

(note: Kimball Webster (b. 11/2/1828 d.6/29/1916) served as deputy surveyor for the General Land Office in Oregon in the early 1850's. In his book "The Gold Seekers of '49, he dedicates considerable space to his trials and tribulations in surveying in Oregon. This book was published in 1917, and the copyright has long since expired. The chapters of interest to surveyors in Oregon were scanned and converted in December 2000, by Dan Linscheid, Oregon P.L.S. #1825. Spelling and/or grammatical errors were not corrected in this process.)

WITH COMPASS AND CHAIN IN OREGON

I had occasionally met Mr. Elder, and about this time he informed me that a surveyor general had been appointed for the territory of Oregon; that he was a man from Illinois, with whom he was well acquainted, and that he would probably be at San Francisco on his way to Oregon in a few weeks.

It was his intention to meet the official in San Francisco, expecting to make arrangements to go to Oregon and do some work on the government surveys. He also said to me that if he should do so, he would like to have me go with him. I did not decide at that time to go.

About that time I met Mr. Pinney in Marysville. I believe he had been cutting wood at Yuba City for some time previous. During the late summer or autumn previous he was employed with others at some place on or near Nelson's Creek, where they had struck a good claim and had taken out quite an amount of gold. I never learned the exact amount, but supposed it to be from \$4,000 to \$5,000 for his share. Some time while chopping he had boarded at Yuba City with a Rev. Mr. George H. Hanson.

Mr. Hanson and a Mr. Bayliss, who kept a hotel at Yuba City, owned the ferry across Feather River at that place. Pinney informed me that Mr. Hanson desired to let him the contract to excavate a road from the boat landing on either side of the river up through the banks so as to permit of teams passing to better advantage. If I would contract with him for doing the work, he thought we might do well.

We looked the situation over and found the cut, on the Yuba City side would be light, but that on the Marysville side was quite deep. I suggested to Mr. Pinney that the better plan would be that Mr. Hanson should set his stakes so that we could know just what would be expected from us to complete the work. Mr. Hanson proposed that the road should be at a true grade from the shore to a certain point, about 150 feet distant, and should be of sufficient width to permit the passage of two teams when meeting, the banks to be properly sloped.

After considerable discussion relative to the depth of the cut, which I claimed would be twelve feet, he replied that he knew it could not be more than nine feet deep, and made the following expression in his western dialect: "You needn't for to dig it more than nine feet anyhow."

We made the contract to do the work with the understanding that we would not be required to excavate over nine feet in the deepest place, but it was not written out. We bought some shovels and the next day we commenced the work. The material to be removed was all fine sand and was good shoveling. We began at the waters edge and threw it into the river and it was washed away by the current. We made the sand fly fast and we made a large showing on the first day.

After we had worked away from the river so that we could no longer throw the sand into the water, we

used wheelbarrows. This was a very much slower process.

We made the cut nine feet deep at the deepest point and finished it in width so that two teams could easily pass each other, but Mr. Hanson then claimed that it must be on a true grade. This would at least add one third to the amount of work. But as we had no written contract, we concluded that the better way out of it was to make the cut as he proposed.

Another matter that came into controversy later was about the width. At the time the contract was made, when Mr. Hanson said the cut must be of sufficient width for two teams to pass, I made the remark that that was very indefinite, and made the request that he should give the number of feet required at the bottom of the cut, and he did so.

About this time Mr. Pinney received a letter from Pelham, N. H., which I suppose was from a Miss Young, with whom he had formerly been somewhat intimate, and whom he married later. This letter seemed to have such air effect upon him that he lost all interest in the work, and a few days later proposed to me that I should pay him for his share of the work completed. We said he had concluded to start for home at once. I pleaded in vain that he should remain until our finished. I paid him for his interest and he started for San Francisco. We supposed the contract to be nearly finished.

I had met Mr. Elder and he informed me that he had met the surveyor-general of Oregon, John B. Preston of Illinois, in San Francisco. Mr. Preston was not the first man appointed, the other having declined to accept the office.

Mr. Elder had been employed as assistant engineer on the Michigan and Illinois canal in Illinois by the new surveyor-general. He said Mr. Preston had promised him work on the government survey. He intended to go to Oregon a little later and desired me to go with him. I agreed to go.

I continued to work on the job and at length finished it, as I supposed. I had made the cut a true grade from the river to the point agreed upon, which made it 13 feet deep at the deepest point. The width was the number of feet stated by Mr. Hanson, but it was not quite wide enough to permit of two teams passing each other. I had also finished the cut on the Yuba City side as was agreed upon, and I supposed that Mr. Hanson would be willing to accept the work and pay the amount agreed upon. I informed him that the contract was completed and requested him to examine it.

We went to the Marysville side, and after measuring the bottom of the deep cut Mr. Hanson said it was not sufficiently wide to permit two teams passing each other. I reminded him of the conversation in relation to the matter when the number of feet was given by him, but he could recollect nothing in relation to that matter. He insisted that it must be made considerably wider before it would be accepted. After having done about one-third more work than we really had contracted to do, to be required to make the cut two or three feet wider, when it was 150 feet long and 13 feet deep at the deepest point, seemed to me to be asking too much. But I found him determined not to pay for the work unless I yielded. I concluded to keep quiet and make the widening as he proposed.

I made the alteration as he had suggested and again I informed him that the contract was completed. Again he went with me to the place of the cut, and also Mr. Bayliss was with us.

Mr. Hanson began to measure and also to find fault with the work, claiming that the job was not nearly completed. He said he would not pay me until considerable more was done. I could endure it no longer, and I said to Mr. Hanson that he was the meanest man I had had any dealings with in California.

Thereupon, he became almost frantic, and he immediately drew the square over my head. It was a heavy carpenter's steel square. He exclaimed that if I uttered another word he would split my head open! I immediately repeated the remark. Of course, it was not my intention to stand there quietly and permit him to cleave my head open, as he had threatened to do. But I stood still nevertheless, intending, if he attempted to strike me, to pursue the course that might seem to be best under the existing conditions. He threw down the weapon and said he would never pay me a dollar for the work until I had done a large amount more to finish it. Determined not to yield now, I replied I had already removed about twice the amount of earth the contract called for at first; that he had continually lied about it; that no dependence whatever could be placed on his word or veracity; that he was a very unjust specimen of a man; and that I would never remove another shovelful of earth for him.

He went away saying he would never pay me a cent. I was as fully determined I would do no more work on the job under any conditions. At first I thought I would sue him for the amount due me. After considering the matter for a day or two I concluded I would see what could be done with Mr. Bayliss, his partner, about the matter. I had been acquainted with him for a number of months, and had considered him an honest man. He had no part in making the contract so far as I was concerned. I went to him one day and informed him that was about to go to Oregon and that I should like to settle the matter. As he was a partner with Mr. Hanson in the ferry, and I had always believed him to be a reasonable man, I had come to him to talk about the matter. Mr. Bayliss listened to my statements very kindly, but said he regretted the conversation that had taken place between Mr. Hanson and myself. If that had been otherwise he thought the matter might have been adjusted with little trouble, but Mr. Hanson was a very passionate man, and as he was then feeling toward me, he would not agree to any settlement that would be satisfactory to me. He said it would be of no use whatever to undertake to have Mr. Hanson agree to pay the full amount of the contract price, but provided I would consent to make a small discount he would see what arrangement could be made with him. When I again met Mr. Bayliss a little later, the proposed settlement had been agreed upon and he paid me accordingly.

I soon after left Marysville for San Francisco, on my way to Oregon. At San Francisco I met Mr. Elder and also Mr. Pinney, who had been waiting here all this time for the sailing of the steamer for Panama. He expected now to sail within two or three days. He might as well have remained and assisted me finishing the contract.

Mr. Pinney had brought his gold with him. It had been put up in several buckskin bags. After his arrival in San Francisco, instead of depositing it in one of the banks for safe keeping during his stay in the city, he had buried it in the sands of one of the vacant lots of the city.

When he went to recover it he failed to find it, when he became thoroughly alarmed. After a more thorough search, however, he found it. He said it had been removed from the place where he first deposited it and had been buried in another place. It was in vain I tried to make him believe that if anybody had taken the gold from its hiding place he would have carried it away, instead of concealing it in a new place, and he would never have got his hands on it again. While he admitted the force of the argument, he said he was perfectly sure that he found it in a different location from where he placed it. He said he was very nervous when he failed to find his fortune where he had buried it.

Almost any one would be nervous under similar conditions. However, it was always my opinion that he found it at the exact spot where he had placed it, but that he had mistaken the locality. Probably Mr. Pinney's deposit of gold did not weigh less than from twenty to twenty-five pounds, which would make

an awkward pocket companion.

I had been in California two winters and one summer, or a little over nineteen months. As a whole I had enjoyed my experiences quite well. We remained in San Francisco a few days, waiting for the sailing of the steamer for Portland, Oregon, and left on Wednesday, June 4, 1851, in the Pacific mail steamship, Columbia. After we had passed out through the Golden Gate into the Pacific ocean, the sea became quite rough, but as I had never been on the ocean before, I did not realize it was any rougher than usual. Nearly all the passengers were seasick. I thought I should escape, but in the evening I also became a victim. The seasickness stood by me for two or three days, and was the only time, with one exception, I was ever afflicted that way.

We passed over the bar at the mouth of the Columbia river on Sunday, June 5th, and arrived at Portland, Oregon, on Monday the 9th, where we remained over night. On Tuesday, June 10th, we passed up the River Willamette, about twelve miles, to Oregon City, in a small, open iron steamer, that probably might safely carry 15 or 20 passengers.

At the time we arrived in Oregon the surveys had been commenced by two parties. The meridian and base lines had to be established and run for greater or lesser distances before any other surveys could be made.

The surveyor-general had taken with him from the states several experienced surveyors and quite a number of other persons to engage in the surveys. A point near Portland was selected from which to commence the meridian and base lines. Mr. James E. Freeman, a man who had been a deputy surveyor in Wisconsin, had been awarded the contract to run the meridian line south from Portland, and William Ives, another experienced government surveyor, had taken the contract to extend the meridian line north from the same point to Puget Sound. These parties were engaged at running the meridian line at the time of our arrival in Oregon, and had all the assistance needed, so there was no prospect for any work on the surveys for me for an indefinite time.

I had been studying surveying when an opportunity presented itself, but knew practically nothing of the government system of public surveys. There seemed to be but little work to be had at Oregon City, and board was quite high.

Mr. Elder was engaged by the surveyor-general as chief clerk in the surveyor-general's office. I was a stranger to the surveyor-general and all his deputies that he brought with him, and I knew that he would provide places for all his own party before a stranger like myself would receive any attention. Yet, I knew Mr. Elder was a good friend to me, but as he was engaged in the office, the prospect seemed to be that he would have no contract, consequently could give me no assistance that was most needed by me. It seemed to me that I had made a mistake in leaving California, and I thought seriously of returning. But through Mr. Elder's encouragement I was induced to remain.

We boarded at a hotel which was one of two kept in Oregon City, where board was six dollars a week, or one dollar and fifty cents per day. One little incident that transpired while at this hotel I will relate to show how sometimes people injure themselves in being too sharp in small affairs. At the time I came to this hotel it was quite uncertain what length of time I should remain. So I had an understanding with the landlord that if my stay should be a week or more, the price would be by the week, but should it be less than a week, I should pay the price by the day.

After remaining for about three days, I concluded to leave for a time, and as it was uncertain when I

should return, I settled my board bill, paying the day price. It so happened that I returned on the evening of the same day, and occupied my room as before. I then remained during the remainder of the week and some days over. When I came to settle my board with the landlord he presented a bill made up by the day price for the time after I had paid him. I claimed the agreement was, if I remained for a whole week, or seven days or more, that the price should be by the week, and that the fact that I settled with him and made a payment at the middle of the week did not change the matter, so far as right and justice was concerned. At the time of the former settlement I paid him a part of a week's board, and that now I was to pay him the balance. But he failed to see the matter in that light, and claimed the day price.

Consequently, I paid him on his basis by the day, but I left him to board at the other hotel, "Mosses," where I ever after stayed when in Oregon City.

Soon after arriving in Oregon I went south up the Willamette valley among the farmers, thinking possibly I would find some work for a time, but as I found no employment, I returned to Oregon City after a few days. Some one informed me that a mill was being erected on the Tualitan River, a few miles from Oregon City, and that the owner of the mill needed some more help.

I went to the location where the mill was being built and engaged to work for three dollars a day and board for a short time. I commenced work on Monday, June 30th. The labor was very hard, it being on a dam across the stream, which was being constructed of stone, brush and gravel. All of this material had to be carried by hand.

I labored on the dam for twelve days, when it was nearly completed, and the proprietor, Mr. Madden, discharged a considerable part of his help. He had other work to be done in building the sawmill and its foundations, etc. He said to me he should pay his laborers only two dollars per day. After that date, but that if I would remain he would pay me two dollars and fifty cents. I continued on the job until the 3d day of August. About this time Mr. Elder one day came over to see me and informed me that he had contracted with the government to resurvey Oregon City and desired me to assist him in the work. At that time he had very little work in the office, as none of the surveys had been completed. I went to Oregon City, but it was some time before he was prepared to commence the job of resurveying the town. In the meantime I was pursuing the study of surveying in earnest.

We commenced the survey on Thursday, August 21st, and completed it on September 29th, making an entirely new survey and setting the bounds, which was authorized and approved by the United States government. While at work on the Tualitan River, the last part of my work there had been on the river, clearing it from sunken timbers and obstructions, so as to permit logs being floated down to the mill.

During the time that I was engaged on the Oregon City survey for Mr. Elder, the contracts had been let to survey township lines, one to Butler Ives, a brother of William Ives, dated August 15; one to William Ives, dated September 10; and one to James E. Freeman, dated September 17. These contracts provided for the surveying of the exterior lines of twenty townships, within the most thickly settled part of the Willamette valley, and principally south of Oregon City, reaching as far south as Township No. 10, or near to Albany on the Willamette River.

Mr. Elder made arrangements with Mr. Freeman, when the work at Oregon City should be completed for me to go out and work for him. Mr. Freeman's contract included some of the Willamette and Santiam Rivers, and extended southerly so as to include townships 6, 7, 8, 9 and 10 south of range 1 west, and townships 9 and 10 south of ranges 2, 3 and 4 west, with a part of the 2d Standard parallel south. This

work was from 30 to 50 miles south of Oregon City.

After the Oregon City work had been completed, I left the place and traveled on foot and alone southerly to the point where Mr. Freeman's party was at work, and found them without trouble. Mr. Freeman had five or six men in his party, a part of whose names I yet recall.

Zenas F. Moody from Chicopee, Mass., who went to Oregon at of about the same time as the surveyor-general. He was young, only 20 years of age. He afterwards became governor of Oregon for four years. Another was George W. Hyde, a brother-in-law of Mr. Preston, the surveyor-general; and another was Alien F. Seymour, of New York state, all of whom went to Oregon with the party of Mr. Preston, and had worked with Mr. Freeman on the meridian line. Mr. Moody and Mr. Seymour were chainmen.

All the government public land surveys were required to be made with Burt's patent solar compass. This was an instrument that was guided by the sun instead of the magnetic needle, and was of far greater accuracy. It was provided with a needle that could be used when it was impossible, from ally cause, to make use of the sun.

