

best in Europe, will demonstrate the truth of those principles by well chosen and by the best conducted experiments. For botany, he can no where find a more able professor than Dr. Gouan. The lectures in every science are free for all the world; it being a maxim with the French, that wisdom should open wide her gates, and, without distinction, receive all who wish to enter.

During my progress through the vineyards, I observed that vines are every where valued in proportion to their age. The expence attending the plantation and cultivation of a new vineyard is so great, that upon a good soil, and in situations easy of access, corn is a more profitable produce.

The best wine was sold in this vicinity last autumn for one halfpenny a quart, and wine for brandy was much cheaper. The abundance was so great, and the demand so disproportionate, that they were obliged to distil the major part of their wines for brandy. Most of this will be smuggled into England. From the port of Cette alone, last year, there went upon this trade thirty-two vessels, which, at three hundred
 tons

tons each, a ton containing two hundred and fifty-two gallons, makes upwards of two million four hundred thousand gallons; and the duty upon this, at nine shillings and six pence a gallon, would have been one million one hundred and forty thousand pounds. All this was lost to the revenue, and much more than this must of necessity be lost, by the absurd practice of laying on such heavy duties. It is to be lamented, that the well known operation of lowering the duties upon tea, has not opened the eyes of Europe upon this subject, but more especially those of our government in England. We have indeed lowered the duty upon brandy to five shillings; yet whilst it can be purchased in France for fifteen-pence a gallon, unless we sink the duty much lower than we have already sunk it, the smuggler, with all his losses, will contrive to make a living profit.

Thirty gallons of wine produce five gallons of brandy; and this quantity in the vineyards last year (1785) cost only fifty sols, or about two shillings.

France is said to contain one hundred millions of acres, of which they reckon
that

that little more than one-third is in a state of cultivation; of this portion something more than fifteen hundred thousand acres are occupied by vineyards. If we allow their population to be five and twenty millions, we shall have four acres for each person.

As every thing which relates to their finance is likely to be new modelled, I need say little on that subject. Few countries stand in greater need of a reform, yet not only from the exemptions claimed by the nobles and the clergy, but from the privileges retained by many of the provinces at the time of their union to the rest, it will require either a strong hand, or most propitious circumstances, to accomplish this arduous undertaking. A nobleman of Berry told me, that on one side of a rivulet which flows by his chateau, salt is sold at forty sols a bushel, and on the other at forty livres, that is, at twenty times as much. In consequence of this, no less than two thousand troops of horse and foot were stationed on its banks to check the smugglers. The farm of salt was fifty-four millions of livres.

The

The whole revenue being twenty-five millions sterling, each person pays twenty shillings annually to the state for its protection. If we reckon the revenue of England at fifteen millions, and the population at seven and an half, then each person will pay forty shillings. The people in France, it is true, have paid less in proportion to their numbers than the English, yet they have suffered more than in the same proportion from the tyranny, vexations, and oppression of the farmers general, to whom they have been often sold.

The price of labour, taking the average of France, may be considered as two and twenty sols, or eleven pence per day for men, and ten sols for women, employed in manufactures; yet a good weaver, working eighteen hours a day, will earn three livres ten sols for himself and boy; shearmen will get two livres a day; spinning women four livres a month, and their board, deducting holidays; carpenters and masons, twenty-four sols, and two meals a day. In husbandry, the men get in winter from ten to fourteen sols a day, with a soup at noon; but in summer, from twenty to twenty-six
sols,

sols, and two meals a day. The women have half as much.

Conversing with gentlemen of the medical profession in France, I see clearly that they have not made the same advancement in the science of medicine as gentlemen who have been educated at Edinburgh. The French are fond of Boerhaave, and so devoted to Hippocrates, that I am persuaded, in the case of fevers, they often, whilst looking for the crisis, lose the patient. They have almost universally a dread of the antimonial preparations; and when they venture to give the tartar emetic, it is in so small a dose as seldom to do much good. In the year 1566, the parliament of Paris forbade the use of antimony; and although, in 1624, this prohibition was reversed, the fear which had been excited and kept up for more than half a century, continued to operate against this powerful medicine. Whilst in Germany and England the science has been advancing with the most rapid progress, the French physicians seem to have been creeping into day with all the timidity of doubt. One obvious reason may be assigned for this. With us the practice of
 medicine

medicine leads to wealth and honor, whereas in France it leads to neither; the fees are contemptible, and, excepting in Paris, the profession is despised.

On the sixth of April I left Montpellier at five in the morning, with a volantier of Barcelona, having previously agreed with him for the use of his volantè. The common price is six livres a day, but a young traveller must not be offended if the volantier should ask twelve, and close the agreement with him at nine. In this little light machine, with one good mule, you travel eight or ten leagues a day.

From Montpellier to Pezenas is eight leagues. The soil is sandy. The rock is limestone. The fields are open, and produce corn, wine, and oil. At Pezenas are to be seen the extensive ruins of a castle, which belonged to the Montmorency family. This strong fortress was hewn out of the rock on which it stands, and appears to have been complicated and full of art. The walls are lofty, and about eight feet in thickness. The rock, which is perpendicular, is a mass of shells, such as turbinæ, oysters, cockles, with a calcareous cement.

From

From hence the circumjacent plain, decked with luxuriant verdure, and shut in by rugged mountains, affords a most delightful prospect.

The next day we dined at Beziers, a city into which the canal of Languedoc is constantly conveying the wealth which flows from agriculture. Here the corn, the wine, the brandy, the olives, and the oil of a country formerly beyond the reach of commerce, find a ready market; and from hence all that tract of country is supplied, at a small expence of carriage, with the productions of distant nations.

Between Pezenas and Beziers, but nearer to the former, there is a stratum of pudding stone, of which the charge is hard blue schist, retaining the angles and the edges, yet sparingly scattered in a calcareous cement. Nearer to Beziers the limestone carries turbinæ, cockles, muscles, oysters, and scallops, deeply indented, and well defined.

In the afternoon we came early to Narbonne, having travelled eight leagues and an half this day. The leagues are of an
uncertain

uncertain length, some about three miles, others four.

All the way from Beziers we traverse a rich country, and corn fields, shaded with vines, olives, mulberries, and almonds, forming at every step the most enchanting views.

At Narbonne there is a little stream, which, by the industry of the inhabitants, proves to them a more certain source of wealth than if its sands were gold.

This stream empties itself into a canal of more than half a mile in length, by the side of which they have extensive gardens, watered from it by hydraulical machines of remarkable simplicity.

They consist of a vertical wheel of twenty feet diameter, on the circumference of which are fixed a number of little boxes, or square buckets, to raise the water out of a well, communicating with the canal below, and empty it into a reservoir above, placed by the side of the wheel. These buckets have a lateral orifice to receive and to discharge the water. The axis of this wheel is embraced by four small beams, crossing each other at right angles, tapering

tapering at the extremities, and forming eight little arms. This wheel is near the centre of the horse walk, contiguous to the vertical axis, into the top of which the horse beam is fixed; but near the bottom it is embraced by four little beams, forming eight arms similar to those above described, on the axis of the water wheel. As the mule, which they use, goes round, these horizontal arms, supplying the place of cogs, take hold, each in succession, of those arms which are fixed on the axis of the water wheel, and keep it in rotation.

This machine, than which nothing can be cheaper, throws up a great quantity of water, yet undoubtedly it has two defects: the first is, that part of the water runs out of the buckets and falls back into the well after it has been raised nearly to the level of the reservoir; the second is, that a considerable proportion of the water to be discharged is raised higher than the reservoir, and falls into it only at the moment when the bucket is at the highest point of the circle, and ready to descend.

Both these defects might be remedied with

with ease, by leaving these square buckets open at one end, making them swing on a pivot fixed a little above their centre of gravity, and placing the trough of the reservoir in such a position as to stop their progress whilst perpendicular, make them turn upon their pivot, and so discharge their contents.

From the reservoir the water is conveyed by channels to every part of the garden; these have divisions and subdivisions or beds, some large, others very small, separated from each other by little channels, into which a boy with his shovel or his hoe directs the water, first into the most distant trenches, and successively to all the rest, till all the beds and trenches have been either covered or filled with water.

Nothing can surpass the luxuriance of their crops, nor the activity of those who are here engaged in the cultivation of the soil.

In this delightful walk, taking notice of some bees who were returning loaded to the hive, I recollected that Narbonne was famous for its honey, and therefore deter-

mined to taste it before I left the city. For this purpose I called at an apothecary's, who is reported to keep the best and to sell the most. His name is Dartiguelongue. The honey, which he produced, was delicate in its flavour, and beautifully white. This at Narbonne he sells at fifteen pence a pound, and when it is for England, he consigns it to a merchant at Cette.

The day following we travelled eleven leagues and an half, to Perpignan, the last city of any consequence in France. It is said to be well fortified, but of that I can form no judgment.

The soil all the way is sandy. The rock is calcareous, and many of the mountains are covered, even to their summits, with vast masses of limestone which have rolled.

The whole of the Rouffillon is rich, and highly cultivated, even to the foot of the Pyrenees, abounding with corn, and wine, and oil, and silk, all of the best quality. The bleak and rugged mountains before us, at the distance of about three or four leagues, forming a striking contrast with the rich valley which they command. Even these

these mountains are not suffered to remain uncultivated, but to a considerable height they feel the influence of increasing capitals, enriched by the growing wealth of the more fertile plain. Winding up through the gorges of the mountains, you see vines and olives flourish in every spot where industry can place them; and, wherever the plough can go, you admire the luxuriance of the corn.

The views all the way up the Pyrenees are beautiful. As you approach their summit, Belgarde presents itself, seated on a mountain eminent above the rest, and commanding this pass for a great extent. This fortress, the last in the French dominions, is more remarkable for strength than beauty.

All through the Rouffillon, it is striking to see the people carrying earth in little baskets on their heads, for want of wheelbarrows. For the prevalence of this strange practice I can assign no cause, unless it be taken from the mountains, where no better mode of conveying earth up the steep ascent can be devised. Men are every where more inclined to imitation than to

the fatigue of thinking, or of seeking for new inventions.

The ploughs they use are suited to the soil, and similar to those described already in coming up from the Rhone.

In this country you dine for two livres at the table d'Hote, and sup for forty-five sols, including bread, wine, and bed.

As you approach the borders, the officers of the douane become more numerous, and, unless well fee'd, most impertinent and troublesome. Notwithstanding their numbers and their vigilance, the contraband trade is very brisk. They reckon more than fifteen hundred smugglers in the Pyrenees; men of desperate resolution, who, knowing the cruel punishments to which they shall be condemned if taken, travel well armed, and generally in strong parties. A military force is sometimes sent against them, but to little purpose, as neither party is ever eager to engage. The smugglers, strangers to ambition, and little influenced by the thirst of military fame, without reluctance quit the field; and, unless when their superiority is manifest and great, think only of securing their retreat; whilst the

the soldier, regarding this service as both dangerous and disgraceful, has no inclination to the attack.

When these daring adventurers have the misfortune to be taken, some of them are hanged, some are broken upon the wheel, and some are burnt alive. How shocking to humanity, that governments by their bad policy should lay such snares for men! how easy would it be, by a different system of taxation, to save these lives, to avoid these cruelties, to employ in profitable labour both him who is engaged in smuggling, and those who are paid for watching him, to open a free communication with all the world, and thereby to cherish and promote the industry, the wealth, the happiness of every commercial nation upon earth. As long as the governments of Europe shall continue to foment the subsisting jealousies of trade, and, by heavy duties, to hold forth high premiums to the smuggler, each must suffer in its proportion, each will be checked and restrained in the progress of its industry and wealth, each will abound with unprofitable subjects, and not one of them will be able to enforce a due obser-

vation of the laws. It is much to be lamented, when light is every where diffused, and when the eyes of Europe seem open to receive it, that light should be diffused in vain, and that so little should have been done by any nation to break those fetters, which ignorance, in the dark ages of feudal anarchy, every where imposed upon commerce.

J O U R N E Y

F R O M T H E

ENTRANCE OF SPAIN TO BARCELONA.

NO one, who has not himself experienced it, can conceive the satisfaction and delight with which a traveller looks down upon a country into which, for the first time, he is about to enter. Every thing attracts his notice, and his attention is pleasingly engaged by a rich variety of forms and productions, of manners and of men, with which he had been unacquainted; and which, in proportion as he values knowledge, will at every step increase his treasure. The face of the country, the vegetable tribes, the animals, all are new, or at least have something new to him; and even those with which he is most familiar,

from peculiarities, for which they are indebted to the soil, or to the climate, strike him with new beauties; or, should they have no claim to beauty, at least they have to him the charms of novelty.

Upon my first entrance into Spain, after I had cast my eyes around to catch a general view of the country immediately before me, my attention was soon taken up with a phenomenon, which at the time was new to me. In ascending the Pyrenees, after I had lost sight of the limestone, I saw nothing but schist to the very summit of these mountains; and pleased myself, as I looked back upon the country, which I had left behind me, to see how much it was indebted to this happy mixture of the limestone and the schist for its luxuriant crops. These rocks, elevated to the highest regions, exposed to the joint action of frost and rain, broken to shivers and reduced to powder, driven by winds, or hurried down by torrents, the mouldering schist producing clay, the limestone its calcareous earth, and each of these contributing the sand which it contained, unite their treasures to enrich all the country
below

below them with a never-failing supply of marble.

Thus far I met with nothing to surprise me ; but, after I had passed the summit of the mountains, and having entered Spain, began descending to the south, expecting to meet more enchanting scenes, more luxuriant crops, and signs of greater wealth ; the face of the country immediately before me appeared desolate and barren, without one cheerful spot in view, on which the mind could rest.

I must own I was at first inclined to attribute this dismal aspect to their want of industry, to some vice in their government, or to some error in their political œconomy ; but, upon examination, I soon discovered the real cause of this barrenness, in the hungry nature of the soil, and the want of those two inestimable feeders of vegetation, the limestone and the schist, which near the summit are seen only to the north ; for the moment you begin descending to the south, the rock changes, and you find the granite.

This circumstance is not peculiar to the Pyrenees ; it is observed on other lofty chains

chains of mountains, and, as highly worthy of attention, may hereafter call for a particular discussion. The soil, which arises from the decomposition of granite, is not friendly to vegetation; for although it contains all the component parts of marle, yet the sand predominates, and the clay is in such small proportion, that the rains and dew contribute little to nutrition, passing quickly through the sand, or being soon evaporated, and lost in air. The proportion of these ingredients, which has been found most productive, is to have equal parts of clay and of calcareous earth, with one quarter of the whole a clean silicious sand. This proportion has been ascertained by the experiments of M. Tillet, as may be seen in the memoirs of the academy of sciences for the year 1772.

It is impossible to pass the Pyrenees without admiring the wisdom of the treaty, A. D. 1660, to which they have given name, as having fixed the most natural of all boundaries, the ocean alone excepted, between two great commercial nations. There was a period when rivers made the most
 9 obvious

obvious limits of an empire ; but in a state of civilization, these change their nature, and are considered by all nations as the most valuable parts of their possessions ; whereas the summits of mountains, as abounding with passes easy of defence ; form a strong barrier against a powerful neighbour, and a barrier which is naturally determined by the parting of the waters ; and these summits being little susceptible of cultivation, leave a convenient space between the profitable possessions of the two adjoining nations.

The only useful vegetable productions of these high mountains are the ilex, and the cork tree ; the latter very profitable on account of its bark.

When these are fifteen years old, they begin to be productive ; yet not for the market ; this maiden bark being only fit for fuel. At the end of eight years more, the bark improves, but does not arrive at its perfection till the third period ; after which, for one hundred and fifty years, it yields a marketable commodity every ten years. The season for barking is in July
or

or August, when they take special care not to wound the inner bark.

From Perpignan to Junquera, a village of six hundred and twenty-seven souls, and the first you meet with after you enter Spain, is seven leagues, or four French posts.

Here the inns begin to exhibit their wretchedness. No bedsteads, but only three boards laid upon trestles to support a mattress; no bed curtains; no glass in the windows.

It is curious to see the peasants exercise their skill in drinking without touching the mouth of the bottle with their lips; and the height from which they let the liquid fall in one continued stream, without either missing their aim or spilling a single drop, is most surprising. For this purpose, the orifice of the spout is small, and from their infancy they learn to swallow, like the Thracians, with their mouths wide open. See Horace, Lib. 1. Ode 36.

On the tenth of April, early in the morning, we left Junquera, passing for a considerable way by the side of a rivulet, which in winter is a raging torrent. The soil, as
might

might be well expected, is hungry land. The cultivated land is covered with vines, with olives, and with rye; the uncultivated abounds in cork trees. At the feet of the Pyrenees we find an extensive valley, every where shut in by mountains, excepting only a small opening to the sea, which is near Castillon de Empurias, in the Bay of Roses. In this extensive plain, or rather basin, which, as we look down upon it, seems flat and level, are many hills, some rising bold, some gently swelling, and covered with various kinds of soil, but chiefly with decomposed granite, which from local circumstances has acquired more than its due proportion of clay, and thereby rendered the barren quartz exceedingly productive.

From Junquera we have three leagues to Figueras, a town of four thousand six hundred and forty souls, where the Spaniards are now erecting a fortress, supposed to be impregnable. Of its strength I am not qualified to judge; but for beauty I cannot conceive any thing to go beyond it. It contains quarters for one hundred and fifty companies of infantry, with five hundred horse;

horse; apartments for sixty officers, each with a kitchen, a dining room, and two spacious bed rooms; one long range of magazines for provisions, and four for powder; all upon a great scale, and highly finished. These works are made bomb proof. To supply the garrison with water, there is a capacious reservoir under the parade, formed in the quarry from whence was taken all the stone for these extensive buildings. The glacis, in most part of the fortification, is formed of the living rock, and the whole is protected by proper bastions. It is said, twelve thousand men will be sufficient to defend these works. At present there is a hill which commands the fort, but this the patient and persevering industry of Spaniards will certainly remove, or at least reduce below the level of their works.

It would be difficult to ascertain how much labour has been lost in the establishment of this strong hold; but we may venture to affirm, on the authority of those who are competent to judge, that had the same sums been expended in the cultivation of the soil, in the establishment of
farms,

farms, in making canals, and mending roads, to invite strangers into Spain, instead of building fortifications to keep them out, the face of the whole country had been changed, not merely in point of beauty, but of strength. The folly of all offensive wars begins to be understood in Europe, but more especially in France; and as for defensive war, the resistance of America, by its successful issue, and that of Corsica, which although not successful, cost the French five times more than the value of the conquest, prove that a country tolerably strong in itself, and well defended by its inhabitants, needs no fortification to repel invaders.

Extensive fortifications cost immense sums to erect, and so much to keep them in repair, that they are commonly suffered to decay. Every such fortress requires an army to defend it, and when the moment of trial comes, the whole may depend on the weakness or treachery of a commander, and, instead of a defence to the country, may afford a lodgment to the enemy. If an able man happens to command, admitting the country to be both well peopled and
well

well governed, may not more be expected from him in the field than in the fortress? The most obstinate resistance the Romans met with was from a city that had no walls. In a discourse of Baron Hertzberg not long since published, we may see what was the opinion of the late king of Prussia on this subject; for, whilst he expended trifling sums on his fortifications, he was at a vast expence in promoting agriculture and manufactures in his dominions; having, in the space of a few years, built five hundred and thirty-nine villages, and established in them forty-two thousand six hundred and nine families, on the banks of the Oder, the Havel, and the Elbe; besides three thousand families on the Netz and Warthe.

Fortifications are only needful for the maintainance of usurped dominion, or to protect the borders of a kingdom from the incursions of a barbarous nation, whose object is to plunder.

The price of provisions at Figueras is remarkable: beef and bread are each about three halfpence sterling per pound, troy weight, but mutton is nine pence. The reason

reason of this disparity is, that they plough with oxen, and have few sheep.

Between this town and the Col de Oriol, the rock, wherever it appears, is limestone.

From Figueras to Gerona is seven leagues. About half way between these places, we pass over a high mountain, called la Cuesta Regia; in ascending which we find a base of pudding stone, whose charge is smooth, rounded, silicious gravel, with a calcareous cement; the top and all the middle region is schist; but in descending near the bottom, the same pudding stone appears again; from which I conclude that this kind of rock pervades the mountain, and forms its base. This phenomenon is worthy of attention, and deserves a more minute investigation and description than a hasty traveller can bestow upon it.

The situation of Gerona is delightful; on a declivity, looking to the S. W. and fed by a rich well watered valley, which is open to the meridian sun, but bounded to the North and to the East, and sheltered

by high mountains. The whole city seems to be built of the pudding stone.

The soil is sand and clay, productive of all kinds of grain; such as beans, peas, lupines, wheat, and barley, with saintfoin and clover. This land they dig with tridents or three pronged forks, and till with oxen. The ploughs are such as I have before described, with this difference, that they have only one handle, and instead of pins, they have two iron wings fixed to the share, extending beyond the heel, to supply in some measure the place of mould-boards.

All the way to Mataró, the soil, and even the sand of the sea shore, is nothing but the quartz and mica of decomposed granite; which, when not robbed of its clay, is made productive.

Nothing is more common than to jump at a conclusion; but if, without subjecting myself to such a charge, I might venture to hazard a conjecture, I should be inclined to think, that wherever vitrescent sand appears, whether on the sea shore, or on calcareous mountains it comes from granite.

After

After having travelled four leagues and an half from Gerona, we arrived at Grannotta, where we stopped to dine. Within three leagues and an half of Calella, the face of the country changes; for here, leaving the valley, we ascend once more the mountains, which, as I expected, are granite. This variety is pleasing, for, although they are scarcely susceptible of cultivation, except for vines, nature has by no means neglected them, but with more than common liberality has clothed them with perpetual verdure, and given them in great abundance the elegant arbutus, with a rich variety of flowering shrubs and aromatic herbs.

Having past these ever fragrant mountains, we descend again into a valley, which is protected from the incroachments of the sea by lofty cliffs. In this valley we cross a river, which shews the nature of the country through which it flows; for, although at present it contains little water, and may be forded without danger, yet, after hasty showers, it rages with un governable fury, and carries every thing before it. The valley being flat, and the soil,

to a considerable depth sharp sand, without any natural cohesion, the torrents, unconfined by banks, have widened their channel to the extent of near a quarter of a mile. This sand is evidently derived from granite, freed perfectly from clay by constant washing.

Having passed the river, not far distant from its mouth we ascended a hill, from whose summit we looked down upon a sea coast, where all nature wears a smiling aspect. Throughout the whole tract of country we left behind us, the vines had not begun to bud, and the birds were silent on the mountains; but here the vines shewed long branches with blossoms and young fruit, whilst the birds seemed to vie with each other, which should charm the ear with most delightful melody. The little hills were covered with vines and olives, and the sea seemed all alive with fishing boats. From this delightful spot numerous villages appear as far as the eye can reach.

In one of these, *Calella*, which, according to the genius of the Spanish language, is pronounced *Callelia*, we took up our lodging

lodging for the night. It has eight hundred and eighty-six souls, and employs near fifty fishing boats.

The next morning, when we set forward on our journey, about five, I was not a little struck to see children, with old men and women, each carrying a little basket, watching, precisely as in the south of France, for the dung of mules and horses which were passing by. This practice, whilst it implies poverty of soil, evidently proves that for industry at least they deserve highly to be praised.

The conduct of farmers in the west of England is the reverse of this. Their dependance for manure being wholly on sand and weeds, the produce of the ocean, they neglect the more obvious source of plenty to be derived from cattle. They set a proper value upon what the Catalans despise; but, in return, these are careful to collect the treasure which the others suffer to be lost; whereas the true wisdom would be to avail themselves of both.

In going from Calella to Mataro, four leagues, the way is wholly by the sea side;

the first part of it over granite rocks, the latter on the beach.

Mataro, a flourishing sea port of nine thousand six hundred and seventy-nine souls, has, for its loyalty and attachment to the present family, been made a city. Here are three convents for men, and two for women, with one general hospital. It gives employment to nineteen looms, sixteen stocking frames, makes much lace, prints linens for America, and is distinguished for the excellence of its red wine. Scarcely one idle person is to be seen. It is however to be lamented, that so much of their labour should be lost by those who are engaged in weaving ribbons; for instead of making many at the same time, all their looms are single. If this proceeds from ignorance, government should take care to have them better taught; if it is the effect of prejudice, they should be allured by premiums to become greater œconomists of time.

All through Catalonia you admire at every step the industry of the inhabitants, who, working early and late, give fertility to a soil which naturally, except for vines,
is

is most unproductive ; but when you come to Mataro, you are perfectly enchanted. The farms are so many gardens, divided every where into beds of about four feet wide, with a channel for the passage of the water to each bed. Every farm has its *Noria*, a species of chain pump, which, from its extreme simplicity, seems to have been the invention of the most remote antiquity. By means of this machine they every morning draw a sufficient quantity of water from the well for the service of the day, and in the evening distribute it to every quarter, according to the nature of their crops. The reservoirs, into which they raise the water, are about twenty, thirty, or even forty feet square, and three feet high above the surface of the ground, with a stone cope on the wall, declining to the water, for the women to wash and beat their clothes upon. The soil is so light, being nothing but sand from the decomposition of the granite, that they plough with two oxen or one horse, or even with a mule ; yet, by the assistance of the water, it is made fertile, and produces on the same spot of ground corn, wine, oranges, and

olives. The American aloe is here planted as a fence.

When we drew near to Barcelona, we had to cross a river, in which we counted fifty felons, clothed in green, and employed in clearing the channel, whilst centinels stationed at convenient distances prevented their escape.

It is curious to observe this mark of contempt for the Moors, in clothing their vilest criminals, and even their hangman, in green, the sacred colour of Mahometans, more especially in Africa.

All the way from Montpellier to Belgarde, the road is wide, and kept in excellent repair; but from the entrance into Spain to within about two leagues of Barcelona nothing seems to have been done since the foundation of the world, either to expedite the progress of a traveller, or even to secure his safety, should he have occasion to pass this way. Although to an Englishman these roads must appear detestable, yet if we look back thirty or forty years, to the time when most of our provincial roads were in the same condition, and reflect how much has been done within that period,

period, we may hope that the industry of Catalans will not overlook an object of so great importance; and that our children, who visit those delightful regions, will pass through them with less hazard and more comfort than their fathers did before them.

The vernal sun, south of the Pyrenees, is reviving to the traveller; but the season of lent has one circumstance attending it, which, in a catholic country, is not perfectly agreeable, nor indeed conducive to his health; for, during these forty days of abstinence, he must learn to live on fish and vegetables; because, although in Spain they have now four days in the week, in which, by special indulgence, they may eat flesh, few people are inclined to use this privilege.

The accommodations, if not in lent, are more than tolerable, and cheaper than either in England or in France. You pay for a volanté, with a good mule, attended by a guide, five shillings a day, without further charge; fifteen pence for dinner, without any limitation in quantity of wine; twenty pence for supper and your bed;
and,

and, in the morning, two pence for chocolate. These being the regular and stated prices, leave no room for disputing with the landlord, as the most patient are sometimes obliged to do in France.

In all this country oxen draw heavy loads on the high way, and move with spirit.

B A R C E L O N A.

IN this journey I made the greater speed, in order to spend the holy week at Barcelona; and I have no reason to repent the pains I took to be present at their solemnities. No citizens perhaps bestow so much expence, and no magistrates can pay more attention, than the citizens and magistrates of Barcelona, in the processions of the holy week.

On Wednesday, the 12th of April, I arrived, and the next morning early I visited the churches, to see the preparations they had made for the entertainment of the evening, in which they were to represent the last sufferings of the Redeemer. In
every

every church I found two images, as large as life, distinguished from the rest as being stationary, and the more immediate objects of their devotion; the one representing Christ as taken from the cross, the other the Virgin in all her best attire, pierced by seven swords, and leaning over the recumbent body of her son. Behind these images, a theatre with colonades, supporting a multitude of wax tapers, dazzled the sight, whilst the ear was charmed by the harmonious chaunting of the choir,

More than a hundred thousand persons all the morning crowded the streets, hurrying from church to church to express the warmth of their zeal, and the fervor of their devotion, by bowing themselves in each, and kissing the feet of the most revered image. The spectators were chiefly natives of the city, but many upon such occasions resort to Barcelona from the numerous adjacent villages, and some from distant provinces.

Towards the close of day the pageant appeared, moving with slow and solemn pace along the streets, and conducted with the most perfect regularity. The last supper

per of Christ with his disciples, the treachery of Judas, attended by the priests, together with the guards, the flagellation, the crucifixion, the taking from the cross, the anointing of the body, and the burial, with every transaction of the closing scene, and the events subsequent to the passion of our Lord, were represented by images large as life, placed in proper order on lofty stages, many of which were elegant, and all as highly ornamented as carving and gilding, rich silks, brocades, and velvets, with curious embroidery, all executed by their most skilful artists, could render them. No expence was spared either in the materials, the workmanship, or the wax lights, which, with the most splendid profusion, were consumed upon this occasion. Each of these stages was supported on the shoulders of six men, who were completely hid by a covering of black velvet hanging round the margin of the stage, and reaching nearly to the ground. This procession was preceded by Roman centurions clothed in their proper armour; and the soldiers of the garrison brought up the rear. The intermediate space was occupied by the groups

groups of images above described, attended by eight hundred burgesies, clothed in black buckram, with flowing trains, each carrying a flambeau in his hand. Besides these, one hundred and fourscore penitents engaged my more particular attention. Like the former, they carried each a flambeau, but their dress was singular, somewhat resembling that of the blue-coat boys of Christ's hospital in London, being a jacket and coat in one, reaching to their heels, made of dark brown shalloon, with a bonnet on their head, like what is called a fool's cap, being a cone covering the head and face completely, and having holes for the eyes. The design of this peculiar form is to conceal the penitents, and to spare their blushes. These were followed by twenty others, who, either from remorse of conscience, or having been guilty of more atrocious crimes, or for hire, or with the most benevolent intention of adding to the common fund of merit for the service of the church, walked in the procession bare footed, dragging heavy chains, and bearing large crosses on their shoulders. Their penance was severe; but, for their
 comfort,

comfort, they had assigned to them the post of honour ; for immediately after them followed the sacred corpse, placed in a glass coffin, and attended by twenty-five priests, dressed in their richest robes. Near the body a well chosen band with hautboys, clarinets, French horns, and flutes, played the softest and most solemn music. This part of the procession wanted nothing to heighten the effect. I am persuaded that every one who had a soul for harmony felt the starting tear.

In the processions of the present day, practices, which had crept in, when chivalry prevailed, with all its wild conceits, practices inconsistent with sound morals, and offensive to humanity, are no longer to be seen. The civil magistrate, interposing his authority, has forbidden, under the severest penalties, abominations which, as the genuine offspring of vice, could not have ventured to appear, even in the darkest ages, unless in the disguise and under the sanction of religion. The adulterer, if he will court the affections of his mistress, no longer permitted publicly to avow his passion, to scourge himself in her presence,
and

and by the severity of his sufferings to excite her pity, must now seek the shade, and if he feels himself inclined to use the discipline, it must be where no human eye can see him. In these ages of superior knowledge and refinement, men look back with wonder at the strangely inconsistent conduct of their progenitors, when, ignorant of every thing but arms, they embraced and carried with them a religion whose influence they never felt, and the purity of whose precepts they did not understand. It was not in Spain only that superstition reared her throne, all Europe acknowledged her dominion, and in every nation in which the victorious banner of the Goths and Vandals was displayed, we have seen execrable vices cherished in the same breast which appeared to glow with fervid zeal for the glory of God, at least as far as could be testified by the most strict attention to the ceremonials of religion. All Europe is emerging from this state of Gothic ignorance, and Spain, although the last, it is to be hoped will not be the least enlightened.

When the pageant was over, the people

retired quietly to their habitations; and although more than a hundred thousand persons had been assembled to view this spectacle, no accident of any kind was heard of. The day following, before eight in the morning, another procession of the same kind, but more elegant than the former, was conducted through the streets, and in the evening, a third, at which assisted all the nobles of Barcelona, each attended by two servants, and, in rotation, carrying a crucifix large as the life, and so heavy, that no one for any length of time could sustain the weight of it. The stages and the images were not the same, which had been exhibited the preceding day, but represented all the same events. Every stage was completely occupied by images large as life, and surrounded by a border of open carved work superbly gilt; and the bearers, as in former instances, were hid by curtains of black velvet, richly embroidered. Two hundred penitents in grey attended as before. In each of these processions were many children, some not more than three years old, carrying little crosses, with each a flambeau in his hand. These are used in
all

all processions, even in the middle of the day.

The different stages, with their groups of figures, belong to different bodies corporate, either of the nobles or artificers, and are ranged in the processions according to their right of precedency. These groups are called the mystery of the corporation. That of the French artificers is an *Ecce homo*, but for some reason the consul walks before it, attended only by the meanest subjects of his nation.

The succeeding day, at nine o'clock in the morning, when, as being Saturday, I had no expectation of such an event, the Resurrection was announced by bells ringing, drums beating, cannons firing, people shouting, colours flying, and, in a moment, all the signs of mourning were succeeded by tokens of the most frantic joy.

The processions were intermitted for several years, prohibited by government on account of abuses which had crept into them, and, in their place, the carnival was substituted, with the same licentious riot and confusion as I have described in Paris, and as all who have passed the carnival in

Italy have seen. But after the inhabitants of Barcelona, in the year 1774, had resisted the demands of government, requiring them to draft every fifth man for the army, like the other cities and provinces of Spain, the carnival was forbid, and the trade, which had been always brisk at this season, felt a loss, which made the citizens call loudly for the restoration of their processions.

After Easter they have one upon a smaller scale ; about seventy priests, each with a lighted flambeau in his hand, preceded by a herald with his banner, carry the host, under a canopy of crimson velvet, to those who had not been well enough to receive it in the churches.

The streets of Barcelona are narrow and crooked, like those of all ancient cities. The old Roman town may still be distinctly traced, occupying a small eminence in the centre of the present city, with one of its gates and some of its towers, well preserved. In this are many sarcophagi, altars, images, and inscriptions, with a temple of Neptune, all which have been well described by antiquarians. It was here
that

that Ferdinand and Isabella received Columbus, returning from America, and from hence that navigator sailed on his second expedition, in the year 1493.

In visiting the churches of Barcelona, an observation is confirmed, which had occurred even in the most contemptible of the country villages south of the Pyrenees, It is evident that all their decorations were invented about the beginning of the sixteenth century, after the gold and silver of America had been brought to Spain, and every altar piece, with every column, shews that their improvement in taste did not keep pace with their increase of wealth. Riches came upon them by surprise, and found them unprepared to make a proper use of the abundant treasure. Hence even the composite and the Corinthian pillars are loaded with new ornaments, and whether fluted or contorted, they are entwined by ivy or by vines, and are almost hid by the multitude of angels fluttering round them, or by cherubs climbing up the branches; and the whole of this preposterous assemblage is covered with one glare of gold. The present generation is en-

lightened, and their taste is much refined; yet they want resolution to reform abuses, and to strip off those ornaments, to which the blind zeal and devotion of their forefathers have given sanction. One of their best writers has remonstrated, and his remonstrances have engaged the attention of government to make wise regulations for the future.

They have in this city an academy for the noble arts, open to all the world, in which all who attend are freely taught drawing, architecture, and sculpture, under the direction of D. Pedro Moles, and others, who, like him, excel in the branches they profess. For this purpose, they have seven spacious halls, furnished at the king's expence with tables, benches, lights, paper, pencils, drawings, models, clay, and living subjects; they assemble in the morning from ten to twelve, and in the evening from six to eight, in winter, and from eight to ten in summer.

This academy is well attended; I counted one night upwards of five hundred boys, many of whom were finishing designs, which shewed either superior genius or more than common application. It is not

not to be imagined that all these boys, or perhaps any of them, are destined to be painters: this was not the intention of government, much less of count Campomanes, who suggested the institution. Most, if not all these youths, are apprenticed to trades; and it is well imagined, that every other art may receive some assistance from this, whose peculiar property it is to excel in imitation. Such institutions are much wanted in England. Not only the sculptor, the architect, and the engineer, but the coachmaker, the cabinet-maker, the weaver, nay even the taylor and the haberdasher, may derive great advantages from that accuracy of sight, and that fertility of invention, which are acquired by the practice of drawing and designing.

D. Pedro Moles is an artist whose works have been universally admired for the beauty of his stroke, and the force of his expression. It is a pity that the graver was ever taken from his hand; he may perhaps be more usefully employed in superintending this academy, but, as an engraver, he would have acquired a more lasting fame, and have made a better provision for his family.

One of the seven halls is fitted up as a nautical school, and is provided with every thing, which is needful to teach the art of navigation. The students, who at present are only thirty-six, assemble every morning from eight to ten, and every evening from three to five. Since the first establishment of this useful seminary, they have sent out more than five hundred pilots, qualified to navigate a vessel to any quarter of the globe.

