

**CARDING.** The process of disentangling and arranging in parallel rows the fibres of cotton, wool, or flax, by the action of wire-toothed cylinders, and the first important mechanical operation in the treatment of fibres preparatory to yarn making. This operation may be compared to the combing and brushing of one's hair, and the *card* combines the properties of the comb and brush, being a brush with wire teeth instead of bristles. These teeth are inserted in strips of leather, called card clothing, which are fixed upon the surface of a revolving cylinder. This arrangement, known as a carding engine, was invented in 1738 by Lewis Paul, a Birmingham mechanic. In the modern machine several such cylinders are arranged so that the ends of the teeth are nearly in contact; and the material, which has previously been formed into *laps*, the width of the cylinders, being brought to them, is caught up, passed from one to the other, and combed out as the cylinders revolve, in the form of beautiful films or fleeces, which are removed by a smaller drum card, called the "doffer," and again from this by the "doffing knife." These films, which are of the width of the drum, are next contracted to a narrow rope or ribbon by being passed through a funnel; and are called the "card ends" or "slivers," and are now ready for "drawing" or "doubling." Carding machines for wool are usually arranged in series of three, called *first breaker*, *second breaker*, and *finisher*. For cotton there is one main cylinder with revolving flats. A double-cylinder arrangement is used for worsted. For coarser materials, fewer small cylinders are required. Consult Murphy, *The Textile Industries*, vol. ii (London, 1912). See SPINNING, and the authorities there mentioned.