

TUCK POINTING IN PRACTICE

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Tuck pointing is a deceit, developed during the early 18th century to give an impression of quality to buildings constructed of damaged or irregular and cheap brick. When laid in the normal manner of the day, such bricks produced walls with wide joints of irregular and uneven pattern which appear the sum of their constituent parts rather than as a coherent surface or plane. In the late 17th century the problem was avoided by using soft, rubbed bricks which could then be laid with thin, straight joints. Such work was costly. Tuck pointing was a less expensive alternative which seems to have been particularly popular for use on terrace houses up to the late 19th century. While the technique is no longer in general use, knowledge of it is needed to repair those areas which remain but are nearing the end of their life.



An area of completed tuck-pointing. 7-9 Great Ormond Street.



Base mortar nearing completion. Note different tones for reveal and main brickwork. Surplus mortar has yet to be cleaned off before grooving takes place.

Description

Joints are filled with a base mortar which has been coloured to match the surrounding brickwork. Where necessary, it covers the rounded or damaged brick edges in order to finish flush with the wall face. While still wet, the mortar is incised with a grid of neat, straight grooves which reflects the brick bond and follows the theoretical centre lines of the joints. Thereafter, a fine mortar—usually white but occasionally black—is pressed or tucked into the grooves and left projecting some 3 mm beyond the brick face. The tuck is trimmed to a consistent but narrow width—perhaps 4–6 mm. When neatly executed, the mathematical appearance, sharp colour contrast and shadow provided by the tucked ribbon gave the desired illusion of tight joints in quality brickwork (see Fig. 1).

Preparation

Apart from the normal bricklayers' tools, tuck pointing requires a frenchman (a dinner knife with its blade cut to

a point and the last 9 mm of which is bent at a right angle), a bevel-edged pointing rule perhaps 900 mm long and a jointer or pointing iron. This last (shown in Fig 4 over) is a knife-like implement with a blade up to 150 mm long and a flat edge of about 3 mm wide.

Joints for tuck pointing or repointing should be cut out and prepared in the same manner as other joints.

The Base Mortar

The specification for the base mortar must vary from building to building as the constituents and mix will depend on the colour, type and texture of the bricks. Old brickwork will have acquired a patina—through weathering and the growth of lichens—which should be respected and reinforced by the new mortar. It may also be necessary to adapt the mortar in different areas of the building to accommodate changes of character. Obtaining and, if necessary, varying the textures and colours is vital if the base mortar is not to draw the eye from the brickwork.

The texture of the mortar can be controlled by the selection and grading of its aggregates or adjusting the mix proportions. Wiping the filled joint with brushes and fabrics coarsens the finish; rubbing with implements can smooth it.

In the past, mortars have been coloured with blood, brick dust, soot and oxides as well as by the natural tints of sands, limes and cements. Today, artificial dyes are also available. These sometimes lack subtlety and being a relatively recent arrival, little is known about their durability or long term weathering: one suspects they will cause mortar to darken more quickly than surrounding brickwork. A further difficulty with additives—however well tried—is that of obtaining colour consistency between mortar batches: for this reason it is probably best to use the natural colours in sands, brick dusts or other constituents to obtain the desired result. Experience suggests that base mortars—when dry—should be a slightly lighter colour than the brickwork as they usually tone down within a few months and then weather with the brick. Note that the base mortars in the illustrations in this Information sheet appear to be darker than the brick only because they are still green and damp.

It is virtually impossible to get the texture and colour of the base mortar right without preparing samples. It is also dangerous to assume that a mix used successfully on one wall is good for similar brick elsewhere. When preparing samples, remember that the mortar should be slightly weaker than the brick and that it should contain lime in order to give it some flexibility: washing up liquid and modern plasticising agents are no substitute.

The base mortar used for the well-fired, fairly smooth yellow stock bricks shown here consisted of 9 parts graded sharp sand (of a dark buff colour) to 2 parts lime and 1 part Portland cement. Graded sand was used to obtain the smoothness of texture.

Matching a mortar to red or purple bricks is rather more difficult. A good start can be made by grinding a spare or similarly coloured brick into a powder and using it as part of the aggregate—say an 8:2:1 mix plus 1 or 2 parts of brick dust. Lamp black or fine coal dust and ash should be tried in much smaller quantities and then gradually increased if necessary. Generally speaking, red bricks will be softer than yellows and a weaker mortar mix will be required.

Though providing the appropriate texture and colour, the base should meet those standards required of any good pointing mortar and which are discussed in Technical Pamphlet No 5. It is particularly important that the base mortar is weaker and more flexible than the tuck as well as the bricks. To this end the use of lime and sharp, gritty sands cannot be over-encouraged.

