11: Spindle or cut teazles

According to an article in *The Textile Mercury & Argus* by N. Pilkington in 1958, the rotary or spindle teazle appeared around 1860. Pilkington's information probably came from the textile engineering firm of Tomlinsons (Rochdale) Ltd., because in promotional literature of their's around the time when Pilkington was writing, they gave the dates for the rotary teazle raising machine and for the Moser card wire raising machine that Pilkington used. Tomlinsons, who were a leading manufacturer of raising machines for over a hundred years, especially of wire raising machines on the Moser pattern, did not claim to have invented the rotary teazle raising machine, but simply said that the first raising machine they made was of that kind. The idea would seem, therefore, not to have been new, and it may have been referred to, for instance, in a patent of 1830 which related to teazles on a central spindle. It was certainly familiar in the textile industry by 1875, when Moritz Wolf Fürth patented a metal rotary teazle in the United Kingdom, whilst in 1881 and 1882, Ernst Gessner of Saxony made further suggestions for improvements. The names of these two patentees suggest a possible continental connection, and it is worth noting that the West Riding teazle merchants classified the length and girth of spindle teazles in metric, not English units, the lengths of the teazles being related to the lengths of the spindles on the machines produced by the manufacturers, the teazles being mostly 5cm in length, with some 4.5cm.

Rotary, or as they were more usually known amongst the merchants and setters, spindle or cut teazles, could only be made from larger stem teazles of 3 in or more, and it was this that gave an early advantage in this part of the trade to the growers and exporters in the south of France and Normandy, where larger teazles were grown, and where before World War I the exporting grower-merchants were organised to supply not only stem, but spindle teazles already processed to any size or requirement. The West Riding teazle merchants who became involved in this part of the business, therefore, had the options of importing teazles already partly or fully processed and sorted, or of importing larger stem teazles from which to make spindle teazles in their own premises. In addition, latterly at any rate, it was the practice for the merchants who bought the West of England crop to sort out all teazles of 3 in or more from this, for spindle teazles. Whilst the clipping and sorting of stem teazles was usually carried out by a number of women, working by hand, in the mills and teazle works of the West Riding merchants, spindle teazles could be produced by a much smaller number of men using basic workshop machinery. The teazles had already had the sepals and stalks trimmed, and the aim in cutting them was to remove the stalk end and the nose or top end, so as to leave a cylindrical section from the body of the teazle, with the core running through it from one end to the other. At Sloman & Smith, the cutting was done on a cylindrical saw. Edmund Taylor (Teazle) Ltd. at one time after World War II used a bandsaw, but when this fell through the floor during a fire on the premises, and was destroyed, it was replaced with a circular saw with a special blade, the saw also being used for cutting wood for other purposes. The usual length that the teazles were cut to was 5 cm, which happened to be the same as 2 in. However, there was a shorter size used on some raising machines, of 4.5 cm. At J. Sloman, when an order for these came in, the imported 5 cm teazles would sometimes be cut down to the shorter length.

Once cut, the teazles had to be sorted again for size, this time according to their girth or diameter, it being necessary, as was the case with stem teazles, to use spindle teazles of the same size for any particular purpose. In Sloman & Smith's workroom, a metal gauge similar to those used to sort stem teazles, was used on spindle teazles, the firm similarly having its own numbers for the sizes for the convenience of the sorters. Whereas the

lengths of spindle teazles were usually referred to in centimetres, the girths were quoted in millimetres. At J. Sloman, the main merchant in spindle teazles after World War I, the range of sizes was as follows, the 44/46 being the largest diameter ever likely to be encountered:

J. Sloman, spindle teazle diameters in mm

44/46
42/44
40/42
38/40
36/38
34/36
32/34

Ideally, the teazles then needed to be bored or drilled with a hole from one end through the core, so that they could be slid onto the spindles of the machines, and would rotate freely on the spindle as the drum of the machine turned against the fabric. It was at this stage, however, that economies tended to be made, or short-cuts to be taken, some woollen firms buying the teazles unbored to save money, and then finding their own ways of making a hole, or of putting the teazles onto the spindles. In fact, Harry Sloman's first job for his father in 1920, when Alfred Sloman set up separately, was to push a hole through the centre of the core of each teazle by hand with a gimlet. At Wormald & Walker's in Dewsbury around the same time, a rather different approach was followed, the cut teazles being pushed directly onto the spindles by a hand-operated clamp invented and patented by the foreman setter, H. Slocumb.[1] However, these methods ran the risk of rupturing the core so that the teazle would break up in use. Once Alfred Sloman had become more organised for the spindle teazle business, which was subsidiary to his stem teazle trade, the teazles were bored, using a treadle-operated Singer sewing machine fitted with a watchmaker's drill. Later an electric drill was used. The bits used to bore the teazles varied in size according to the size s of the teazles, the larger ones having a thicker core, the hole needing to be drilled within the core. Harry Sloman used drill bits between ⅛ in and ¼ in, and even $^{5}/_{16}$ in on the largest.

Spindle teazles were sold in various ways. Before World War I, Normandy cut teazles of 50 mm x 40 mm were supplied by the 'pack of 14,400'.[2] However, usually spindle teazles were sold by the Yorkshire merchants to their mill customers in thousands. J. Sloman often sold spindle teazles in small lots of between 500 and 10,000, and these were counted out by hand. The deliveries were sent out at one time in cases, if large enough, and later in cartons.

Spindle teazles were usually put onto the spindles of the machines in sets of three, the spindles being arranged on the drum of the machine at a diagonal angle. In the earlier 1880s, Ernst Gessner was proposing an artificial teazle with a wooden body set with short wires, and in the twentieth century, similar items with a rubber body covered with wires have been used as a substitute, whilst a machine such as the Metazel by Tomlinsons of Rochdale around 1960, offered a different alternative, using a sleeve of card clothing slid onto a wooden former. Gessner also proposed a modification for the real teazles in the form of a small metal cap for the end of each teazle to protect it from wear, but such an elaboration seems not to have been introduced much, if at all, in practice. Another suggestion of his, though, of a short length of string sunk between the hooks of the set of three to make them work together better, may have been used to some extent.[3] Otherwise, though, the only skill required in the fitting of spindle teazles was the ability to make sure they were the right way up.