

THE DRESSING OF MILLSTONES: ENGLISH PRACTICE AS DESCRIBED BY BRYAN CORCORAN IN 1882

Introductory Note

On 23 September 1882 the London Lodge of the Amalgamated Millers Trade Society held a meeting in London, the purpose of which was to hear a paper by Mr. Bryan Corcoran entitled 'On Modern Milling'; over 200 people attended and provided a very full discussion of the paper. All of the proceedings was published in The Miller of 2 October 1882, pp.609-616, together with diagrams provided by Mr. Corcoran. In his paper, Mr. Corcoran had a section on the use and dressing of millstones, and it is this which is reproduced below, subject to some editorial abridgement and selection, and re-drawing of his diagrams.

The Bryan Corcoran who gave the paper represented the third generation of Corcorans in the business of manufacturing millstones. His father, also Bryan, had taken over his father's business at some time in the first half of the nineteenth century and traded as Bryan Corcoran & Co. at various offices in Mark Lane, London, until taking a partner Mr. Witt around 1870 when the firm became Corcoran, Witt & Co. Around 1885 this firm was claiming to have been 'established over a century', but no longer had a Corcoran in it; Bryan Corcoran senior had left it in 1875 and set up on his own for a short period before either retiring or dying, and his son Bryan Corcoran junior (who was the lecturer at the meeting in 1882) had set up his own firm of millstone makers, also in Mark Lane, around 1875. So the author of this paper had a background which should certainly have established him as a leading authority in the subject of millstones, and he was introduced as such to the meeting.

The whole of the paper and the discussion is recommended reading, but the section reproduced here is of particular interest because it answers questions about millstone dress which have caused some confusion among present-day mill enthusiasts, in particular that relating to the direction of rotation of the stones relative to the sharp edge of the furrows and the so-called 'scissors' action. It may have been Sir William Fairbairn who first introduced the scissors idea in his 'Treatise on Mills and Millwork' in 1865. On p.154 of Part 2 he says:

'The direction of the grooves (i.e. furrows) being the same in both upper and lower stones, as they lie on their backs in the position proper for being cut, it is obvious that, when the former is reversed and set in motion, their sharp edges will meet each other after the manner of a pair of scissors, and thus grind the corn more effectually when it is subjected to the action of the unbroken surfaces between the channels.'

This suggests a direction of rotation, relative to the sharp edges of the furrows, opposite to that shown so clearly by Bryan Corcoran. Millers with whom I have discussed the matter all agree with Corcoran, and the scissors concept is probably misleading.

D.G.T.

'DRESSING STONES

It is necessary that the faces of the millstones should be perfectly true planes, and I believe that if they are so, and the runner properly balanced, it is almost an impossibility to kill the flour, and at the same time make broad

