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P306 Masonry

Walls… are formed of very small pieces, that they may have a sufficient quantity of, or be saturated with, mortar, which adds greatly to their solidity. **To saturate, or fill up, a wall with mortar, is a practice which ought to be had recourse to in every case, where small stones, or bricks, admit of it. It consists in mixing fresh lime with water, and pouring it, while hot, among the masonry in the body of the wall.**

Bricklaying

WALLS, &c.—The foundation being properly prepared, the choice of materials is to be considered. In places much exposed to the weather, the hardest and best bricks must be used, and the softer reserved for in-door work, or for situations less exposed. **In slaking lime, use as much water only as will reduce it to a powder, and only about a bushel of lime at a time, covering it over with sand, in order to prevent the gas, or virtue of the lime, from escaping. This is a better mode than slaking the whole at one time, there being less surface exposed to the air. Before the mortar is used, it should be beaten three or four times over, so as to incorporate the lime and sand, and to reduce all knobs or knots of lime that may have passed the seive.** This very much improves the smoothness of the lime, and, by driving air into its pores, will make the mortar stronger: as little water is to be used in this process as possible. Whenever mortar is suffered to stand any time before used, it should be beaten again, so as to give it tenacity, and prevent labour to the bricklayer. **In dry hot summer-weather use your mortar soft; in winter, rather stiff**. If laying bricks in dry weather, and the work is required to be firm, wet your bricks by dipping them in water, or by causing water to be thrown over them before they are used, and your mortar should be prepared in the best way. Few workmen are sufficiently aware of the advantage of wetting bricks before they are used; but experience has shown that works in which this practice has been followed have been much stronger than others wherein (p355) it has been neglected. It is particularly serviceable where work is carried up thin, and in putting in grates, furnaces, &c. In the winter season, **so soon as frosty and stormy weather set in,** cover your wall with straw or boards; the first is best, if well secured; as it protects the top of the wall, in some measure, from frost, which is very prejudicial, particularly when it succeeds much rain; for the rain penetrates to the heart of the wall, and the frost, by converting the water into ice, expands it, and causes the mortar to assume a short and crumbly nature, and altogether destroys its tenacity.

P369 Plastering

LIME forms an essential ingredient in all the operations of this trade. This useful article is vended at the wharfs about London in bags, and varies in its price from thirteen shillings to fifteen shillings per hundred pecks —-Most of the lime made use of in London is prepared from chalk, and the greater portion comes from Purfleet, in Kent; but, for stuccoing, and other work, in which strength and durability is required, the lime made at Dorking, in Surrey, is preferred.

The composition, known as PLASTER or PARIS, is one on which the Plasterer very much depends for giving the precise form and finish to all the better parts of his work; with it he makes all his ornaments and cornices, besides mixing it in his lime to fill up the finishing coat to the walls and ceilings of rooms….

The plaster commonly made use of in London is prepared from a sulphate of lime, produced in Derbyshire, and called alabaster. Eight hundred tons are said to be annually raised there. It is brought to London in a crude state, and afterwards calcined, and ground in a mill for use, and vended in brown paper bags, each containing about half a peck; the coarser sort is about fourteen pence per bag, and the finest from eighteen to twenty-pence. The figure-makers use it for their casts of anatomical and other figures; and it is of the greatest importance not only to the plasterer, but to the sculptor, mason, &c.

P371 The Cements made use of, for the interior work, are of two or three sorts. The first is called lime and hair, or coarse stuff; this is prepared in a similar way to common mortar, with the addition of hair, from the tan-yards, mixed in it. The mortar used for lime and hair is previously mixed with the sand, and the hair added afterward. The latter is incorporated by the labourers with a three-pronged rake…

FINE-STUFF, is pure lime, slaked with a small portion of water, and **afterwards well saturated**, and put into tubs in a semi-fluid state, where it is allowed to settle, and the water to evaporate. A small proportion of hair is sometimes added to the fine-stuff. Stucco, for inside walls, called trowelled or bastard stucco, is composed of the fine-stuff above described, and very fine washed sand, in the proportion of one of the latter to three of the former. All walls, intended to be painted, are finished with this stucco.

MORTAR, called gauge-stay; consists of about three-fifths of fine-stuff and one of Plaster of Paris, mixed together with water, in small quantities at a time: this renders it more susceptible of fixing or setting. This cement is used for forming all the cornices and mouldings, which are made with wooden moulds. When great expedition is required, the plasterers gauge all their mortar with Plaster of Paris. This enables them to hasten the work, as the mortar will then set as soon as laid on.