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JUNTA DE ANDALUCIA





P.C. Monumental de la Alhambra y Generalite CONSEJERÍA DE CULTURA

A

# JOURNEY

THROUGH

### SPAIN

IN THE YEARS 1786 AND 1787;

WITH PARTICULAR ATTENTION

TO THE

AGRICULTURE, MANUFACTURES, COMMERCE,
POPULATION, TAXES, AND REVENUE

OF THAT COUNTRY;

AND

## R E M A R K S JULIUPA

Donat vorde S. Conde de

IN PASSING THROUGH

APART OF FRANCE.

BY JOSEPH TOWNSEND, A. M. RECTOR OF PEWSEY, WILTS;
AND LATE OF CLARE-HALL, CAMBRIDGE.

IN THREE VOLUMES .- VOL. II.

THE SECOND EDITION, with Additions and Corrections.

LONDON:

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### CONTENTS

### OF THE

### SECOND VOLUME.

	Page
OVIEDO and its Environs, with a De-	
Scription of Avilés, Luanjo, and Gijon,	
with respect to Manufactures, Commerce,	
Nutaral History, and the Manners of the	
Inhabitants in the Asturias -	<b>1</b>
Journey from the Asturias to the Escurial,	
through Leon, with an Account of the	ambr
Merino Sheep, and Salamanca, with a	lA .
Description of that University, and of the	
Irish College	59
S. Ildefonso and the Palace, with its Gardens	100
Segovia, and its Manufactures -	116
The Escurial, and Convent of S. Lorenzo,	
with the Diversions of the King -	
Return to Madrid, with an Account of the	
principal Characters about the Court, the	
Manners of the Age, the Palaces of the	
Great, and their Establishments -	134
Digest of the Taxes and Revenue of Spain	160
Debts of Spain, and Observations on Finance	188
나를 하다 하게 되었다. 그런 지원을 사용하는	The

Generalife

The Rank of S. Carlos and a Statement	Page
The Bank of S. Carlos and a Statement of their gains —	196
Population of Spain, and the Causes of its	
Depopulation assigned _ — — —	207
The Ministers of State, with an Account of	
distinguished Characters employed by them	240
Journey from Madrid to Seville through the	
Sierra Morena, with Oservations on the	
common Obstacles to Population —	256
Seville, with an Account of the principal	
Paintings, the Manufactures of Snuff and	• •
Silk, the Mint, and the Inquisition, &c.	
Cadiz, with a Description of the City —	344
The general Workhouse at Cadiz Alamon	350
General Observations on Population —	361
The Commerce of Spain with the Colonies,	
with an Account of the Philippine Com-	
pany, the Treatment of Slaves in the Spanish Settlements, and the Rebellion in	
Peru — — — —	06H
The Spanish Navy in the years 1776 and	367
	201
0 1010	394 401
Diversions, Manners, and Customs at Cadiz	
Wainles and Marches at Cali	412

#### JOURNEY

THROUGH

#### THE ASTURIAS.

VIEDO, the capital of the Asturias, stands near the conflux of two little rivers, which pour their water into the Bay of Biscay, at Villaviciosa. It was built by Froila, or Fruela, the son of Alfonso I. furnamed El Catolico, and made the feat of his dominion. This city contains one thoufand five hundred and fixty families, and has five thousand eight hundred and ninetyfive communicants, besides children under ten years of age, who are computed to be about one thousand fix hundred; so that the whole population being feven thousand four hundred and ninety-five, they are not five to a family. It has four parish churches, eight chapels, fix convents, and a sufficient number of priests, with a bishop, his auxiliary, and thirty-fix canons. The Vel. II. bishoprie

bishopric is worth fixty thousand ducats, and the chapter is reckoned eighty thoufand; the former being equal to £.6,591.
15s. 11 $\frac{1}{4}d$ . and the latter £.8,789. 1s. 3d.
per annum.

The family where I took up my abode, was that of the auxiliary bishop. He is more than six feet two inches high, very stout, remarkably well made, handsome, youthful in his appearance, cheerful, active, and considerably more than threescore years of age. His manner is easy, and his conversation lively. The title given to him is, Most Illustrious; and upon the first approach to him, you bend the knee, and kiss his ring, having previously received his benediction, signified by crossing with his right hand.

His palace is far from elegant, yet by no means uncomfortable. You enter by the coach-house, and from thence pass through a door into the stable, or up the stair-case to the dwelling, which is over these. When ascended, you go through a kind of gallery, or lobby, to the bishop's apartments, consisting of a drawing-room of about thirty by eighteen, a little study, and a corresponding

sponding bed-room. The dining-room is about twenty-four by twenty-two, and not far from it is the little kitchen, with a few bed-rooms in the intermediate space. The whole has white walls, and ill-jointed floors. The chairs and the long table are of oak.

If the palace itself is plain; the stile of living is still more remarkable for its simplicity: enough for comfort, although little for luxury, and less for ostentation. Our dinner commonly consisted of a sopa, or bread stewed in broth, sollowed by an olla, composed of beef and mutton, a bit of baccon, and some sausages, with garvanzos, or large Spanish peas (cicer arietinum). At other tables they add veal and sowls. This was succeeded by some kind of roast meat, or game; and sish, in some shape or other, brought up the rear. Every morning and evening, instead of tea, chocolate, with Naples biscuits, was handed round.

