

A VISIT TO THE QUICKSILVER MINES OF IDRIA.

At the entrance to the village of Idria, in Germany, my passports were examined, and the officer having ascertained that I wished to examine the mines, said he would send a person to accompany me. Accordingly a serjeant soon after called at the public-house where I lodged, to say that the mining operations were carried on day and night, and that I could enter at any time. I had noticed from the hills a dark crowd of men in front of a large building, and those, he told me, were the evening gang, about commencing the descent. I appointed six o'clock in the morning, and on waking, found him waiting for me. At the building alluded to, which is on one side of the village, and covers the entrance of the mines, we changed our dresses, and the keeper unlocking an iron gate, we found ourselves in a horizontal gallery, three or four hundred yards in length, running directly into the hill, at the foot of which the edifice is erected. Here we came to a small chapel, with a light burning before the picture of the Virgin, and turning short to the left, commenced the descent. It has nothing difficult, being effected the whole way by means of stairs in pretty good order: indeed, the mines have nothing corresponding to the ideas of terror which we are apt to connect with such places, except the atmosphere, which, throughout the mine, must be strongly impregnated with mercurial vapour, and is constantly producing salivation among the workmen.

Having descended by seven hundred and twenty-seven steps, reaching to a depth of one hundred and twenty-five fathoms, we arrived at the region where chiefly the cinnabar is procured. The mining operations are carried on principally in galleries, the friable nature of the ground or rock seldom admitting of larger chambers. The cinnabar is in strata of from two to six inches in thickness, and of a variety of colours, from dark to light red, the quicksilver sometimes being mixed with it, sometimes occurring in the intervening strata of earth or stone. Sometimes the cinnabar is of a brilliant red, and once I found it in small crystals; but such specimens are rare: generally it is of a dull red colour, and the stone is so brittle, that nothing more than a pickaxe is required: the strata affording the quicksilver appeared to have no particular direction, and occupy about one-third or one-half of the entire mass of rock. Proceeding a short distance, however, we came to galleries where the cinnabar is less common, and the quicksilver is the chief object of search. It occurs here sometimes imbedded in a friable rock, sometimes in a kind of earth, in appearance and hardness resembling talcose slate, but principally in the former. Generally it is in particles too minute for the naked eye; but often, when the work is broken, small globules present themselves, varying from a size just large enough to be seen, up to that of a common pin's head. These globules are not distributed at random through the mass, but the substance in which they occur forms strata, usually about one inch or two in thickness.

Descending still lower, we soon came to the richest part of the mine. Here the gangue consists almost entirely of talcose earth, mentioned above, and the globules are so large that when it is broken, they fall out and roll to the bottom of the gallery. The labourers here are relieved every four hours, being unable, from the state of the atmosphere, to work longer than this at one time. In the other parts of the mine they work eight hours. There are three hundred and sixty altogether employed in the mines, divided into three companies, and working each eight hours out of the twenty-four. Their pay is only from fifteen to seventeen kreutzers (*5d. to 6d.*, English,) a day, the usual pay of day-labourers throughout Germany. I found several of them suffering from the effects of the mercury.

Having loaded myself and the guide with specimens, I returned by the same way to the upper mine, and proceeded next to examine the washing-rooms, which are situated a few hundred yards from the mines. The gangue containing the metal is carried to this house, and if it is of the earthy kind it is broken up and thrown upon large sieves, by means of which the loose or native quicksilver, called here *jung frau*, (or virgin quicksilver,) is separated from the earth: the latter is then cast into shallow boxes, open at the ends, and a little inclined, and a gentle stream of water being made to pass over it, a rake is used, and the earthy matter is carried off. There are seven of these boxes in succession, and by the time the residuum reaches the last of them it resembles a heavy gray powder, and is sufficiently pure to be carried to the vapour furnace. The stony fragments require only a slight washing to cleanse them from the outward earthly impurities.

The furnace is half a mile lower down the valley, and at the extreme end of the village; it consists of a circular walled building, about forty feet diameter by sixty in height, on each side of which is a continuous range of chambers ten or twelve feet square, and nearly as many in height: by means of small square openings in the partition walls, the air is allowed to pass from the centre buildings to the remotest. Each has also a door communicating with the external air. These buildings are all of stone, and are plastered within. The gangue, after being prepared in the washing-house as already described, is removed to this edifice, and placed in earthen pans four inches deep and fifteen in diameter, which are piled up so as to fill the centre

building. The doors of the chamber are then carefully walled up, and a strong fire having been lighted under the centre building, the quicksilver rises in the form of vapour, and passing into the small chambers, is then condensed by the cold atmosphere around them. Some of the gangue, you will observe, was brought here in the form of the native rock: I understood them to say, that the expansive power of the vapour, together with the heat of the fire, was sufficient to cause the rock to disintegrate, and thus allow the escape of the quicksilver. When this process is over, the door-ways of the chambers are once more opened, and the quicksilver, which is found chiefly adhering in drops to the sides and ceiling, is scraped off, and running into a hollow in the floor, is taken thence to the cleaning and bottling room. It appears to act on the mortar of the chambers, for I found the latter flaky, and the crevices all filled with small globules.

The cleaning-process is very simple, a piece of canvass being merely spread over a funnel, and the quicksilver, being made to pass through this, comes out sufficiently pure. That intended for home consumption is then tied up in sheepskins, while that for exportation is put in iron bottles, large enough to contain sixty-eight pounds. The furnace is kept in operation only during the winter months, and then the vapour which escapes from it is a serious annoyance to the town; they have a blast three times every fortnight.

The price of quicksilver at the mines is one hundred and twelve florins for one hundred German pounds. The quantity annually procured is about one hundred and sixty-four tons; formerly it was greater, and brought a better price; their market, which is chiefly in China, having been injured by competition from the quicksilver mines near Almeria, in Spain.—*Magazine of Popular Science.*

PERSIAN MULETEERS.

The summit attained, we cast our eyes over—I will not say *enjoyed*, according to the customary phrase—one of the most withering and hopeless-looking prospects of endless mountains of snow that ever greeted the inflamed optics of miserable travellers: it seemed as if, in truth, the morning sun coming forth could "wake no eye to life in that wild solitude;" and on these altitudes we continued, plunging down one side of a peak to mount up another, thus making our way along the crest of the ridge for several hours, with a continuation of effort quite exhausting, until our alpine *traject* terminated in one of the steepest and longest descents I ever made. I am certain we came sheer down an uninterrupted mountain-side of full three thousand feet in height, upon a little hollow, rather than a valley, of unbroken snow, in which lay a village like a black-winged bat sleeping in a nest of eider-down. It was one of the severest things I ever had to do. There was no riding; my saddle came twice over the horse's neck in the attempt, and then I gave it up. It was just one long slipping and scrambling-match the whole way down; and I got half-a-dozen severe tumbles to help my poor wretched back, by the heels of my clumsy boots sliding from under me on the old frozen snow.

We stopped awhile to put oursel ves to rights and take breath at the bottom; and often as I have had occasion to admire the courage of Persian muleteers, I never did so more than at this moment, when, still panting with the exertion of merely *descending*, I looked back, and measuring the height from which we had *stooped*, reflected what the first ascent must have been. The caravan which opened this track had come from Khoe, and when they reached this little valley, and observed the state of the snow, knowing that the *dalle* must be impassable, had taken the bold resolution of breasting up this precipitous acclivity, which, even when free from snow, would be considered as a desperate attempt. What, then, must the performance of it have been under the embarrassed animals had to flounder upwards, shoulder-deep in tough snow? when not a moment could pass without leads falling and going wrong; horses and mules tumbling into holes, sinking, giving up, and all the other exciting occurrences incident to such a struggle against difficulties that are often insurmountable even in this plain? Verily, these rough, hardy muleteers merit a crown of honour for their perseverance, and a place for indefatigable courage beside the bold *Sonrajees* of Turkey.

Perhaps there cannot be a more interesting and exciting spectacle than the progress of a large caravan of mules and yaboo, conducted through the unbroken snow of a stage that has been shut up by drift or a heavy fall, by these Persian muleteers; and the behaviour of their animals is as gallant, as striking, as their own. A large and powerful unloaded mule is generally chosen to lead on such occasions; and the animal, caparisoned in handsome harness, with bells and fringes, seems conscious of the trust that is reposed in, and the exertions that are expected from him. Far from being dismayed at the laborious exertions that await him, he is ready to fight for the post of honour, and kicks and bites at any of the rest that attempt to pass him or to share his toils: with a sagacity that seems miraculous, he smells out as it were the obliterated track, or searches for a fresh one in the most promising ground. Through the deep but even snow he plunges with unflinching perseverance, listening occasionally to the shouts or di-

rections of his master, until, quite done up, he is withdrawn to be replaced by a fresh leader. Does a wreath occur, he smells about for awhile to discover the soundest and shallowest part, then boldly dashes at it with his full force, and never halts until he flounders through or gets so deeply entangled as to require help to effect his extrication. If the snow is very deep, there must be many such leaders put forward in front, for the track of one is not sufficient to open up a passage for the loaded beasts; and truly it is a fine thing to see these bold sagacious brutes performing the duty which they know falls to their share. The loaded animals follow with more caution, but their sagacity is scarcely less admirable. If they fall or stick, there is a momentary flounder, and a strong effort to get free; but if this fails, they know as well as if they were endowed with reason, that they are powerless without the aid of men, so they lie quite composed in the snow till that aid comes; and then, to be sure, the practised manner in which they assist these efforts is wonderful. Then for the men; to see these hardy fellows, in their heavy felt coats or sheepskins, plunging after their beasts, now dashing forward to help the leaders through a bad step, in another moment losing the load of a fallen mule, covered with snow; often forced to carry the packages themselves for a considerable way, their mules now and then rolling head over heels down the hill-side, and landing in the ravine below, themselves working on breast deep ahead with their long staves, to sound the depth of auspicious places. Then the shouting, and the whinnying, and the braying, and the ringing of bells, and the shrieks or cries of the passengers, who may be pent up in kajawabs or baskets on either side a mule, form altogether a scene of interest and excitement which it is not easy to forget.—*Fraser's Persian Journal.*

A Matrimonial Fix.—Recollect, when you are married you are tied by the leg, Sam! like one of our sodger deserters, you have a chain danglin' to your foot, with a plaguy heavy shot to the end of it. It keeps you to one place most all the time, for you can't carry it with you, and you can't leave it behind you, and you can't do nothing with it.—*Sayings and Doings of Sam Slick*

A PRACTICAL CONCLUSION.

Mr. Chick, an excellent artisan sent out by the London Missionary Society in 1821, was the first European smith who settled in the interior of Madagascar; and to him the natives of Ankova especially are indebted for their improvement in the art of working in iron. He reached the capital in 1822, and fixed his residence at Amparibe, where he erected his shop, and fitted it up in the European style, as far as circumstances would admit. Mr. Chick was himself a powerful man; and the tools, the bellows, the anvil, and the large sledge-hammer which he used, filled the natives with the greatest astonishment. The report of his great strength soon reached the palace; and shortly after he began his work, the king with a number of his officers paid him a visit. Mr. Chick's boys were at work at an anvil of a middling size. A spare one, of considerable weight was standing on the floor in another part of the shop; and the king, after looking about with admiration for some time, told his officers to lift the anvil that was standing on the floor: each in his turn put forth his utmost strength, but could not raise it from the ground. "What!" said the king, "are you all conquered? Let me try." His Majesty then laid hold of it with all his might, and tried to raise it from the ground, but with no better success than his officers. Aoka izay, (said the king,) ave'ao mba atao ny zazaha ankehitriny—"Enough; let the White man try now." Mr. Chick then lifted the anvil to a considerable height from the ground, to the great surprise of all present; and it is singular to notice the first impression which this evidence of the superior strength of the Englishman produced on the minds of the king and his suite; they all concurred in declaring that it would be dangerous to fight with such men.—*Ellis's History of Madagascar.*

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