

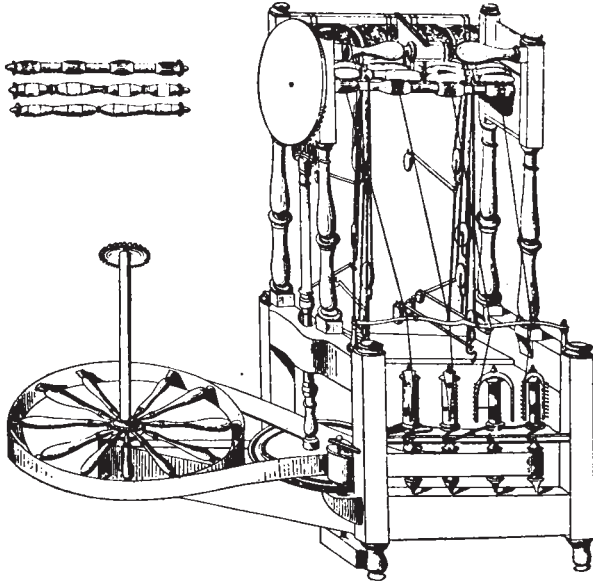
Dictionary of Technical Terms Relating to the Textile Industry.

(Continued from page 47.)

SPIDER-WORK:—Lace worked in spider stitch.

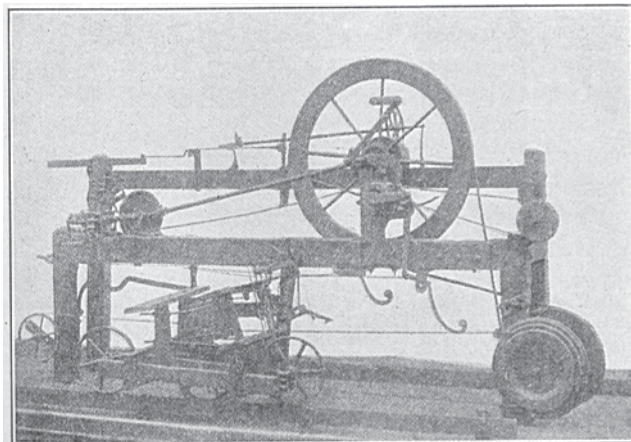
SPIN:—To draw out and twist into threads, as to spin wool, cotton, flax silk, etc.

To form, by drawing out and twisting roving, yarn or threads of a required count.



ARKWRIGHT'S ROLLER SPINNING FRAME.

Some historians claim Leonardo de Vinci as the inventor of the spindle, but if so, his idea or device as constructed in 1452 was never universally known. Spinning was carried on in its crudest state until 1533, when a German, by the name of Johann Jürgen, of Wolfenbüttel, invented the well-known spinning-wheel. As the demand for cotton cloth increased, several efforts were



CROMPTON'S MULE-JENNY.

made to facilitate the production of yarn, and in 1764 James Hargreaves produced his spinning jenny. In 1767 Arkwright received a patent on a device which laid the foundation for our modern cotton spinning, *i.e.*, drawing out the sliver by means of three sets of rolls and winding the same upon a bobbin placed on a spindle and between a

flyer. The inventions of Hargreaves and Arkwright were successfully combined by Crompton, who in 1779 invented his mule-jenny.

SPINDLE:—The center of the spinning action and commonly a finely tempered, tapering pin of metal, which is used in spinning for imparting twist to the thread, and on which the latter, when twisted, is wound.

One of the skewers of a spinning-machine upon which a bobbin is placed to wind the yarn as it is spun.

An upright steel rod, on which the bobbin revolves, and at the top of which the flyer is fastened.

A pin on which anything turns, etc.

SPINDLE-FOOT:—The base of the spindle which revolves in the step; also called *shaft*. The *blade* is that part of the spindle extending upwards from the bolster. The length above the bolster varies, but in any case, whatever this length may be, the spindles are said to be so much out abreast.

