

PHASES OF INDUSTRIAL GROWTH IN THE STATE OF OREGON

HOW WATER TAP THROUGH OREGON

Will Go From Columbia South by Railroad and Stage to California.

TOUR OF INLAND EMPIRE

Joseph Gaston Gives His Impressions of a Country of Marvels and Varied Resources—Experience in Snow Storm.

PORTLAND, Feb. 25.—(Toslie Editor.)—Leaving Portland on January 15, I struck a great snowstorm at Hood River, where the snow had reached a depth of six inches. At Blazer at 1 o'clock P. M. the snow was eight inches deep and falling rapidly. Taking shelter in a Columbia Southern coach, the passengers, 25 in number, impatiently waited four hours for the train to start for Shaniko. The train was held up thus, waiting for nine sheepherders coming down on a freight from Heppner on their way to Wasco, for which service they paid the Columbia Southern \$2.00 cash, which shows that Mr. Harriman is running that line for the accommodation of sheep and not for profit.

We were five hours on the road from Riggs to Shaniko, 26 miles, which shows that Mr. Harriman is exceedingly careful of the old railroads. This road, obviously constructed under great difficulties, has been of immense advantage to that country, and E. E. Lytle's management of it must have been very satisfactory, for every body has nothing but praise for him. Five prosperous towns—Wasco, Moro, Grass Valley, Kent and Shaniko—have been built on the line of the Columbia Southern in Sherman County, is the most important.

Moro has a population of about 500. Two banks, a prosperous newspaper, published by that old pioneer of Oregon journalism, D. C. Ireland, and his son; a dozen good stores and all other shops and signs of prosperity. The other towns named are all growing, prosperously, and good openings for business.

Shaniko, being the southern terminus of the railroad, has special advantages in being the receiving and shipping point for a vast region, receiving wool and livestock from and shipping merchandise to points 150 miles south. The Shaniko warehouse probably handles more wool annually than any other local warehouse in the United States.

Traveling by Stage.
At Shaniko I was held up two days for the storm to pass, and it did pass on northward at the rate of 75 miles an hour, the snow skimming along in sheets and avalanches, not falling on the ground. From Shaniko to Prineville we had a covered stage, six passengers and half a ton of freight, and made the 60 miles in two days, daylight. For most of the way we had as fellow-travelers on the road and campers in the same house at night, 13 timber locators, of whom two were ladies, and of whom we will hear more further on.

This was a cross-country run, climbing up a hill, the passengers walking to spare the team, and then descending down the other side with wheels rough-locked to keep from slipping off the road down the mountainside a thousand feet to "kingdom come."

There are, however, some rich valleys between Shaniko and Prineville, where vast quantities of alfalfa are raised and many thousands of sheep and cattle feed. The alfalfa is raised on the prairie, and the sheep and cattle are raised on the hills. C. M. Cartwright, a notable farmer, not only as a principal of a farm, but for a whole village of nice buildings, for the companies of the great estate, which owns 25,000 sheep and several thousand cattle, and where the owner lives in a residence as fine as anything on "No. 10" in Portland.

Prineville has been the subject of much newspaper comment during the past year. It is the county seat of Crook County and is well located at the junction of the Ochoee and Crooked River. It is now and will always be a prosperous town and the business point, being the natural center and distributing point for more than 2,000,000 acres of rich country, embracing the valleys of the Mark, McKay, Mill and Ochoee creeks, and the great valley of Crooked River and all its tributaries. It has a fine hotel, two banks, a prosperous newspaper, a dozen or more large stores and shops, a school building that would be a credit to Portland, several churches, and they are now erecting a stone block for a hotel and store which would be a credit to any city of 50,000 people.

Sure to Get a Railroad.
Any railroad passing through this region must touch this town, for its business, which cannot be taken away from it, is so large that it cannot be neglected. The population is about 1200, of as hospitable and progressive people as can be found anywhere, and the place bids fair to become a very large town.

