typical dishes, very savoury—I have found them too savoury:—

(1.) The pojera.—I know not how to spell it as it is called in the Spanish interior. It is a kind of hodge-podge; meat, soup, bread, spices, bay-leaves, and every sort of vegetable are stewed or boiled up together, and it is eaten hot from the stewing-pan. This is a favourite winter dish.

(2.) Gazpacho.—Arabice, soaked bread. This forms the bulk of the fare of the poorer classes throughout the fierce heats of summer. It is a cooling diet, and very wholesome. When nicely made, it is a luxury. It consists of onions, cucumber, lettuce, radish, garlic, pimientos, all chopped up fine, and put into a bowl full of oil, vinegar, and cold spring water, with slices of bread floating in it.

(3.) Baccalao-fry.—The baccalao is a dried cod, hard as iron, and requiring six hours' soaking in cold water before it is in any way palatable. It is cut up into small pieces, and put in the frying-pan with a lump of fat, with vegetables of the season, and pimientos picantes or bay-leaves; then, covered with strong-smelling oil, it is fried, and is, the miners say, "Muy rico."

Three sorts of sea-fish.—The only sorts which ever find their way into the interior, and, of course, that only in the cold months, are used as the staple for the evening fry. The atun, a huge fish, of reddish-brown colour, caught at Cadiz, weighing from 50 to 150 lb., the flesh is like that of the sturgeon, but somewhat coarser, perhaps; it is sold by the pound, and is very cheap and common. It is reported to be very nourishing. These fish come into the mining-towns from the nearest station on donkey-back, and, being

strapped two on each pad, the long tails dangling and flipping along the dusty road, is an unusual sight. Then there are the "boccarones," or anchovies, caught off Malaga, and sent in shoals to the interior; and the "sardinas," a small, high-flavoured, silvery fish, like a sprat.

As to drink, the miner takes his aguardiente and his Val-de-Peñas wine, costing about threepence-halfpenny per quart, whether white or red, or Catalan black wine. The Val-de-Peñas, if good, is something akin to Burgundy, and is grown in La Mancha.

As to amusements, the miner knows but few. If athletic, he "throws the iron bar," or "rolls the ball," an iron or leaden ball, six inches in diameter, along the road. If not, he plays "rouletta" in the street, or cards at his own home. On feast-days the cock-pit is open to him, or he takes his gun and dog and wanders over the Campo to try and pick up a hare, or red-legged partridge, or bustard. Dance and song and guitar fill up his holiday. In the mines owned by the Spanish companies the Sundays are not observed, but the feast-days, in some measure, take their place. In the mines worked by English or German companies, the Sundays are kept as far as is consistent with the safety of the mine. Gambling, if it can be called an amusement, is a passion with many of these men, nay, with well-nigh all of them.

Of anecdote belonging to the Spanish miner I have not much in this place to recount. I have said before that the criminal, fleeing from the clutch of the law, the "suspected" person, *i. e.*, suspected of political leaning against the existing Government, the debtor, the adventurer, and the peasant who cannot obtain in his own province employment sufficient to

support himself and his family, all flock to the mines for shelter, and support, and concealment; and it will readily be imagined that when so many strange elements enter into a large body of men, there are many of evil devices and unbridled passions, men given to drink, licence, and low debauchery. But this is far from being the rule. Still, we meet among the miners with many who, in England, would come under the appellation of "rough characters."

Here are a few trifling anecdotes, which came under my own personal observation, illustrative of certain aspects of mining life and character in Spain:—

When a late Government first came into power, not many months since, it was for a few weeks singularly lenient; soon, however, it became exceedingly severe. In one town, with which I was at the time well acquainted, no less than sixty persons, accused of political offences, were seized out of the population of 30,000, and, without a trial, were hurried off to the dreary exile of the swamps and savannahs of Cuba. "Better take them out on the Campo and shoot them at once," was the remark made to me by a gentleman with whom I was discussing the question. Confusion, sorrow, and heart-burning then reigned supreme, and man after man left his employment, his family, his trade, to seek shelter and work in the mines until the tyranny should be overpast.

