Original Communications.

ENTERING SWITZERLAND BY THE SIMPLON.—II.

From the note book of our Travelling Correspondent.

REFUGE HOUSES.

We pass at intervals square houses, built merely of square dressed stone, substantial, but gloomy in appearance. They are large enough to have two or three rooms on the first floor with a half story above. They are quite architectural in appearance, all looking alike. We notice that each one is numbered, and now we pass one which has the word "Refuge" plainly painted over the door.

There are twelve of these scattered along the pass. They were built by Napoleon Bonaparte when he made the road, being intended to accommodate travellers in the winter when storms are frequent, and when men would lose their lives but for this temporary shelter. Certainly these Refuges are silent monuments of the goodness of the heart, as well as of the greatness of the mind that could attend to such minutiæ, while planning so mighty a work as this splendid mountain road.

The valley is now getting narrower and as our road winds among the mountains following the course of the stream, the rocky walls, almost perpendicular, shut out the view beyond, first closing upon us on one side then on the other, while the opening beyond shows us nought but snow-clad summits hemming in the view.

WINDING ALONG THE PRECIPICES.

The stream is still a strong torrent, roaring over its rocky bed 200 feet and more below us. The road is cut into the mountain side at our right, while a high retaining wall of masonry on the left makes a dizzy precipice as we look down upon the tops of the tall trees growing by the stream. The stages would run ugly risks of getting a wheel down over that left edge of the road, if it were not for the ever present granite posts, which fringe the top of the retaining wall. They are about three feet high here, and not more than ten feet apart around these dangerous curves. Then the road is so broad and smooth that there is no need of running near the side. For this safety we thank old Napoleon, who sleeps so quietly under the splendid dome of the Invalides.

Now as we wind around the projecting mountain's edge, the road is so cut in the face of the rock that we have half an arch over our heads, while above the cutting the rock rises perpendicular for 1,000 feet or more. We feel in these wild solitudes, notwithstanding our isolation, a certain nearness to home and friends, for ever at the side of the road, rise friendly looking telegraph poles, and we know that the wire can be made to speak to our family and friends 4,000 miles away, and tell them how we are enjoying these sublime crags that hem us in and shut out our vision from the world beyond.

CROSSING THE ALPS—THE FALLS OF GONDA.

A turn in the road shows us a light mist on the mountain side to our right. We hear a roar, as though the stream which is now far below us were tumbling over a high ledge. As the road curves we see a white foaming torrent hurrying down the mountain—a glorious sight.

We feel a tingling excitement as we strain our eyes to take in the grand view. The torrent we can follow for half a mile or more up the slope of the mountain side, its course crooked and zigzag, foaming, and white all the way,—tearing, leaping, boiling, roaring, it rushes down. We try, with opera glasses, to trace it to its source in a mighty snow-bed that has been sleeping for centuries 'way up there on the top of the ridge; but the crags and the curve of the mountain hide the upper stream from our view. The torrent crosses our road under a stone bridge and rushes on, down a steeper declivity than it had above, to join the Doveria, five or six hundred feet below us. The excitement we feel as we approach this sublime scene, cannot be described. We have seen nothing so grand in all our travels. Our hearts beat rapidly as we strain our nerves to take it in. The torrent roars louder and louder; we are enveloped in its mist. As we get abreast of it and look up the steep declivity it seems as if the rushing foam would leap out from its rocky bed and overwhelm us. It thunders as it rushes under the bridge beneath us. The stone arch-way seems to vibrate. A glance down the torrent induces the momentary desire to jump from the stage top over the side of the bridge and go rushing down, riding the boiling foam into the dark deep valley below.

At the end of the bridge we enter a tunnel cut through the solid granite for six hundred feet. We hear the roar behind us, dying away, but still feel the mist in our faces. Now the tunnel is lighted by a window cut in the side, which shows the perpendicular rocks of the other side of the stream only a few feet from us. Now all is dark again, but the road keeps its uniform width of twenty-five feet, and we soon emerge into the bright sunlight, the valley being so narrow that you could almost jump to the rocks on the other side.

A RAINBOW.