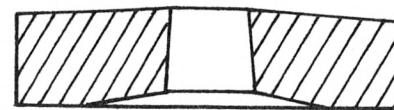


Fig. 1

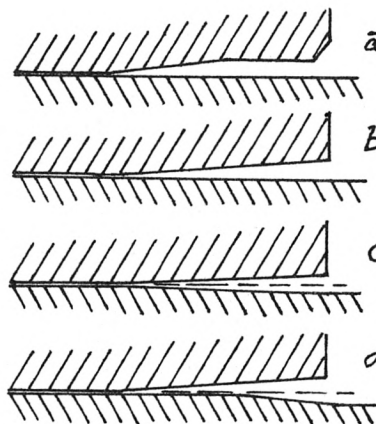


Fig. 2

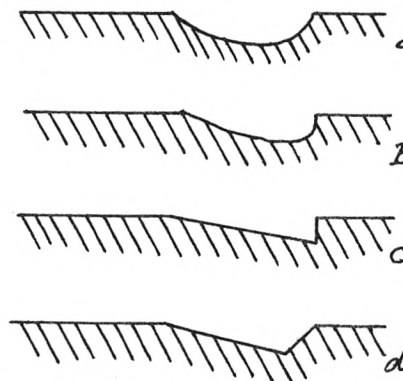


Fig. 3

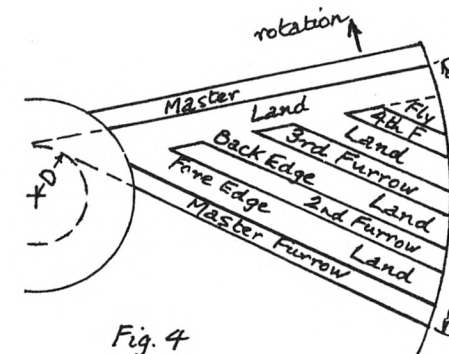


Fig. 4

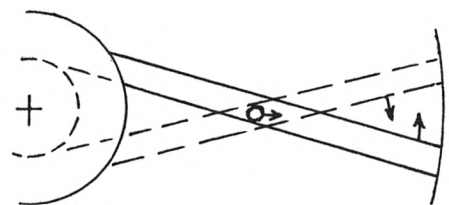


Fig. 5

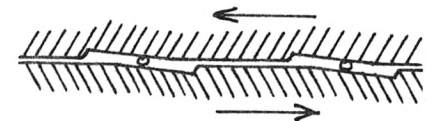


Fig. 6

bran. The eye of the runner (see Fig.1) should be smaller at the back, tapering to a larger diameter at the face, especially for middlings, &c., which do not feed so freely as wheat.

The SWALLOW, or bosom (again see Fig.1), may be of various shapes to roll the wheat over and over with light pressure, to reduce it all to an even size, or, as in the case of gradual reduction, to bring the whole feed gradually from wheat to flour, or any intermediate stage, &c.; but whatever the shape, it should be as true as though turned in a lathe, otherwise it will cause an irregular reduction of the wheat. I advise that the bedstone be a plane or staff right up to the eye (as shown in Fig.2a where a cross-section of the swallow is shown, with the eye at the right-hand side of the diagram; alternatively as in Fig.2b), unless it is found advantageous to have a different gradient in one stone or the other (Fig.2d). I think it is better to have all that is necessary in the runner, as it is easier to keep one swallow true than two (Fig.2c). The depth may vary according to circumstances, but where it has to touch the wheat, one-eighth of an inch at the eye is usually ample.

FURROWS, whatever their shape, should be true, and the greater the care with which they are made and kept, the less deep they need to be. Many shapes are advocated, such as those shown in Fig.3. I see no advantage in the first (Fig.3a); the second (Fig.3b) is not easily made; the third (Fig.3c) houses dead feed, and in making the square back edge, the face is very apt to be chipped, and make greys in the flour; the fourth (Fig.3d) is what I always make and recommend.

DRIFT is the eccentricity of the furrows, or the direction in which they lie; it is reckoned by the distance of the fore edge before the centre of the stone. In the ordinary dress the stone is equally divided into 'quarters' or 'harps'. The sketch (Fig.4) shows one 'quarter' of a 4-ft. stone with $3\frac{1}{2}$ -in. drift (marked D in the sketch), 10 quarters, four furrows $1\frac{1}{8}$ in., lands $1\frac{3}{4}$ in., and fly $2\frac{1}{8}$ in. to run 'right-handed', or 'with the sun'; all the furrows are parallel and parallel to each other. The drift regulates the sweeping action of the furrows. The diagram of Fig.5 represents a master furrow of runner and bedstone crossing each other, and a grain of wheat travelling down in the furrows; the arrows show the direction in which the stones travel and the way the wheat is swept.

A grain of wheat does not actually travel down the furrows as shown above, but entering a furrow is caught and passed between the lands as shown in Fig.6, till relieved by the next furrows, and caught by the next lands, gaining impetus to travel towards the skirt from the rotating runner, and thus continuing its journey till it gets out in a state of reduction according to the setting of the stones, dress, &c.'