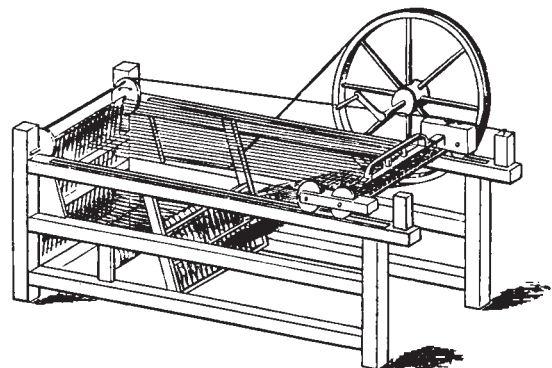
SPINDLE-STEP:—In spinning-spindles, the lower bearing of an upright spindle.

SPINDLE WHIRL, WHARVE OR WHORL:—The little round pulley fastened on the spindle, and round which the spindle band is passed.

SPINNERET:—A tube projecting from the lower lip of the silkworm, and through which the silk issues.

SPINNING-GLAND:—A gland that spins silk or a silky substance, as in silkworms.

SPINNING-JENNY:—A spinning machine which was



HARGREAVES' SPINNING JENNY (improved.)

the first to operate upon more than one thread. Invented in 1764 by James Hargreaves; he contrived a frame with eight spindles, which would thus produce eight threads at one time. The original jenny of eight spindles had been doubled in power by the time the patent was taken out. The spinning jenny was subsequently improved upon and largely superseded by Crompton's mule-jenny.

SPINNING MACHINE:—A machine for spinning, specifically, one that spins fibres continually (ring frame) as distinguished from a mule or other intermittent working device.

SPINNING-MULE:—A machine also called *self-actor*, being entirely automatic in its movements, which completes the spinning of the yarn and winds it

on the spindle in a cop or cylindrical coil, conical at each end. It consists of a fixed part, creel, roller-beam, etc., and a traversing part or carriage, which runs out about 64 inches, drawing out and

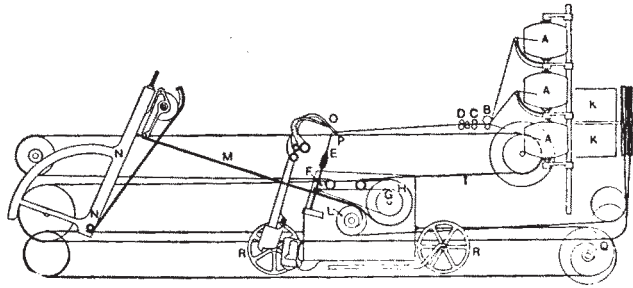
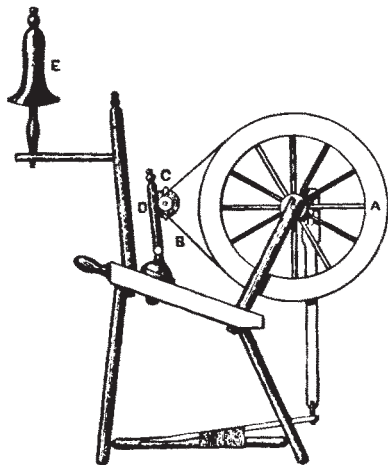


DIAGRAM OF MODERN WORSTED MULE.

A, Bobbins; B, C, D, 3-pairs of Drafting Rollers; E, Spindle; F, Whirl; G, Tin Drum; H, Driving Drum; I, Cord; J, Twist Pulley; K, Head stock; L, Catch Scroll; M, Chain; N, Quadrant; O, Faller Wire; P, Counter-faller Wire.

spinning the roving to the required fineness, then runs back, winding the spun yarn on the spindles. Mules contain as many as 1,500 spindles.

SPINNING WHEEL:—A household implement formerly used for spinning yarn or thread, consisting essentially of a spindle that received rapid rota-



SPINNING WHEEL (Known as the Saxony Wheel.)