We descend from the stage and look down over the precipice to see where the stream is—how deep down. It is hundreds of feet below, and has shrunk to one-fourth its former size. The rocks forming the two sides of the chasm approach each other within a few yards. They tower up nearly one thousand feet above us, two perpendicular walls facing each other, and leaving only this crack or fissure through which the stream is struggling. It is tumbling over the rocks, and sends up clouds of silver spray which fill the notch. But the sun is shining right down to the very bottom of the deep chasm—and a lovely rainbow rests against the dripping walls of rock. Bright tufts of green grass shoot out here and there from little shelves in the rocky wall, and with the white boiling foam below, the wet rocky sides, black and brown, the rainbow among the spray, and the green fringes of grass all lit up by the brilliant sun, which cannot shine down in this deep chasm more than five or ten minutes during the day, make a picture as strikingly beautiful as can well be imagined. A priest in his black gown, travelling in one of the stages, had also dismounted and leaned over the precipice with me. He could speak neither English nor French; but with a face beaming with delight, he muttered something I could not understand, and hurried off to mount the stage. But my head becomes dizzy looking down the gorge; the rushing water seems to make rocks and all move along. What if I should lose my hold on this sapling as I lean over——.

We mount the stage, turning our backs upon scenes we would love to spend the day amongst, for we have greater heights beyond which must be scaled before night. The valley widens again as we leave this narrow gorge; but the winding course of the stream shuts out any view beyond a few hundred yards; the rocky barriers overlapping each other, and each corner of rock as we wind round it, opening a new valley to the vision. A few stunted pines and bushes grow where a patch of soil has caught on the rocky steeps, but most of the mountain sides are bare rocks with streams coming down here and there from the snow-beds above. Emerging from another tunnel, we seem to be walled in totally; but a closer view shows the road marking its zigzag way up the face of the mountain that closes in the view. A friendly hamlet shows itself at the foot of the ascent, the first house we have seen for many miles. Certainly a glad refuge for man and beast when the storm king sweeps these defiles and sends his blinding snows to fill up the gorges and hide the road and cover the rocks and trees with his white mantel.

HIGHER LATITUDES.

We dismount and walk up a steep path, leaving the stages to drag their slow way up the zigzag road, while we sit on a high rock and watch them. We look down upon the valley we have just left, and enjoy the grand panorama. From our elevated position we can see the mouth of the tunnel we last emerged from; then, one rocky edge after the other around which the road had been winding. The broad road looks like a narrow footpath as it follows the stream. The stages are here, we mount and are soon climbing higher zigzag roads until we find ourselves on a plateau comparatively level.

SKY FARMING.

All around us are green meadows, with little cottages here and there, cows feeding in one lot and peasants cutting the hay in the next. Women are doing most of the work. There are four or five of them to every one man. The bright scarlet scarf or handkerchief covers their heads. It is tied under the chin and hangs in a point behind. Some are turning the hay, others raking it into ricks, others assisting the men in loading it on little wagons. We notice little narrow canals, two feet wide and nearly as deep, running here and there all over the meadows. They are fed from the melting snows at the side of the valley, and find their way into the stream in the centre—after running back and forth through every field.

We were much surprised to find these beautiful cultivated fields after having climbed so high, and leaving behind us a desolate barren district, shut in by rocky walls where not a house, nor a man, nor an animal had been visible for miles. The word *alp* signifies a *mountain pasture*, and it is these pastures, these green meadows high up among the mountains that have given the name to the whole region.

DINNER NEAR THE CLOUDS.

We come to the little village of Simpione at which we stop for dinner. Our appetites are sharp, and the smiling fields around give us hope of a good meal. We are not disappointed. Away up here so near the clouds, we are soon enjoying a well arranged, well cooked dinner. They give us a course of soup, then delicate mountain trout, then splendid mountain mutton, good beef, stewed fowl, potatoes, peas, and lettuce, stewed pears for dessert, with good milk, butter, honey, and cheese. The rye bread is excellent. White and red wines too were set before us, but we needed no stimulus to coax an appetite.

Who would have expected such a table among these Alpine heights, more than four thousand feet above the sea, nearly twice as high as our Allegheny mountain range?

As we leave the town, the road ascends more rapidly, and before long the valley grows more narrow. Cultivation ceases; but again we enter another valley, and here are smiling fields, and farm-houses. We are coming nearer the clouds.

COLD. DESOLATION.

