

is known by the appellation of *la Vega de Murcia*.

Beyond *la venta del Puerto* the view is bounded on all sides by barren mountains, across which passes one of the roads that descend to Almanza. This spacious town appears seated at the extremity of an extensive plain, celebrated for the victory which secured the throne to Philip V. This plain is in a high state of cultivation, and its fertility seems to increase the nearer you approach to Almanza. The people of this country have a tradition that the years immediately following the battle fought here were extremely productive; a paltry compensation for the waste of human blood, occasioned by that victory. About the distance of a cannon-shot before you come to Almanza, is erected a socle, on the four sides of which are Spanish and Latin inscriptions relative to the victory gained by the Marshal de Berwick. Above the socle rises a pyramid, upon which was placed an armed lion. The Valencians, taking umbrage at this figure, and its threatening attitude, beat it down with stones, and the little statue which now crowns the pyramid was substituted in its stead. A victory like that of Almanza might have been commemorated by a more magnificent monument.

The only branch of industry carried on at Almanza is weaving, in which considerable numbers of hands are employed, so that the hemp,

grown in the neighbourhood is not, by far, sufficient to keep them employed. To the north of the town you see the picturesque ruins of an old uninhabited castle. Towards the east rises a mountain in the form of a trapezium, the sides of which are so regular, that at a distance you would almost take it for a prodigious intrenchment.

On leaving Almanza, previous to the construction of the great road, you crossed a country, stony, desert, and covered with heath; another not very pleasing specimen of the kingdom of Murcia. Soon afterwards, you perceive on the left, the village of Chinchilla, seated on a naked eminence, commanding a view of the spacious and fertile plains of La Mancha. You are then but six or seven leagues from the village of Hellin, remarkable for being the birth-place of Macanaz and of Count de Florida Blanca, who was exiled thither immediately after his disgrace. You now approach Albacete, the environs of which are rendered fertile by irrigation. This town, situated between Valencia and Alicant, is frequented by a great number of merchants. It has manufactures of steel and iron brought from Alicant. Their productions have not attained any high degree of perfection, but this branch of industry is at least sufficient to banish idleness and indigence from the place. Beyond Albacete, the road passes through

three large villages of La Mancha, La Gineta, La Roda, and Minalla; and you proceed for nine leagues across a prodigious plain very negligently cultivated, and producing only a small quantity of corn and saffron.

You next arrive at El Provenzio, a pretty large town, the inhabitants of which are principally engaged in the cultivation of saffron.

Proceeding through a well cultivated country, you come to the two villages of Predonera, which has a saltpetre manufactory, and La Mota, in an agreeable situation. Hence the eye expatiates over the extensive plains which were the theatre of the exploits of the immortal Don Quixotte. Soon afterwards, you pass within a league of Toboso, the native town of Dulcinea; and discern its steeple, the little wood where the knight awaited the tender interview which he sent his faithful squire to negotiate, and the house in which Dulcinea received his amorous message.

At length you pass through Quintanar, and arrive at Corrol, a large village of La Mancha, which is no more than nine leagues from Aranjuez. In 1783, the new road went no further than this place. In 1793, I found that it had been carried on to the confines of the kingdom of Valencia, and excepting about twelve leagues, the road from Madrid to Valencia was one of the finest in Europe. The new road has in seve-

ral places taken a different direction from the old one. It leaves San Felipe a league to the left. It neither crosses the extensive plain of Almanza, nor passes by the monument of the battle. On reaching this plain, you proceed for some time along the skirts of it, and then gently descend into the kingdom of Valencia; a transition announced by the temperature of the air, and the high cultivation of the country. On my last journey, I entered Valencia on the 27th of February. All the almond-trees were in blossom, all the spring flowers were blown, and we travelled among olive and carob-trees, beneath the shade of which a soil easily fertilized, announced abundance. This first dress of nature appeared so much the more striking, as we had just traversed La Mancha, where the ground in several places was still covered with large patches of snow.