In a mine that I knew of a political refugee sought employment and shelter. He worked underground, and his delicate white hand soon acquired, what with clay, tallow-grease, lead-dust, and hard work, quite a miner's horny touch. The civil guards heard of his whereabouts, and watched the shafts of the mine now and again. His ruse to escape detection was this:

when he ascended the shaft one of his most trusty friends went just before him; as he (the friend) emerged into the open air he scanned the country round, with keen, scrutinizing gaze, to see if the blue capa and red facings of a civil guard were lurking anywhere within eye-shot. If the enemy was at hand, this "advanced guard" simply looked down the ladder, and shouted, "Pedro, bring up that pick-axe that we have forgotten"; and it is needless to say that the poor fellow was underground again in a trice! Alas, his game was soon played out, and the ill-fated fellow has ere now shared the fortunes of his political comrades!

Tobacco for his cigarette is the miner's delight. He cannot live or work without it. Not the good, honest English cutty clay pipe, with its substantial "cut" of moist, aromatic shag tobacco, but snuffy-scented, dry powder, like a bad cigar pulverized, rolled up in the tiny papers sold at every corner, is the Spanish miner's joy. One evening, on the road to the mines, a gitano-looking man came up to me—it was at the close of a hot summer's day—and, in a most mysterious way, said, in a whisper,—"Cigarros, señor?" I was puzzled for awhile; and he then detained me by my arm, on which I bade him begone, and thrust him off. The man's dark figure and swarthy face followed me wherever I went, as I turned my steps homewards. I went into a venta, when I came out he was just outside; into a friend's house, he was fanning himself with a huge lady's fan just under the shade of some adjoining houses. I thought he meant mischief, and got a friend to walk the rest of my homeward journey with me.

The following morning I was called, ere dressed,

from my bed-room to speak to some one on important business. I hurried to the door, and there, with a huge sack half full at his feet, with his brass-earrings and his fan, stood my friend of the previous night. He was a contrabandista, or smuggler of Havannah cigars and tobacco, of which his sack was partly full. He explained that his business was brisk in mining localities; that he must be off speedily, and so on. I bought a few bundles of first-rate cigars for a very trifle, and bade him Adios.

Now and then a wild, lawless spirit sets a bad example among the mining population, and the bad example is followed by the younger men. At such a time the wine-shops will be full; the click of the navaja heard in the streets; and the hospital surgeons have extra work in dressing stabs.

Once, lodging in a street which was full of miners, I heard a desperate quarrel going on outside my windows, and the ominous click of the revolver or the knife. Fortunately, the guard came up, and prevented bloodshed. The two men, my next-door neighbours, had quarrelled, and turned out into the street at one in the morning, heated with passion and bad wine, to settle their dispute, which was, of course, about some wretched woman.

On another occasion, two bangs, louder than ever revolver produced, greeted my wakeful ears about the same time in the morning. On inquiry the next day, I found that some young miners, for a lark, had drilled a couple of holes in the stone wall of a poor old woman's house hard by, filled the holes with dynamite, and put a live fuse there. The dynamite explodes downwards, and so only a few fragments of the wall were blown out into the street. But it struck

me, at the time, as a rough style of practical joking. The miners are very fond of using this dynamite for fishing. On Sunday you see them by river, and tarn, and pool, exploding this stuff in the water. The fish rise to the water stunned, and the men wade in and capture them. There is necessarily a large store of this explosive mineral in every mining town, and so this becomes a frequent pastime of the wilder sporting spirits. These miners, accustomed to face death and danger, have plenty of pluck and courage. During some of the Intransigente risings, our letters from England and France, and the North of Spain, were stopped, and lay, we heard, at a wayside station, some twelve miles from our town; whoever brought them must bring them through the very ranks of the foe. A miner volunteered; dressed himself as a melon-seller, and, unarmed, trolling forth his wild Andaluz ditty on the back of his donkey, his panniers filled with letters and newspapers, with a thin layer of melons at the top, he brought the letters to his town in safety. "I saw," said he, "the Intransigentes" (to many of whom he was well known) "sitting armed upon the rocks, just above one defile through which I had to pass."

And not only has the Spanish miner real courage, but he has a most loyal, most affectionate, and genuine feeling for his employers. I was once returning home late at night from some Spanish mines; one tired man, who was known to me, greeted me, and asked,—"Was I walking home alone?" On hearing that it was so, he shouldered his gun, and nothing would persuade him to leave my side until he had seen me within the precincts of the town where I dwelt. This is but one of the many instances of the Spanish miner's

devotion to his employers, if kind and good to him; nor are instances wanting of the devotion and loyalty of these men to their employers, whether Spanish or foreigners, as a body.

For a Spaniard, the miner is rather given to drink, always commencing his morning with aguardiente, and ending the day with Val-de-Peñas; but I challenge any one to walk the streets of any English mining town, and find as little drunkenness as he would in Spain. Still, it must be admitted, that many of the miners—probably driven to it in great measure by their unhealthy life—indulge in too much stimulant.