The good bishop filled up his mornings with the duties and functions of his office; after dinner he took his fiesta; then either rode or walked; and in the evenings conversed with his friends, who assembled round him. His family consisted of his

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chaplain,

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chaplain, his fecretary, and two pages; besides these, his nephew, who is one of the canons, lived with him, and his great nephew, my travelling companion, was occasionally there. The pages wait at his table, and attend him when he goes from home. The remainder of their time is occupied with studies, and when qualified, they rise into the priesthood, and, admitted to the table, become companions, till a living offers to which the bishop can present them. The padre cura, that is, the rector of S. Andres de Aguera, had been one of these, and whilst I was at Oviedo, an amiable young page was ordained priest, said his first mass, and sat down with us at table.

Having been recommended by count Campomanes to the intendant, I fometimes, with the canon, frequented his tertulla, or evening affembly, where I never failed to meet the count de Penalba, a friend of Campomanes. Here I found two apartments, one for cards, the other for conversation; both neat; the former spacious and well proportioned. The company assembled in the card room was numerous; their game was lottery, a game requiring neither judg-

judgment nor memory; but the room for conversation was deserted. The count indeed was so polite as to quit the card-table; but as I selt that I had no right to expect such a sacrifice, I staid only a short time, and then either tormented the bishop, who was no Frenchman, with my miserable spanish, or, when I thought that I had sufficiently trespassed on his goodness, I retired to my room.

A few days after my arrival, I was prefent at a grand procession of the bishop,
with his canons, attended by the principal
inhabitants, carrying torches, and preceded a v General
by the ashes of Santa Eululia, to implore
rain from heaven. But this patroness of
the diocese, deaf to their petitions, would
not intercede for one refreshing shower,
and in consequence the maize was scorched
up, and produced but little grain. Being
at the time in blossom, it required daily
showers to prevent the blight.

From the frequency of processions, the consumption of wax becomes considerable in every part of Spain, more especially where the country is not watered, either by rivers or by the noria. But I am inclined

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to think, that the same expence, if properly applied, would in most places secure a never failing supply of water, and pay good interest for the capital employed. Government is sensible of this, and with a view to watering, as well as to navigation, encourages the canals, not as with us, by leaving this most important work to private adventurers, but as a national concern, at the national expence.

After the procession, I went to visit the Hospicio, or general work-house, and found the numbers confined to be, men, fixtyfive; boys, fifty-five; women, ninety; girls, feventy; not including infants out at nurse. The house is large and commodious, confifting of four spacious quadrangles, three stories high, and perfectly well fitted up, with comfortable work-rooms and dormi-Some of these I found two hundred tories. and fifty feet in length, lofty and wide. To fupport this establishment, the funds are thirty thousand ducats annually, arising from licences to fell brandy in the Asturias; three thousand from rents of land; and some other emoluments; being together equal to four thousand pounds sterling, besides the proproduce of their labour, which is stated at three thousand reales, or thirty pounds per annum, including what they make for their own consumption. Among the two hundred and eighty persons shut up in this hospicio, I saw no cripples, so that their labour may be fairly reckoned at two shillings and three halfpence each per annum. The expence of every pauper to the public is not so easily calculated, because they receive all deserted children. Here the mother has nothing to do but to put the child into the eradle, ring the bell, and then retire.

Besides this resuge for the poor, and for their children, the bishop causes seventy reales to be distributed every morning at his gates, giving either a quarto or an ochavo to all who come, and weekly pensions both to widows and to orphans. In addition to all this, the canons scatter their alms plentifully as they walk the streets; and the fix convents administer bread and broth at noon, more especially the Benedictines, who, as the most wealthy, are most liberal in their donations. When sick, the poor have a commodious hospital always ready to receive them.

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B 4 Notwith-

Notwithstanding all that has been done, and what more, in the way of charity, can be devised? beggars, clothed in rags, and covered with vermin, swarm in every street. Is it not therefore evident, that they have done too much, increasing both the numbers and the distresses of the poor by the very means, which have been employed to relieve their wants.

What incitement can we here find to industry? for, who will dig a well when he may draw water from the fountain? Is he hungry? the monasteries will feed him. Is he sick? an hospital stands open to receive him. Has he children? he need not labour to support them; they are well provided for without his care. Is he too lazy to go in search of food? he need only retire to the hospicio.

Dry up the fountain, and every man will instantly begin to dig a well; burn the hospicio, or dissipate its funds; give no relief but as a reward, that it may prove a stimulus to industry, and although at first the distress will be increased, and the population will be diminished, yet, as the fruit of that industry, which can spring only from

from distress, the population will afterwards advance in a constant and regular progression; wealth will be disfused; and distress will be confined to the cottage of the slothful.

I was exceedingly pleased with the anfwer of the bishop, when I one day took the liberty to ask him, if he did not think he was doing harm by the distribution of alms. "Most undoubtedly," said he; "but "then it is the part of the magistrate to "clear the streets of beggars; it is my "duty to give alms to all that ask."