The township lines were all required to be surveyed by the sun, but subdivisions were permitted to be made in part by the needle, at such places where local attraction did not exist to great extent. At this time I knew nothing whatever in regard to the working of the solar compass. I had never even seen the instrument. It is very reliable, but is provided with several arcs, which must be constantly adjusted; the most important of these are the latitude arc and the declination arc. The exact latitude, even to one minute of a degree, of the place of work, must be set off on the latitude arc, and the declination of the sun, north or south, must be set off on the declination arc, also to the exact minute for the month, day and hour, otherwise the instrument would not give a true meridian of the sun.

The next morning after I came into camp Mr. Freeman told me to take the axe for that day. He also told me to blaze the trees that stood on each side and near to the line as run by the compassman where there were trees, and to prepare posts for the section and quarter-section corners. I have a distinct recollection of feeling considerably embarrassed, as I did not fully comprehend all the duties I was expected to perform. It was all new to me.

The line was started and the first tree that needed to marked was blazed on the proper side, but I made it quite low down. I went along the line a short distance d turned about, facing the tree I had marked. It at once occurred to me that the purpose of blazing those trees was for a guide by which to follow the lines, and that marks should be made sufficiently high so as to be readily seen at a distance, and that afterwards I would make the marks higher up on the trees.

While I stood looking at the marked tree, Mr. Freeman said: "Make the marks a little higher on the trees." Mr. Hyde gave me some instructions as to what the corner posts should be, and how they should be prepared, and I soon became familiar with the duties of an "axeman". I continued to perform these duties for several weeks, until one day Mr. Freeman said to me that perhaps I might think it strange he kept me as axeman so long. He had not at first intended to do so, but they had tried two or three before I came and could not make them understand the work. As I had done it so well he had hesitated about making a change.

This was the first time that I had known if I had given even ordinary satisfaction. I said to him that I was satisfied, that I had enjoyed the work, and that I felt greatly pleased if I had given satisfaction. Mr.

Freeman was not an expert mathematician, and as I had studied trigonometry pretty thoroughly, I could calculate distances very readily by logarithmic sines. There were many triangulations to make and distances to calculate across rivers and bayous. When I first began work for Mr. Freeman, he requested that I would make the calculations of the distances with him. He would work them by the traverse table, and I by logarithmic sines. Sometimes we would agree in our results, but very often we would obtain different results, and in such cases we would each go over the work again. In almost every such instance the error was found in his work.

After a time he gave up making all such calculations and trusted it wholly to me, unless they were of a very simple character.

Mr. Hyde left the party soon after I began work for Mr. Freeman. He assisted him in making the calculations before I came. It was very important that the work of the calculations of these triangulations and distances should be done correctly, as a small error was liable to cause much trouble later, and sometimes might cost hundreds of dollars to correct.

We continued the work, but in November, previous to the finishing of the contract, the rainy season began and there was much rainy and cloudy weather, so the survey was continued under considerable difficulty.

About November 20, Mr. Freeman concluded to go to Oregon City. The contract was not completed, but with favorable weather it could be finished in a short time. Mr. Freeman went to the surveyor-general's office at Oregon City to return the field notes of the surveys he had completed, and to get a contract for subdivisions.

The camp was broken up and he discharged all his help, excepting Mr. Moody and myself. He authorized us to remain and await his return, and to board with a family, and see to the pack horses. In case it should become fair weather previous to his return, so the solar apparatus could be used to advantage. I could try to survey a new township line. I had not at that time undertaken to make any surveys with the solar compass, though I had been learning by observation about its workings.

The first week after Mr. Freeman's departure the weather continued cloudy or rainy the greater part of the time, and we could do no work on the township line, but one of the settlers desired me to make a survey of his claim, which was one mile square. This could be done by the needle. The lines were to be made to conform to the cardinal points, due north, south, east and west, but otherwise were not required to conform to the public surveys. I agreed to survey it for him, and after the starting corner was pointed out, we began the work. This was my first experience in surveying any lengthy line, my experience having been on city lots. We were to survey around one square mile, making four equal sides, each one mile in length. Of course, I felt some nervousness about the closing. Should errors be made they would show at this point. About one-half of land was in the prairie, and the balance in timber land.

I managed the compass, and Mr. Moody, with another man, were chainmen. The man for whom we were making the survey remarked that he supposed I had had a good deal of experience in that kind of work. I did not inform him that I was then engaged in making my maiden survey. When we had surveyed three sides of the quadrangle, and were running toward the starting point on the fourth, or last side, the owner began to predict about where we would come out in relation to the point of beginning.

He declared there would be quite a wide distance from the point of beginning. This, as was natural, caused me to be more nervous. However, I made no reply, and when the survey was completed, it proved

to be a very satisfactory close. This gave me more confidence, and as another man near by desired a similar survey made, we made that with equal satisfaction. About the second week of Mr. Freeman's absence the weather cleared up and the sun shone, and Mr. Moody and myself started the survey of the township line. I was compassman, as before, and assisted him in making the measurements with the chain. This was an east and west line, six miles long, and was run as a "random line," as they were called. All east and west lines were random lines, as at first surveyed, and were afterwards corrected according to the amount of error found in closing. Later I surveyed many township lines, but I believe that was the most difficult one I ever surveyed. Soon after we commenced it we ran into the Santiam bottom and river, and the line followed the stream, crossing and recrossing almost the entire distance. The impassible parts of this line of six miles, which was measured by us by triangulations and offsets, amounted to very nearly, if not quite, one-half of its entire length.

It was a tedious and discouraging task for a beginner. But we worked upon it steadily, when the sun favored us, and at the end of nearly a week we reached the town corner. I had run a due west line, and at the end fell farther from the corner than I had expected. Consequently, I did not feel fully satisfied with the outcome of my work.

We did not correct the line, however, as I supposed Mr. Freeman would make a new survey when he should return. In fact, we had no time to correct the line, as Mr. Freeman returned after an absence of about two weeks. I explained to him what we had accomplished during his absence, and how the township line had closed. After he had made an examination of his field notes of the closing six miles farther north, he said it was really the best close that had been made on that contract, it having closed with less variation, as compared with the parallel line six miles north of it. We soon after finished the contract.

While at Oregon City Mr. Freeman took the contract to subdivide townships 9 and 10 s. range, 1 west; 8 and 9 s. range 1 w. and 9 s. range 3 w., it being a part of the townships of which we had surveyed the exterior lines. This contract was dated November 28, 1851.

After we had finished the first contract we began the subdivision. There were 60 miles of surveys of subdivisions in each township. At first I acted as one of the chainmen with Mr. Moody, and Mr. Freeman was compassman. Soon after we had started, however, Mr. Freeman asked me to relieve him so as to give him time to write up his field notes. The result was before we were half done I was compassman substantially all time, and so continued until the contract was completed.

The winter of 1851-52 was quite a rainy one in Oregon, and some time during the rainy season Mr. Freeman concluded to dispense with the camp and depend upon the settlers for accommodations. Nearly all the settlers held their claims under the Donation Law, so called, passed by Congress September 27, 1850.

These claims principally consisted of 640 acres, equal to one square mile of land, which, when taking account of the lands unsettled, caused the residences to be at a considerable distance from each other, generally from one-half mile to three miles.

In some respects this arrangement of seeking accommodations with the settlers was satisfactory, and in other respects it was not. In many instances, after our work for the day had been completed, when we were wet and hungry, we were obliged to travel from two to four miles before reaching a house. The houses there at that time were log cabins, the great majority of which contained but one room, with

perhaps a small "loft."

So, many times when we reached the first house after a long walk, and made the inquiry if we could be accommodated with supper, lodging and breakfast, or in western language: "If we could get to stay over night?" the reply almost invariably would be: "We have no accommodations to keep folks." At the next house we probably could "get to stay," as they "kept folks." The estimate of the distance to the next house was almost invariably given at not more than one-half of the actual distance. When we at length arrived at the next house a similar story, in most cases, would be told, so that on some occasion we traveled until quite late in the evening before we could succeed in finding lodging for the night. The next morning we were obliged to retrace the same road to reach the place where we had quit work the evening previous. These people, however, were very hospitable and could not be censured with justice. A majority of them were immigrants from Missouri and other western states, and many of them had lived on the frontier during their whole lives.

In many cases where we stopped for the night, the cabin contained one room only, of a fair size, say 15 by 20 feet, and the family would consist of man and wife, and from five to ten children, in some instances including two or three girls nearly women grown. Of course, families so situated could not be expected to have accommodations for three or four tired, hungry men. However, in many cases we would prevail upon them to consent to keep us, and they would do the very best that they were able to do under the existing conditions.

They would divide their bed, putting the feather bed on the floor for the use of their guests. This was done for us in many instances. After managing in this way for a time, and becoming familiar with the ways and manners of the people, I knew much better how to manage the matter of getting kept over night. I learned that if we should assume a simple "No" with excuses, more or less elaborate, was to be taken as a final refusal, that we would find very few places of accommodations.

Later I made it a point to get into the inside of the house before the request was made for accommodations for the night. I would not even await an invitation to step inside, but no sooner than the door was open I would at once enter, if possible, without being conspicuously ungentlemanly. Sometimes I would inquire for a drink of water and gain admission thereby. Once inside I found the battle more than half won. We could then almost always induce the good people to keep us. The surveying of the public lands may be thought by many to be light, easy work, but it is really hard and rough. The surveyors are subjected to much exposure, especially in the winter or rainy season.

The winters in Oregon, as in California, are called "rainy seasons." There is much rainy weather and some snow, but the snows are usually damp and soon melt away in the valleys. The weather is seldom very cold, but is sometimes cold enough to cause thin ice to form on the surface of standing water.

During the rainy season in Oregon the small streams were full and all the sloughs and swampy places were at times overflowed with water. At that time ferries had been established across some of the larger streams at certain points. The smaller streams had to be forded.

We had very much wading to do in crossing streams, sloughs and swamps, quite often having to wade places where the water was not less than three or four feet deep. The water was necessarily cold, but after a few days of experience we would become accustomed to it, so we would not mind it very much. When a pair of new boots were purchased, before they were worn, a slit would be made in each one, near the sole, at the inside of the instep to give drainage for the water to pass out. We had a great amount of

similar wading to do on this contract.

I will relate only one from many experiences which came my way during the fall of 1851. When Mr. Freeman was surveying the meridian line, he had a transit with his party, to make triangulations to distant mountain peaks and other topographical objects that might come within range on either side.

This transit, from a fall or some other accident, became injured, so it became entirely useless for the purpose of making triangulations, and it was left by Mr. Freeman at a farmhouse. Previous to his visit to Oregon City in November, he concluded to take the transit along with him to the surveyor-general's office.

One morning he desired me to go for the instrument and bring it to camp. He gave me the name of the man where it had been left, and the location of the house was pointed out on the plan. As I remember, the location was about twelve or fourteen miles distant.

Our camp was to be removed on that day, so that on my return it would be necessary for me to pursue a different course from the one in going. I started and found the house without difficulty, and after partaking of some dinner and settling all bills due the proprietor, I started in the direction of which I expected to find our camp. In my journey to the house I found a comparatively dry road, and was not obliged to go through any deep water.

It was considerable into the afternoon when I started on the home journey and I did not suppose I would be able to reach camp that evening, but concluded to take the chances of finding a house where I could remain over night. After traveling two or three miles I reached a stream of considerable depth, which I waded, coming out pretty thoroughly soaked. A short distance farther on I entered a large prairie. The weather was cloudy, but it did not rain very much. I kept on and was able to pursue the proper course by the help of the instrument, until it became dark, when a dense fog settled down upon the plain. I could see only a short distance and was not able to see to read the bearing of the needle of the transit. I had no other guide to direct my course except a very slight movement of the atmosphere, which was scarcely perceptible.

However, I kept the course as well as I was able to do, thinking the most probable outcome would be that I would be obliged to remain on the prairie until the next morning.

Some time between eight and nine o'clock in the evening, I heard the low of a cow at my left, at about a right angle with the course I was then traveling. I immediately shaped my course toward the point from which the sound came, supposing there would be a farmhouse in that vicinity. I soon came upon a little trail or road, which I followed, but I had not gone a great distance before I came to a slough, at that time filled with water. As the weather had been quite cool, the water was frozen over to the thickness of half an inch. I waded into the water where the trail entered it, and broke my way through the ice. Before I reached the opposite side, I found the water nearly four feet deep, and it was no easy task to break the ice so as to make my way through.

After a time I reached the opposite side and soon after saw a dim light through the fog. I went in the direction of the light and soon reached a house, where the inmates had retired for the night. I found the people to be very hospitable. The good lady of the house arose and prepared a supper for me, and during the night dried my wet clothing before the fire. The next morning I traveled to camp.

We completed the contract about the first of March and immediately after went to Oregon City. The pay

at his time for chainmen, axemen and campmen on the surveys was about two dollars a day. Mr. Freeman paid me a larger compensation, but I do not remember the price. After our arrival at Oregon City, Mr. Elder said to me that he had resigned his position as chief clerk at the office of the surveyor-general, and should go on the field work. He was to have a contract, and desired me to work in his employ. I agreed to do so.

He received a contract dated March 25, 1852. This contract was for the survey of the exterior lines of townships 1, 2, 3, 4 and 5 south, of range 3 and 4 west, with a part of the first standard parallel south. This amounted to about 120 miles of surveys at \$17 a mile. This contract was principally in the Yamhill valley, westerly and southwesterly from Oregon City. The work was all within 25 miles of the surveyor-general's office. Mr. Elder had procured me a solar compass, for which I paid him \$350.

We began the contract about the first of April and finished it near the end of May, I was compassman on substantially all the lines of the contract, while Mr. Elder wrote the field notes and made the plats.

I received a commission as a United States deputy surveyor, April 25, 1852, from John B. Preston, surveyor-general of Oregon.

As soon as the contract was completed we went to Oregon City, and Mr. Elder proposed that my name should be associated with his in a contract for subdivisions, so as to be able to obtain a contract of ten townships, instead of five, the number usually awarded to one deputy in a single contract.

I was to work for him and have charge of one party, while he would have charge of a second party. I agreed to this. The contract to Elder G. Webster was dated June 8, 1852, and was for the subdivisions of townships 3 and 5 south range, 2 west; 1, 3, 4 and 5 south range, 3 west; and 2, 3, 4 and 5 south range, 4 west. This included all the townships, with two exceptions, of which we had made the surveys of the exterior lines, and included two townships in range 2 which had been surveyed by Deputy William Ives. The number of miles contained in the contract to be surveyed was estimated 660. The subdivisions, or interior lines of a township, amount to about 60 miles, provided there are no streams lakes to be meandered. All stream considered navigable are measured on both sides.

In this contract were portions of the Willamette and the Yamhill Rivers, which were meandered. We left Oregon City on or about June 9th. We made two parties. Mr. Elder managed one party and I the other. In my party were Henry S. Gile, from Alfred, Maine, a very intelligent man, who acted as one of my chainmen; James M. Fudge from Sangamon county, Illinois, also a very fine young man (he was killed by the explosion of a steamboat boiler a short distance above the falls at Oregon City, in the spring of 1854); Andrew Murphy, an intelligent Irish-American citizen from St. Louis, Mo.; and James O'Connor, as campman. The last named was an inhabitant of Oregon, a young man. At this time I do not remember the names of Mr. Elder's party with the exception of Matthew Murphy, a brother Andrew, and who assisted Mr. Elder in the management of the compass before the contract was completed.

We had good working forces on this contract and consequently had a very pleasant time. I made considerably more than half of the surveys with my party. We were engaged on this contract about four months, until about the 8th of October, when we went to Oregon City and made up our field notes and plats, and turned them to the surveyor-general's office. Mr. Elder paid me something more than \$100 a month for my work.

My health had continued good all through the summer, until just previous to the time of finishing of the contract, when I was taken ill but managed to lead my party and do my work until the survey was

completed.

After we went to Oregon City I did not improve. I procured some medicine once or twice from an English physician. Mr. Elder said I was afflicted with a fever of some kind, and I thought later that probably he was right. Be that as it may, I was quite sick for three or four weeks, although I was out more or less every day during the whole time. Finally, I began to improve, and about the first of December I had nearly recovered my usual good health.

Up to this time I had had no contract on my own account, but it was understood that I should receive a contract of subdivisions for winter. This was under President Filmore's administration and of course Mr. Preston, the surveyor-general was a Whig, politically, as was Mr. Elder.

One day when I was in the surveyor-general's office, Mr. Preston called me into his private office and inquired in regard to my politics. This surprised me as I had supposed he knew, and I could not help wondering how much bearing my reply would have in awarding me a contract. I immediately said I was a Democrat, and asked if that would make any difference about awarding me a contract. He said it would not with him, but with surveyor-generals generally a distinction was made, and contracts were only awarded to deputies of their own political faith.

Mr. Preston was a fine man, and had always been very kind to me. I never knew the object of his making the inquiry, but I afterwards supposed he did it to test my honesty and to see if I would equivocate in any way. If I had pursued such a course it is possible I might not have fared as well as I did. He said that a majority of his deputies were Democrats. Mr. Freeman, William Ives, and his brother, Butler Ives, and Joseph Hunt were all of that party.

He awarded me a contract, No. 27, dated December 1, 1852, for the subdivisions of township No. 14 south, ranges 1, 2, 3, 4 and 5 west, estimated at 315 miles, at 10 per mile.

I made up my party and left Oregon City about a week later, going up the River Willamette on a steamer to Salem, where I had arranged to have the "pack horses" meet us, and where we camped near the river. A storm began soon after we arrived at Salem, and it continued for two or three days, so it was impracticable to attempt to move up the valley until the rain should cease. Our work was about 50 miles southerly from Salem.

After three or four days the weather became fair and pleasant, and we packed up our camp and moved southerly up the valley of the Willamette.

The river, with all the streams, was very much swollen from the recent rains, and we were obliged to do considerable wading, some of which was quite deep. As I'd but a short time previously recovered from quite a severe illness, and had not been so exposed for several weeks, I took cold.

I felt the cold quite severely on the first night out from Salem. On the second evening I had, as I believe, as severe a cold as I ever experienced in my whole life. After the other men had turned in for the night I inquired if ally one of them had anything that would cure a cold. One of them replied that he had some cayenne pepper in his valise and told me where I could find it, and he told me that a teaspoonful in hot water was a proper dose. After heating some water I put in a tablespoonful of the cayenne, stirred it thoroughly, and drank dregs and all. I am now convinced it was the warmest dose I ever drank, but I immediately laid down for the night, and when I arose the next morning, my cold had nearly disappeared. It troubled me very little afterward. This, I believe, was the only serious cold I experienced while in

Oregon.

We were about three days in making the trip from Salem and we began work December 17, in township No. 14 south, range 3 west. The Willamette River ran through township 14, range 4 and 5, west. The Callapooza, a small river, also passed through some of the townships. There was much rainy weather through the last part of December, and also during January, 1853, all the streams and swales being full of water.

I don't recollect the names of the men who made up my party, with the exception of one, whose name was McDonald. Whenever we got into a hard place, he was always complaining, and would say that he should quit work. He was not the sort of a man I desired, but I did not wish to have him leave, as he had a sympathizer in the party who would be pretty sure to leave if he did, and that would break up my gang. It would probably trouble me to supply their places at that time.

We finished one township on January 3, and commenced upon the one next west in range 4. The Willamette River intersected the western boundary of this township, which it crossed four times, and also crossed its south boundary. We had completed about two-thirds of the easterly part of this township when one day it became necessary to cross the Willamette River and bring out a line before we could make any farther progress.

I made some inquiries of some of the settlers in relation to a boat, and learned of a man nearby who owned a "dugout," but upon seeing him he declared it would be impossible to cross the river in its swollen condition. We went to the river where the boat was located and the situation for crossing did really look to be somewhat dangerous to be undertaken at that time with such a craft. I had many times used similar boats to cross streams.

A "dugout" is a boat made from a log, being dug out, as its name implies, and many of them are not very steady on the water, overturning very easily. This was one of the unsteady kind, and the river at the point where the boat lay at that time was very rapid. A short distance below was the upper end of an island, against which a large quantity of drift timber had lodged and against which the current was lashing itself with great force. After considering the situation for a few moments I concluded that I could make the crossing, as I was obliged to do, or await the fall of the river. The boat was so small and frail that it was not safe for us all to undertake to cross at one time. I said to the men of the party that I could take them safely over, as I believed, provided they would do just as I should command them, and not become frightened. I said also that we must cross the river or lie still until the freshet should subside, which might be several days; that I would leave it to them to decide whether to go or not, as it was, as I knew, attended with some danger to make the attempt to cross.

Possibly we might meet with some accident, and if so, we probably would fare hard. They concluded to make the attempt. I took two men into the boat with me, together with the instruments. The men sat on the bottom of the boat to steady it, and after giving them their instructions, I pulled the boat into the current. Though the passage was difficult we went safely across to the other side of the river. But our troubles had only begun. The lowlands along the river were overflowed to a depth of several feet; in places it was so deep that it was impossible to wade it, so that it was necessary to make triangulations. The country was timbered, and brushy, and the lines crossed the island.

We were wading in the water nearly all day. I believe now, considering the water, brush and all the conditions there present, it was the most difficult line of equal length that I encountered on all the

surveys I made while in Oregon.

It crossed the river at a little more than one-half mile from the corner at which we began, and we worked in the water nearly the entire day, but got the line across before night.

At the time when we were wading in the deep cold water, Mr. McDonald began to complain as usual, and said he would quit the job. I was feeling a little out of patience myself, and I said to him that he had been saying about the same thing whenever we got into a hard place, and that I had become tired of hearing it. I advised him either to stop such talk or quit at once. He replied that he would quit after that day. I said, "all right." The next morning when we prepared to start for our work, he said to me that he supposed I understood he was to quit work. I remarked that I had heard him say as much when we were in the water the day previous, but that I had concluded that probably he had changed his mind in the meantime. He went to work again and continued for several days, when he concluded to quit, and his companion went with him.

This broke up our party, when it was near the first of February. My contract at that date was less than one-half completed. As I was getting short of supplies that were impossible to procure from the settlers, I sent the campman with the horses to Albany, it being about twenty-five miles northerly, down the Willamette valley, and gave him orders to procure such supplies as were needed, and to hire two good men. I remained alone in an unfinished log house while he was absent, about one week, and was engaged in copying my field notes. He returned with provisions and brought along with him two men that proved themselves to be very good help. After this time we had much better weather, and also an improved party. I finished the contract about the 25th of March, and went to Oregon City with my returns.

Before my return to Oregon City, Mr. Elder had arranged for a double contract in the Umqua valley, and had the name of Harry S. Gile associated with his own in a similar way that he had my name used in the contract a year previous. As at that time I could have no contract of my own until later, Mr. Elder suggested that I go with him to the Umqua valley. As Mr. Gile had had but little experience as a compassman I could help him survey the township lines, and return in season to get a contract of my own, which would probably be available later. I at once agreed to his proposition.

