

### SETTING STONE WORK.

After the blocks are properly prepared and the surface on which they are to bed being truly level, the setting is an operation demanding great care in order to secure good joints and solid trustworthy work. In stonework, it must always be borne in mind, only fine mortar is admissible, and this should be clean and the materials sharp, and it is important that no dirt, clay, or other uncementitious substance be interposed, as this destroys the binding of the cement, and, if of hard texture, is liable to fracture or chip off the delicate arrises of the blocks. Large stones should be first tried on their beds before setting, and then raised and withdrawn, the bed finally cleaned, well wetted, and the mortar laid even; the stone should then be brought near its place and gently lowered upon wooden wedges, by withdrawing which it is brought exact to its bed, when it may be pounded down home by a suitable wooden mallet or block of timber. Stones are raised and lowered by aid of a lewis, which is a contrivance for securing a firm hold of them, without defacing the faces or injuring the joints, the lewis hole being made on the top of the block, which becomes in turn the bed for the stone above. Cramps, joggles, dowels and plugs are names commonly applied to four different forms of connections respectively, thus: A cramp, which may be of lead or copper, is from six to ten inches in length, and from five-eighths to one and one-fourth inches in thickness, having each end turned up to act as the cramp, and from one to two inches wide, according to the size of the stones to be joined together. If the cramp is of copper it is forged to the form and run in with lead. Lead cramps are formed at once by running the molten lead into the channels prepared for it. Joggles are of a double wedge sometimes cubes, inserted so that their diagonals coincide with the form and usually of slate. They are joints. Slate joggles and dowels are laid in fine cement or oil putty. Dowels are of a common square section, and are more frequently applied vertically, that is, to the beds of the stones, being inserted in the top of one block of stone and the bottom of another. A plug is similar to a dowel, but is formed by the mortices being run with cement or lead. Mason work is known as "plain" when worked to a smooth face; "sunk," when "cut in"; "stopped," when not finished to the end of a stone moulded, straight, cornices, strings, etc., without a bend; "circular," moulded circular, neckings, columns, etc.; "circular circular," as niches, domes and spheres; "dressed" or "cleansed" on face, and "tooled" on face. About one-eighth the volume of ashler masonry should be mortar. Rubble masonry per cubic yard requires, of stone, one and one-fifth, and of mortar, one-fourth. Masons' specifications require very careful consideration, in so far as the description, quality, and mode of working stone goes, but the architect's drawings should furnish all necessary information as to the quantity and disposition of the stonework

of a building. Half-inch scale drawings should be prepared of the masonry of windows, doors, and other features, and the jointing should be well shown on drawings. These details may be supplemented with one-eighth or quarter full-size sections of window jambs, sills and mullions, door jambs and moulding, piers with their arch mouldings, bases and caps, cornices, columns, etc. The net amount of stonework can thus be actually computed by the estimator, and the contractor can obtain a fair idea of the amount of labor on the work. Such details are also most useful to the architect when the preparation of the full-size working drawings has to be undertaken, as he can discover exactly how much stone is required for any feature.—St. Louis Builder.

### MEASURING PLASTER CORNICES.

In making an estimate for a plaster cornice, several things are to be taken into consideration, says the St. Louis Builder. Measure the whole length around the wall, and deduct one projection of the cornice each way from the main length. If the girt of the mouldings from the ceiling to the wall line is under six inches, take it by the foot running measure, but if more than six inches, charge by the foot superficial. When there are eaves to the cornice, charge then by the foot superficial, bending a tape-line round in the concave; count all angles and mitres above four, taking measurements on longest lines. When there are enrichments in connection with the cornice, other than running mouldings, such as lambrequins or set ornaments, charge them extra according to their value, at so much per running or superficial foot. All quoins, arrises, heads or ovolos should be charged by the running foot. Pateras, which save mitring of enriched soffits, are

not to be taken unless in frame or coffer; these must be charged under their own department. Plastering on brick walls to be measured from top of ground to lowest member of cornice, but where the walls are lathed, the whole height of wall must be measured. Stucco should be measured by the yard superficial, and charged according to the style and quality of the work.

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