Among the widows pensioned by the bishop, were many who had lived in affluence whilst they had husbands. These were the widows of lawyers, who are numerous, and spend all their gains.

I went afterwards with don Antonio Durand, and don Francisco Roca, to visit the hospital, of which the former is physician, the latter surgeon. The most remarkable cases were, tertians, dropsies, and a disease peculiar to this province, called Mal de la Rosa.

The tertians were only remarkable, as yielding to the lancet, followed by emetics, cathartics,



cathartics, and the bark. Perhaps the latter were the really efficacious remedies, and all the merit of the former might be merely negative. The dropfies were foon cured by cathartics, and abstinence from drink, allowing no liquid but half a pint of wine in twenty-four hours.

The Mal de Rosa has been considered as a species of the leprosy; but to me it appears to have no affinity with that disease. It attacks the back of the hands, the infteps, and the neck, where it descends the sternum, almost to the cartilago ziphoides, but the rest of the body is free. At first it appears red, accompanied with pain and heat, but ends in scurf. In the progress of this disease, vertigo and delirium succeed, with foul tongue, lassitude, chilliness, tears, and, according to the testimony of Dr. Durand, a peculiar propenfity to drown themfelves. It goes away in fummer, and returns in spring. The disease may be cured by nitre and gentle cathartics; but, if neglected, it terminates in scrophula, marasma, melancholy, and madness.

At Oviedo, as in most of the great towns in Spain, an hospital for the lues is opened three

three times in the year, to receive as many as the hospital will hold; but the surgeons all over the peninsula complain that patients are tardy in their application. This may arise either from the violence of their treatment, or from the mildness of the symptoms; but whatever cause may be assigned, the consequence is, the universal prevalence of that complaint.

The diseases which seem to be endemical in the Asturias, are, intermittents, dropfies, hysteria, hypochondriasis, scrophula, bronchocele, glandular obstructions, cachexies, scurvy, leprosy, madness, epilepsy, attended with worms, apoplexy, and palsy, rheumatism, phthisis, and erisipelas, with the mal de rosa, and the sarna, or the itch.

For the leprofy they have in the Asturias twenty hospitals, called *Lazaros*. It appears in various forms. Some patients are covered over with a white dry scurf, and look like millers; in others the skin is almost black, very thick, full of wrinkles, unctuous, and covered with a loathsome crust; others have one leg and thigh enormously swelled, and full of varices, pustules,

and ulcers, sending forth a most abominable smell. All complain of heat, with most intolerable itching. Some patients, instead of the great leg, have a most enormous swelling of one hand, more especially the semale subjects, or else have the seatures of the face swell to such a degree, as hardly to retain the human form; others again have carbuncles, big as hazle nuts, all over the surface of their body.

The common itch (scabies) is little less disgusting than the leprosy, thus transiently described. It usually attacks the heads of children, and is attended with ulcers of the foulest nature, itching intolerable, and lice innumerable. It is commonly preceded by horripilation and a frebricula, which terminate in the expulsion of numerous little pimples like the small pox. These, in healthy subjects, are large, pointed, red, quickly suppurating; but at the end of nine or ten months they go away. Bad subjects have this disease for life. The females are more exposed to it than males.

Agues, fevers, and even pleurifies, are faid often to terminate in scabies, and this frequently gives place to them, returning however

however when the fever ceases. In adults it takes possession of the hands and arms, with the legs and thighs; covering them with a filthy crust. In wet weather the itching becomes more troublesome, and towards midnight is insupportable. The patients, who labour under this disease, breed sirones, a kind of vermin exceedingly minute, yet visible without the assistance of a lens, which form channels between the cuticle and the skin.

The predisposing cause of all these diseases may be sought for in humidity, arising from the peculiar fituation of this province. This hilly country, bounded on the north by the Bay of Biscay, and to the south by. fnowy mountains, is always temperate, and generally moift. The N. E. wind indeed is dry, attended with a bright sky, and with a bracing air, but with every other wind the fun is obscured by clouds. The north wind always produces the most dreadful tempests, and the N. W. is little better, both bring rain in fummer, and the west wind comes loaded at all times with moifture from the Atlantic Ocean. In May, June, and July, they feldom fee the fun; r podnika

but then, to balance this, in August and September they as seldom see a cloud. The coast is temperate, and comparatively free from rain; but such is the moisture of the hills, that no care is sufficient to preserve their fruits, their grain, their instruments of iron, from mould, from rot, from rust. Both the acetous and the putrid fermentation here make a rapid progress.

Besides the relaxing humidity of the climate, the common food of the inhabitants contributes much to the prevalence of most diseases, which insest this principality. They eat little sless, they drink little wine. Their usual diet is Indian corn, with beans, peas, chesnuts, apples, pears, melons, and cucumbers; and even their bread, made of Indian corn, has neither barm nor leaven, but is unfermented, and in the state of dough. Their drink is water.

This account, collected from gentlemen of the profession, is confirmed in the valuable work of don Gaspar Cassal, an old physician, of more than common observation and experience, who has given to the public a natural history of the Asturias.