From Prineville to Bend is a delightful drive of 25 miles over the finest wagon-road of its length in Oregon. Over a level country, and a hard, smooth road, the team sped along at the rate of seven miles an hour. The many new and taste-

ful cottages and clearings in the boundless sagebrush along the road show that the country is being rapidly settled up in anticipation of the early advent of the railroad. Until recently this country was deemed worthless. But the irrigation canals running out from Bend will put a new life into the country, and the volcanic soil, practically level, and convert the seeming desert into a garden for fruit, flowers, grain, grass and all vegetable crops, developing such wealth and prosperity that many can now foretell.

The new town of Bend, on the Deschutes River, is fortunately located as to bid fair to become the chief center of business, population and culture in this great Deschutes Valley. Only two years old, it has electric lights, city waterworks, three fine hotels, a bank and one of the best-edited and most popular papers in the state, and large and prosperous stores. All the residences are new and handsomely painted, and many of them equal to anything in East Portland, and they are now erecting a public school building equal to anything in the state.

Blocked by Heavy Snow.
At Bend we struck the great snowfall, the heaviest in 20 years, according to the oldest inhabitant, and were held up for four days awaiting the opening of the road. From a point about 12 miles south of Bend, down to Silver Lake, 80 miles, the depth of the snow averaged about four feet before settling. The stagecoach managed to get through a letter mail on horseback, but abandoned all their wagons. Then, bunching up their teams, they forced them over the road in spans, wading through the snow for three days, until a road was broken.

This great fall of snow at this point is accounted for by the proximity of the line of the Cascade Mountains. Promoted by the stage company the use of a fine "cutter," which the village blacksmith was building, the vehicle turned out to be a horse-killer, somewhat like horse and sledge. But as the mail had to go, and as I was the only passenger, we—"Butcher Bob," the driver, a jolly good fellow, and myself—got out of Bend on the evening of January 23 for Silver Lake.

A good-natured crowd had gathered to give us a grand send-off, and bidding me good-bye, we started on our journey. We departed amid jocular admonitions from the crowd.

Hardships of Winter Travel.
Bob assured his passenger that we would get through, and we did. Leaving Bend at 7 o'clock in the evening, following through the snow all night, delivering our mail, and getting a letter to the farmers' letter-box on the line, we reached Cort Allen's ranch at 4 o'clock the next morning, 26 miles in nine hours, and myself pulled out of Bend on the evening of January 23 for Silver Lake.

A good-natured crowd had gathered to give us a grand send-off, and bidding me good-bye, we started on our journey. We departed amid jocular admonitions from the crowd.

Confident of the Future.
The town is already a hustling place, confident of its own future; with electric lights, city water, banks, stores, hotels, newspapers, steamboats and every shop, factory and facility to push ahead with an active, healthy growth. Sixty new houses have been built the past year; many are under construction, and there is a certainty of having railroad connection with the whole country within four months. Real estate is booming and prices advancing, and the town can never have a competitor within its own exclusive territory.

Many Business Openings.
There are business openings all over this new country for men of business with some money, and for active, capable young men willing to work.

It was a short but a day's sleighride from the Falls down to the end of Lindley's logging railroad at Pogeama. And then from that plateau, on the top of the Siskiyou Mountains, we found the snow two feet deep and everybody cutting firewood, but a short run down to the Southern Pacific and over into the Rogue River Valley, at Ashland, where we found all the farmers out in the fields in their shirtsleeves plowing in the warm sunshine for their spring crops on February 3; a veritable transformation scene that made me doubt my own eyes.

Like the "Happy Valley."
Rogue River Valley beats the world on climate. The hand of man has planted orchards, vine, fruits and flowers and built pretty cottages in this favored spot and has made it still more attractive. Forgetting the railroad and its noisy engines, and giving rein to a little imagination, the graceful outlines of the hills with their purring streams, the groves of spreading oaks and the miles and miles of orchards make up a scene which might easily lead the beholder to think he had in some magical way wandered into the happy valley of Basseterre, painted by the immortal Samuel Johnson.

Killed While Stealing a Ride.
CHEHALIS, Wash., Feb. 25.—(Special.)—John Paulson was killed by a train half way between Napavine and Winlock Tuesday night. His head was dismembered from the body, which was dragged about 100 feet. His blankets were picked up near by. Paulson was evidently riding the brakebeam and fell under the north-bound train. He was about 20 years old. Papers found on the body showed that he had been near Kirkland, Wash. The coroner's verdict was in accordance with the facts stated.

