SILK, is properly an animal fluid, hardened by the air; being an extremely soft and glossy thread, spun by the silkworm, the body of which consists of eleven rings.

The humours found in the body of this insect approach to the nature of silk; since, on being rubbed in the hand, they leave a solid crust behind. In the sides of the belly, all about the ventricle, there are deposited a vast number of vessels, which contain the silky juice: these run with various windings and meanders to the mouth; and are dipped,
It will also be requisite to search the bale more than once, and take from out of the parcels a skin to make an effray for unlefs it be known, by trial, what one buys, there is the greatest danger of being cheated in this commodity. To make an estimate, and know the lightness, fix the effray upon one eight of an ortée or hand of silk of a hundred and ten aunes or ells of Lyons in length, and see what it makes of aunes by the eight part. The skin, which is of eighty threads, must be multiplied by a hundred and ten aunes of Lyon, an from this number must be deducted one eighth: as for example, 110 by 80 makes 8800, the eighth part of which is 1100; and this is the eighth part of a portée, or hand of silk. Now, to calculate what these 1000 aunes weigh which is the eighth part of a portée, or of 110 aunes of Lyons, it will be proper to take a skin out of the parcels, which you take out from the bale which you judge may contain at least 1100 aunes, to make the one eighth part of a portée; which portée must be divided on two bobbins, half on each; then fix the two bobbins on the centre, or beam, and from thence pull it through the comb hurdiator, viz 500 from the two bobbins. will make 1000, which will be one eighth part of what you desire to know. This done, you cut off your silk, and carry it to put on the hurdiator: then weigh it, and multiply the weight by eight, it will weigh just as much as a portée of 110 aunes of Lyons, which is the general rule for calculating. When they draw the silk out by this means, one may learn to adjust the weight.

There are filks of Piedmont, which are very light and clean, and are to be preferred before any on the face: the portée of silk of the lightest weighs near twenty-four penny-weights, and from this it arises in gravity to twenty-five and twenty-six penny-weights the portée, and at times to twenty-seven and twenty-eight: but even these weights may be dispensed with: provided that the other qualities be good, that is, that it be well wrought, even and clean. When the silk is more than twenty-eight penny-weights the portée, it must always be proportionately cheaper.

Methods of preparing Silks. The several preparations which filks undergo to fit them to be used in the manufacture of filken stuffs, are reeling, pinning, mulling, bleaching, and dying. To wind filks from off the bale, two machines are necessary: the one a furnace, with its copper; the other a reel, or frame, to draw the silk. The winder, then, seated near the furnace, throws into the copper of water over the furnace (first heated and boiled to a certain degree, which cullum alone can teach) a handful or two of balls, which have been first well purged of all their loose furry substance. She then fits the whole very briskly about with birchen rods, bound and cut like bristles; and when the heat and agitation have detached the ends of the filks of the pods, which are apt to catch on the rods, she draws them forth: and joining ten or twelve, or even fourteen of them together, the forms them into threads, according to the bigness required to the works they are destined for: eight ends sufficing for ribbands; and velvets &c. requiring no less than fourteen. The ends, thus joined into two or three threads, are first pased into the holes of three iron rods, in the fore-part of the reel, then upon the bobbins or pulleys, and at last are drawn out to the reel itself, and thereby fastened each to an end of an arm or branch of the reel. Thus disposed, the winder, giving motion to the reel,
reel, by turning the handle, guides the threads; substitutes new ones, when any of them break, or any of the balls are wound out; strengthens them, where necessary, by adding others; and takes away the balls wound out, or that having been pierced, are full of water.

In this manner, two persons will spin and reel three pounds of silk in a day; which is done with greater dispatch than is made by the spinning-wheel or distaff. Indeed, all silks cannot be spun and reeled after this manner; either by reason the balls have been perforated by the silk worms themselves; or because they are double, or too weak to bear the water; or because they are coarse, &c.

Of all these together, they make a particular kind of silk, called florretta; which being carded, or even spun on the distaff, or the wheel, in the condition it comes from the ball, makes a tolerable silk.

As to the balls, after opening them with scissors, and taking out the insects (which are of some use for the feeding of poultry,) they are steeped three or four days in troughs, the water whereof is changed every day to prevent their floating. When they are well softened by this scouring, and cleared of that gummy matter the worm had lined the inside withal, and which renders it impenetrable to the water, and even to air itself, they boil them half an hour in a lye of ashes, very clear and well strained; and after washing them out in the river, and drying them in the sun, they card and spin them on the wheel, &c. and thus make another kind of florretta, somewhat inferior to the former.

As to the spinning and reeling of raw silks off the balls, such as they are brought from Italy and the Levant, the first is chiefly performed on the spinning-wheel; and the latter, either on hand.reels, or on reels mounted on machines, which serve to reel several flaxens at the same time. See Reel.

As to the milling, they use a mill composed of several pieces, which may mill two or three hundred bobbins at once; and make them into as many flaxens.

For the dying of silk, see Dying.