Although

Although subject to such a variety of endemical diseases, few countries can produce more examples of longevity. Many live to the age of a hundred, some to a hundred and ten, and others much longer. The fame observation may be extended to Gallicia, where, in the parish of S. Juan de Poyo, A. D. 1724, the curate administered the facrament to thirteen persons, whose ages together made one thousand four hundred and ninety-nine, the youngest of these being one hundred and ten, and the oldest one hundred and twenty-feven. But in Villa de Fofinanes, one Juan de Outeyro, a poor labourer, died in the year 1726, aged bra y Generali more than one hundred and forty-fix D years. LUCA

When we consider the temperature of the climate, arising from its humidity, together with the cooling winds from the Atlantic, and from the snowy mountains, we must naturally expect to find instances of protracted age, with the prevalence of chronical complaints, and of such maladies as are seldom mortal: whereas in warmer and in drier climates, nature comes sooner to maturity,

is fubject to more acute diseases, and, like combustibles, when burning with a vivid slame, is rapidly consumed.

The physician reported a case too singular to be easily forgotten: a young man, aged twenty-eight, complaining of a sever, was bled twice without relief; and having some symptoms which indicated a different treatment, they gave him a bitter purge, which brought from him, in one day, one hundred and seventy - three large worms, (the teretes). Five days after this he passed one hundred twenty-four, and the next day seventy-three, and died.

From the general hospital, I went with don Nicolas Trelles to visit an hospital for pilgrims, of which he is chaplain and confessor. It is a miserable building, with a wretched hall, and numerous cells, by way of bed-rooms. Here pilgrims from every quarter of the globe, who are going to prostrate themselves before the altar of S. Jago, in Gallicia, are received and lodged for three nights. When they arrive in Oviedo, they present themselves before one particular altar, and receive every man ten quartos.

Should he chance to die here, he is buried with more pomp, than the first nobleman of the province, and is attended by all the canons to the grave.

The rage for pilgrimage is much abated; but there are people living, who remember when it was the fashion for all young men of spirit, both in Italy and France, before they married, to go as pilgrims to S. Jago; and even now it is not uncommon to fee straggling some few old men, and many companies of young ones, pursuing the same route. We met twelve fine made fellows. who came from Navarre, finging the rofary, and haftening towards the next convent, where they expected to lodge, and receive more money for the journey.

S. Jago, if I am not mistaken, was the first who preached the gospel to the Spaniards; but however this may be, their devotion fprings from gratitude; and the reverence of all furrounding nations, who are acquainted with his military fame, is the just reward of his undaunted prowess, when, mounted on a white horse, he appeared in the air fighting against the infidels, and putting them to flight before

Vol. II. Ramiro,

#### [ 18 ]

Ramiro, at the battle of Simancas. (A. D. 927.)

The fight of pilgrims naturally reminded me of relics, and excited a curiofity to vifit those of the cathedral; and for that purpose I made application to the bishop, who the next morning fent his nephew, the canon, to shew me every thing most curious among their treasures. Tradition says, but I do not undertake to vindicate the truth of its report, nor indeed would our good bishop; tradition fays, and our good bishop, with becoming modesty, considers it as possible, that when Cofroes, king of Persia, pillaged Jerusalem, God, by his omnipotence, transported a cheft of incorruptible wood, made by the immediate followers of the apostles, and filled with relics, from Jerusalem, by way of Africa, to Carthagena, Seville, and Toledo, and from thence, with the infant don Pelayo, to the facred mountain near to Oviedo, and finally to the cathedral church of San Salvador. Upon its being opened, by the command of the fovereign Alonzo the Great, in the presence of assembled prelates; they found portions of all the following articles: the Rod of Moses; the Manna. Manna which fell from heaven; the Mantle of Elias; the Bones of the Holy Innocents: the Branch of Olive which Christ bore in his hand when he entered Jerusalem; great part of the true Cross; eight Thorns of his Crown; the Sanctiffimo Sudario, or napkin stained with his blood; the Reed, which he bore by way of fceptre; his Garment; his Sepulchre; the Milk of the Bleffed Virgin; the Hood, which she gave to S. Ildefonso archbishop of Toledo; one of the three Crucifixes carved by Nicodemus; and a Cross of the purest gold, made by angels in the cathedral. CONSEJERIA DE CULTURA

"Whosoever, called of God, shall visit these precious relics, shall obtain remission of one-third of the punishment due to his sins, with indulgence for a thous sand and four years, and six quarentines, "&c. &c." Thus at least runs the promise, in the name of the pope, and by authority of the bishop; yet I doubt much, if thus worded, the promise be agreeable to the faith of catholics. All their bishops and men of learning, with whom I have



had the honour to converse, have folemnly affured me, that without repentance, and a firm belief in the atonement, no power upon earth can absolve the guilty; and that the church claims no prerogative respecting indulgences, but that of remitting the punishment, which would otherwise be endured in purgatory by those, who shall not have performed the penance appointed by the church for each particular offence. When they promise forty days indulgence, or as many forty days as shall make one thousand and four years, they do not mean absolutely days and years, as if endless duration could be divided into portions, to be measured by the rotation of the earth, for they hold fuccession to be inconsistent with the idea of eternity; but they mean, if I understand them right, the remission of such a portion or quantity of punishment as shall be equal to forty days, or one thousand and four years penance, should their lives be protracted to fuch a period as would allow them to perform the whole. When the points of difference between protestants and papifts shall be fairly and distinctly stated, the

the subjects of dispute will vanish, or at least the contending parties will have the better chance of coming to agreement.