Aberdeen Oplum-Joint Raided.
ABERDEEN, Wash., Feb. 25.—(Special.)—Lizzie Morgan and Viola Rease, colored, were arrested today for conducting an opium joint. It is the first case of the kind ever found on Gray's Harbor.

people, two banks, two excellent newspapers, one of which is printed and edited by two young ladies, a dozen very large and new papers in the state, and large and prosperous stores. All the residences are new and handsomely painted, and many of them equal to anything in East Portland, and they are now erecting a public school building equal to anything in the state.

Railroad From Nevada.
The terminus of the railroad running north from Reno, Nev., is only 90 miles distant, with practically an open level country between, assuring the extension of the road to Lakeview within a year. It has boundless agricultural resources all around, and altogether it has a certainty of becoming the big town of South-eastern Oregon.

One hundred miles west from Lakeview is located the progressive town of Klamath Falls. The country between the two places is rich in rolling hills, covered with much fine timber and interspersed with charming little valleys of great fertility. The whole country is covered with splendid three-storied bank houses of cattle, like all the country from Shanks to Lakeview. This livestock is now, of course, all gathered into the feeding grounds to be fed from the great ricks of alfalfa until the snow disappears.

Alfalfa is the great forage standby of Eastern Oregon, and the article which produces the fat, the muscle, the wool and the cash, no matter whether fed to horses, cattle or sheep. One can't talk timothy hay to an Eastern Oregon stockman, for he has more facts and arguments than one could answer with a book. Klamath Falls has more resources and advantages to build up a city than any other place in Oregon outside of Portland and Baker City. The Government will irrigate and reclaim from swamp 100,000 acres of rich land around the town. All the other lands within a radius of many miles are rich, productive soil, and which it covered with fine timber. Right at the town is a vast cheap water power, which can be used five times over in a mile to operate manufacturing or electric roads.

Confident of the Future.
The town is already a hustling place, confident of its own future; with electric lights, city water, banks, stores, hotels, newspapers, steamboats and every shop, factory and facility to push ahead with an active, healthy growth. Sixty new houses have been built the past year; many are under construction, and there is a certainty of having railroad connection with the whole country within four months. Real estate is booming and prices advancing, and the town can never have a competitor within its own exclusive territory.

Many Business Openings.
There are business openings all over this new country for men of business with some money, and for active, capable young men willing to work.

Like the "Happy Valley."
Rogue River Valley beats the world on climate. The hand of man has planted orchards, vine, fruits and flowers and built pretty cottages in this favored spot and has made it still more attractive. Forgetting the railroad and its noisy engines, and giving rein to a little imagination, the graceful outlines of the hills with their purring streams, the groves of spreading oaks and the miles and miles of orchards make up a scene which might easily lead the beholder to think he had in some magical way wandered into the happy valley of Basseterre, painted by the immortal Samuel Johnson.

Killed While Stealing a Ride.
CHEHALIS, Wash., Feb. 25.—(Special.)—John Paulson was killed by a train half way between Napavine and Winlock Tuesday night. His head was dismembered from the body, which was dragged about 100 feet. His blankets were picked up near by. Paulson was evidently riding the brakebeam and fell under the north-bound train. He was about 20 years old. Papers found on the body showed that he had been near Kirkland, Wash. The coroner's verdict was in accordance with the facts stated.

Aberdeen Oplum-Joint Raided.
ABERDEEN, Wash., Feb. 25.—(Special.)—Lizzie Morgan and Viola Rease, colored, were arrested today for conducting an opium joint. It is the first case of the kind ever found on Gray's Harbor.

each and 40 head were sold at \$150 each. They average from 1250 to 1500 pounds each, and some of them were only halber broken.

Also this from Canyon City: "J. D. Combs and W. H. Officer will leave soon for Portland with 15 span of fine horses, which they will sell at that place. They have refused \$400 each for the horses, and since they are in great demand, they expect to realize quite an advance over that figure on the Portland market."

The news from the large Eastern Oregon ranches as to the condition in which cattle are keeping through the winter is generally good. Some of the hay supplies are running out and the cattlemen are trying to buy. Rye hay is the mainstay of some of the ranches, and stock is said to be doing well on it. From one ranch in the Vale country we learn that for 2000 head they are feeding 20 tons a day of this hay.