While flush filling of joints involves covering of damaged arrises, great care is needed to avoid unnecessary smudging over the bricks whose character one is trying to retain. Although the mortar will be trowelled off, it must shortly afterwards be rubbed, brushed or “bagged off” to remove any shine. This is done after grooving when the mortar is dry enough not to smudge.

Grooving

Grooving is undertaken within an hour of pointing, though the exact timing will depend on the coarseness of the mix. The bevelled rule is offered up and the frenchman—held with 3 mm of the point buried in the

mortar—is run along the joint. The resulting grooves should be just under 3 mm wide. All bed joint grooves are made before those to perpends are started. When completed, the whole is lightly brushed down to remove loose material (see Fig 3). Bed joints must be marked at regular centres and perpends placed directly above one another or the result will jar on the eye. Thus, grooves are often not on the centres of joints and sometimes, particularly with perpends, actually touch bricks. Here one may either score the brick face or leave it unmarked and rely on the adhesive properties of the tuck mortar to provide sufficient key to the face.

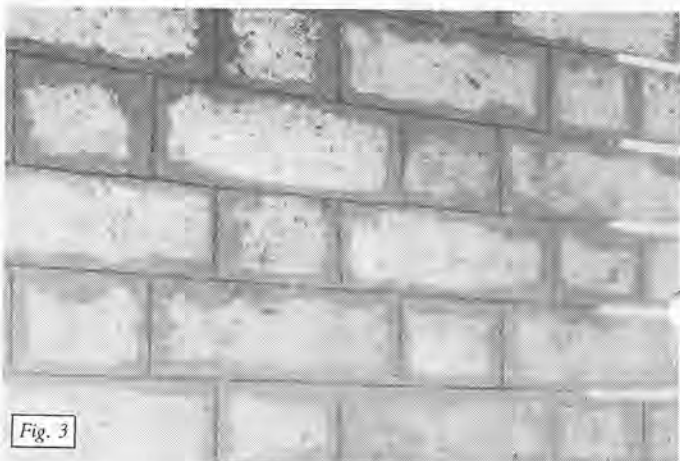


Fig. 3

Base mortar with grooving completed. Note the degree to which excess mortar has been removed.

The Tucking Mortar

Tucking mortar is usually a brilliant white. It consists of lime putty sometimes used on its own but more commonly mixed with silver sand or even Portland stone dust. The two can be used in equal proportions but 2 parts lime putty to 1 part silver sand seems the most favoured recipe.

Putty and sand should be thoroughly mixed at least a day before use and then covered and sealed to keep it moist or kept in a wet sack. If properly stored, the material improves with age and its life is indefinite; portions can be removed for knocking up as and when required.

Tucking mortar is knocked up to a consistency similar to glazing putty (see Fig 4). The rule is located just under the groove to be pointed and the pointing iron—with mortar placed on the last 30 mm or so of the blade—is run slowly over the groove (see Figs 5, 7 and 8). Pressure must be sufficient to force mortar fully into the groove and provide a good key but not so great as to squeeze it more than 5–6 mm wide. When a sufficient length has been applied, the ribbon is stroked two or three times with the pointer to bring the fattiness to the surface and leave a unified, straight finish as in Fig 7.

The base mortar should still be green when the tucking is carried out in order that good adhesion is achieved between the two. Yet both mortars should be sufficiently firm to avoid bleeding of colours. Some bricklayers prefer to leave the base mortar overnight and tuck it in the morning—particularly when working in cool or wet weather. Most, however, will spend an afternoon tucking the base mortar they placed that morning.

When perhaps a square metre of bed joints have been tucked, they are trimmed. The rule is again placed against the joint. The frenchman—held at an angle to the wall

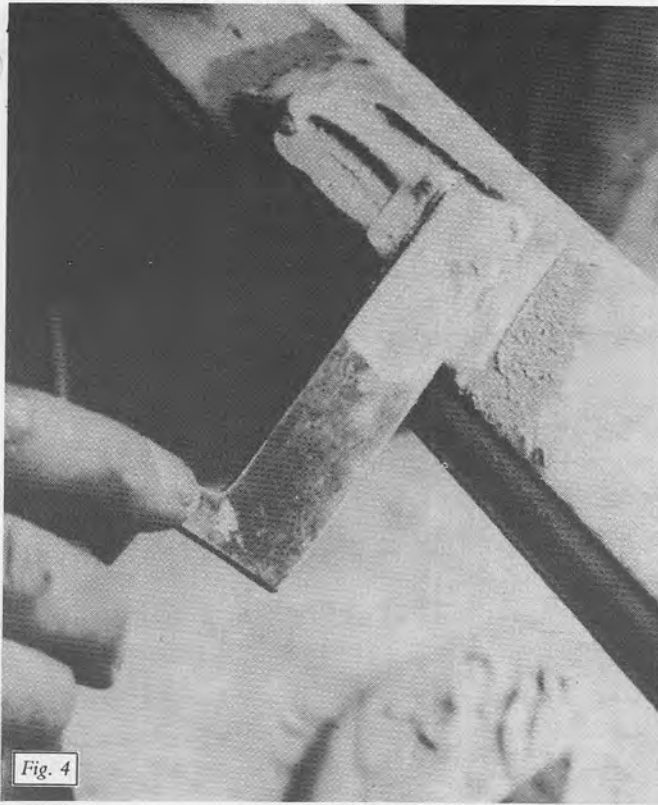


Fig. 4

Knocking up the tucking mortar using a jointer.