Some days after I had examined all these relics; the Sanctissimo Sudario, or facred napkin, on which the Redeemer, during his passion, impressed his image, was exposed in the cathedral to eight or ten thousand peafants, collected from all the furrounding villages, most of whom had baskets full of cakes and bread, which they elevated as high as possible the instant the curtain was withdrawn, in the full persuasion that these cakes, thus exposed, would acquire virtue to cure or to alleviate all diseases. Many lifted up their beads, and every one had fomething or other to receive the divine energy, which he conceived to be constantly proceeding from the facred image of his Lord. After a few minutes, one of the canons drew the curtain, and the multitude retired.

The monasteries in Oviedo are not highly interesting; yet two of them excited my curiosity; both of them belonging to the Benedictine order. The first was of monks, whom I visited for the sake of father Feyjoo, whose

whose same has extended to the most distant nations. I went into his cell, and conversed with those, who had reverenced him living. I examined the seatures of his bust, but this having been taken when the clay was no longer animated, it was from his works alone that I could form any judgment of his mind. All who are conversant with these, will agree with me in thinking him, for general literature, the first writer of the Spanish nation.

The convent of the Benedictine nuns I visited chiefly on account of their great wealth. They are only fifty, and their re-v Generalife venue is allowed to be twenty thousand ducats, or £.2,197 5s, 3\frac{1}{4}d. a year. They invited us to tea. I went with the canon and my young friend to their parlour; and they affembled with the lady abbefs at the grate. Their conversation was lively, and their behaviour perfectly easy, I ventured to folicit one of them to fing; she was young and handsome, genteel and delicate, and her countenance was highly interesting; but when she began to chaunt a portion of the litany, she made me start; for having long fince forgotten all the fongs of infancy,

infancy, and being accustomed to sing only in the choir, her voice was become harsh and grating on the ear. When we took our leave, they invited us to repeat our visit; but my curiosity was satisfied, and my time was short.

The building itself is worthy of attention for its vast extent, and for its elegance.

The person to whom I was chiefly recommended was the count of Penalba, a man of good abilities, of gentle manners, and of uncommon information, for a nobleman of Spain.

I went with him to see the hot springs of Rivera de Abajo, at the distance of some miles from Oviedo. The situation is most enchanting, in a little valley every where shut in by losty mountains, excepting only a small outlet for the stream. The rock is limestone, and the waters resemble those of Bath, both in temperature and in taste. The principal spring rises from the rock, and is near two inches in diameter. The baths are ill contrived, and separated by a cold passage from the dressing rooms.

The virtues of these waters have not been ascertained, nor have they been analised:

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but

but the cases, in which they have been chiefly recommended, are, rheumatism, palfy, jaundice, and sterility; and for these they are in the highest estimation.

In the centre of the valley, on a little eminence, is a castle with round towers, called San Juan de Priorio; and near to it a church, most romantically placed, with a beautiful back ground of oaks and chefnuts.

As we returned, we vifited a new manufacture of petroleum, established near the city, according to a plan fent from Paris by count d'Aranda, and which I understand to be the same with that invented by lord This will certainly become Dundonald. an object of importance, because coal every where abounds in the Asturias, although it has never yet been turned to profit, on account of its abominable fmell, arifing perhaps from the rock, between which it lies, and the fulphur, with which it is impregnated. It is well known, that alcali and fulphur form the liver of fulphur, than which nothing is more offenfive to the nostrils. Now the whole province abounds with marle, chalk, gypfum, pifolite or calcareous

careous freestone, limestone, marble; and the rock, which confines the coal, is wholly calcareous. But should they ever penetrate this stratum, and find the coal in schist, I have no doubt that their coal would cease to be offensive. At present they have not sufficient encouragement to work these mines, because the country abounds with wood, and the prejudice against coal is so strong, that men, to whom the multitude look up, have not scrupled to attribute all the consumptive diseases of our island to the prevailing use of coal.

The limestone of this province every

where abounds with fossil shells,

To the west of Oviedo the soil is gypfeous, but they make no saltpetre, nor is there any sign of nitrous earth.

The trees are, elm, ash, poplars, and a species of the oak, called robles, an appellation perhaps derived from robur. In the low lands they get two crops in the year, taking after barley either maize or flax. Their wheat is very fine.

The ploughs about Oviedo are, without exception, the worst I ever saw, and perhaps the worst which the imagination can conceive.



conceive. The coulter is fixed in a beam by itself, with two oxen and one man to work it. This goes first; then follows the plough in the same tract, with no iron excepting at the point of the share. The handle is curved, to serve the purpose of sheets, and has a mortice to receive the tenon of the beam, and itself is morticed into the tail of the share. It has a retch to raise and to depress it. The whole is made in the most clumsy manner, and at best can only scratch the ground, which, being mostly strong land, requires to be well ploughed.