The stream we have followed all day is still near by, but is shrunken to a rivulet. We are travelling along a wide valley. On either hand the mountains rise, a quarter to a half mile away, their rocky sides lifting themselves, in some places, quite precipitously, with a continuous covering of snow all along, while in others the mountain slopes up more gradually, the snow beginning as low down as the level of our road, and covering the entire slope. Two rocky peaks projecting here and there are again covered with snow higher up. We are above the growth of pines, for not a bush of any kind appears along the hills. The snow banks come nearer to us on either hand. Here are twenty or thirty cows feeding in a meadow, and at the edge of the field begins the snow bank that stretches up to the top of the peak. It is getting colder every minute, and we put on our overcoats, and unbind the shawls for the ladies. Here are a few scattered chalets made of logs or of stone, within a quarter of a mile of the eternal snow. They are occupied, we judge, only a couple of months in summer by the herdmen who tend these cattle. There are no gardens around them, and no evidences of regular farm life.

Pretty flowers are growing at the roadside, however, and we pluck a nosegay. The wild rose is not frightened out of its life by these great glaciers blinking at it. The little blue bell manages to maintain its existence, too, and these little yellow flowers shine happily among the scanty tufts of moss. G. W. M.

THOUGHTS FOR THE SUMMER.

"Wherever you may be—should you be among friends or among strangers, among the people of the world or the friends of the Redeemer, these vows will remain with you." "Ye are not your own; ye are bought with a price."

Almost every one who reads these words will recognize them as being taken, the first from the solemn charge given by our ministers to those who come out from the world to join themselves to the people of God—the last from the gentle, yet stirring words of the Apostle Paul, as he sought to win Christians to more entire self-consecration. Let us think for a moment of these familiar words, and see if there is not that in them, which we should carry with us in all our summer wanderings, and which should help us to walk worthy of the name we bear.

The vows which we thus solemnly and irrevocably take upon us, "in the presence of God, angels, and men"—what are they? They are vows of entire, willing consecration of all that we have and are to the service of God; vows of attachment to, and covenant-union with, His Church—of separation from the world. Following us everywhere, covering all actions and all words, they lay a gentle but firm hand upon us when we are tempted to sin, they bar our way when we walk towards paths of worldliness or vanity, they incite and inspire us to active labor for the Master, if we only feel and realize them as they rest upon us. They are there, whether we think of them or not—we cannot shake them off, or go from beneath them. We have deliberately assumed them, and we can never revoke the covenant thus made. Our blessing or our curse it must be forever.

And it is a joyful, blessed service to which these vows bring us, if we only bow to the easy yoke and lovingly take the light burden. It is a service which is more blessed, the more entirely and devotedly it is followed. If we try to make as little as possible of our vows, and keep them as negligently as we can without actually renouncing them, they will be only a weariness and a weight to us. But if we daily take them to our hearts anew with joy and gratitude, and ever strive to feel their gentle, holy influence, they will be like the pressure of a mother's loving hand, and not like the stern grip of a jailor, from which we would gladly escape.

"Among the people of the world or the friends of the Redeemer." It is comparatively easy to acknowledge and be faithful to our vows, when we are surrounded by those who are under the same, who will uphold us in our efforts to keep them, who will rejoice if we are true to them, and mourn if we are unfaithful. When those around us are "friends of the Redeemer," it is not hard to range ourselves with them, and call Him *our* friend. But "among the people of the world," how is it then? Ah, many a weak Christian—aye, and many a strong one too, has found out what a different thing it is to declare friendship for One who has to others "no beauty that they should desire Him." The temptation is so strong to hide the love for this "despised and rejected" One in their own hearts, outwardly to appear the same with the people of the world around, and only to do small service secretly for Him, which will be very likely soon to fade away into no service at all.

And where are those binding Vows all this time? They are there—upon their hearts and consciences just as much as if they were at the communion table in their own church; never leaving them or lifting their sacred obligations for an instant—calling upon them for the same consecration, the same obedience, the same holy living, the same separation from an evil world, the same open, fearless acknowledgment of Christ as their Lord and Saviour, as if none but His loving friends were there.

Shall we thus keep our vows, fellow Christians, during the coming summer, when we leave our homes to seek health and recreation? Shall we faithfully remember them WHEREVER we go, whether "among the people of the world or the friends of the Redeemer?" Shall we so live under them, that they shall be a glad and willing service, instead of a hard and wearing bondage?

We have no right to do other or less than this, for we "are not our own, we are bought with a price." All that we can offer to God in our vows or give Him in our hearts and lives, is His already by the right of creation, and ten-fold more by the right of redemption. It is the beauty and glory of His plan, that He lets us make of ourselves a free-will offering.