The following paragraph is taken from the Indiana Farmer: "Two excellent farms and cattle feeders in Pike County, this state, Messrs. J. Morrison and R. M. Craig, a few days ago sold two carloads of Angus and Shorthorn steers in the St. Louis market at \$5.50 per 100 which average 1450 pounds. It was the top price of the market for the day. They were fed corn and shredded fodder, and had the run of good pasture several months, making a gain of 700 pounds."

Likewise, the following item: "The Experiment Station of the Kansas State Agricultural College in Manhattan, Kan., has just issued Bulletin No. 130, entitled 'Steer Feeding Experiment.' The object of the experiment was to test alfalfa as the sole roughage for steers, and the results were compared with a mixture of roughages. It being the opinion of many feeders that a mixture is preferable. In this experiment the steers getting alfalfa as the sole roughage made better gains and at less cost."

If an experiment were carried out at the Oregon Agricultural College in which the new pulverized alfalfa hay—grinding up the entire plant, including the dry stems, rich in protein—were to be used, not as a substitute for this roughage, but as the main item in the feeding, the results would be studied with much interest.

This material, produced at present in California and Idaho, but not in Oregon, so far as is known, has had great success, not only for cattle, but also for sheep, hogs and chickens.

The Southern Pacific Railroad is as good as its word in the alfalfa experiments in each Willamette Valley county. At the Silverton Development League meeting it is reported that they promised 20 or more alfalfa fields as soon as they could be procured. The Telephone-Register of McMinnville, reports progress in these counties thus: "H. E. Johnson, traveling freight



HIGH PRICES FOR HORSES

OREGON STOCK IN DEMAND FOR EXPORT AND ARMY SERVICE.

Cattle in Eastern Part of State Are Standing Hard Winter Well.

agent of the Southern Pacific Company, was in the city last Tuesday, looking after the company's proposition to experiment with the growing of alfalfa. He secured a tract of land for experimental purposes near F. W. Martin, and another tract from Mr. Atkinson, near Newberg. These two tracts are of very different character of soil. The land will be inoculated and the best methods of cultivation used. That the results will be satisfactory there can be little doubt.

The noticeable point is in the different character of lands to be handled. Experience here, as well as in other countries, shows the hardy and adaptable nature of the plant. Known in both France and England as lucerne, it is cultivated there on soils with chalk, sand, loam and marl as subsoil, as well as on the deep, alluvial soils similar to those on which many of our experiments are being tried. In those countries the plant is often drilled instead of sowed broadcast, and covers the ground between the rows with thick vegetation. The advantage is that weeds are kept down till the alfalfa has taken firm hold.

But there, as here, drainage of the upper soil to a depth of at least 18 inches is an absolute necessity. Such drainage may be either natural or artificial. Whenever the roots strike a water-sogged stratum they tell the tale at once. The leaves wither, the stems dwindle and the plant dies off.

The modern farmer, when he sets out to sow alfalfa fields, sees to it that the soil is duly inoculated with bacteria, on which the vigorous growth of the plant depends. The Agricultural College at Corvallis is in a position to supply earth containing abundance of these bacteria to all alfalfa growers, free of charge. When once the growth has been established on a farm on a small scale, by thorough culture of a small patch of alfalfa ground, from that corner of the farm enough inoculated soil can be taken to insure the growth of as large an area as is desired. It is an aid, and a most important one to insure success when the other necessary conditions are complied with. Briefly stated, these are deep plowing, clean cultivation, fresh, clean seed, and deep and efficient subsoil drainage. Of course, weeds must be cut down before seeding. The second year the alfalfa will take care of itself.

Good Weather Hurts Wheat.
City people, enjoying the recent dry, brilliant weather, did not think of its injuring the winter wheat by prematurely forcing its growth. But the Salem Spokesman no doubt tells the truth.

"The farmers who have a wheat crop in this season in the vicinity of Salem are now pasturing it, which is an excellent plan as the wheat is maturing very fast by the fine weather and would prevent stooping to some extent if it is not kept down to the regular normal growth. The fair weather which prevailed during the former part of this month and the after part of last, caused the wheat to turn somewhat yellow, and the farmers were not pleased as to the result of it. The rains of the past few days, however, with the prospect for their reasonable continuance, will be an assurance of natural and successful growth from now on."