The location of the contract was about 150 miles south of Oregon City on an air line, and included the best part of the Umqua valley. It consisted of eight or ten townships, both the exterior and interior lines, or between 700 and 800 miles of surveys.

We left Oregon City for Umqua about the middle of April, 1853. It was a good country to survey, and Mr. Elder made it well. I remained until the contract was completed, some time near September 1st, or between four and five months.

I surveyed the larger part of the township lines and considerably more than one-half of the subdivision. Mr. Gile worked one party, and I the other, while Mr. Elder copied the field notes and drew the maps.

A short time previous to the completion of the contract, Mr. Elder proposed to me that if I would remain and complete the work, he would go to the surveyor-general's office at Oregon City and get a large contract in the Rouge River valley, the same to be a company contract for Mr. Elder and myself.

The Rouge River valley was about seventy-five miles southeasterly from the place where we were then at work, and the understanding was to move our parties over there from the Umqua country, and thus save the breaking up of the parties. I at once consented to the proposition, and Mr. Elder was to start for

Oregon City at once, both of us feeling certain he would be able to procure the contract.

Before he had started, however, we received information that an Indian war had broken out at the Rouge River valley. That put a stop to our proposed contract. Of course, we could do no surveying during an Indian war. The war continued during the succeeding three or four months.

General Joe Lane was then in Oregon, and with the United States regular army that was stationed there, together with volunteers, he secured peace. But a large number of the white inhabitants lost their lives during the outbreak. It happened very fortunate for our surveying party that it did not occur a month later, when we should probably have been surveying in that valley, and probably some of us would have lost our scalps.

The war was said to have been caused by the abuse of the daughter of the chief by some gold miners who were at work on Rouge River, and as the perpetrators of the foul deed immediately left the place, so that the chief could not punish the guilty parties, he made preparations to exterminate all the white people then in the valley. Nothing was known in relation to his intentions by the whites until his arrangements were completed.

One day when all was in readiness, as he supposed, the Indians commenced shooting down the whites indiscriminately in Jacksonville, the principal village of the Rouge River settlement. In this instance, as in one or two other Indian outbreaks that I knew something about while I was in the Indian country, the trouble was caused by ill treatment of the Indians by the whites, and I firmly believe the same, or similar causes, have produced similar results in the great majority of Indian wars and massacres since the discovery of America by Columbus. It is my opinion that the poor Indian--naturally a noble race of men--have been most shamefully and wickedly abused and mistreated.

I will give just one instance that came under my observation, as an illustration. In Oregon City I became acquainted with a man by the name of Angel. About the time the Rouge River gold mines were discovered and began to be worked, Mr. Angel concluded to remove there. Previous to his removal, as I was talking with him in relation to the matter, he said he was the owner of a good rifle, and that Indians were quite plentiful in the Rouge River country. He said he intended to shoot the first Rouge River Indian that he should see after his arrival at that place.

I had some argument with him in regard to the justice or propriety of committing such an act, but he persisted that his mind was fully settled, and he would certainly do that deed, provided he should have an opportunity. When I was fully convinced that he was truly in earnest, or appeared to be so, I said to him, that should he do as he said he would do, and murder an innocent, unoffensive Indian in cold blood, it was my wish that he would also be shot by an Indian.

Mr. Angel removed to Rouge River, and I later learned that he shot three or four Indians at different times, while he was standing in his own doorway, and that he made a boast of it, but that he was killed during the Rouge River Indian outbreak. Provided I had the truth of the matter, I certainly believe he received his just deserts. Poor Mr. Angel!

We had a pleasant time while engaged upon the Umqua contract, and after it was completed we returned to Oregon City. Mr. Elder paid me \$185 a month for the time I was employed, nearly five months.

One incident that I failed to relate in its proper place I will insert here. When writing in relation to the work on the contract in the winter of 1852-3, I wrote that I sent the campman to Albany, where he hired

two men.

One of these men had had very sore eyes, from which he had not fully recovered. He said it was his opinion the disease was contagious, as he believed he had contracted it from another person. A short time previous to the finishing of that contract, one of my eyes felt as though some foreign substance was in it. I endeavored to remove it, but with no good results. The eye soon became inflamed and troubled me badly. Within two or three days later the other eye was affected in a similar manner as the first. They were in bad condition and troubled me much. After I had completed the contract and went to Oregon City my eyes did not improve, but steadily grew worse. I could not bear the light without pain, and many times in the evening after the hotel was lighted, it caused me such suffering I would go outside and walk the dark streets. In the morning my eyes would be fairly glued together, and it would be impossible for me to open them until I had removed the sticky substance and open them with my fingers.

I applied to the English physician I have previously mentioned, and he gave me some salve, which he directed me to apply at night. I applied it as directed. It seemed almost like putting fire into my eyes. After I had applied it for two or three nights, my eyes instead of improving, as I had reason to suppose they would do, became worse, and in the morning after I had succeeded in getting my eyes open I threw the box of salve into the street. From that time my eyes began to improve. I wore colored glasses for a time to protect them.

When I left Oregon City for the Umqua with Mr. Elder, although my eyes had improved some, they were very sensitive to light. They continued to improve, but when I commenced work they troubled me greatly. I could see double--that is, I could see two objects where there was only one. Suppose I was looking at a man some distance away, I would seem to see two men, instead of one.

However, my eyes continued to improve slowly but steadily, and at length regained their normal condition, so far as my sight was concerned. Still it was a long time before they became strong, so as to bear any excessive light without causing me pain, and it is my opinion they were never quite so strong after that time as they had been previously.

At the presidential election that took place in November, 1852, Franklin Pierce of New Hampshire was elected president of the United States. This caused a change in the national administration from Whig to Democratic. After I arrived at Oregon City from the Umqua valley, Mr. Preston said to me that he supposed that Mr. Pierce would send a man there to take his place as surveyor-general, and that he would be removed from the office. He also said that as I had been crowded out of a contract in the previous spring, which I was really entitled to, he would give me my first choice of a contract from any of the lands at that time available to be surveyed.

After we had examined the plans, I selected for a contract the country west of the Willamette River, including the Long Tom valley. The contract was dated September 15, 1853, and included the survey of the 4th standard parallel south of range 5 and 6 west, the township lines of townships No. 16, 17 and 18, south of range No. 5 west, and 14, 15, 16, 17 and 18, south of range No. 6 west, or so much of these as was suitable for settlement, estimated at 396 miles, at \$12 per mile. The west line of some of these townships ran into the coast range of mountains, and included some lands that were unfit for cultivation. This was the largest single contract, as I believe, that had been awarded to any deputy in Oregon. It proved to be a good contract, notwithstanding I had some very difficult township lines to survey in the mountains. Instead of the surveys amounting to 396 miles, there were 486 miles of surveys. In making the surveys of the public lands the deputy contracts to do the work at a certain price per mile; employ and

pay his own help, and also pay all expenses. We paid help at that time each by the day and paid for the time only that we were able to work, on account of good or bad weather.

As soon as practicable after the contract was signed, I made up my party and left Oregon City, September 23, 1853. My party consisted of A. M. Addington and Granville Blake, chainmen, and John E. Boyd and Joseph Hawkins. All were from the western states.

I began work on the survey September 28. The weather was fair for the most part until the 13th of October, and it was not very stormy and bad through November.

The west line of the west tier of townships for nearly its entire length, or thirty miles, was in the coast range of mountains. It was very difficult to survey. The spurs and ravines made it up or down nearly the whole distance. Much of the way it was very steep. The mountains were heavily timbered. To survey these lines it was necessary to pack some provisions and take along.

When night came we would build a fire, and after partaking of such eatables as we had managed to carry with us, lie down to sleep. To survey the two lines of a township in this broken country usually kept us in the mountains three or four days at a time, and we would carry with us provisions sufficient to last that length of time. Each one would carry his own pack.