Let us then in all solemnity and earnestness renew our vows of consecration, and in the strength of our God seek more faithfully to keep them. DORCAS HICKS.

MINISTERS' SALARIES.

We have already written, more than once, about the low salaries of many of our faithful ministers. In numerous cases the salaries have not advanced according to the change of the times, and we continue to hear of cases of real distress on this account. This is especially true in some of our country and village parishes. We fear some of the good people are not thoughtful enough in regard to this matter. In every call to a pastor, it is stipulated that he is to be "free from worldly care." How can he be so, if his salary regularly falls short of his most economical and necessary expenses? How can he be a successful minister, thus fettered and embarrassed all the time?

But often it is still harder, when the salary is not only too small, but too slowly and too irregularly paid. We recently heard of a good and faithful minister, whose people were so tardy in the payment of his small stipend, that he finally agreed to throw off a considerable sum, which he did not know how to spare, if they would only pay him the rest, and continue afterward to pay promptly. They consented, and made a good beginning, but it was of no use. The old habit had become chronic. In a short time they were as much in arrears as ever. They could not have realized what daily suffering they were inflicting upon their devoted pastor and his family.

We heard of another people who were well cured of their dilatoriness. They called a pastor. He knew something of their bad habits, and said, in a fair business way, "My salary must be paid promptly. If, at the end of the quarter, it is not in hand, you must not expect a single sermon more from me, while that is due." One of their own number said it was the best thing that ever occurred for that society. After that they found no difficulty in paying the salary promptly. They only needed to know that it must be done, and it was done.

We knew another clergyman whose people were quite in arrears when he was about to leave them. He called upon the Trustees, but they had no money for him. "No matter," he said, "just give me your note, and it is the same thing." But they were quite surprised at the suggestion. They had never given a note. They were still owing the previous minister; he never asked for note.

"But, gentlemen, you hired me, and agreed to pay me so much for my services. Of course, you will pay me, by cash or by note of hand. Surely, that is the only proper business way to settle the matter."

"But, could you not go round, and collect it yourself?" they asked. "Your predecessor did so."

And we were told that he took old notes of one man against another, and collected what he could and as he could, and finally had to leave, the parish still owing him considerable. His successor preferred not to try that way; and so he *insisted* upon the note, which was reluctantly given, but finally paid, principal and interest, which, surely, was no more than the minister's due. We cannot suppose there are many parishes disposed to treat their ministers in this way. But from what we hear in various quarters, we are quite sure there are not all the thoughtfulness and consideration with people that there should be on this subject.

C. P. B.

JOSIAH BISSELL.

In the recent Semi-Centennial discourse before the Presbytery of Rochester, the following mention was made of one of the remarkable men who laid the foundations of the city of Rochester, and whose name we give above. As an illustration of his energy, his building a meeting-house in a week was cited. It was on this wise; and we doubt if even Chicago can match it.

Rev. Joel Parker, a licentiate just from the Seminary, had commenced preaching, with great success, in a school-house on the East side of the river. After a few Sabbaths the place was too strait for them. A conference was held on Monday morning, to see what should be done.

Most naturally it was suggested that they should hire a hall. Mr. Bissell said, "No, let us build a house for ourselves." Others said, "We cannot wait for that; we need a place at once." "But," said Mr. Bissell, "we can build a house by next Sunday." They replied, "That is impossible." He said, "It is not impossible. If we could make a thousand dollars by building a store-house for flour this week, we should do it; and it's a pity if we cannot do as much for our Master as we should for ourselves." Further objections being made he said, "Put me on the building committee, and it shall be done—we will worship in the new church next Sunday."

They put him on the committee, and that very hour he began to make his contracts. He engaged one master mechanic, with his men, to fell the trees (which were still standing green in the woods), and to lay out and erect the frame; another set of men were to be ready to put on the siding and roof the moment the frame was up; and still another to go right along at the same time, with the floors, windows and doors; and another to prepare benches and pulpit. And when he engaged each man to do his work by a given day and hour, he offered, in each case, a considerable bonus, if the man would complete his job a few hours earlier than the time specified; thus working ahead of time. There are not many of us who do that.