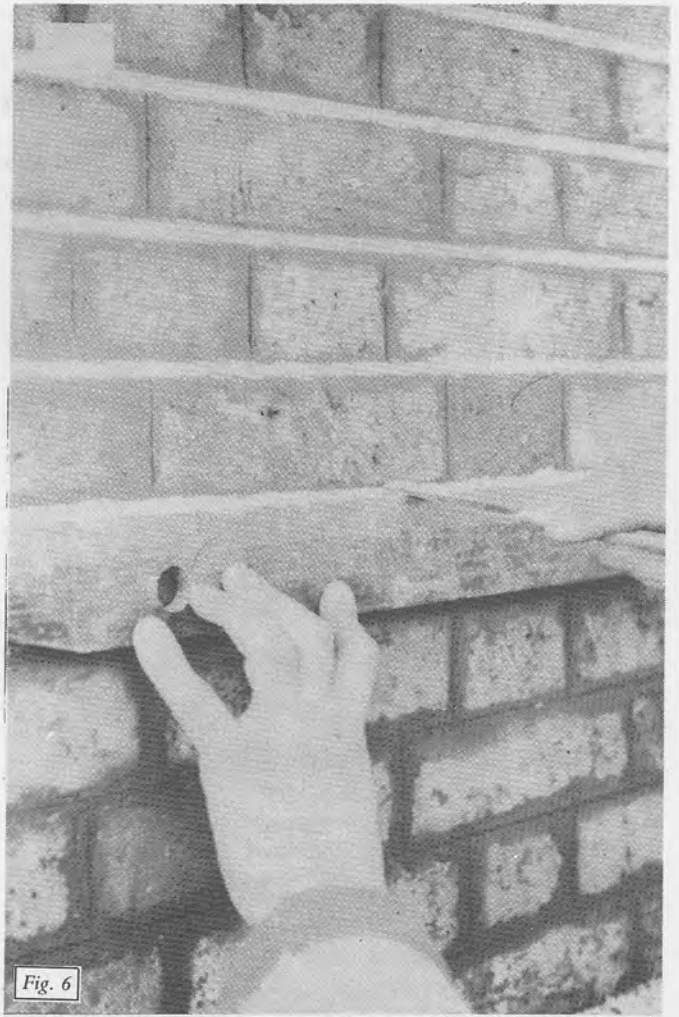


Fig. 6

Trimming the tuck-pointing using a frenchman. Use of a bevel-edged rule is particularly important to avoid smudging the tucking mortar.

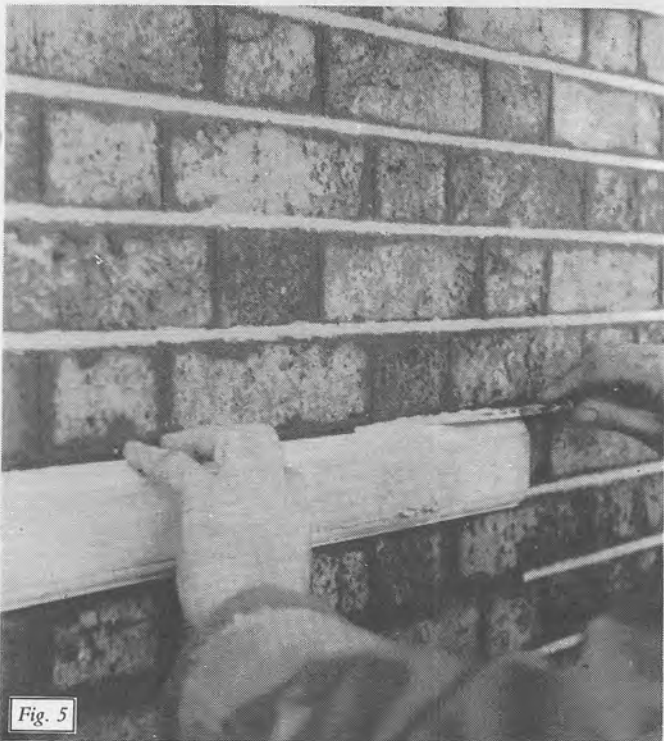


Fig. 5

Tuck pointing the bed joints using the jointer shown in Fig. 4. Bed joints are completed before perpend are started.