To turn the sheep into the field and keep them there until every vestige of Spring green has gone and nothing but long lines of leaved off roots are visible seemed hard medicine the first time it is tried. But once the sheep are taken off and the wheat starts again how magical is the change.

Sometimes from ten to 20 stools were but one central shoot showed itself before the sheep took a hand, a bunch of stems, each in due time crowned with its yellow ear.

Small Capital Needed.
A cannery with a daily capacity of from 3000 to 10,000 cans could be put into operation for about \$5000. A larger plant could be installed for a corresponding larger outlay of capital, but one of this size could handle all the fruit that is now raised, and additions could be made when needed at a small cost.

After placing the early products on

ALL SPRAYING NOW.

Newspapers Comment on Campaign for Cleaner Orchards.

DANGER IN ROSE BUSHES

Multnomah Inspector Insists That City People Keep Them Clean.

Freewater Wants a Fruit Cannery.

The campaign for clean orchards is in full swing and everywhere spraying is being resorted to by fruitgrowers, as shown by the country newspapers. The following is from the Argus: "The Hillsboro orchards are being sprayed with a vengeance, which goes to show that the adaptation for killing the San Jose scale has not been fruitless. Orchard after orchard has been entered, and the pruning knives and spray pumps have been working over them. This should extend into the country, and be kept up for two or three years, and then we shall have some fruit that will grace any market in the world."

And this from the Corvallis Times: "As to cleaning up the old orchards, it looks as though Benton would lead the procession. Members of a spraying firm in the Times office yesterday, declared that every farmer they have met expects to join in the war or cut down his trees. Professor Corley is kept busy night and day."

Culprits in the Cities.
Soon the culprits left out will be the owners of individual trees and of rose bushes in the towns and cities. In Multnomah the inspector is getting after them sharply—so much the sooner will the end be gained. Remember the new edition of bulletin on spraying to be had from the Corvallis Agricultural College for the asking.

It is a pleasure to notice the address of Thomas Frisco, of Dundee, at the Forest Grove horticultural meeting on walnuts. Eminent practical and sensible, especially in the cautions as to planting no seedlings except those raised from nuts from grafted trees. The speaker warned his hearers against using black walnut stocks, lest the nuts from grafts thereon should be dark colored in the autumn, bearing as a prodigious blotch upon the reputation of our experiments are being tried. In those countries the plant is often drilled instead of sowed broadcast, and covers the ground between the rows with thick vegetation. The advantage is that weeds are kept down till the alfalfa has taken firm hold.

But there, as here, drainage of the upper soil to a depth of at least 18 inches is an absolute necessity. Such drainage may be either natural or artificial. Whenever the roots strike a water-sogged stratum they tell the tale at once. The leaves wither, the stems dwindle and the plant dies off.

The modern farmer, when he sets out to sow alfalfa fields, sees to it that the soil is duly inoculated with bacteria, on which the vigorous growth of the plant depends. The Agricultural College at Corvallis is in a position to supply earth containing abundance of these bacteria to all alfalfa growers, free of charge. When once the growth has been established on a farm on a small scale, by thorough culture of a small patch of alfalfa ground, from that corner of the farm enough inoculated soil can be taken to insure the growth of as large an area as is desired. It is an aid, and a most important one to insure success when the other necessary conditions are complied with. Briefly stated, these are deep plowing, clean cultivation, fresh, clean seed, and deep and efficient subsoil drainage. Of course, weeds must be cut down before seeding. The second year the alfalfa will take care of itself.

To turn the sheep into the field and keep them there until every vestige of Spring green has gone and nothing but long lines of leaved off roots are visible seemed hard medicine the first time it is tried. But once the sheep are taken off and the wheat starts again how magical is the change.

Sometimes from ten to 20 stools were but one central shoot showed itself before the sheep took a hand, a bunch of stems, each in due time crowned with its yellow ear.

Small Capital Needed.
A cannery with a daily capacity of from 3000 to 10,000 cans could be put into operation for about \$5000. A larger plant could be installed for a corresponding larger outlay of capital, but one of this size could handle all the fruit that is now raised, and additions could be made when needed at a small cost.