The harrows have no iron, and are only used for maize; the wheat and barley be-

DE AND ing always left unharrowed.

The cart wheel has no fpokes, but confifts of a wooden ring or felloe, composed of four quadrants, and is bisected by a plank of about eight or ten inches wide, to receive the axis, which, being fastened to the wheel, turns round with it, making what is called an axis in peritrocheo. Some of these, for heavy work, are bound with iron, and have spike nails with enormous heads. I had the curiosity to measure the axis, and found

found it commonly more than eight inches diameter, but sometimes ten; yet, I must confess, that I was not surprised at finding this quantity of friction overlooked in the Asturias, having observed so little attention paid to it even in England, where, till within these few years, the large wooden axis was universal; and where, even in the present day, sew farmers have adopted iron.

To set any matter in a proper light, it is often necessary to view it in the two oppofite extremes. Now it must be evident, that were it possible to have the axis, of the fame diameter with the circumference of the wheel; the friction would not be in the least abated, but would, as may be proved, and has been proved by the most accurate experiments, be equal to onethird of the whole weight moving on a smooth surface. Were it possible to reduce the axis to a mathematical line, friction would altogether vanish. Having found the two extremes, the imagination readily feizes a general idea of the proportions which lie between them. Let us however examine these proportions with a moreminute

minute attention. It is evident, that in the former case, always supposing the plain to be horizontal, a power more than equal to one ton would be necessary to move three tons; whereas in the latter case, a sly would give motion to ten thousand tons.

Stating the diameter of the wheels to be four feet, and that of the axis to be eight inches, which are the usual dimensions in the Asturias, something more than one ton would move eighteen tons; but, supposing the wheels to be five feet high, and the diameter of the axis to be two inches and an half, then fomething more than one ton would fet in motion feventy-two tons, the friction being always directly as the diame-All ter of the axis, and inversely as the diameter of the wheel. Here I must take occafion to observe, that in point of friction, to diminish the axis will be found more adviseable than to increase the diameter of the wheel, because the friction will be in proportion to the diameter; whereas, the degree of strength being given, the weight of the wheel will be nearly as the square of the diameter. Whilst the motion is horizontal on a plain, which is perfectly

perfectly hard; wheels which are high, and confequently heavy, will have no other disadvantage than the superior cost, but on foft roads, and in moving either up hill or down, the weight of the wheels must not be overlooked, nor must the diameter be difregarded. The weight in both cases tells against the horse; but, as to the diameter, a distinction must be made. Going up hill, in proportion as you elevate the axis above the horses breast, so as for the line of draft to make an angle with the hill, in the same proportion you lose power. The truth of this proposition may be caught by moving in imagination the line of draft up and down in two opposite extremes. vate or depress it, till it becomes perpendicular; the whole force of the horse will tell for nothing, and he will act only like a log of wood equal to him in weight. Let the line of draft make an angle of 45° with the plain, on which the waggon is ascending, and one half of the force will be loft. In like manner by the composition and resolution of forces, the exact proportion of loss may be ascertained. In going down hill, the diminution of friction, which is directly

## [ 30 ]

as the diameter of the wheels, makes it needful to create new friction by chaining the wheels, or by a sliding piece to prevent their rotation.

In the Asturias, not satisfied with the quantity of friction arising from a wooden axis of eight inches diameter revolving without greafe, they fix two wooden pins, which confine the axis in its place, fo near together, that they bind hard against it; and this they do only for the fake of the noise arising from the friction, and which, whilst it appears to lull the oxen, and to incline both them and the driver to sleep, as they move flowly on, is considered as exciting them to labour, and thereby precluding the necessity of either speaking to them or pricking them with goads. This mufic, refembling the found of a post-boy's horn, is heard from morning to night in every part of the Asturias, and, when at a great distance, is not unpleasant even to a franger, but to the native peafant it appears to be the never-failing fource of calm enjoyment.

In this country oxen supply the place of horses,

horses, and consequently beef is cheap, being fold for ten quarts the pound of twentyfour ounces, which is 17 penny for a pound of fixteen ounces; mutton is fourteen quarts for the Asturian pound, or 25 penny for fixteen ounces, including the alcavala, millones, and arbitrio. The bishop tells me, that within his memory provisions were exactly half the present prices. Barley is twenty reales; maize or Indian corn, thirty; French beans, forty; wheat, from forty to fifty the fanega, which in the Afturias differs little, as I apprehend, from one English bushel and an half; wheat therefore is from 5s. 4d. to 6s. 8d. a bushel, or about 6s. on the average.

Monday, August 21, I went with my young friend to pay a visit for a few days to his father at Aviles, on the sea coast, about five leagues from Oviedo.

The occasion of this visit was to be prefent at the feria, or church feast, which in catholic countries all over the world, and even among protestants in a degree, gives occasion to much traffic, and is considered as a licentious season.

The road was over the mountains. This they

they are making at a vast expence, and in a most substantial manner, without the least attention to economy, or. to any thing but their own ideas of utility and beauty. For some miles near to Oviedo, and likewife near to Aviles, the road is made perfectly straight, very wide, and rounded in The foundation is laid with the middle. large masses of limestone rock, covered with stones broken to a smaller fize; and, to support the arch, which they apprehend would spread like the arches of an edifice; supposing them to have no lateral support, they absolutely build two walls the whole extent of way. This certainly contributes much to beauty, but not in the least to the principal purpose for which it is designed. The fides of the road being planted with trees, makes it a delightful walk for the inhabitants.