A, Wheel; B, Band for driving Spindle and Flyer C. The spindle had a bobbin loosely placed upon it, but with sufficient friction applied to cause it to lag behind the flyer, and so wind the yarn. The spindle was sustained by a post D fixed into the frame of the machine, and the wheel was driven by treadle shown. The material to be spun was placed upon the supporting piece E, and was withdrawn by the hand of the spinner.

tion by means of a band connecting it with a fly-wheel, which was driven by a treadle or crank.

SPIRACLES:—The breathing holes of the silkworm; one row of nine down each side of the body.

SPIRALS:—Fancy yarns formed by doubling on frames devised to impart a spiral action to one of the threads.

SPIRAL STRUCTURE:—Secondary deposits on the outer cell wall of the cotton fibre, placed in a spiral form.

SPLIT:—One of the openings between the wires of a loom reed through which the warp-threads pass, and are guided from the harness to the fell of the cloth. These splits of the reed beat up the filling, *i. e.*, drive up each pick, in turn, to the fell of the cloth; also called *dent*.

SPLIT-FOOT:—A term used in connection with the manufacture of hosiery, to designate the grade or style.

When used in connection with ordinary hosiery, knit on a circular machine, it refers to hosiery in which the foot is knit with yarn in natural color, or bleached, whereas the leg is dyed.

When referring to full fashioned hosiery, it designates that the goods have been knit flat, and looped or sewed together, forming a seam up the center of the sole and leg of the stocking.

SPLITFUL:—The number of yarns passed through the split or dent of a loom reed.

SPLIT-MOTION:—A special selvage motion working on the leno principle, placed in the centre of a loom, for weaving two pieces of cloth (each having its own selvages) side by side.

SPLITS:—Cloths woven two or more pieces in a width, and cut apart either while in the loom or after re-

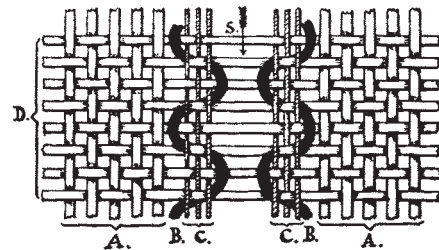


DIAGRAM SHOWING THE FORMATION OF SPLITS.

Woven with fast centre selvages.
A, Regular weaving threads; B, Whip, and C, Standard threads, weaving Leno; D, Picks; S, Arrow indicating where the two fabric structures are severed, *i. e.*, split apart.

moval. The inner selvages are either loose—*i. e.*, imperfect and which are then sometimes hemmed by a sewing machine, or their outside threads are worked on the leno principle, by what is known as a split-motion, to prevent ravelling.

SPONGE SILK:—A woven or knitted fabric, made from waste silk, and which looks like rough crash, or low grade cotton toweling; used for draperies and underwear, also for wiping silverware and machinery.

SPOOL:—A wooden bobbin, consisting of a barrel with a head on each end, the thread or yarn being in this case drawn from the barrel in reverse direction from that it is wound on.

SPOOL-COTTON:—Cotton thread wound on spools.

SPOOLER:—A machine for winding yarn or thread on spools; called also spooling machine.

SPOOLING:—Yarn being put upon bobbins or spools.

SPOON LEVER:—A part of the back stop motion in a drawing frame or sliver lap machine; a spoon shaped lever or tumbler grooved at the top, so that the sliver passes securely through it. When the sliver breaks or runs out, the release of its weight brings the other end of the lever into contact with other parts of the stop-motion, in turn arresting the motion of the machine.

SPORES:—The germinating seed of fungi.

SPOTS:—Applies in the cotton market, to cotton on the spot, visible and tangible in bales, the opposite of *futures*.

SPOT-STITCH:—In crochet work, a stitch by means of which raised dots or figures are wrought at regular intervals.