The Spanish pitman is sadly underpaid; for his eight hours' underground work he only receives moneys equivalent to half-a-crown of English money daily; and, although provisions are cheap, and his manner of life, poor fellow, very simple, and his wants very few, this is most certainly far less payment than he is justly entitled to. He is paid thus little in this way. The captain of the mine measures out a mass of rock to be worked, by blasting and the pick-axe. It is so many square yards. A Spanish foreman of miners offers to do it for so much, his offer is accepted, he pockets at the rate of £5 to £7 per month for himself, but only pays the men two shillings and sixpence per diem.

CHAPTER V.

SURFACE-WORK AT THE MINES.

MARVELLOUS is the difference to any one who has studied carefully, as has the writer, the character of the Cornish miner in England and the Andaluz miner of Spain, between the leading features of character in the two. Sad as the mists that sweep his wintry wold, silent, contemplative, far-sighted, the rugged, independent Cornishman takes his way to his work. At evening he returns to his substantial fare, the loneliness of his cottage—for he cares for no noisy friends—and the study of his Bible, or some book deeply imbued with religion. Early the child of habit, he turns off to bed. Sunday comes, and he joins in the prayer-meeting, or teaches a class, or leads the sonorous singing of Wesley's hymns in his chapel on the grey hill-side. He is a man of few words on any subject other than religion; a man full of prejudices, full of obstinacy; a man who never acted on impulse in his life; a man who esteems lightly the trivial joys of life. Methodism and money are his all-in-all.

A very different being is the Andaluz miner. Bright as the sun that floods his morning path, noisy, thoughtless, impulsive, the courteous, ephemeral Andaluz sings his way to the mine, and plucks the wayside flower of the Campo to wear it in his button-hole or his sombrero. Life is a jest with him. At eve he returns to his home in the noisy town, to his light, savoury fry,

or salad, or soup; and, that finished, he seeks some house hard by where the song and guitar and dance will help to while away the weary evening. He reads no book but the book of busy life around him, which he scans as keenly and reads as truly as any one. On his Sunday or feast-day he plays cards, or goes to the cock-pit, or plays the light guitar, to the singing of his black-eyed wife, or wanders over the Campo, gun in hand. He is a man full of talk and prattle and lively joke; a man who never speaks of religion, or very seldom; a man full of strong, fiery passion, but without a spark of obstinacy about him; a man who always acts upon the impulse of the moment, who will stab, or offer his dinner, on the spur of the moment's impulse; he is a man who turns everything into a joke, shuts his eyes to what is serious, sucks mirth and merriment from the veriest trifles; amusement and the news of the day are his all-in-all.

Enough has now been said on the character of the miner for the present, and the writer offers in conclusion a short description of the surface-work, or processes through which the lead passes when it is brought to bank, before it is melted, an operation which he also briefly will describe, as he has seen it in Spain. Only let him crave some indulgence from the reader if his words be heavy on these points; for he is conscious of having studied the miner's life and character with a far keener interest than the working of the mine.

The lead of the three kinds above described—first, second, and third class—is brought to the surface by means of whims, to be crushed, and acted upon successively by water, fire, air, and zinc. The history of the lead, after it is once brought to bank, is

necessarily connected with the process of smelting, and, therefore, the scene shall be changed, and we will see the whole process as carried on at one of the largest smelting-works in Spain. Generally, the processes through which the lead passes at the mine itself are the being crushed and precipitated by the action of water; this done, it is put, in subsistence like gravel, into sacks, and sent on donkey-back to the nearest smelting-works; these last seldom being attached to the several mines.

But the smelting-works to which I now take you are situated on, and attached to, the mine whose ore they work upon; and, therefore, the whole process can be seen in its several consecutive stages. Situated in the remote wilds of the Campo, in a wild hilly district belted in with ridges of tawny red, crimson, and wooded sierra, clothed as to its every slope with thickets of encina (evergreen oak), chaparro, and other shrubs of the Campo, every slope covered with tough, or prickly, or aromatic shrubs, and dry bent-grass, the haunt of the hare, the wild cat, the red-legged partridge, the quail, and the bustard; where, as you wander, gun in hand, you see nothing, for mile after mile, but a few mine-chimneys standing up here and there and a few peasants cutting their donkey-loads of brushwood, and hear nothing but the wail of the plover; in a district where desolation is only atoned for by the rich tints of the naked sierra and the wild, rugged beauty of the scenery, stand the chimneys of the mine and the engine-houses of the smelting-works from which I write, the mine and works being superintended by a French company with Spanish *employés*.