In this day's journey we observed very few houses. Half way, a *venta* on the declivity of a hill, commands a view of a fertile valley. It is four leagues further to the *Venta del Rey*, a large new inn, where we were agreeably surprised to find clean furniture and utensils, and even a fire-place.

Every thing in this district indicates affluence. The new road is in general constructed with particular care, and even with magnificence.

As we travel along it, we come at intervals to

handsome new houses, fine bridges over the smallest streams, banks faced with solid walls, frequent parapets for the safety of the traveller, parts of the road turned with art along the sides of hills, and stones marking the distance at the end of every league. The fifty-fifth is placed at the entrance of the long village, at the extremity of which is situated the Venta del Rey. On your way thither, you pass through Lanera, another village, formed of groups of houses, most of which are new, scattered on either side of the way. High roads, especially in fine countries, are like the banks of rivers, and even of smaller streams; they invite population.

## CHAPTER XI.

*Arrival at Valencia. Popular indignation against the French. Description of the City and its Environs. Rice-grounds. Barilla. Oil. Esparto. Aloes.*

WE arrived very late on the seventh day of our journey at Valencia, The sixty-third league-stone stands near the first house in the suburb where we judged it advisable to pass the night ; a precaution which the terror of our muleteer, rather than our own fears caused us to adopt. Valencia was at that time the theatre of one of the most violent ebullitions of regal and religious fanaticism against the French. Every person, belonging to that nation, whatever might be his opinion respecting the Revolution, was exposed to the popular fury. In order to repress its rage, Don Vittorio Navia, governor of the kingdom of Valencia, was obliged to exert the utmost vigilance, and to make use of the small armed force which had been left in its capital. On the night of our arrival, the city was illuminated ; numerous patrols were employed to prevent disorders. The innocent and peaceable

objects of this blind animosity were shut up in their habitations, from which they were every moment afraid of being dragged. I knew several persons at Valencia who were in this predicament; to their safety I sacrificed the pleasure I should have received from seeing them, and they were not a little obliged to me for it.

For our part, keeping close and quiet in our inn, we imposed silence on such of our servants as might have betrayed us by their language, and in particular, on our children, who, by their cries might have apprised the enraged passengers, of the existence of a little French colony. We fortunately passed quite unnoticed, and set off an hour before day-light from this dangerous city. The tumult which had already had more than one paroxysm, cost none of our countrymen their lives; but several of their habitations were broken open, and some of their warehouses pillaged; and the Valencians thus gratified the ancient jealousy excited by the prosperity of our commerce and industry; a jealousy which is stronger at Valencia than in any other part of Spain, because that city, celebrated for its manufactures, looked upon us as active and formidable rivals.

I shall not carry my readers so rapidly through the kingdom of Valencia, neither shall I make them quit its capital so abruptly as I was obliged to do in 1793. This province, one of the most beautiful portions of Spain, perhaps the most

delightful country in Europe, requires us to enter into some particulars respecting it.

The capital of Valencia, though not strictly speaking a handsome city, is at least a very agreeable place to reside in, especially of late years, since the establishment of a vigilant police, which is not less attentive to its embellishment than to its security. Though its streets are unpaved, they are kept extremely clean. The soil, which is very frequently removed, serves to manure the vast orchard which surrounds Valencia on every side. Idleness and indigence are banished from this city, where artisans of every description find work. In 1783, near four thousand silk looms and frames of different dimensions gave employment to upwards of twenty thousand of the inhabitants, exclusive of those who prepare the wood and iron-work of so great a number of machines, and such as are engaged in spinning, winding, and dyeing the silk.

This prosperity has progressively increased since 1783, and I am assured, that of late years Valencia has contained eight thousand looms and frames of every description. The government neglects nothing that can tend to the encouragement of this branch of industry. Of this disposition it exhibited several proofs during the war with France. That war occasioned two of those extraordinary levies of men, known in Spain by the appellation of *quintas*. The court



exempted from the ballot all the journeymen employed in any manner whatever in the silk manufactures, and in the city of Valencia alone this exemption extended to upwards of three thousand persons.

