

FRIDAY, NOVEMBER 20, 1903.

Oregonian

PROF. LECKENBY'S PAPER

Experiments at Union Have Been Highly Successful - Underground Piping the Surest Method of Leeching Out the Native Alkali,

The following address on "Leech-Alkali soils" was delivered by Prof. some places it is actually vitrified.

A. B. Leckenby, superintendment of and in other places you can break it it for the winter.

soil in Eastern Oregon, the paper is to get rattled. of especial interest to irrigators in tuls part of the state.

Prof. Leckenby said: Mr. Chairman and Friends: I wont detain you but a few moments. I would like the privilege of digressing for a few words. