The Morning Mail

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RAILWAY ENGINEERING IN OREGON.

The initials at foot of an interesting communication from Oregon may be remembered by more than the connexions of the writer, as those subscribed, a few years ago, to letters inserted in the MAIL from New England, Chicago, and especially from the flourishing State of Iowa. After a very careful education in Europe, taking a good degree, including engineering under Mr. Downing, at Dublin University; a studious year's residence in Germany, a winter in France, and a walking tour from Cannes to Rome, our correspondent, scorning delights, and determined to live, if laboriously, at least independently, landed in America not unprovided, and with good introductions. Having seen New England, however, he made for the Great West, found employment on Omaha railway lines, and soon acquired enough to purchase house and home in Iowa. This, after the mode of America, he subsequently disposed of advantageously, led by his indefatigable spirit and the completion of the Great Pacific Railway to visit San Francisco. The whole of the country from San Francisco to Portland, in Oregon, may be said to lie literally open to the hand of man. The climate everywhere good—in California the most equable in the world, and abounding in fruits, flowers, and, above all, the very best wheat and flour. Oregon is very similar in temperature and climate to Ireland. Our correspondent is now employed, at good pay, upon one of the lines which will soon create an absolutely new civilised country to which every courageous and great-hearted young man may turn from blood-stained Europe, and count upon an independent life in a continually advancing region.

Portland, Oregon, February 1871.

About the 1st of last September we received orders to proceed to Astoria, to survey thence to Portland for a projected railroad. We knew little or nothing about the country ourselves, nor did those who sent us appear to know much more—indeed, it was a sort of *terra incognita*. There were rumours of a military road, pack mules, and hunters who would supply us with game; but how much of all this "panned out" the reader will learn in the sequel. Well, after a few days spent within hail of Astoria, on ground which Irving has rendered historic, we cut adrift from civilisation and plunged into the wilderness. Our party was not ill-adapted to the trip, consisting chiefly of soldiers, sailors, and miners, all used to roughing it; and, though apt enough to grumble, yet ever ready at a pinch. We started without a tent—why I hardly know; but, at all events, we had none, nor did we need it at first; but before long our old hands predicted rain, and while at supper one evening it commenced to pour down. Some of us found a shelter (as we supposed) under some logs, and, spreading our blankets underneath, built a fire in front. At first we fared well enough, but towards midnight a fast-increasing drip awoke us. Horror! The rain had found its way around the logs, and was dripping down from the middle of the under side. Here was a pleasant fix. Time—Midnight. Scene—Burnt woods all around; fire fast going out, and no dry wood near; blankets and clothes wet, and no chance to dry them.

What would you have done? Well, I know what we did—rolled ourselves up again in our wet blankets and slept, or tried to sleep, till daylight, when we built up the fire and got dried out after a fashion. Before the next rain came we had got some canvass and made ourselves a tent, and could laugh at the rain.

On our third Sunday out I remember watching with curious eyes the manufacture of a pair of "pack straps," then to me an unknown article, but the use of which soon became evident, for next morning, when a fifty-pound sack of flour fell to my lot to carry to our next camp, over a rough trail where hands and knees were about as much use as feet, I soon found these straps indispensible. We made them of flour sacks or old blankets, folded into two long strips, which pass over the shoulders and under the arms, and are fastened to the pack with ropes. I am not going to weary the reader with an account of all our camps through four long months, but I must speak of some of our earlier ones. At first our great difficulty was to find enough level ground to sleep on, and often our party had to break up into three or four sets to attain that object. Once, two or three of the boys chose a place at some distance from the party, and had lit a fire and turned in, when one of them heard, or fancied he heard, some animal prowling around them, and preferred rejoining us and facing our laughter to staying there all night. A wild cat, or possibly a panther, may have caused his alarm. It was at our next camp, I think, which was on the point of a hill, where some one anxious for more warmth than one camp fire afforded fired a large stump in the hollow, though warned of the consequences of so doing. Soon the fire began to spread—the soil being one mass of dry twigs and decaying logs burned like tinder, and our very camp fire kindled the ground around it, nor could we control the fire. It was now dark, and no chance to move our camp, so, rolling up in our blankets—we had not found enough of level ground to pitch our tent—we determined to sleep till driven out by fire or smoke.

A more uncomfortable night I have seldom spent, for the fire crept around us till we had to roll out of its way, and we tossed around uneasily till daylight, when we ate a hurried breakfast and packed off our camp.

To one who has never seen this country it may seem an easy task for a party of twelve or fifteen men to move their camp and baggage over a distance of from half a mile to two miles daily; but you must remember there was very rough ground and the densest brush to be encountered, while we had also to cut a trail and do our day's work on the line. Such brush I never saw—salmon brush, something like a large raspberry, with a thorny stem, and often twelve feet in height; huckleberry and sallal brush, not thorny, but so thick that a lean cat could hardly crawl through; and, worse than all, the "devil's walking canes," sticks as large as one's finger, thickly set with sharp thorns, which have an ugly trick of breaking off with the slightest touch, and then festering before they will leave the flesh. They have, moreover, a most sickening smell. Add to this, that they mostly grow in rough places or on steep hillsides, where one naturally grasps at them, and lets go, and I think you will acknowledge that they are rightly named. Huge logs strewed the ground in all directions, and movement, except where our trail was cut, could only be effected by crawling and scrambling.

Elk abound here, and we often heard them whistle and bray, but we rarely saw them. Once three walked into a camp, just as we were leaving, and came on us unawares; but they retreated too swiftly to give our only rifle-bearer a chance. Mosses of every description clothed the trees, and large armfuls torn from the trunks

and drooping branches of the maples often supplied us with bedding. Fir boughs were, however, more generally preferred, for the moss soon got packed and hard, and is inhabited by myriads of spiders and other insects, while the smaller branches and twigs of the fir make a fragrant and elastic bed. At this season we pitched our tent rather to give a "homelike" aspect to camp than because we needed it. The dews, however, were heavy, and never dried off the bushes on the north side of the hills, keeping us constantly wet.

Of course, our "grub" was of the rough-and-ready style, but men who work hard all day and then sleep out of doors learn not to be very fastidious. Indeed, our bean soup, fried bacon, tea or coffee, without milk or sugar, and bread baked in a frying-pan, could almost be called luxurious; and, towards the end of our trip, when we were reduced to flour and water, we often talked of those halcyon days when the weather was fine and we had plenty to eat.

After some weeks spent in traversing this country, during which we followed up the course of one stream to the summit of a range, and then down another on the opposite side, we reached a large river (the Nehalem), which flows into the Pacific Ocean south of the Columbia, and whose course we proposed to follow up. Here we procured canoes, and for a while got rid of the laborious packing. The river water was now of a clear, dark brown, almost like tea, said to be caused by the falling leaves of the alders—a tree growing in profusion on the banks, and which was our chief reliance for fuel, for, though in a heavy-timbered country, the procuring firewood often decided the position of a camp, for green fir does not burn well, and the trees are of unmanageable size.

There is a species of maple here called the vine maple, never attaining any great size, but which will burn fiercely even when green. Its wood is tough, and we sometimes used it for axe handles, for which it was difficult to find any suitable wood. With its bright green bark, and limbs winding in all directions, it forms quite a feature in these woods. Birds and animals were rarely seen, but everywhere we saw "sign" of elk and wild cat, and sometimes saw the track of a panther, or heard his humanlike yell.

There is a pretty little wren here, quite tame, for it knows no better, which comes hopping and flirting around, and often, as I stood behind my instrument, made as if it would alight on my shoulder. Restless little creatures they are, with rich brown plumage and soft black eyes. When we were surveying along the seashore humming birds were common enough, and I remember being once rather startled by a loud humming close to my ear, and found an inquisitive humming bird examining my scarlet shirt.

Chipmunks (a very small squirrel) similar to those of the Eastern States were everywhere in myriads; and once in a while a large grey squirrel would peer around cautiously from the opposite side of a tree, and vanish again at the slightest motion. Sometimes they would throw down nuts or twigs from the top of some large fir, but it was long before I found out what did it. The trees of this region are glorious objects; giants towering from 175 to 250 feet in height, often ten and twelve feet in diameter, and running up a hundred feet or more without a limb. The red, white, and yellow fir, the cedar, and (less often, however) the spruce and hemlock, all attain this growth. I have often wondered why, in some places, where the large trees were all fir the young growth was all hemlock, or *vice versa*. Why is this? I have asked many, but got no satisfactory answer. This seems to be the rule, moreover, not the exception. Can Nature be rotating her crops? While the fine weather lasted our time passed pleasantly enough; and, after a hearty supper and a warm by the camp fire, our toils and troubles were forgotten, and we spent the time till bed-time in playing cards or relating our varied experiences. Books, of course, we had none, and candles were scarce. There is something fascinating in the sombre grandeur of these vast forests—by day the sun hardly dispels the gloom, the ground and fallen logs, and often the very trees themselves, are clad in a robe of soft, green moss, and only here and there a patch of sky can be seen. Look where you will, your view is bounded, not by foliage, but by the solid trunks of trees. At night it is often so still that a candle will burn without flaring, and but for the sound of rushing water, which is rarely out of hearing, or the cry of some owl or wild animal, nothing breaks the silence. Before dawn the cook gets up and starts his fire, then the campkeeper tends our tent fire, and with the first dawn a hideous reveillee on the frying pan rouses the sleepers. Then may be seen a crowd of sleepy-eyed, half-dressed men, each softening and warming a pair of wet or stiffened boots; then, by two and three they go down to the river or nearest water for a rough toilette, then back to roll up blankets. We sleep in couples, and two men's blankets and spare clothing form a bundle or "pack." These are done up with care, for if they have to be carried it is important to have them compact, and if they go in the canoe they are apt to get wet if loosely done up. By this time breakfast is ready—there are no chairs or tables to be set, but each man taking his tin plate and cup, hunts up a dry spot to sit on. Then we leave our bundles at the canoes and start off for our day's work on the line, generally having a tedious scramble through the brush before we find it. Then follows a day of chopping brush, and pushing the line ahead till dusk, when we consult as to where camp is likely to be—for each day we are in new country—sometimes making for the river and following it till we reach camp, or striking off directly through the woods, following some elk trail or open "shoot." The elk trails are often of great age, and worn quite hard and roadlike. They wind cunningly through the brush, sometimes crossing large bogs deeply worn by the constant striking of the hoofs, sometimes, where a brushy tree has fallen and blocked the trail, it forks out in all directions, but can generally be found again on the other side.

Some of these trails must be of immense age, if one may judge by the fallen timber and subsequent growth; but how the bucks, with their huge branching antlers, can rush swiftly through the brush was ever a mystery to me.

Once we had seen the canoes at noon paddling up the river, and at dusk, having struck the river less than half a mile further on, we supposed, of course, that camp was still ahead. For a mile or more we followed up the river, in vain examining the sandbars for footprints where the canoe men might have got out to tow, and shouting, with no answer but the echo. At last we began to suspect the existence of some great bend behind us which the canoes had not passed, and all except one turned down stream. It was now nearly dark, and we hurried along, anxious to escape a night's camp out without either supper or blankets. Just as the daylight vanished we heard the horn blow in camp, sounding faintly and far distant, indeed, but still plain enough to give us our direction. After a long weary scramble through the brush in the dark we reached camp, and relieved our feelings by a growl and a hearty supper. Where our line crossed it was but a few hundred feet from water to water, yet between these points the river made a bend of several miles. Our friend who kept on up the river had to sleep out alone, but rejoined us next morning. Fortune seemed to be against us at this camp, for when we started out in the morning with our packs to lighten the canoes on their long round, under the guidance of our (so-supposed) best woodsman, after scrambling wearily through brush and across countless bogs—we had no trail for an hour—we saw smoke ahead, and, though rather puzzled as to who could have started a fire in these wilds, made for it, and in a few minutes walked into the very camp we had just left! It was the old story of walking round in a circle on a misty morning; however, we took a fresh start, and this time reached our destination in fifteen minutes. It is surprising how easy it is to get "turned round" in these woods, and there was hardly one of our party but got lost at some time during the trip.

Once we passed a small settlement where a few pioneers had built themselves cabins, and commenced to till the soil. Rough as their improvements were, they were pleasant to our eyes, and for a few days we revelled in fresh vegetables. For more than six weeks we followed this river, till, at last, between ice and its diminished size, we had to abandon our canoes, and return to the detested, packing. All needless weight was now thrown aside, for we could no longer get in supplies from our rere, and it was doubtful if we had provisions enough to carry us through to the settlements. Moreover, it was mid-winter, and the days were short, so that speed became a great object. There had been a sort of trail cut once before through this upper country; but it had been made in summer, when the river was low and easily forded, and the trail crossed constantly from side to side. Now, the river was "up," and we had to fell trees to cross on. These were often frosty and slippery, and I well remember one long slanting fir which looked easy enough to cross, yet each man, on reaching a certain point, came down on his knees and 'cooned it (cooning—*i.e.*, crawling on hands and knees) in the most approved style. How well I remember that log! That morning I had a big bundle of blankets on my back, a leather satchel at my side, and a long-handled frying-pan in one hand. This is not the best rig for crossing a log, and I felt much relieved on reaching *terra firma;* but, being one of the first to cross, had the satisfaction of watching the long file of heavily laden men, as they 'cooned down that log; a most comic scene.

Near salt water, hemlock and spruce was the prevailing growth; further up, fir became more common; and yet further, cedar covered the country; then, as we rose into the mountains the fir returned, and I have seen acres covered with worthless white fir, not six inches in diameter, yet often running up more than a hundred feet without a limb. The trees assume the most fantastic shapes. Sometimes, where the top has been broken off, a side limb takes a vertical shoot, and gives a bayonet form to the tree—sometimes two or three of these may be seen on the one tree; then there are twin and triple-topped trees; and sometimes on the top of some lofty stump, 100 feet from the ground, may be seen a shrub of huckleberry or sallal, some bird having carried up the seed. More than once we found a spruce limb growing out of a cedar, or *vice versa*, puzzling at first sight, but probably the result of a natural graft. In mosses, lichens, and funguses the botanist would find a rich harvest. Sometimes a cedar or hemlock has sprung up on some huge log or rotting stump—earth seems hardly needed for its growth—and by degrees, as the one has increased in size and the other slowly rotted away, the thick brown roots become like the claw of a table, while the actual trunk of the tree remains stilted up aloft. I have seen many a huge, moss-covered log, not yet rotted away, on which hemlocks two and three feet in diameter were growing. Towards the end of our trip a sharp frost was succeeded by a heavy rain, and everything at once became ice-clad, then branches began to snap off, and sometimes at night we could hear a great rushing roar, as some giant of the forest, over-balanced by his icy load, fell, and swept all before him in his fall. Our instruments, which were always left on the line, are at this season hid carefully under some solid log or stump, nor did they ever meet with any injury. We could hardly have carried them to camp had we wished it, nor would they have been any safer there.

For two weeks after abandoning the canoes we tramped it up the river, and before we could reach fresh supplies were reduced to flour and water, not having even salt. Did you ever try to live and work on bread alone? Had one an elephant's stomach it might do, perhaps; but no matter how much or how often we ate, we still felt unsatisfied. However, we managed to push the line through within reach of the settlements without having to make a forced march out, as some of our croakers had predicted. Here again we were in luck, for the night after we crossed the last summit it showered heavily, and stopped our work for some days. In another week we reached fences and houses, which we welcomed as a sailor does the land.

One mysterious episode I had almost forgotten. On the upper waters of the river, where it is furthest from the settlements, we several times heard the distant baying of hounds, and more than once thought we saw the blue smoke of a camp fire, but failed to find it.

On another occasion we heard the hounds bay, and a wild yell crying them on. We all shouted, but could get no reply. Another day one of our boys was sent back on some errand along the line, and heard, or thought he heard, chopping. He shouted, when the noise ceased, nor could he get any reply, and, being late, he hurried on. It is strange that these people, whoever they were, did not seek us, for a surveying party is always an object of interest in a new country to all, whether friends or foes—these seemed to avoid us.

Rumour has it that Quantrell,* of bloody memory, and another fugitive from justice, haunt these wilds, where they live by hunting and occasional help from friends. I offer no surmises, but state the facts as they occurred.

NOTE.—The above-described country lies between Astoria and Forest Grove (Oregon). The mountains are part of the "coast range" lying between the Pacific Ocean and the Willamette Valley. We were surveying for a route for the Portland, Astoria, and M'Minnville Railroad. The distance we travelled was about one hundred miles, and during the latter part of the trip it either rained, froze, or snowed pretty much at the time; but, with exception of rheumatism in several instances, the whole party, numbering about fifteen, enjoyed the best of health, in spite of all hardships and exposure.

F. E. P.

*Quantrell was a Missouri guerilla in the late war.