The silk manufactures are not the only source of employment possessed by the Valencians. They supply the royal arsenals with a considerable quantity of hemp. They have manufactures of woollen cloths and camlets in their capital, and fifty paper-mills, scattered throughout the country.

Their wines and brandies are exported in great quantities not only to England, Jersey, Holland, and the North, by way of Dunkirk, where most of the brandy denominated Valencian, was some time since made, but also for several years past to Spanish America. The wines and brandies of Valencia even find their way up the Loire, to the environs of Orleans. Our merchants buy them up, to mix the latter with our brandies which are of superior quality, and the former with the French wines in order to give them a higher color.

Rice is another source of wealth to the inhabitants of the kingdom of Valencia; but its cultivation detracts from the salubrity of their genial climate. They, however, possess means of protecting themselves from the pernicious influence of the rice-lands. I have known people

who, by taking care not to go abroad till the sun had risen to some height above the horizon, by returning in the evening to their apartments, which were well closed against the external air, and abstaining almost entirely from the use of water, lived in the midst of their rice-fields without sustaining any inconvenience; but few persons who reside in their neighbourhood, escape the attacks of periodical fevers. They are not on this account the less attached to that branch of agriculture, because it is attended with little trouble, and considerable profit. Rice is sown at midsummer, and reaped at the end of September. The crops seldom fail, and the produce is sure to find a ready market. Such being the case, it is but natural that the cultivation of this article should have numerous partisans. The government is, in consequence, obliged to enact severe laws to diminish the quantity of rice-grounds. They abound along the coast, and especially to the south of the city of Valencia, from Gandia to Catarrojo. On this tract, the predilection for the culture of rice assumes the character of a mania, which nothing can restrain. The government divides the farms into several quarters or *cotos*, and marks out those which alone for a given time may be sown with rice; but this restriction is in few instances attended to. In vain the Captain-general repairs personally to the spot to enforce these regulations.

His authority is often compromised, and sometimes even his safety; and the law is frequently evaded with impunity. The quantity of rice raised of late years is consequently prodigious. Valencia supplies all Spain, except the south of Andalusia with rice, which is preferred to the produce of Carolina.

The extensive demand for the rice of Valencia has tended to raise it considerably in price. The measure which in 1785 was sold for six or seven piastres, now costs from ten to twelve; and the farmers of the country assert that Valencia annually receives no less than thirty-two millions of reals for the rice which it exports. There are, it is well known, two ways of cultivating this grain. It is either planted or sown. When planted, it is more productive, but requires more attention, for which reason the latter method is generally preferred. The land is prepared by ploughing for its reception, but the surface is made level without any appearance of furrows, and covered with water to the depth of more than a foot. The culture of rice, at least in the kingdom of Valencia, is attended with this singularity, that the plant is constantly in water even including the time of reaping it. Rice-grounds are never drained, except for the purpose of weeding them. In harvest-time the reapers wading up to the knees in water, are followed by low carts which receive the sheaves of rice; this grain is then

separated from the straw in the same manner as all other kinds are, not only in the kingdom of Valencia, but throughout almost all Spain; that is, it is trodden out by horses or mules. After this operation, the rice is still covered with the husk. This is removed by means of mills perfectly resembling corn-mills, excepting that the stones are covered with cork. The rice is sold both before and after the latter operation.\*

Barilla is a production peculiar to the kingdoms of Valencia and Murcia. It is an essential article in the manufacture of glass. About one hundred and fifty thousand quintals are annually made and exported to France, England, Genoa, and Venice.

Soda, in Spanish, *sosa*, is a species of barilla, made use of in the soap manufactories of France and England. About twenty-five thousand quintals a-year are made in the kingdom of Valencia.

*Aqua-azul* is a third species of barilla. The quantity annually made amounts to four thousand quintals, the greatest part of which is exported to Marseilles.

\* The rice-grounds have of late years gradually extended their limits. A law-suit between their partisans, and those of plantations of mulberry-trees, was decided in favour of the former, who have abused their victory at the expence of the salubrity of the air. The rice-grounds, however, do not yet reach beyond Ria; the rest of the coast of Valencia still remains free from their pernicious influence.

Lastly, *solicor*, a fourth species of barilla, is produced without cultivation, and is used in the glass-houses of France, England, and Italy.

When the plants of these different species of barilla have arrived at maturity, they are formed into heaps which are left a day or two to dry. They are afterwards laid, without too much pressure, in holes about three feet deep, and set on fire. The burning matter is stirred from time to time with long poles, and fresh plants are thrown in when the others are consumed. When they are supposed to be completely burned, the holes are covered with earth, and the barilla is left to cool. It is too often adulterated by the admixture of other plants which grow in the same soil. The ashes produced by this burning are the barilla in lumps, in which form it is exported.

Oil is one of the most abundant productions of the kingdom of Valencia; but it is not allowed to be exported, except when the price is very low. It is generally thought to have a disagreeable taste and smell, and upon the whole it deserves that character. This imperfection<sup>s</sup> is attributed to various causes; in the first place, to the practice of bruising the fruit by the negligent manner in which it is gathered, instead of plucking it with care; secondly, to the custom of keeping the stone too long in the olive; and thirdly, to the scarcity of oil mills, which occasions the olives to be left several months in heaps, in which

they ferment, and rot before the juice is expressed.

To me this third cause appears the most important as well as the most general in its operation. It is one of the principal inconveniencies of the feudal system, which still oppresses a great portion of Spain. In the kingdom of Valencia, in particular, there are few landed proprietors but what have their exclusive ovens and mills, either for corn or olives. Now the mills of the latter class are far from being sufficiently numerous for the growers of olives, and they are not at liberty to build others for their own use. The oil of Valencia must therefore be of inferior quality, as long as its inhabitants are not released from these galling restrictions. Some, however, succeed by care and precaution, in producing an oil, which in the opinion of competent judges, is not much inferior to that of Provence.\*

The Valencians fail not to derive advantage from all the productions of their soil. They have a kind of earth, of which they make squares or tiles of colored delft-ware, called *azulejos*, which are manufactured only at Valencia. They are used to pave and cover the walls of apart-

\* Some improvement has been made in the manufacture of oil, especially in the environs of Alicante. At Eiche, for example, and on the hills adjacent to that little town, is made a virgin oil, limpid as water, and which is not surpassed by the best oils of Provence.

ments. The most complicated subjects, as masquerades, bull-fights, &c. are painted upon them.

*Esparto*, though one of the most common productions of the country, is of very great utility to the inhabitants, who make with it mats and cordage. Great quantities of this article were formerly sent to the French ports in the Mediterranean, but the exportation of it was forbidden in 1783. This prohibition produced remonstrances. It was asserted that the country could not possibly make use of all the *esparto* grown there. The government, in consequence, allowed certain individuals to export considerable quantities, and our ports of Toulon and Marseilles, where it is much used in the dock-yards and arsenals, reaped the advantage of this permission.

The industry of the Valencians even avails itself of the aloe, a parasitical plant, which seems to have been designed only for ornament and for inclosures. From its long and very thick leaves they procure a kind of thread, with which they make bridles and other articles.

They likewise export part of the wool of the second quality which their territory produces. The sheep which furnish it are chiefly kept in the vicinity of Gandia, and in the port of that town it is shipped for Marseilles, together with numerous cargoes of dried fruits, aniseed, and cochineal raised in the country.

Finally, their abundant crops of oranges, lemons, raisins, and figs, and above all their wines and brandies furnish them with articles for a prodigious exportation.