Fig. 7

Removing excess tucking mortar after trimming with the frenchman. This illustration shows how stiff the tucking mortar should be when applied in order to avoid smudging and shrinkage.

with the point facing upwards—is run along the top edge of the tuck and cuts away the surplus mortar (see Figs 6 and 7). It is then turned upside down and the lower edge of the ribbon is trimmed in the same manner.

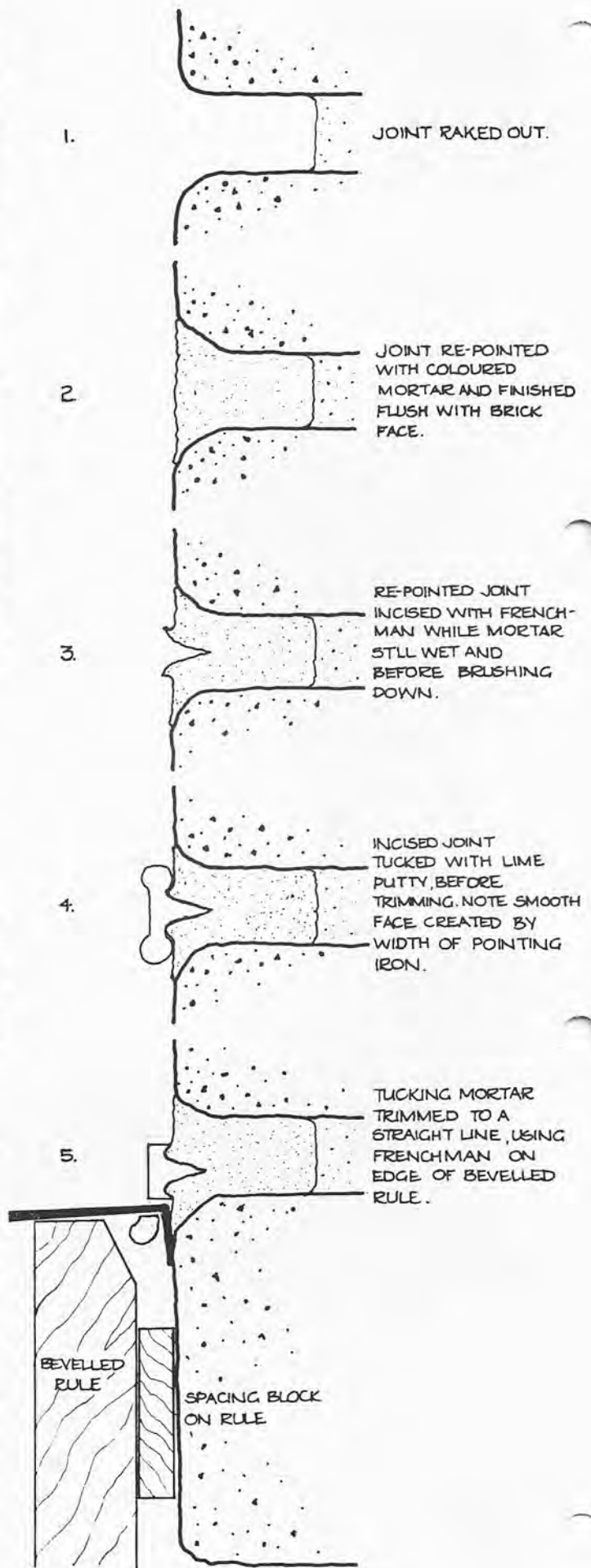
Perpend are tucked and trimmed only when all bed joints in the area have been fully trimmed (see Fig 8).



Fig. 8

Above: Perpends being tuck-pointed after completion of work to bed joints. Note blocks on rule to avoid damaging completed work.

Right: The various stages summarized.



Samples

The preparation of full samples is a sensible precaution, particularly when patching tuck pointing. They should be of the full treatment rather than the base mortar on its own for the tuck ribbon can have a dramatic effect on what at first may appear a good colour. Samples should also be viewed from the ground; it is surprising how colours and fine textures change with distance.

Labour and Costs

Most bricklayers are unable to execute tuck pointing. Those who can usually suggest they are the only people with the know-how but the skill is not quite that rare. One or two of the smaller, well established contractors retain men who were taught the process during apprenticeships and there are a small number of self-employed, experienced bricklayers who act as tuck pointing sub-contractors. Most of the well known restoration contractors have conservators or other means of access to tuck pointers though these sometimes provide to be the sub-contractors or members of other firms.

In *London Prices* published in 1749, Batty Langley complains that tuck pointing costs twice as much as ordinary flush work. Today in the Greater London Area it is five to six times more expensive than the struck joint given to yellow stock walls. One sub-contractor is currently charging £40-45 per square metre, for labour only (August 1987); it should be realised that 1½ square metres of tuck pointing is a good daily output.