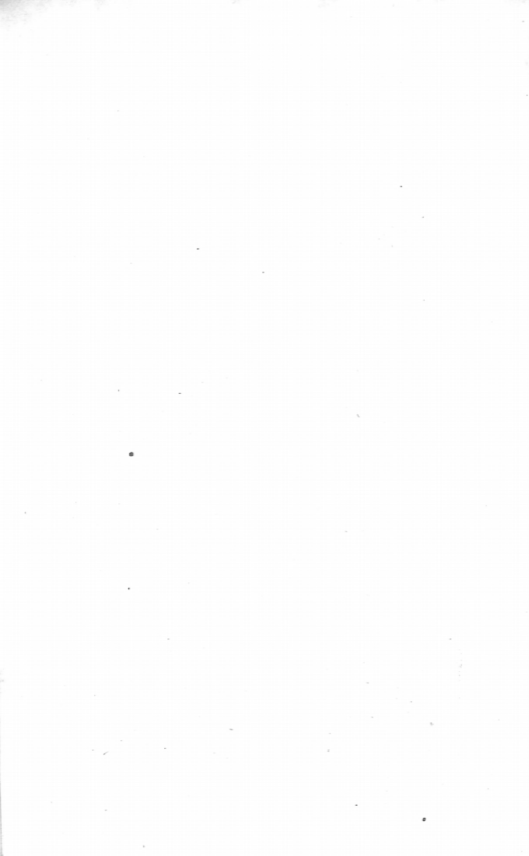
Equally well furnished with the preceding, and equally well conducted is the military academy, in which are three magnificent apartments for the students to pursue their studies, from the first elements of the mathematics, to the higher branches of their profession. This and similar academies, established by the reigning monarch, are of vast importance to the nation, as furnishing a sufficient supply of engineers in time of war, without the necessity, as in former periods, of depending wholly on their allies. These seminaries in Spain are the only schools in which the mathematics can be studied to advantage; for although, in all the universities professors are appointed, they are said to be wholly ignorant of this science,

science, which they profess to teach. V. Camp. E. P. Ap. 1. p. 292.

Besides these institutions for the instruction of such as are devoted to arts or arms, there are not wanting some of more general utility, accessible to all the citizens without distinction. These are a cabinet of natural history, and the public libraries, of which there are four; three general, and the other confined to medicine and surgery; the cabinet belongs to D. Jaime Salvador. From the reports of this collection, I had formed high expectations, but I must confess myself dissatisfied. Some thirty or forty years ago, it may have been worthy of attention, but the science itself, and the cabinets of the curious, are so much improved, that collections, which at remoter periods excited wonder, are in the present day justly regarded with cold indifference. The general libraries are those of the bishop's college, of the Carmelites, and of the Dominicans. This last I found most worthy of attention, as containing more modern books of value than either of the former. Among these, some of the most considerable were the ruins of Palmira; Raphael's Heads, by

Fidanza; Duhalde's China; Monumens de la Greece; Histoire genealogique de la Maison Royale de France, & des anciens Barons, par le P. Anselme; Antichita di Ercolano; Muratori Thesaur. vet. Inscriptio-num; Numismata Vir. illust. ex Barbadica gente; Danubius Pannonico Mysicus. These may serve to shew that the collection is not contemptible. In short, whatever studies a man may be desirous of pursuing, he will find in one or other of these libraries the best books, to which he may have access six hours every day, excepting holidays. In the convent of the Dominicans there is one apartment filled entirely with books prohibited by the inquisition, and, in order that no one may be tempted to peruse them, all the vacant spaces are filled with devils cracking human bones, it is to be supposed of heretics. Lest, however, this sight should not suffice to check a prying disposition, they are well secured by lock and key, and no one has access to these without a special licence.

In the cloister of the Dominicans there are more than five hundred records of sentences passed on heretics, containing their name, their age, their occupation, their place





Barcelona in the Convent of the Dominicans.

Oliver Boer. Trabajador. heretico. condenado en Persona. 27. de October de 1566.



Inquisitorial Mercy.

place of abode, the time when they were condemned, and the event; whether the party were burnt in person or in effigy, or whether he recanted and was saved, not from the fire and the faggot, for then he might relapse, but from the flames of hell. Most of these were women. The first date is A. D. 1489, and the last, 1726. Under each inscription there is a portrait of the heretic, some half, others more than three parts, devoured by devils. I was so much struck with the fantastic forms, which the painters had given to their dæmons and the strange attitudes of the heretics, that I could not resist my inclination to copy some of them, when no one was walking in the cloister. Some time after this, sitting with one of the inquisitors, who did me the honour of a visit, he in a careless manner took up my memorandum book, and as chance would have it, opened precisely on the leaf which contained my drawings: I laughed; he coloured; but not one word escaped from either at the time. Fifteen months after this, when I returned to Barcelona, he smiled, and said, "You see that I can keep a secret, and that we are not strangers to principles of honour."

During

During my residence at Barcelona, I had an opportunity of seeing all the courts of the inquisition assembled in a grand procession to celebrate the feast of S. Pedro Martyr, their patron saint, in the church of St. Catharine of the Dominicans. Happy had it been for Christendom if all their festivals had been as innocent as this. It is, however, universally acknowledged, for the credit of the corps at Barcelona, that all its members are men of worth, and most of them distinguished for humanity.

Visiting the churches at all hours, whenever any service was performed, I made a party with some friends to hear a penitential service in the convent of St. Felipe Neri, on Friday evening of April 28. The first part of the Miserere was no sooner ended than the doors were shut, the lights were extinguished, and we remained in perfect darkness. At this moment, when the eye could no longer find an object to distract the mind, the attention was awakened by the voice of harmony, for the whole congregation joined in the Miserere, which they sung with pleasing solemnity; at first with soft and plaintive notes; but having laid bare their backs, and prepared

them for the scourge ; they all began nearly at the same instant to use the discipline, raising their voices, and quickening the time, increasing by degrees both in velocity and violence, scourging themselves with greater vehemence as they proceeded, and singing louder and harsher, till at the end of twenty minutes, all distinction of sound was lost, and the whole ended in one deep groan. Prepared as I had been to expect something terrible, yet this so far surpassed my expectation that my blood ran cold; and one of the company, not remarkable for sensibility of nerves, being thus taken by surprise, burst into tears.

This discipline is repeated every Friday in the year, oftener in Lent, and is their daily practice during the holy week. I was not at liberty to ask what advantage they derived, or what benefits they expected to receive from this severity; yet, from the prevalence of vice in Spain, I fear this practice has little if any tendency to reform their morals.

The hospicio, or house of industry for the poor next attracted my attention. This institution originated in the year 1582, much

much about the time when the poor began to occupy the serious attention of all the governments in Europe. With the house of industry is united the hospital of mercy, which, in the year 1699, was put under the care of the nuns of St. Francis, called *Monjas Terciarias de S. Francisco*. The whole was reformed in 1772. In this establishment they provide for children of parents who are burthened with a numerous offspring, for beggars, and for other objects of distress. In the year 1784, they had 1466 paupers; the year following 1383; and, when I was there in 1785, the number was 1460, the average being fourteen hundred and thirty-six. Of this number, about one thousand are able to work, three hundred are idiots, and the rest are little children. The whole expence of them is about forty-eight thousand two hundred livres Catalan, or about five thousand one hundred and sixty-four pounds sterling per annum. The king allows for each pauper fourteen maravedis per day to purchase a ration of bread. These are equal to one penny sterling, or nearly so. The voluntary contribution amounts to about fifteen thousand livres Catalan,

Catalan, and the deficiency is made up by the bishop. The women and children are employed in knitting, spinning, and in making lace. The men card, comb, spin, and weave cotton, flax, and wool. The produce of their labour is contemptible, being at the rate only of one penny each per day, should we allow, which cannot be allowed in Spain, three hundred working days, and one thousand paupers fit to be employed. Yet this produce is greater in proportion than the average of our work-houses in England. Although no paupers can be either better clad, better fed, better attended, or better lodged, or can meet with greater tenderness when they are ill, they cannot readily forget their loss of liberty. All these comforts, therefore, are despised when compared with freedom, and few, besides the most decrepit, would remain within those walls if they could be permitted to beg their bread from door to door. This principle, however, is productive of much good; for most of the young men in Barcelona, of any worth or spirit, form themselves into clubs for mutual relief, in the same manner, and nearly upon the plan adopted by our friendly societies in England.

England. These fraternities have each its firm, taken from the name of the Saint to whose protection it is recommended. They are upon the most respectable footing, and being well conducted, leave none but the most improvident and most worthless subjects to be disgraced by confinement among fools and madmen. Those who are able to work, but choose rather to live in idleness and vice, are left to the correction of the laws.

There is one house of correction, which is too remarkable to be passed over in silence. It embraces two objects; the first is the reformation of prostitutes and female thieves; the second, the correction of women who fail in their obligation to their husbands, and of those who either neglect or disgrace their families. The house for these purposes being divided into distinct portions, without any communication between them, the one is called *real casa de galera*, and the other *real casa de correccion*. For each of those, who are shut up in the former, the king allows seven deniers to purchase eighteen ounces of bread, and nine deniers, which is nearly one penny sterling, to procure meat. The fund for
this

this arises from fines; but to aid this fund, the women are obliged to work as long as they can see. By their labour they earn about five shillings a month, half of which they have for themselves, whilst, of the other half, the alcaide or governor has one-tenth to stimulate his attention to his duty. These women, working thus from light to light, would earn much more were it not for the multitude of holidays. The ladies, who deserve more severe correction than their husbands, fathers, or other relatives can properly administer, are confined by the magistrates, for a term proportioned to their offences, in this *royal* mansion, or *casa real* de correccion. The relation, at whose suit they are taken into custody, pays three sueldos, or four pence halfpenny per day for their maintenance; and with this scanty provision they must be contented. Here they are compelled to work, and the produce of their labour is deposited for them till the time of their confinement is expired. The whole building will contain five hundred women; but at present there are only one hundred and thirteen. Among these are some ladies of condition, who are supposed to be visiting
some

some distant friends. Here they receive bodily correction, when it is judged necessary for their reformation. This establishment is under the direction and government of the *regente de la audiencia*, assisted by the two senior criminal judges, with the alcaide and his attendants. One of these judges conducted me through the several apartments, and from him I received my information. Among other particulars, he told me, that they had then under discipline, a lady of fashion, accused of drunkenness; and of being imprudent in her conduct. As she was a widow, the party accusing was her brother-in-law, the marquis of —.