The ambition of Spaniards, in aiming at perfection, is no where more visible than near Aviles. The ancient road turned about two hundred yards, in order to avoid a low and swampy meadow; but now, at a vast expence, they are determined to have a straight and spacious avenue of near three miles,

miles, like those of other cities. From Oviedo to Gijon, a little sea-port to the east of Aviles, they are making another road in the same style, and at similar expence.

Aviles contains eight hundred families, with two parish churches, three convents, and two hospitals, of which one is for old women, the other for pilgrims going to San Jago. They have no manufactures, except of copper and brass pans for the surrounding villages, and of some thread for their own consumption.

Aviles is fituated on the bank of a little river, about one league from the fea, but not y Generally within reach of the tide. It is every where furrounded by hills, which, for the most part, are fertile to their fummits, and are either covered with flocks or shaded by the roble and the chesnut; whilst the low lands are loaded with luxuriant crops of wheat and maize.

The house of my young friend is one of the most commodious I have seen. After the fashion of the country, it is built round a court, but with only half the usual corridor; for commonly this runs all round the Yol. II. D court,

court, like that still seen in some of our great old inns. In this house the gallery is wide, and open to the fouth, and to the morning fun. The ground floor is given up wholly to the fervants, except one corner occupied by a chapel. The apartments are, a dining-room, a drawing-room; both spacious and lofty; one to the west, looking to the street, the other to the east, commanding a lovely profpect, which is bounded by the sea; four principal bed-chambers, and others inferior. Of these, two only were fingle bedded; the rest contained, two. three, or upon occasion, four beds; for in Spain, even in respectable families, three or four gentlemen will occasionally occupy one room.

Custom reconciles to this; and, by the practice of Scotland, France, and Spain, I see clearly that other nations can be reconciled to that which is most disgusting to an Englishman; and certain it is, by what we see daily in our cottages of the poor peafants, that our olfactory nerves may be reduced to such a degree of torpid insensibility, as to be happy and contented in the midst of filth and nastiness.

In this respect, no nation can surpass the Spaniards; who, without disgust, without regard to decency, when lodging thus together in one room, conceal only by a napkin that, which the French shut up in boxes, and hide in the little closet, where they keep their clothes.

Upon occasion of the church feast or feria, which, by the by, marks the origin of our word Fair, the concourse of strangers to Aviles is confiderable, and every gentleman opens his house for the reception of his friends. At this feafon the morning is fpent in lounging about to view the shops, the cattle, and the people affembled in the fair; and the evening is closed by dancing. The balls are given by the principal perfon in the city, and fuch is the fimplicity, which reigns in this distant province, that the fervants and peafants are allowed to crowd about the entrance of the room to fee the dance. The most favourite dances are the English, the minuet and the country dance; but fometimes they dance the cotillion, and, towards the close of the evening, the fandango.

Sunday, August 27, being the fourth day

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of the fair, and remarkably fine, the concourse of people, with the multitude of cattle, was surprising, and the market was brisk. As protestants, we must be allowed to wonder at this practice.

Beef here is fold for feven quarts and an half the pound of twenty-four ounces, and mutton eleven; bread, five quarts for the pound of twenty ounces; wheat, thirty-two reales the fanega, which weighs a quintal, and which, if supposed equal to the quintal of Catalonia, will be ninety-two pounds English; barley and maize, twenty-eight reales; beans, thirty-fix.

It is striking to observe how corn finds its level all over Europe, whilst butchers meat, which is not of such easy transport, varies exceedingly in price. Thus, at Aviles, beef is under three halfpence; mutton is  $2\frac{1}{16}$  pence for a pound of sixteen ounces, whilst bread is  $1\frac{1}{8}$  penny for the same weight.

No distinction in price is made between the prime pieces and the coarse, nor between fat meat and lean, because the prices are fixed by the magistrate, without respect to quality. The consequence of this arrangement rangement is, that the meat is never fo good as it might be, were the market free.

The government of this city is in two corregidors, four regidors, and a fyndic, who is annually chosen by the people to inspect the meat, to vindicate their rights, and take care upon all occasions, that justice shall be done to them.

Whilst I continued at Aviles, I discovered, for the first time, that the visit is always to the lady; that the master of the family is perfectly at liberty to come or go; that there is no necessity to take notice of him; and that, if the daughter is handsomer than her mother, she may, without offence, occupy the whole attention. This idea I found afterwards confirmed in the great metropolis, by seeing gentlemen introduced to ladies of the first sashion, and visiting them on the most familiar footing, without the least acquaintance, or even personal knowledge, of their husbands.

The science and practice of medicine are at the lowest ebb in Spain, but more especially in the Asturias. Fiat venesectio is still the favourite prescription, notwithstanding

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the ridicule of Le Sage, and the serious reafoning of Feyjoo. When the fond husband meets the physician in the street, and urges him to step in to see his wife, Sangrado pulls out at once his lift of patients and his watch, tells him that he can not stop one moment, orders him instantly to fetch the furgeon, and to have her blooded, promifing faithfully to see her in the space of half an hour. Palfies most undoubtedly are frequent, but it is by no means clear, that these are always caused by plethora, although in many cases they certainly originate from fulness. Sangrado however has fuch a dread of palfy, that he bleeds his patient into a dropfy, or leaves him to languish between life and death, a prey to the most gloomy of all diseases, to which humanity is subject.

At the request of the bishop, I visited a friend of his, an old canon, who was threatened with a palfy by his physicians. He had been twice blooded, and the question was, whether he should lose more blood. I went to him immediately, and found him surrounded by his friends, who all stood looking on, expecting every moment to see the fatal stroke, whilst he, sitting in his great

great arm chair, apparently in perfect health, yet with a gloomy and dejected countenance, seemed to be waiting for the awful moment, without one ray of hope to cheer his mind. Those of his friends, who could be spared from business, continued with him; his neighbours dropped in to look upon him; but all continued filent, excepting such of them as thought it needful to ask him from time to time how he felt. No one entered into conversation with him, nor would they fuffer him to look into a book. Notwithstanding this repeated venesection, his pulse was remarkably full and strong. He was of a certain age, lived well, and took no exercise. I could not hefitate what advice to give. At my request the room was cleared; he adopted the vegetable diet, and took exercise. Thus by degrees his fears were diffipated, and he returned once more to join the little circle of his friends in their innocent amusements.

At the defire of my friend at Aviles, I went to vifit a monk, who was related to the family, and found the good old man crying with agony of pain, arifing from the stone. The physician ordered nothing but D 4. Madame

BIBLIATECA 2

Madame Stevens Solvent; but this was too flow in its operation, and could give no present ease from pain. I ordered the Enema Moliens, by way of warm fomentation, to be used immediately, and to be repeated, if occasion should require; but the first application gave relief, and all the monks crowded round me to confult, each for himself, what would be proper for his complaint. Among all those, who came to me, I did not find one, who was not afflicted either with the stone, the gravel, or with the hypochondriacal disease. For this I could affign no other cause, but their inactive life, and the want of animating hope; both common to the cloistered tribe.

vent of nuns, where I was confirmed in my idea, that man is formed not only for focial life, for that is found in convents, but for domestic cares. Without a pursuit the mind must languish, and the health will suffer. The two nuns, whose friends had requested my advice, were hectic, and I am satisfied that others, who consulted me, were running the same course. Nature certainly never intended them for nuns. Other considerations

tions apart; the severity of their discipline, their rising at midnight from a warm bed to go into a cold chapel, is ill suited to the delicacy of the semale sex, and must be inevitable ruin to the tender constitution.

I was much pleased with the good sense, and slattered by the considence of the lady abbess. When she was describing a diseased breast, and I had said, "If this young lady were my fister, I should desire to see the breast;" she answered, "Every lady is sister to the physician who attends her;" and immediately desired the nun to go with me to a parlour. On examination I found it was a cancerous case, and recommended them to make application to a surgeon.

After having passed ten days very pleafantly at Aviles, I went with the count Penalba to stay as many at *Luanjo*, or, as we should pronounce it, Luanco.

Luanjo has three hundred and seventy houses, and one thousand eight hundred souls, of which one thousand three hundred go to confession and communion, the other five hundred are infants. It is a little sea port, and carries on a coasting trade.

The

The ride from Aviles to Luanjo is chiefly on the sea coast. When we arrived, the sun was set, and the evening was shut in.

The habitation of the count is massive, chiefly calculated for strength, and to resist the waves, which always wash its solid base, and occasionally breaking against the house, send their foaming spray over the lofty roof into the street. Whilst I was there I was so fortunate as to be witness to this sight. To enter the dwelling, you pass through the coach-house, and find the ground sloor given up to stables.

When we arrived, the great hall was already occupied, as usual, by the neighbours, who were amusing themselves with cards; but, as we were under no obligation to join the party, which was not of the genteelest cast, we went up stairs, and took possession of a room which occasionally serves for eating.

The family confifted of the count and countess, with their children, his two sifters, and her mother. His brother, a geneteel young officer, was there upon a visit. The family being thus numerous, and the greatest portion of the house being occupied

pied with offices, little remained for bedrooms. These were sew in number, and
upon a contracted scale. The room, in
which I slept, was about eleven seet by
fourteen, yet contained two beds, one for
me, the other for the brother of the
count. The walls are white limed, the
floors are smoothed with the addice, but
not one is plained, and I do not recollect
one ceiling. The beds have no curtains.
The great hall where we dined is a double
cube of about fifty by five and twenty;
with these dimensions, if well fitted up, it
would be elegant.

The stile of living resembled the old bray Generals British hospitality; and the long oak table, furrounded by strong oak benches, was

every day well covered.

I was at first surprised, and much disgusted, with a ragged and half naked visitor, who came up at dinner time, walked round the table, spoke freely to all the family, but in a manner to me quite unintelligible, sat down occasionally at the bottom of the table, and sometimes seized a bone, then laughed and chattered like a baboon; yet,