There was no apparent hurry or confusion, and yet the house was done on Saturday night, as he promised; they worshipped in it on Sunday; and by his wise thoughtfulness, it was so put together, in two separate frames, that it could easily be separated, as it was afterward, and converted into two dwelling-houses. Of course, it was a very plain building, but answered its purpose well until a more substantial edifice could be erected.

He was a man of mighty impulses and resistless energy, until an early death transferred him to higher spheres and more intense activities. He died in 1831, at forty years of age; but already having lived a small century, if life be measured, not by empty years, but by worthy deeds. C. P. B.

Scientific.

CLIMATE IN GEOLOGICAL PERIODS.

One of the most startling geological revelations of modern days is the demonstration, that at so comparatively recent a period as the Miocene a temperate climate prevailed in the Arctic circle, and poplars, planes, and lime trees grew within twelve degrees of the pole. Beds of fossil-plants of this epoch have been found in Iceland, on the Mackenzie River in North Canada, in Banksland, in North Greenland, and in Spitzbergen. A hundred and forty-four species of flowering plants and nine ferns have been described by Professor Heer. Seventy-eight of these were probably trees and fifty shrubs. There were no less than thirty-one Coniferæ, among which were four species of *Sequoia*, allied to the gigantic Wellingtonias of California (a group which was abundant in Miocene times), and three of these were also inhabitants of Central Europe. Species of *Thujopsis* and *Salisburia*, genera now found only in Japan, inhabited Spitzbergen and North Greenland, along with beeches, oaks, planes, poplars, maples, walnuts, limes, hazels, and even a magnolia. Among the shrubs were buckthorn, holly, dogwood, and hawthorn; while ivy and vines twined round the forest trees, and large, broad-leaved ferns grew beneath their shade. Many of the limes, planes, and oaks had very large leaves, and the tulip-trees and maples bore large fruits; in some cases even the flowers are preserved, and the specimens are so abundant and so perfect, that it is impossible to escape the conclusion that all the plants grew upon the spot, and that the climate must have been at the very least as mild as that of the South of New England at the present day. Yet in North Greenland an enormous glacier now covers the whole country, leaving only a narrow strip of land free from ice in summer, and no woody vegetation but a few dwarf willows can exist.

Here, then, we have absolute proof that the warm climate which characterized the Miocene epoch in the north temperate zone extended into the Arctic regions; and it is Professor Heer's opinion that forests might then have flourished at the North Pole itself. But although this is by far the most striking and the most satisfactory case, it is not the only indication of a mild Arctic climate in past ages. Ammonites, Belemnites, and an Ichthyosaurus have been found in Oolitic rocks about 77° N.—animals which we are almost certain could not have inhabited a frozen sea. Coal and characteristic coal-fossils have been found about the same latitudes. Again, in the oldest of all the formations which produce sufficient organic remains to afford any indications of climate—the Silurian—Encrinites, Corals, and Mollusca have been discovered in the Arctic regions, and seem unmistakably to indicate a warm and open sea where there is now an almost perpetually frozen ocean.—*London Quarterly Review.*

RAIN AND HAIL MARKS.

In some of the older rocks small hemispherical impressions are found, which exactly resemble the marks left on a surface of fine sandy mud by a shower of rain. Circular pits of various sizes are thus formed with a somewhat raised rim, and they are often all a little deeper on one side, showing the direction of the wind when the drops fell which produced them. Fine specimens of these rain-prints were obtained by Sir Charles Lyell from the mud flats of the bay of Fundy, in Nova Scotia, where in summer the sun dries and hardens the surface so rapidly that the succeeding tide covers them over with a layer of sediments, and thus effectually preserves them. A cake of this dried mud can be split, and will sometimes show the rain-marks and their casts on two opposite surfaces. Now the markings on certain Triassic and Carboniferous shales of North America correspond in the minutest particulars to these recent rain-prints, and even agree with them in the average size and depth of the pits; so that we learn, not only that rain fell in those early times, but that the general atmospheric conditions were so similar, that the size of the drops was about the same as they are now, that the sun shone out afterwards and hardened the surface, and that within a few hours the tide flowed gently over that ancient shore and deposited its preserving layer of sediment. There is a stratum of Triassic shales in New Jersey which preserves layer upon layer of these rain-prints, and among them Mr. Redfield, the well-known meteorologist, has detected curious indented subangular impressions which exactly correspond to the marks produced by a storm of angular *hail*; a most curious corroborative proof of the striking similarity of our present climates to those of the most ancient geological periods.—*London Quarterly Review.*