The judges of this court are universally acknowledged to be men of probity, and worthy of the high degree of confidence thus placed in them. One of them, Don Francisco de Zamora, to whom I am indebted for the most polite attentions, is a gentleman of indefatigable application, and of universal knowledge.

The *audiencia* mentioned above, although a modern institution, bears some resemblance to the courts of Westminster Hall,

Hall, and a still greater to the parliaments in France, having the administration of justice, civil and criminal, committed to it, with the government, both æconomical and political, of the whole province, like the ancient courts of all the feudal sovereigns. The captain general and governor of Catalonia is president of the audiencia, with a vote. This tribunal, which is supreme, and receives appeals, is divided into three courts, one criminal, the other two civil, and when united into one, æconomical.

In each of these are five judges. The kings of Arragon, and after them the sovereigns of the united empire of Castile and Arragon, were accustomed to appoint viceroys of Catalonia, till Philip V. in the year 1716, changed the government of this province, established the audiencia, and appointed his captain general to preside in it.

Besides these general courts, there is one established for commerce, which is again subdivided. Of the subdivisions, one being judicial, determines differences between the merchants; the other has the government of all arts and manufactures:

The whole city of Barcelona is divided into five districts or wards, over each of which presides one of the five *alcaldes del crimen*, or judges of the criminal court of the *audiencia*, with his *promotor*, *escrivano*, *alguacil*, *portero*, and *alcaldes de barrio*, to determine, in the first instance, all causes both civil and criminal between the inhabitants, and to preserve the peace in their several wards. The *alcaldes de barrio*, of which each ward chooses annually eight, resemble our constables. But besides these two *alcaldes mayores* are conservators of the peace, and justices for the city at large.

The government of Barcelona, as far as relates to political œconomy, is committed to a court of twenty-four *regidores nobles*, or aldermen, four deputies from the commons, with authority to vote, and two syndics, the one called *procurador*, and the other *personero*. This court is subordinate to the *acuerdo*, or œconomical court, which is composed of the two civil courts, assisted by the *regente de la real audiencia*, and presided over by the captain general of the province.

There are three colleges of *escrivanos*; the

the first are called *escribanos publicos*, or *escribanos de numero*, who are scribes to make contracts and wills. The second are *escribanos reales de la audiencia*, who are present in court to authenticate all transactions there; but who may, by special licence, make contracts also: of each of these the number is limited to forty. The third are improperly called *escribanos*, being *procuradores*, that is, proctors, solicitors, attorneys, or counsel, to solicit and to plead all causes in the courts of justice. In Catalan these are distinguished by the name of *notarios reales causidicos*, and although by law they are limited to thirty, it is impossible to confine them to that number, because of the multitude of causes which they have to plead. There are at present seventy-three of these, besides one hundred and ninety-nine advocates.

The multitude of causes does not arise in Catalonia, as in Wales, from any violence of temper, or litigious spirit in the inhabitants, but from the uncertainty of its laws. They have a peculiar code, called, Constitutions of Catalonia; but this being inadequate to their wants, the next in force is

the canon law; and, where that is silent, their ultimate resort is to the Justinian code.

The process is by written evidence, and the only parties visible in court are the judges and the pleaders, with the *relatores*, or readers of that evidence authenticated by the *escrivano*, in whose presence it was taken. For the assistance of the poor there is appointed a procurador, and also an *abogado*; the one to solicit, the other to plead their causes.

No hospital that I have seen upon the continent is so well administered as the general hospital of this city. It is peculiar in its attention to convalescents, for whom a separate habitation is provided, that after they are dismissed from the sick wards as cured of their diseases, they may have time to recruit their strength, before they are turned out to endure their accustomed hardships, and to get their bread by labour. Nothing can be more useful, nothing more humane, than this appendage. The numbers they received into this hospital were, in the year 1785, nine thousand two hundred and ninety-nine; and in 1786, six thousand

thousand four hundred and eighty-eight. In the former year they buried eight hundred and fifty-four; in the latter, nine hundred and twenty-six; which, upon the average, is nearly a ninth of those who enter; but then it must be considered, that many are put into public hospitals merely to save the expence of funerals.

With this hospital is united, under the same administration, an establishment for foundlings, sufficiently capacious for the city and its environs. The deserted children were five hundred and twenty-eight, on the average of the two last years, and of these two-thirds were buried; a proportion shocking to humanity, but the inevitable consequence of taking infants from the mother, and crowding them together in a city; more especially if, as in Barcelona, five children hang upon one nurse. It is much to be lamented, that they have not, like the French, recourse to the milk of goats; or, like the nurses of the Orphan Hospital in Dublin, learnt the use of sucking bottles.

The boys on this foundation are bound apprentice when of a proper age; the girls,

when marriageable, are conducted in procession through the streets, and any young man, who sees one, whom he would choose for a wife, is at liberty to mark her, which he does by throwing his handkerchief.

Besides these charitable foundations, there is in Barcelona an orphan hospital, which I did not visit.

The inns are little inferior to those of the great towns in France. The table is well served, and supplied with plenty of good wine. The whole expence for lodging and board is only five livres French, or four shillings and two pence sterling per day.

Barcelona may be considered as divided either into districts or into parishes; the former being five, the latter eight, including the cathedral. In a circumference of four miles it contains at present ten thousand two hundred and sixty-seven houses, and twenty thousand one hundred and twenty-eight families, consisting of ninety-four thousand eight hundred and eighty persons.

The thriving condition of this city will appear

appear by exhibiting at one view the state of its population at different periods.

A. D. 1464,	the number of per-			
	sons was	-	-	40,000
1657,	-	-	-	64,000
1715,	-	-	-	37,000
1759,	in 13,917 families,	-		69,585
1778,	in 16,608 ditto	-		84,870
1786,	in 20,128 ditto	-		94,880

The falling off, in 1715, may be readily accounted for, by recollecting, that during the war of the succession, Barcelona was besieged three times, and taken twice, first by the English, then by the French. In these convulsions the migration was great, and the assassinations were innumerable.

If the returns, which have been made to government, are compared with the parochial returns of births and burials, we shall be inclined to suspect some inaccuracy in either one or both, unless we take into consideration the numbers of priests, soldiers, monks, and nuns, which make these proportions differ from those, which have been found in other countries. The births,

and 1786, were three thousand nine hundred and sixty-six; the burials four thousand one hundred and ninety-eight; the deaths exceeding annually the births by two hundred and thirty-one. This circumstance is not uncommon in great cities; but if we multiply the births by twenty-six, and the burials by thirty-six, and take the average between them, we shall have one hundred and twenty-seven thousand and ninety-seven, which is thirty-two thousand two hundred and seventeen beyond the returns to government. It must be confessed, that the people have an interest to conceal their numbers, in order to lessen their contribution. This being the case, perhaps we should come nearer to the truth, if we should suppose the population of Barcelona, comprehending only those who are settled in a family way, at more than a hundred thousand souls. I shall however only state them according to the government returns.

Settled in families	-	-	94,880
Secular priests, and servants of the church	-	-	912
In 19 convents of monks	-	-	1,212
			In

In 18 convents of nuns, and 3 of beatas - - -	654
In the general hospital, with foundlings - - -	2,597
In the work-house - - -	1,438
In prisons, and house of cor- rection - - -	337
In sanctuary at the cathedral, at present only - - -	8
In garrison, and military aca- demy - - -	5,628
Officers of justice, and inqui- sitors - - -	147
Clergy of St. Philip and others	157
Strangers on board of ships, and in the inns, &c. -	3,440
	<hr/>
Total numbers in Barcelona -	111,410

This account of the population of Barcelona I have from D. Francisco de Zamora, and it is confirmed by the captain-general; yet both acknowledge, that to obtain precision is almost impossible; and neither of them could give me the numbers confined in the prisons of the inquisition.

The

The wealth which flows into Barcelona is not confined within its walls, but helps to increase the population of all the surrounding villages, which, in the compass of five leagues, are one hundred and five, all subject to its jurisdiction, and all partaking of that tranquillity which arises from energy in a well constituted government.

The industry which every where appears in Catalonia seems to act with concentrated force in Barcelona. Early and late, not only is the hammer heard upon the anvil, but every artist is seen busily employed, each in his several way adding to the general stock.

Two considerable trades in Barcelona are the taylor and the shoemaker, who are employed in clothing the army, not only in Spain, but over the whole empire. It is curious to observe, that as Scotland is remarkable for breeding gardeners, Ireland chairmen, Switzerland soldiers, so Catalonia is distinguished all over Spain for shoemakers and taylor.