After placing the early products on

the market, which soon becomes overstocked, there comes a lull, and consequently, loss to the grower. A practical standpoint, would put dollars into the producers' pockets."

How many poultry people are in this state crying for similar steps to be taken.

CROWS MUST BE EXTERMINATED

Indisputable Evidence That They Destroy Bird Life.

Some weeks ago attention was called to the havoc wrought in the stock of China pheasants and other game birds by our Oregon crows. A bounty on these pirates was suggested, to be supplied from the game license surplus. This should surely be kept in mind now, and candidates for legislative honors, should be requested, even required, to pledge themselves to this amendment. Many hunters who are good observers report the stock of Chinese pheasants as decreasing and the number of these black robbers to be increasing fast.

When the last season opened many hen pheasants were found without a single chick; sometimes six or seven old hens gathered in one bunch for company. One of the best of the outdoor papers, the "American Field," of Chicago, has just new printed the following indictment of the murderous crow:

"The crows begin about 4 o'clock in the morning, or a little later, and they look the shade trees over for the young birds. They go into the trees that stand in yards and that line the streets, close by buildings. The robbers will creep from their houses the crows disappear for the day, but begin again next morning just the same, and they eat every young bird they can find. The robbers will creep up a good fight with them, but the crows will get the young just the same. Every kind of small bird that builds its nest in trees or on the ground, or in people's stables, is rapidly exterminated. After the young have reached the age when they can fly well I have watched the crows catch, kill and eat them in the air. I have watched them break up the nest of the meadow lark that builds on the ground; in fact, they kill everything they can, being, as they are, very fond of meat."

And the field says: "The young of song, insectivorous and game birds are worth more than all the crows and the trouble is that the will bring about their declination, if not annihilation."

"The laws of most states protect the nests of game, song and insectivorous birds and the eggs of these birds are not less so on the part of such birds as have a predilection for the young of these young birds, and a premium should be offered for getting out to them the fate of the birds they would destroy."

"Save the song birds and destroy their enemies."

BACTERIA AID CHEESEMAKER

Prof. Pernot, of Agricultural College, Completes Experiments.

The following letter from Professor E. F. Pernot, bacteriologist of the Corvallis Agricultural College, is of more than passing interest. In his laboratory were to be seen recently samples of most cheeses of commercial name and reputation, all made by the inoculation of the same material with varying cultures of bacteria.

So he writes with a general knowledge of his subject: "It is within the power of any of our modern cheese-makers to control the flavor and aroma of these dairy products. They operate by the use of pure cultures of selected races of organisms, which will produce cheeses of various standards. Micro-organisms are the specific agents in producing cheese flavor. A single variety acting upon fresh milk leaves behind potamones, which have a distinct enzymic activity upon the curd, bringing about what is commonly known as curdling or flavor."

"Therefore it is needless to say that if each variety of germ produces a distinct potamine when growing in milk, then all that is necessary to produce a cheese of a certain flavor is to inoculate the milk with a culture of organisms which produce the desired flavor, and exclude undesirable ones."

"Since the introduction of cream separators and of Pasteurizers, milk which is intended for making butter and cheese is under the full control of the dairyman in manufacturing standard dairy products."

"I have separated seven different varieties of organisms from foreign and domestic cheese, which, when inoculated into milk, and subsequently made into cheese, have reproduced the flavor of the cheese from which they were isolated. These cheeses were all made of milk from the same source, under similar conditions and in the same dairy."

"The brewers have long since recognized the necessity of utilizing and perpetuating pure cultures of certain ferments to insure a uniform product in their products. The wine-makers do the same, then why not the dairyman?"

"The only reason why we do not produce cheese of the different varieties to equal or surpass that of any other country is, perhaps, because our people are not painstaking enough. They want their raw material to be turned into gold with the least possible effort, and disregard the necessity of absolute cleanliness in the dairy and in the handling of milk."

"But all this is rapidly coming on, and with it the full development of the Pacific Northwest as one of the greatest dairying districts of the world."



NO. 1—END OF DITCH IN SUMPTER VALLEY.

NO. 2—DITCH EMERGING FROM RESERVOIR.

NO. 2—DITCH EMERGING FROM RESERVOIR.