Before the middle of October we had completed the lines of the three townships of range 5, which was in a fine country to survey, and had made some progress upon the other range. In cloudy weather we worked upon the subdivisions. There was considerable cloudy and rainy weather in November, while December proved still worse. I completed the subdivisions of the three townships of range 5, and on December 9th went to Marysville and copied my field notes, as the weather was so cloudy and stormy that I could not work to any advantage. I returned from Marysville December 21, and worked a few days, when there came a snow storm. The snow fell to the depth of ten or twelve inches and it was light and dry like a New England snow in mid-winter. It cleared away cold, and we had really a New Hampshire winter for about two weeks. The snow blew and ice formed over the streams and other exposed waters six or eight inches in thickness. This was a very unusual occurrence for Oregon.

This state of affairs continued for more than two weeks, or until the 27th Of January, when it became warm, and the snow soon melted away.

During the cold spell we could do no work at surveying, but keep ourselves as comfortable as possible in our tent. In December and January we worked only twenty seven and one-half days. February was a better month, but we had some stormy weather.

I finished the contract April 21, 1854, just seven months from the time of its date. We worked 133 days on the field work and averaged very nearly three miles for each working day. After the contract was completed we started for Oregon City, leaving all the camp equipment page, blankets, etc., with a man near Albany, going by the Willamette on a steamer. When I arrived at Oregon City, Colonel Gardiner was in the office as the new surveyor-general of Oregon Territory, Mr. Preston having been deposed during the winter. Mr. Preston had remained in the place and had opened a private land office. Colonel Gardiner was a good man in his place, but he knew very little in regard to the public land surveys. As Mr. Preston was a practical engineer and surveyor, it was a poor exchange in a practical sense.

I copied and returned my field notes and plats to the office. At this time, my friend, Mr. Elder, had returned to his home in Illinois, and Mr. James E. Freeman had gone to California and was employed on

the public surveys there. After my work on the field notes and maps was completed, which kept me busy for a considerable time, I was one day near the Willamette below Oregon City a short distance picking some strawberries for pastime, when a gentleman accosted me and inquired if my name was Webster. I replied that it was. He said he was agent for some coal mines on Bellingham Bay, at the north end of Puget Sound, near the British boundary and opposite to Vancouver Island. He represented a company in New York, and had come to Oregon City for a surveyor to go there and make a survey of the land upon which the mines were located. He went to the surveyor-general's office, where I had been recommended to him, and he asked me if I would go with him and do the work.

I agreed to do the job, which was a matter of a few days' work only, after we should have reached the place. He was to return to Olympia, situated at the head of Puget Sound, immediately, where I was to meet him.

I started on the trip June 11th, and went down the Willamette to Portland in a steamer. From Portland I boarded another steamer and traveled down the Willamette and Columbia Rivers about 70 miles to the mouth of the Cowlitz River. From this point I went up the Cowlitz River in an Indian canoe, propelled by two or three Indian men with poles, about 35 or 40 miles, as far as the Cowlitz Farms Landing. From Cowlitz Landing I rode horse back 50 or 60 miles to Olympia, at the head of Puget Sound, where I arrived June 16.

At Olympia I learned the agent had gone ahead down the Sound, and had left instructions for me to follow with the mail carrier to Alki Point, near the present site of Seattle, about 60 miles from Olympia, where he proposed to meet me.

We left Olympia in the afternoon in a small skiff, and made a landing at Steilacoom for the night. This was about 20 miles from Olympia. Upon reaching Alki Point early the next morning I met the agent, who had engaged three Indians with a large Indian cedar canoe to take us to Bellingham Bay, which I believe was about 100 miles northerly.

On leaving Oregon City I had heard of an Indian outbreak at Puget Sound, and I learned that there had been an attack at Bellingham Bay. I was advised to abandon the trip, but I had resolved to keep ahead. Two other men, friends of the agent, went with us from Alki Point (Seattle), which, including the three Indians, made seven in our party. After leaving Alki Point we encountered some dangerous experiences with our canoe on the Sound and got thoroughly drenched with water several times, but the Indians succeeded in keeping the cedar canoe right side up.

At length we reached Bellingham Bay, which I believe was the same location where the city of Whatcom, Washington, is now situated. When we arrived we found five or six men, which was all the inhabitants then residing in that vicinity. They occupied a small log cabin, which was the only building within many miles.

This was the exact location where two men of the same party had been killed by the Indians a short time previous. The door of the cabin was literally riddled with bullets.

The trouble had been with the Indians from up the British coast, near Fort Snelling. It was a very intellectual tribe of red men, who were tall and well proportioned, with a skin almost as white as many of the white race.

A number of the Indians had been employed for a considerable time at one of the sawmills along the

sound, and had been very satisfactory laborers, when for some cause they concluded to quit work. The proprietor refused to pay them the amount due at that time unless they should continue. A dispute arose, when the proprietor drew his revolver and shot one of the Indians dead on the spot. The other Indians immediately left for their homes. This caused the trouble. The chief of the tribe fitted out a war party and they down the coast to the sound in large war canoes, at once created a general alarm at the settlements along the sound. These war canoes were made from cedar logs, and neatly and elaborately ornamented. They were of sufficient capacity to carry 50 warriors, one with a paddle.

The men at the coal camp at Whatcom had heard of danger and had taken the precaution to keep out a guard at night, two at a time. They supposed the indians would approach them by water in case they made attack, consequently they adopted the plan of keeping guard in a boat, anchored a short distance from shore.

On the night of the attack, two men were on guard in the boat as usual, when the men in the cabin heard shots at the landing, only a few rods distant. Thoroughly alarmed they took to the brush for safety. The Indians fired many shots into the house, but the men had made escape. The two men on guard were supposed to be surprised and killed, but their bodies had not been discovered when I was there. One evening about sunset we heard much shooting out in the bay, but it was too far away for us to see so as to ascertain the cause. We supposed it to be a war party of the Indians, which was later learned to be the fact. They were exchanging shots with some men in boats.

That night we expected an attack at our exposed camp, we were all armed and prepared to defend ourselves well as possible under the conditions. But they did not trouble us and we heard nothing further from them during our stay.

I completed the survey as was desired. As I now remember I surveyed two square miles of land, on which the coal mines cropped out. After the surveys were completed we left Whatcom on our return, and arrived at Steilacoom on the evening of the 3d of July, 1854. Here we celebrated Independence day and remained until the 5th, after which I returned to Oregon City over the same route I had traveled when on my way out, having been absent about twenty-eight days.

After my return Colonel Gardiner, the surveyor-general, offered me the work to finish the remainder of a contract somewhere in the northern part of the territory, upon which a deputy had been at work and had failed to finish it. So far as I was able to learn in regard to it, it was located in a rough, brushy, timbered country, and was not a desirable piece of work.

Yet, as I learned, the deputy who first took the contract and undertook to do the work, did not attend to his business as he should have done, which was probably the real cause of his failure.

HOMeward BOUND

I was satisfied that I could make the work pay me some profit, but it was not a very desirable contract. Still, if I refused to accept this offer from Colonel Gardiner, I could not afterwards consistently ask him for a better contract. If I should accept it and finish the work, I might later be in a position to receive a better offer from him. The most desirable country in Oregon, lying west of the Cascade mountains, had already been surveyed, or was under contract.

At first I was undecided which course to pursue. It seemed to be a turning point in my life. Should I engage to do the work, I might perhaps remain in Oregon for years to come, and possibly never return home. At that time it was about five years and three months since I had left home, and I had learned that the longer the absence was continued, the less strong my desire to return. But I soon came to a decision to go back to my old New Hampshire home, if for nothing more than a visit.