Amongst the more considerable trades are the silk-weavers, cutlers, armourers and braziers, carpenters, cabinet-makers,

turners, with fringe-makers and embroiderers. I was particularly struck with the gun-smiths, who appear not only numerous and diligent, but uncommonly dexterous in the handling of their tools. The turners are more than dexterous, making one foot upon occasion serve the office of a hand to guide the tool, or to fix the poppet-head. The carpenters work in a manner peculiar to this city. They have neither pit saw, hand saw, carpenter's adze, axe, nor hatchet. To slit a plank, they fix it in a vice and use a spring saw strained by a bow, for working which they require two men. At this we need not wonder much; yet, when we see two men employed with the same tool, that is, with a tool of the same form, but finer, to make either dove-tail joints for cabinets, or tenants for doors and sashes, we must be allowed to smile. If they wish to smooth a board, they let it incline upon two wooden tressels, and hew it across the grain with a cooper's adze, not reflecting that an elastic body cannot resist the stroke. It is by no means necessary that a mechanic should be able to explain the laws of motion, but what philosophers acquire

acquire by study, he should learn by observation; and with him, experience should supply the place of instinct, and supersede the use of abstract reasoning.

The chocolate grinders have a method of working peculiar to Spain, and much preferable to that which is used in England. Our grinders, depending altogether on muscular exertion, use only the muscles of one arm, and employ those muscles to the greatest disadvantage; whereas in Barcelona, the slab, instead of being flat and horizontal, is curved, forming the segment of a hollow cylinder, and is inclined to the horizon. The operator kneeling behind this, and leaning over it with a granite roller, which is something longer than the slab is wide, grinds the chocolate, using both his hands, and pressing it with the weight of his body, as well as by the exertion of his arms. This operator goes from house to house, because most families choose to have their chocolate ground at home. For the market they have a more expeditious method, and grind the chocolate much finer than it can be made by hand. For this purpose five rollers of polished

lished steel, fixed in a frame, and appearing like the spokes of a wheel, or the radii of a circle, yet each turning round upon its axis, are placed between two mill stones, of which one is immoveable, whilst the other with the rollers receives motion by communication, in common with two other mills of the same construction, from a cog-wheel below stairs, which is turned in the usual method by a mule. The nuts fall through hoppers to feed the mills. In this manner one man will grind three hundred weight of chocolate every day.

The manufacturers of silk, cotton, and wool, adopt all the modern improvements. It is now about a twelvemonth since M. Pontet brought to them from France a model of a machine for spinning cotton better than it can be spun by hand, something like that which was invented by Mr. Arkwright. As this machine is well known in England, I shall not describe it. They have here a company, established by charter, for spinning American cotton to supply the manufactures, which used to take annually from Malta spun cotton to the amount of two hundred thousand dollars,
or

or about thirty thousand pounds sterling. This company enjoys many and valuable privileges. They have fourteen of the Manchester machines at work. As the cotton comes over foul, and full of sand, they are obliged to prepare it before they can begin to work. This they do in a simple machine constructed for the purpose. They have a large lanthorn cylinder made with pantile laths, leaving half an inch between lath and lath. This cylinder is inclined to the plain of the horizon, and is immoveable. Within this they leave a portion of a cone, approaching in its form to the containing cylinder, turning on their common axis, and furnished with iron spikes of about five inches in length, placed in a spiral line, to correspond with similar spikes fixed within the cylinder, in order to tease and to cleanse the cotton. The person who turns this machine with one hand, feeds it with the other. Government, disposed to give every possible encouragement to this branch of manufacture, has granted to the Marquis de Gobert exclusive privileges for his blanket manufacture at Vicq, as a reward for his having planted cotton in the island of Ivica, and

and has offered premiums to those who spin the greatest length of thread from one ounce of cotton. For printing cottons they have the same slow process, which was practised in England with stamps, previous to the use of cylinders.

The manufacture, which gave me the greatest pleasure, was one of woollen, carried on by Don Vincente Vernis. He employs three hundred and fifty persons in making cloth for Spanish America, which indeed takes most of the Barcelona goods, except some silk smuggled with their brandy through Guernsey into England. He has a very compact and elegant machine for winding and twisting worsted, in which fourscore reels are managed by one little girl, whilst another gives motion to the whole, and at the same time employs herself at knitting. This child, sitting on a bench, treads a vertical wheel, which, by means of a wheel with cogs, fixed on the other end of the same axis, moves the horizontal wheel, and thereby turns the spindles. When one of the girls is weary the other takes her place.

The manufactures have increased with
such

such rapidity, that the wages of labour for all kinds of artists in the city and the environs have advanced to two piftreens, or one shilling and eight-pence a day, for which they work only seven hours. The common labourer will earn fourteen pence in winter, but in harvest twenty. These gains, however, are not out of proportion to the value of provisions, as regulated by the magistrate. Mutton is sold for ten pence the pound of thirty-six ounces, beef for seven-pence, and bread at present for seven farthings the pound of twelve ounces; lodging for a small family costs about two guineas a year.

The mechanics here allow, that to maintain a family with tolerable comfort, their gains must be one hundred livres Catalan for each, which is nearly eleven pounds sterling.

As fuel is not easily procured, they use the utmost frugality in dressing their little dinners, seldom indulging themselves with either roast or boiled meat, but mostly stewing it in pitchers over their fagon or little furnace.

Nothing can more distinctly mark the character

character of this people and the rigid parsimony which accompanies the industry of Catalans, than a trade by which many contrive to obtain a maintenance for themselves and for their families. This occupation is to make fogons, which they do for less than a penny sterling each. Their manner of constructing them is somewhat singular. They take any bottomless pot, without enquiring for what use or purpose this pot has been before employed. They line it within, and cover the outside with well-tempered clay; then, putting three iron bars in the bottom, and three knobs by way of feet, with three more to support an olla or puchero, the whole is finished; and in this behold the poor man's kitchen. The puchero is simply an earthen pitcher, in which the meat is stewed, and hence the common invitation to dinner, even in the houses of wealthy citizens, is to partake of their puchero, or, as we say, to take pot luck.

The foundery for brass cannon is magnificent, and worthy of inspection. It is impossible any where to see either finer metal, or work executed in a neater and

more perfect manner. Their method of boring was, in the present reign, introduced by Maritz, a Swiss. Near two hundred, twenty four-pounders, are finished every year, besides mortars and field-pieces.

The stationers in Barcelona have a method of ruling books for merchants, than which nothing can be either more simple, expeditious, or exact. For this purpose they have a frame with bars, moveable in grooves, which are readily fixed at the distances required.

In every country a traveller can pass through, he will find some mechanical contrivances, some modes of expediting work, which are of late invention, or at least new to him; and I am inclined to think, that no country, if thoroughly examined, would furnish more than Spain. This, however, I conclude, not only from those transient observations, which I have had opportunities of making, but from those of a most excellent mechanic, M. Betancourt, a Spaniard, who has sought out ingenious artists in their garrets all over Europe, and who, I am persuaded, not from national prejudice, but from intimate knowledge
and

and conviction, places his own countrymen among the foremost in fertility of imagination and mechanical invention.

The inspection of their gun-locks gave me peculiar satisfaction. In those which are made in England, the tumbler, unless case hardened, is apt to wear, and to go off upon the half cock; and even when executed in the most perfect manner, how many accidents have happened in going through a hedge; but in the Spanish gun-lock, the tumbler, if I may be allowed to call it such, being of a different construction, is free from these imperfections. I shall not here attempt any verbal description of this excellent piece of mechanism, but hereafter I may, perhaps, engrave my drawings, and give them to the public.

The commerce of Barcelona is considerable, notwithstanding the many impediments, natural and political, which have checked, and still continue to restrain its progress. This city has no navigable river, and seems to have been built in its present situation only for the sake of deriving protection from the high mountain, which commands it. The basin is formed by a

mole, and is sufficiently capacious, but there is only twelve feet water on the bar. The quay is well constructed, but merchants are not permitted to land their goods immediately on it, lest the boatmen should want employment. All ships which are admitted to prattique, even though they should be forced in by storms, pay a duty, which is called *Lluda*; and, should they be obliged to land the cargo; on reshipping, they have oppressive duties to discharge.

The province is indebted to the Count Campomanes for the removal of the worst impediment to manufactures, that ever was invented by the blind avarice of sovereigns, at once to seize a revenue and to cut off the source, from which it should arise. Although abolished, the *Bolla* deserves to be recorded for the honour of the king, who, from principles worthy to be adopted by all the governments in Europe, had the wisdom to revoke it. Previous to the abolition of this vexatious tax, the weaver could not begin a piece of cloth, without sending for the administrator of the *bolla* to affix his leaden mark, and when he had finished it, he was to do the same. When
disposed

disposed of, it was necessary to have another leaden seal, attended with a certificate; after which, when sold by retail, the portion cut off was to be sealed with wax, and the end of the piece, from whence this small quantity had been taken, was to be sealed again with lead. The tax was fifteen per cent.

We wonder at the strange absurdity of this imposition; but, let our own government reflect, that the sovereigns of Catalonia had not the monopoly of folly. Spain may with good reason say to England,

*Cum tua pervideas oculis mala lippus inunctis,
Cur in amicorum vitiis tam cernis acutum.*

HOR. SAT. lib. i. sat. 3.

Brandy, wine, nuts, almonds, raisins, and cork, are shipped at different places on the coast for the merchants, who reside in Barcelona. The wines are Mataro, Villanova, Sitges, Valls, and Granatché. The price varies according to the season, but when it is highest, we may reckon Mataro at sixteen dollars, or forty-eight shillings, the hoghead, including the Spanish duties; Villanova, fifteen dollars; Granatché, forty.

