell of cooked dust will be mistaken for that bugaboo "burnt air."

In plastering do not use a "brown coat" of mortar. Put the finish directly on the "scratch coat." Time, labor, and patience will be saved, and the work will be better, harder, and more durable. Build the foundations for the piers, in the cellar, with as much care and deeper than those of the external walls. These piers support the center of the house, and they are frequently neglected. The result is a great crop of cracks in the plaster.

Have the walls of the upper floor 9 feet high in the clear, even if you have to cut off six inches from

own comfort for the sake of an external appearance which is for the benefit of your neighbors.

Lastly, have a garret by building a sharp roof. Cover the roof with dark colored slate from Maine or Vermont. Lay it in cement, and be happy.

Moral: Alterations on paper cost much less than those in wood and stone. Therefore it is better to spend a long time over the plans than to make changes on which the builder charges his own price.—*The Mechanical News*.

A STONE AND BRICK COTTAGE.

This house, which belongs to Mr. J. N. D'Andrea, is built on the Basque principle, under one roof, with covered balconies on the south side, the north side being kept low to give the sun an opportunity of shining in winter on the house and greenhouse adjacent, as well as to assist in the more picturesque grouping of the two. On this side is placed, approached by porch and lobby, the hall with a fireplace of the "olden time," lavatory, etc., butler's pantry, water closet, staircase, larder, kitchen, scullery, stores, etc.

On the south side are two sitting rooms, opening into a conservatory. There are six bed rooms, a dining room, bath room, and housemaid's sink.

The walls are built of colored wall stones, known as "insides," and half timbered brickwork, covered with the Portland cement stucco, finished Parian, and painted a cream color.

All the interior woodwork is of selected pitch pine, the hall being boarded throughout. Colored lead-light glass is introduced in the upper parts of the windows in every room, etc.

The architect is Mr. W. A. Herbert Martin, of Bradford, England.—*Architect*.

Slate Roofs.

C. C. B., of Jackson, Mich., wishes to know (1) of any way to fix a slate roof so it will not leak, or (2) of any paint or preparation that a roof can be covered over with, to prevent the water from working back up under the slate.