In the kingdom of Valencia, industry is not cramped and oppressed, as in the provinces of the crown of Castile, by royal imposts. None of those comprehended under the denomination of *rentas provinciales*, are known here; in the place of all these there is only the *equivalente*, a direct tax on all property of what nature soever it may be. It is rated with great accuracy in each township by the board, called the *Contaduria de mopios et arbitrios*, and the tax, which is moderate, is gathered by a collector, denominated *alcalde*. On the other hand the Valencians are subject to very heavy feudal services, and seignorial imposts levied in kind on the produce of the soil, amounting to a seventh, a sixth, and in some places to a fourth of the whole crop.



## CHAPTER XII.

*Buildings of Valencia. Canals. Irrigation. New Port. Silks. State of Manufactures.*

LET us now enter Valencia and survey the most remarkable objects in that city.

Its exchange is a spacious structure, where the merchants and manufacturers assemble, and where the chief, nay almost the only subject of their conversation and bargains, is the most valuable production of the country, silk.

The arts and belles lettres are seldom cultivated in manufacturing and commercial cities. Valencia, nevertheless, has a public library, that of the archbishop, which also contains a collection of statues and antique busts.

The last archbishop of Valencia was of a character so austere, as to make him an enemy to all profane pleasures. His scruples diminished the value of this collection, by causing some of the statues which compose it to be mutilated. The theatre of Saragossa having been burned by lightning, he obtained an order for shutting up that of Valencia, and building houses upon the scite which it occupied.

Since his death, the lovers of the stage have begun to erect a new theatre, under the direction of Fontana, a skilful architect, who, some years since was invited to Madrid, to execute the embellishments of the palace.\*

The *Real*, the residence of the Captain-general, is more remarkable for its fine position than for its beauty. It is an ancient and extensive edifice, situated in the most remarkable quarter. Between the walls of the city and the suburbs runs on this side a long vacant space, to which you are led by five bridges over the Guadalaviar. If the current of that river filled its channel, it would be difficult to imagine a finer point of view; but before it reaches Valencia, it is extremely reduced by the abundant contributions which it has paid in its course. It is this river that furnishes the greatest part of the water for the irrigation of this fertile country. This system of irrigation is superintended by a police which cannot be too highly admired. The different cuts made from the river feed several canals for irrigation, or *azequias*, which diffuse their benefits over all the adjacent lands. Each landholder previously knows the very day and hour at which he is to receive the salutary supply. He then opens his sluice and admits the water into the little canals which border his grounds,

\* This theatre is finished, but Valencia is still without any dramatic exhibition.

and which he is obliged by an express law to cleanse twice a year. Four *azequias* are cut from the Guadalaviar at different heights. The principal begins at Gestalgar, and bears the name of Moncada, a town four leagues from Valencia, where the board for the management of that *azequia* is established ; for in this kingdom the canals for irrigation constitute an important object of the general police, and in the capital there is a tribunal for the sole purpose of enforcing the laws relative to it, and punishing the delinquents. It meets in the vestibule of the cathedral, and notwithstanding the almost rustic simplicity of its members, who are all farmers, they know perfectly well how to command respect.

This general and periodical irrigation is certainly attended with great advantages. It maintains verdure and fertility ; it multiplies productions to such a degree, that the soil is continually covered with fruits ; that the mulberry-trees are thrice stripped of their leaves ; that the fields of clover and lucern are mown eight or ten times a year ; that the earth, not content with bearing forests of olive and mulberry-trees, at the same time nourishes strawberries, corn and pulse beneath their shade. But this mode of watering is likewise accompanied with serious inconveniences. This artificial fertility gives not to the plants that substance which they receive from nature alone. Accordingly the alimentary sub-

stances of Valencia are in general much less nutritious than those of Castile. This profusion of water, which changes the nature of the plants, seems also to extend to the animal kingdom. Malignity has gone still further, at the expence of the human species, and even of the fair sex, and has composed the following lines, to which I am by no means disposed to subscribe :

En Valencia la carne es hierba, la hierba agua,  
Les hombres mugeres, y las mugeres nada.\*

Near the banks of the Guadalaviar, are the finest walks of Valencia, the *Alameda*, *Monte Olivete*, and the road to *Grao*, a small village on the sea shore, about half a league from the city.

For a long time Valencia had no other port than the bad roadstead opposite *Grao*. Small vessels could seldom approach nearer than half a league, and ships with three masts were scarcely ever seen there. Their cargoes were unloaded into barges which were rowed close to the shore, and then drawn by oxen upon the beach. Valencia, therefore, wanted nothing but a harbour to render it one of the most flourishing cities in Spain. Within these ten or twelve years efforts have been made to procure it this advantage. This undertaking has been confided

\* In Valencia flesh-meat is grass, grass is water ; men are women, and women nothing.

to an able engineer, a pupil of Don Thomas Muñoz. Every thing conspired to crown it with success; the special protection of Don Louis de Urbina, the new captain-general of the province, the voluntary contributions of the merchants and manufacturers, and an advance of five millions of reals made by the bank of St. Charles. The new port will have eighteen feet of water, and will be capable of admitting large frigates. It has been formed not by digging away the beach, but by raising the water of the sea by artificial means similar to those to which the French had recourse in the construction of the port of Cherbourg.\*

The coast of Valencia will, therefore, cease to be the terror of mariners from one extremity to the other; for before this recent undertaking, it had not a single good harbour. From the Alfaques at the mouth of the Ebro, to Carthagena, there were no roads but those of Alicant and Santa Pola, where the anchorage was at all safe

\* The works of this port have been continued, but not with a success answerable to the first expectations. A duty was laid upon silks towards defraying the expences of this undertaking. Various other funds were set apart for the same purpose, but the tempests of winter destroy what has been done in summer. The winds are continually choking up the entrance of the port with sand-banks, and it is to be feared that all the money hitherto expended has been absolutely thrown away.

or which could afford shelter to vessels in cases of necessity.

During the administration of Count d'Aranda, an establishment was projected upon this coast, but it disappointed the expectations that were formed respecting it. A great number of Spanish slaves languished in the chains of the Algerines, in the island of Tabarca. Charles III. ransomed them and allotted them an asylum in a small desert island to the south of Alicant, which, upon this occasion, received the name of *Nueva Tabarca*. The attempt was praiseworthy, but it proved unsuccessful. Nature, by refusing this island wood, stone, earth, and water, seems to have doomed it to remain perpetually desert.

The new port of Grao holds forth more pleasing prospects. It is likely to be much frequented, and will doubtless do considerable injury to the commerce of Alicant. Even before its construction, nothing could be more delightful than the road from Valencia to Grao; but this small village was inhabited only by fishermen, and towards the north the shore was lined with miserable huts. Great part of them having been consumed by fire, and all the proprietors being obliged to rebuild them on a new plan, handsome uniform houses have risen upon their site, and will soon form a new town, which will add not a little to the embellishments of the environs of Valencia.

From the top of a tower contiguous to the cathedral, called the *Miquelet*, you may enjoy an enchanting view of Valencia, and its territory. The city seems to stand in the midst of a prodigious orchard, over which are scattered numberless villages and hamlets. Hence you behold the Guadalaviar slowly propelling the scanty remnant of its waters to the sea. Hence you may likewise perceive the Albufera, a lake which discharges itself by means of a very narrow channel into the Mediterranean, and which at a certain distance, as also in the map, has the appearance of a gulf. This lake abounds in aquatic birds, which the Valencians take great delight in shooting. In this sport they particularly indulge twice in the month of November. At this season the lake is covered with water-fowl, teal, and wild ducks. The sportsmen pursue them in boats, and oblige them to take shelter among the reeds; at length finding themselves too closely pressed, the birds rise in flocks, and are killed in great numbers. The Albufera belongs to the king, who lets it for twelve thousand piastres, and the farmer sells permission to shoot there for a stated sum.