All these are red. The following white wines are, Sitges, fifty-four; Valls, twenty dollars; but the common price is twelve dollars and an half per hoghead for both the Mataro and Villanova.

When brandy is dearest, it is sold, duty free, on board, at 57 dollars, or £. 8. 11 s. the four cargas or pipe of 124 gallons English, Hollands proof, or 1 s. 4 $\frac{1}{2}$. per gallon; but it is sometimes sold at 10 *d.* Of late considerable quantities of brandy have been embarked at Barceloneta, where they may be deposited from the neighbouring country, without being liable to the heavy municipal duties levied at the gates of the city on provisions of every kind, and from the imposition of which, brandy is much dearer in Barcelona than in Guernsey.

Beside the articles above enumerated, the merchants export wrought silks, printed cottons, woollen goods, small arms, and specie. This last is contraband. Catalonia furnishes thirty-five thousand pipes of brandy, and two thousand of wine, besides thirty thousand bags of nuts, containing three bushels each, at twenty shillings the bag. Of the above, about four thousand pipes

pipes of brandy, and some silk, go to Guernsey and Alderney, and the rest to France, all to be smuggled into England.

The cork bark, which makes a principal export of this province, was for a time prohibited, under the idle notion that the inhabitants might manufacture it at home; not reflecting that the English cutters could get a supply of cork in Portugal and France.

The imports are corn, fish, woollen goods, hardware, and oil of vitriol. The articles prohibited are beer, cyder, lead, hose, haberdashery, muslins, and cottons; but of the two last, immense quantities are smuggled in.

Wine, entering the city, pays a town duty of fifty reals per carga of twenty-eight gallons. Wheat and barley, entering by sea, pay, if for the public bake-house, one and an half per cent; if on a Spanish merchant's account, three per cent; and if on account of alien merchants, four and an half per cent. This duty was recovered formerly for the bishop; but at present the

king takes a part of it on his own account.

Cloth pays from one hundred twenty-seven to three hundred fifty-seven maravedis the vara.

Leather pays eighteen maravedis per pound. Hardware from thirty to fifty per cent; and fish, from thirty to seventy per cent, on the prime cost. Wine exported pays five per cent. if on foreign bottoms, but if on Spanish, it is free. Nuts pay three sols eight deniers per sack. Of these, twenty thousand are for the English market.

About one thousand vessels enter the port of Barcelona yearly, and of these one half are Spanish, one hundred English, one hundred and twenty French, and sixty are Danes.

The confidence of Catalans on the intercession of the saints has at all periods been a source of consolation to them, but upon some occasions, has betrayed them into mischief. Every company of artizans, and every ship which sails, is under the immediate protection of some patron.

Folio volumes testify the numberless miracles performed by our lady of Montserrat, and every subordinate shrine is loaded with votive tablets. Were this persuasion of the kindness and power of departed saints productive only of gratitude and hope, it were cruelty to rob them of their treasure; but, unhappily, it has been the parent of presumption; and among the merchants has brought many wealthy families to want. The companies of insurance in the last war, having each of them its favorite saint, such as San Ramon de Peñaforte, la Virgen de la Merced, and others, associated in form by the articles of partnership, and named in every policy of insurance, and having with the most scrupulous exactness allotted to them their correspondent dividend, the same as to any other partner, they concluded, that with such powerful associates it was not possible for them to suffer loss. Under this persuasion they ventured, about the year 1779, to insure the French West Indiamen at fifty per cent, when the English and the Dutch had refused to do it at any premium, and indeed when most of the ships
were

were already in the English ports. By this fatal stroke all the insuring companies except two were ruined; yet, notwithstanding their misfortune, this superstition remains in force.

In Catalonia as in France, with which this province was formerly connected, accounts are kept in livres, sols, and deniers; twelve deniers make a sol, and twenty sols a livre. Thus far all is plain and easy; but when we are to reckon by the money of this province, nominal and real, nothing can be more perplexing. If we reckon the peso or current dollar at three shillings sterling, the hard dollar will be four, the current pistole, twelve; and the pistole of gold, fifteen shillings.

But for greater perspicuity, I shall reduce them to a table, reminding the reader that in proportion as the exchange varies, additions or subtractions must be made.

CURRENT COINS OF BARCELONA.

Maravedi of which 4 make a Quarto, 18 a sol.

Half Quarto of 2 Maravedis.

Quarto of 4 Maravedis, worth $\frac{2}{7}$ of a penny sterling.

Double Quarto, worth $\frac{4}{7}$ of a penny.

The above are of copper. Those which follow are of silver.

Denomination.	Value in Quartos.	Sols. Deniers.	Value Sterling.
Quarter Pistreen	8 $\frac{1}{2}$	1 10 $\frac{1}{2}$	0 0 2 $\frac{1}{2}$
Half Pistreen	17	3 9	0 0 4 $\frac{1}{2}$
Pistreen	34	7 6	0 0 9 $\frac{1}{4}$
$\frac{1}{2}$ Pillar ditto	10 $\frac{1}{2}$	2 4	0 0 3
$\frac{1}{4}$ Pillar ditto	21	4 8	0 0 6
$\frac{1}{2}$ Pillar Pistreen	42	9 4	0 1 0
Double Pistreen	68	15 0	0 1 7 $\frac{1}{2}$
Peso Duro, Hard } Dollar - - - }	170	37 6	0 4 0 $\frac{1}{2}$

The GOLD COINS are,

				£.	s.	d.
Durillo, worth	-	5 Pistreens	-	-	-	-
$\frac{3}{4}$ Doblón new	-	10 ditto	-	1	19	10
Doblón, ditto	-	20 ditto	-	3	15	0
Double Doblón	-	40 ditto	-	7	10	0
Doblón de a Ocho	-	80 ditto	-	15	0	0
$\frac{3}{4}$ Doblón, old	-	10 and $\frac{3}{4}$ d ^s .	-	3	0	0
Doblón, old	-	20 and 6 d ^s .	-	3	4	3 $\frac{1}{2}$
Double Doblón, ditto	-	40 1 1	-	0	8	0 $\frac{1}{2}$
Doblón de a Ocho, d ^s .	-	80 2 6	-	0	16	1 $\frac{1}{2}$
				4	12	3
				3	4	0

The Pistreen being reckoned at 4 Reals vellón, of 8 $\frac{1}{2}$ Quarts each all over Spain, except in Catalonia, where 4 Reals vellón are valued at only 7 fols 5 $\frac{1}{4}$ deniers. Pistreens brought from Spain into Catalonia, gain $\frac{1}{8}$ per cent.

THE IMAGINARY MONEY OF CATALONIA.

	Deniers.	£.	s.	d.
Denier	12	0	0	1 $\frac{2}{3}$
Sol				
	Sols.			
Livre	20	0	2	1 $\frac{5}{8}$
Real ardite	2	0	0	2 $\frac{7}{8}$
Peso, cur. Dollar	28	0	3	0
Ducat	38	7	4	1 $\frac{10}{17}$
	Dollars.			
Current Pistole	4, or 112	0	12	0
Pistole of gold	5, or 140	0	15	0

Eight Deniers are equal to 3 Quartz, Spanish Money.

To reduce Pesos into Livres, multiply by seven, and divide by five; or add $\frac{2}{5}$ of the Pesos.

To reduce Livres into Pesos, multiply by five, and divide by seven.

MEASURES IN CATALONIA.

Twelve Cortans make one Quartera, which is two Bushels, English measure.

Sixteen Cortans make a Carga of wine or brandy, which is about thirty Gallons English, and is reckoned to be twelve Arrobas.

One hundred Quarteras are reckoned equal to 128 Fanegas.

WEIGHTS.

Eight Ounces make a Marc, being $\frac{1}{2}$ heavier than in Castille.

Twelve Ounces make a Pound.

Twenty-six Pounds one Arroba.

Four Arrobas one Quintal, which is ninety-three Pounds English, or ninety-one Pounds Castilian.

One hundred and twenty-five Pounds make one hundred and twelve Pounds English.

The

The building of Barcelona, according to historians, was about two hundred and thirty years prior to the christian era, and three hundred subsequent to the first establishment of the Carthaginians in Spain. It is said to have been called Barkino by its founder, in honour of his family, and to have derived from the Jews the commercial spirit which it has constantly retained.

It has seen many revolutions, and suffered much by every change. It was early delivered from the dominion of the Moors, and raised into a county, paying homage to the kings of France, till they, unable to protect it, resigned their claims, leaving the citizens to their own exertions for the vindication of their freedom. From this time their struggles, for more than a century, were incessant with the Moors; but in the end, the crescent yielded to the cross, and for many generations Barcelona was independent on its neighbours. Towards the close of the twelfth century it was annexed, by the marriage of its count, to the crown of Arragon; and, at a subsequent period,

period, by the union of Ferdinand and Isabella, it became a part of the Spanish monarchy.

Whilst the succession was disputed between the two houses of Austria and Bourbon, on the death of Charles II. of Spain, this city was A. D. 1700. of too much importance to the contending powers, to remain long in the quiet possession of either. The French were masters of the city, when the earl of Peterborough arrived upon the coast with his little army, a force too inconsiderable to attempt a siege with any prospect of success. But as this gallant officer had that, which supplies the want of more numerous armies, an imagination fertile in resources, his friends never gave up their hopes of success, till they saw him re-embark his troops, and prepare for sailing. The moment of despair to them was to the besieged the reviving of their confidence; and his departure was the signal of festivity to those, who had never been free from apprehensions, whilst he remained before the city. He failed; but in the night he disembarked his troops, and before the morning he got possession of Mon-