Unsightly enough are the rude sheds, the tall smoking chimneys, the huge piles of broken granite in

the midst of a scene which Nature has made so full of wild grandeur and desolate beauty. Here are the mouths of the several shafts of the mine, and all around them the smelting is carried on.

Save men and machinery there are no signs of life. Pool after pool, trough after trough, of yellow water is around you, water impregnated with lead; and chickens, cats, and dogs cannot live three months here; only men and rats can bear this atmosphere of lead; the mules are kept at a distance. The two or three horses, necessary for those *employés* who live upon the spot, look thin and dull of eye.

On a bright afternoon I went through the works with the manager, who had but lately come from the superintendence of a like establishment in Germany. He told me that he turned out, from the thirteen smelting-furnaces then at work, forty-eight tons of "soft," *i. e.*, finished, lead per diem, each ton consisting of twenty pigs, or oblong shapes of lead, which weigh 1 cwt. a-piece, and are strapped (two on each animal) on donkey or mule, and so sent off to the nearest railway station for transportation.

As we strolled from his house to the works my friend gave me some curious information on many points, which I shall here offer under the head of "Miscellanea."

And first, summing up the experience of many years of mining and smelting in Germany, England, and Spain, he assured me that for mining courage he considered the Spaniard had not his equal. "Why, look here," said he, "you may call it recklessness, but the Spanish miner will run like a cat up a nearly perpendicular wall of granite without fear, just grasping, with naked foot and hand, the little projecting pieces of the rock.

And as to ladders, why he doesn't care whether they are safe or unsafe." Then, in answer to my allegation that 2*s.* 6*d.* per diem, or even 3*s.*, was far too little for such work as the pitmen did, he said,—"Well, it is not enough; but the Spaniard is not a man who lives for money, as does the Englishman; he can afford to sacrifice a day's wages for a day's amusement, and he cherishes his pride more dearly than his money." Thus I found that these poor fellows would sooner take "piece-work" below ground on their own account, and at their own responsibility—making, perhaps, only 1*s.* 8*d.* to 2*s.* per diem—than work under a ganger and earn 3*s.* per diem. They can then say, "I am my own master; I take piece-work!"

My friend told me that he considered no man should be allowed to work below ground until he had attained his twenty-second year. He also said that he had pitmen as old as forty-five working below ground; but that at that age they were worn out, and put to perform, so long as they could, the easiest surface-work possible for them to obtain.

In many of the Spanish Government mines the pitmen are, some of them, only of the age of seventeen! These, working before their frame is settled and their stamina fixed, die young, or have to turn to other work. In Germany, the system of Government supervision of mines is more strict and better than in France, Spain, or England. In each mining town there are a set of duly-qualified engineers stationed, sometimes as many as eight or ten in number, where the mines are numerous. These men each hold a book of mining regulations,—in shape it is like a large pocket-book, and bears the Government stamp,—

and supply a copy of the same to all the mine-owners, agents, engineers, &c. These men wear a recognized uniform, and have absolute authority to descend and explore any part of any mine; and should a boiler be dirty, a rope rotten, a ladder unsafe, or anything be found of neglect, they can fine the manager £20, or more, on the spot, and stop the mine if the fine be not paid and the defect amended.

Some Spanish surface-men were frying their meal upon the burning lead, thus eating a dinner impregnated with lead-smoke. My friend, who had warned them of the danger and folly of this, quietly, there and then, vindicated his authority by fining each of the culprits. Said one of them, "Well, but it's just the same to me whether I die to-day or next year!" I noticed a large reservoir of what looked beautifully clear water, and inquired if, in summer, a bath in it, for master and men, might not be advantageous. "Never," said he, "bathe in water near a lead-mine; it is strongly impregnated with lead. And in spring, never bathe in any stagnant water; it is sure to beget a calentura."

On the stone walls, which separated one part of the works from another, I noticed a quantity of blue-coloured blotches, and was informed that it was the oxide of lead from the smoke of the chimney, which had come down in the damp or rain, and settled there. From forty-five to fifty per cent. of this poison, for such it is, is contained in this smoke.