I thought that perhaps this was as good an opportunity to do so as would offer itself in the near future. Consequently, I made arrangements with Mr. Preston to draw the money for the balance of the surveys for which I had not yet been paid, and to forward the same to me at Hudson, N. H., my home. After having been a resident of the territory of Oregon for some more than three years, I left Portland for San Francisco in the steamer Columbia, which was the same vessel that brought me to Oregon.

To convey a faint conception of the many vicissitudes of the surveyors employed in making the surveys upon the public lands of the United States in sparsely settled regions, I will relate two or three incidents from many similar experiences which occurred while I was engaged upon the public surveys of Oregon.

One morning while making surveys of township lines, previous to leaving camp I gave the campmen their orders (I had two at that time) to move the camp during the day six miles east, or as near that point as they could find wood and water for camp purposes.

We were to start from the township corner that morning, and survey a line due east. Provided it should prove a good country for surveying, we could nearly or quite reach the opposite township corner, a distance of six miles, where I had ordered the campmen to pitch camp.

This was in the late autumn when the days were short, and at that season we took no lunch with us. The usual time for us to finish breakfast and leave camp in the morning was as early as sunrise.

On the day mentioned, our line was principally through a timbered and brushy country, so when night came we had completed but three and one-half miles.

Just before it began to grow dark, we left the survey and started east, expecting to find our camp within two or three miles. We had traveled about that distance when we came to a wagon trail or road, the course of which was nearly north and south, and near which was plenty of wood and water. We halloed, as was our custom, to attract the attention of the campmen, but received no reply.

Under ordinary conditions we could be heard at least one mile, and sometimes, when conditions were more favorable, nearly or quite two miles. As we heard no reply from the campmen, we followed the road south about three miles, but could hear nothing from our camp. We then retraced our steps to the point at which we first intersected the road, and followed it in the opposite,

or northerly direction, for about an equal distance, but could hear no reply to our calls, when we felt certain the camp could not be in that direction.

We again retraced our way to about the point at which we had at first intersected the road. We had seen no house on that day.

It was then about eleven o'clock at night. I saw a place by the roadside where there was an abundance of dry wood, and I said to the party that I should camp there for the night. They all concluded to adopt a similar course. We started a good blaze and remained near it until morning.

When morning came we started to find either our camp or some house. One of the men went with me, and we traveled in a southerly direction. The two other men went in another direction.

About ten o'clock in the forenoon we came to a small cabin. We entered it and found a man there who was living alone. I asked him if he could prepare something eatable for us, as we had eaten nothing since early in the morning on the day previous. He replied he was alone and that he could do nothing for us. I said to him: "Have you any provisions of any kind about your house?" His reply was that he had a little. I said that "we must have some of such as you have," and that if he did not produce it for us himself we would help ourselves to such as we might be able to find about the house. He at once kindled a fire and prepared us a dinner, but it was near noon before our meal was in readiness. Previous to the time our dinner was in readiness the other two men made their appearance, and they had become so much exhausted and faint for the want of food, they had been eating the barks and roots of trees.

The next day I commenced work again without looking for camp any farther, but selected a line in another direction, which was through a country with settlements.

We worked three or four days, stopping at the houses for accommodations at night, before we heard anything from camp. Then the campmen found us, and I afterwards learned, although they would not admit it at that time, that instead of going six miles east, they traveled six miles south, and camped about nine miles from the point where they were ordered to go. On another occasion, at the time I was engaged in running a party for Mr. Elder, upon going to camp one evening when it was nearly dark, we followed a line into a brushy bottom to correct a quarter section post that had been set on a random line by the other party at work for Mr. Elder. One man accompanied me, who was present with the other party when the post was located. We followed the surveyed line and found the post without difficulty, and made the necessary correction, marking witness trees, etc.

At that time we knew the location of our camp, as it was not to be removed on that day. It was not more than a mile distant: in a straight line. To follow the line back, upon which we had come, until we should reach the open land, and then go to camp would double the distance to be traveled.

The man with me proposed to take the short cut through the brush, and claimed to know the way as he had been over the same route with the other party. It was becoming quite dark, and I consented to his leadership, against my better judgment, which was something I seldom did, to follow another in the woods.

The route was very brushy, with-much fallen timber, and being quite dark, our progress was slow. We continued to travel, making our way through the tangled brush as best we could. At length we came to a small river, from which we drank some water, and where we rested for a short time. It being dark, it was impossible to read the bearing from the instrument. It was my opinion that we had not traveled altogether in a direct line. My companion desired to cross the stream, but I was convinced that we were on the same side as was our camp.

We again started and traveled until about eleven o'clock, previous to which I had utterly abandoned all hope of reaching camp on that night. As we came to a tall white fir tree, I said to my companion that I should camp under that tree for the night, as I believed we had traveled in a circle, at least to some extent, and there was no possibility for us to reach camp before daylight. He didn't agree with my opinion, and he claimed we had traveled nearly in a straight line. He thought that we must be near camp, and left me, expecting to each camp within a short time.

I climbed the tree, probably to a height of nearly 100 feet, to break off some twigs, on which to lie down for the remainder of the night. I remained in the tree for a considerable time, listening to the noise that came from my companion as he made his way through the brush. His progress was slow, as ours had been, and I could distinctly hear the brush crack, but instead of keeping a straight line, as he supposed he was doing, he soon began to bear away to the left in a curved line. He continued to circle to the left, but not for once did he pass beyond my hearing.

In about three-quarters of an hour after he left me, I could hear him approaching from nearly the opposite direction from that in which he had started. I descended the tree and awaited his approach. When he had reached a point within a few rods of me, he halloed. I answered his call. He seemed surprised and came to me. His first question was how I came there. It was some time before I could convince him of the act that I had remained during his absence at the same place where he had last parted from me.

He thought he had traveled in a straight line, and when he first heard my voice in answer to his call, he relieved he was almost in camp. When he became convinced that he had passed around in a circle, and had made no progress toward camp, he seemed to be satisfied to remain with me until morning. The next morning I led the way to camp without any difficulty, where we arrived shortly after breakfast time, having been without food for some more than twenty-four hours.

These are sample or specimen cases, and many other similar, more or less varied experiences could be related, if space would permit, such as sleeping out in the mountains in the winter season, with one blanket only, with a cold drenching rain falling all through the night. I have awakened to find myself completely covered with snow two or three inches in depth, with the exception of my face.

At that time there were roaming in the coast and cascade ranges of mountains and valleys numerous wild animals, such as grizzly and black bears, cougars or mountain lions, wild cats, gray wolves and coyotes, deer, moose and many other species of animals. There were also two or three kinds of rattlesnakes.

Sometimes we would approach within sight of one of the animals, which would seem to be pleased to increase its distance between us as rapidly as possible. They are savage, ferocious animals when aroused, but when they are respected and passed at a distance without being interfered with in any way, they are seemingly not to be feared. To keep peace with them, their rights as monarchs of the forests should always be respected.

In San Francisco I met Mr. James E. Freeman, who was about to start on a survey of the public lands of California, and he desired me to assist him in doing the work. He offered me a salary of ten dollars per day and board for the entire time we should be absent from San Francisco in completing the work of the contract. I considered that to be a very liberal offer, and I hesitated before declining it. However, as I had made a start for home, and my mind had been fully decided in that direction, I concluded not to make a change.

I also found my uncle, Alfred Cummings, in San Francisco, occupied with carpenter work, and he had concluded to go home with me. San Francisco had greatly increased in size and population, and had improved its condition during my absence. I remained there eight or ten days awaiting the departure of a steamer for Panama.

We left San Francisco near the end of July and took passage on the steamer Yankee Blade. Before reaching Panama the coal became exhausted, and we landed on a small, uninhabited island, where wood

was cut and carried aboard the vessel in boats for fuel, in order to complete the voyage. We were then within two or three days sail of Panama.