The cathedral of Valencia, though highly extolled, is an edifice rather elegant than magnificent, the walls of which are covered with stucco, in compartments bordered with gold. It contains, among other good pictures, some of the

performances of Joanes, one of the best Spanish painters of the second rank. Great encomiums are likewise bestowed on the Temple, a modern church, in a noble and simple style, and on the College del Patriarca, whose church, which would be handsome were it less obscured with smoke, possesses a rich shrine, which is shewn with much ceremony to the curious, and even to those who have no taste for such articles.

Some other churches likewise contain pictures by Joanes, Rivalta, and Orrente, the three most eminent painters of Valencia.

But what particularly distinguishes the city and kingdom of Valencia is their manufactures. We shall say but a few words concerning those of woollen cloth, though they contribute much to the prosperity of a portion of this kingdom, the mountainous region towards the west. Here are buried, as it were, the manufactories of Enguera, Ontiniente, Concenteyna, and Alcoy. They consume the greater part of the wool of the country, which, though of inferior quality, makes very good common cloth, and is even in great request for the manufactures of Languedoc. But it is the silk manufactures of Valencia that render this country so flourishing. Twenty-five years ago it produced a greater quantity of silk than it was able to manufacture;\* and it was then difficult to

\* It is computed that the quantity of silk manufactured one year with another in Valencia amounts to one million pounds.



conceive why government should throw such obstacles in the way of its exportation. Now that the number of looms is nearly double what it was at that period, there is sufficient reason for prohibiting the export of silk. It has even been found necessary to import this article from Italy, and sometimes from France; as for instance, after the bad season of 1784, and when the French manufactures have been in want of hands. But, notwithstanding the vigilance of the administration, part of the silk of Valencia finds its way out of the kingdom. Its exportation to the other provinces of Spain is not forbidden. A much more considerable portion than it is able to manufacture is sent to Andalusia; and it is well known that some of it, wafted down the Guadalquivir, is conveyed to England.

The increase of the silk manufactures of late years, has tended to encourage in an extraordinary degree the cultivation of mulberry-trees. They are every where planted, and are every where found to thrive. A few years since, there was a large barren tract between Valencia and Murviedro, called the *Arenal*. It is now covered with mulberry-trees. All the landholders pay particular attention to their cultivation. I was told of one who collects annually twenty pounds weight of the eggs of silk-worms, and has a sufficient number of mulberry-trees to support them. It is common enough to meet with persons who

raise five, six, or seven pounds of eggs. It may not be amiss to observe, that all these trees are of the white kind (*moreras*); for, in some of the provinces of Spain, as, for instance, in the kingdom of Granada, there are black mulberry-trees (*morales*), whose leaves produce a silk very little inferior to that of the white ones.

The leaves of the latter are sold at the rate of about 270 French livres per *carga*. These leaves are gathered once, twice, and at most thrice a year; but the last are seldom so abundant, or of such good quality as the first. In so temperate a climate, the season for gathering the leaves of the mulberry lasts the greater part of the year, but the trees must only be stripped at certain intervals, and in proportion to the consumption of the silk-worms. All these naked trunks, whose number increases as the season advances, disfigure the plains otherwise so verdant and so fertile.

The silk of Valencia may be compared, in respect to fineness, with the best in Europe, but the spinning is still imperfect, because it is divided among thousands of hands, and consequently is not executed in a uniform manner. Hence the inequalities of their stuffs; and on this account the Spanish silk imported into France is never made use of in any fine work.

Every body knows that the beauty of the stuffs principally depends on the manner in which the silk is wound from the cocoon. This first wind-

ing is performed in three different ways, according to the instrument employed for the purpose. The method which has been, and is still practised in Spain, is attended with this defect, that the little threads of six, seven, or eight cocoons, which are wound off at once, form a single thread upon a small bobbin, without having been previously rubbed against each other. The consequence is, that the silk thread thus formed remains rough, and easily unravels. The second mode of winding is that common in Piedmont, by which each thread of silk is joined to another, and is not separated from it until it has been twisted round it four or five times.

The third manner, that of Vaucanson, is an improvement upon the latter. Upon the bobbin which he invented, the two threads of silk, after their first twisting, join a second time for the same purpose. This operation is called the *double crossing*.

If these threads, thus wound upon the spindles, are intended for the woof, they are fixed in a machine with several stories, where they are separately twisted. They are then removed to another machine, where they are twisted together, after which they are fit to be used in the loom. Those for the warp are not twisted till the moment when they are joined together.

But before the threads are twisted two and two, they undergo an operation called the *brève*,

which consists in spreading them over a large cauldron, in which several viscous ingredients are kept boiling, and the steam from which prepares them to adhere to each other. They are then carried to the twisting machine. The silk, after passing through the machine, is called *organzine*. It is in this state only that it is allowed to be exported from Piedmont, where the operation of twisting was performed better than in any other country previous to the improvement introduced by Vaucanson. The method of that skilful mechanic, who extended his views to all the operations relative to the manufacture of silk, is exclusively followed at Lyons; but the bobbins for double crossing, which go by his name, can only be used for the silk of the country, because foreign silk, which for the most part is used in these manufactures, in order to be exported, must be reduced to organzine.

Machines for sparing manual labour have long been in use at Valencia, as well as at Talavera de la Reyna, where I have seen a single wheels et in motion a thousand of those small spindles on which the threads of silk are wound. Those of Valencia are smaller, because that city does not contain, like Talavera, a royal manufactory, where all the operations are performed under one roof. In the former, each manufacturer has his work-people, and the machines necessary for his business scattered in different quarters.

With respect to spinning, however, the Spaniards adhere to their defective method with an obstinacy which the government has of late years attempted to subdue. In 1781, a French merchant settled at Madrid agreed to supply first the manufacturers of Murcia and Valencia, and successively any others that should require it, with Vaucanson's bobbins. But the idleness of the Spanish manufacturers producing an aversion to the use of silk, which, when thus wound, is closer and finer, and which requires greater care in the weaving without an increase of profit in proportion to the trouble, it was found necessary to employ French hands in the first experiments of this kind.

An intelligent manufacturer of the name of La Payesse, began upwards of twenty years ago to make these experiments on a large scale in a manufactory which he established at La Milanesa, near Valencia; but the silk wound, spun, and organized according to Vaucanson's method proving from fifty to sixty reals a pound dearer than that prepared in the Spanish way, had less sale; and this worthy citizen was by no means indemnified for the expence he had been at. Nevertheless he was not discouraged. He called in theory to the aid of practice, and published a treatise *On the Art of winding, spinning, doubling, and twisting Silk, according to Vaucanson's Method*. He even offered to direct the proprietors of silk-worms in

their experiments; but there is every reason to fear they will prove unavailing as long as all the implements made use of in the Spanish manufactures have defects which are so glaring to all persons acquainted with the subject, but of which the government seems not to be perfectly aware. It must however be acknowledged, that the art of watering silks has been brought to as great perfection at Valencia as in any part of Europe. The Valencians owe this superiority to one of their countrymen, Don Manuel Foz, an enlightened manufacturer, who learned the secret of the natives of the Levant, during a tour in Turkey undertaken expressly for that purpose.

But the other branches of the manufactures of Valencia have not for some years been improved so much as there was reason to expect. The fault lies in the system which the Spanish government pursues in regard to silks, and in the almost unconquerable attachment of the Valencians to the ancient processes.

The Patriotic Society of Valencia has, nevertheless, endeavoured, of late years, to contribute to the advancement of industry.\* None of these Spanish societies has directed its attention with

\* In spite of the exhortations and the rewards given by this society, the cultivation of the mulberry-tree has, of late years, rather diminished than increased, because it is not sufficiently encouraged by government, and efficacious measures are not adopted for putting a stop to the extension to the rice-grounds.