The lead is raised from this mine, here varying from 500 to 980 feet in depth, in large iron buckets, which are wound up to the surface by "whims." The three different classes of whims in work here are:—(1) the primitive, or man-whim of the early miners,

in which three or four men turn the huge creaking handle, with a Spanish "Yo-heave-ho," like the cry of the fishermen turning the windlass on the beach of our South Coast fishing-towns: this is the man-whim; (2) the mule-whim, worked by two mules yoked abreast; and (3) the steam-power whim, which last, of course, is the latest introduction.

These whims are much like those used in the Cornish mines, consisting of a shaft sunk in the rock, generally found in Spain, as opposed to the square shaft of some of the Cornish mines, and a hollow cylinder of wood, turning on a perpendicular axis. While one bucket, or, as the Cornish men call it, "kibbal," is being raised full, the other kibbal is descending empty, so that no time is lost.

The lead of the first class, that is, lumps of the mineral taken from the pure, rich lode by pick or blasting, looking like shivered blocks of pure mineral, is shot out on the ground, and carried straight to the furnace. The lead of the second and third classes, the former being embedded in lumps of granite, the latter in dust and offal, is carried a few yards, to undergo the first, or water, operation of its purifying.

The water operation or process is as follows:—The lumps of granite are crushed into the consistency of gravel by huge iron rollers. This is put by shovelfuls into huge troughs of water, or subjected to the influence of a running stream of water. If the troughs be used, they are worked up and down in small cisterns of water, and the water washing over carries away the stone and granite elements, the lead, from its greater specific gravity, being left behind. The men and women engaged in this work earn from 10*d.* to 2*s.* 6*d.* per diem. It is dirty, heavy work,

and nearly all, men and women included, work up to their ankles in water, and work eight hours per diem.

There is then left a certain amount of lead, but still with a large admixture of stone, granite, offal, dust, &c. This, which looks like discoloured gravel or discoloured sand, is wheeled off to the first smelting-furnace, and we come to the second, or fire operation or process. Here are the master smelters, each one of whom, standing before his furnace with his two firemen, look red-faced, worn, and streaming with perspiration. All have a short blue jersey, sandals of esparto-grass or canvas, or bare feet, and thick dark serge and woollen trousers. The master smelter earns one dollar (that is, 4*s.* 2*d.*) per diem, the fireman, 1*s.* 8*d.* to 2*s.* The lead is shovelled into the heat. You wait a few minutes, and presently the mineral is red-hot. The master smelter opens, with a long iron pole, a tiny door,—an operation which, for obvious reasons, is called tapping,—and lo! into a huge cauldron, sunk in the ground at your feet, comes winding down from the furnace, in a long, winding, scarlet, or rather vermilion stream, coiling about as it comes down like a huge snake, the red-hot molten lead.

The cauldron looks at first—it is called, in smelting phraseology, not the cauldron, but the "pot"—like a huge vessel full of vermilion paint. At last it grows lead-colour, and then the fireman casts in a handful of dust from the floors. This is to purify the liquid molten potful of mineral. A cloud of thick yellow smoke, as he stirs the dust in, rises up, and with its sulphurous stench sickens, with its blinding cloud blinds you. You cannot see the men working at the next furnace, five yards off. This smoke is the most

dangerous atmosphere of the smelting-works; it gives a heavy cough, sickens, and, if you are much in it, finally gives you lead-colic. The smoke clears away at last, and you see that all the particles of offal, of dust, &c., are lying in a thick coating at the top of the pot. This coating, an admixture of lead with dust and dross, is taken off with a huge iron ladle, and sent back to be re-smelted with the next batch of foul lead. This operation is called "skimming."

The lead in the pot is still molten and liquid. The master smelter comes up, with iron ladle; at his side, on the ground, stand several massive iron "moulds," or oblong shapes, with the stamp of the smelting firm, and the title of the mine, embossed in raised iron capital letters at the bottom of each mould. The lead is filled into these moulds, and, as lead will not stick to iron, in about five minutes the lead has cooled, and is in solid oblong forms, or "pigs," turned out of the mould upon the floor, and left to cool. Each mould of lead, of the larger size, weighs 145 lb., and sixteen of these pigs go to the ton. The price of this lead fluctuates from £17, which is low, to £25, which is well-nigh the highest price attained, per ton. In the shed where I stood to watch this operation four furnaces were at work, and the atmosphere was simply impregnated with lead. Three shifts of men are at work, each taking an eight hours' spell of duty; and thus, day and night, the furnaces are at full smelting power. The moulds of lead above described are about two feet long, four inches high, and five inches broad. These moulds of lead are what is called "hard" lead —that is, they have another operation yet to go through, namely, the process of "desilverizing," or extraction of all the silver from them, after which