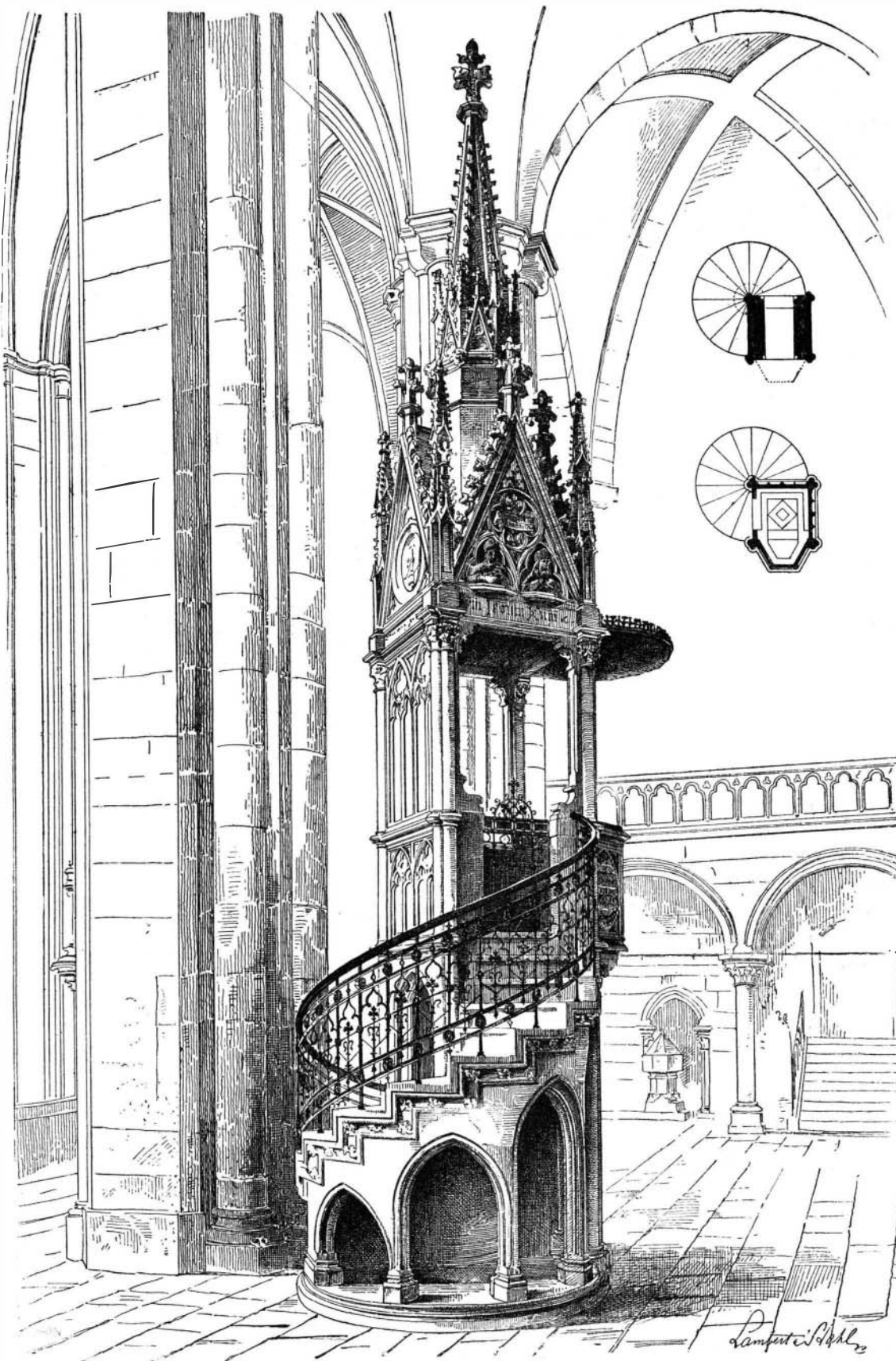
(1) When slates are laid upon a board roof, the boards should be covered with waterproof bitumenized felt, overlapping on the incline of the roof. If upon battens, a sheet wire netting can be stretched from batten to batten to keep the felt from sagging, and the slates laid with the proper tilt to make the tails lie close.

(2) To keep out draughts, as well as a special precaution against leakage occurring on exposed sites from driving rain or melting snow, the slates are often pointed with hair mortar on the inside, or torched, as it is termed; or they may be shouldered or bedded for about two inches at their heads in hair mortar,

generally mixed with coal ashes, which have been sifted and washed, to give a good slate color, and this method is more effectual than mere pointing, as it does not get loose nor drop out, while it tends to keep the tails or feet of the slates down tight.

Sometimes the slates are rendered on the under sides with hair mortar, both to keep out the weather and maintain a more equable temperature within.

If the slates are already laid, pointing must be resorted to as suggested, but there is a cement for pointing which has been in successful operation in this country and England for a long time, and it is superior to hair mortar. It is this: Take equal parts of whiting and dry sand, and 25 per cent of litharge, made into the consistency of putty with linseed oil. Use just enough sifted and washed coal ashes, in addition, to give the mixture a good slate color. It is not liable to crack when cold, nor melt like coal tar and asphalt with the heat of the sun.



PULPIT, CHURCH OF THE HOLY CROSS, LOWER AUSTRIA.—AVANS & LANGE, ARCHITECTS, VIENNA.

the floor below. This is of course for a moderate size of house. High ceilings for sleeping rooms tend toward giving the sleepers purer air by furnishing greater space. When one is drawing plans, it is best to consult with a carpenter and see whether the framing will come out even multiples of commercial lengths. It is sometimes cheaper to use the full lengths of the timber than to cut off six inches from the ends. Increasing the size of a house six or eight inches may frequently be done without any appreciable addition to the cost.

In designing, get the inside arrangement right. Have places for every piece of furniture. Arrange the bedrooms so that they will contain beds without putting them against doors or windows. Put them against inside walls if possible. Have some connecting rooms and some which do not. After all this is done, put the outside on. Let doors and windows come where they will, and do not spoil your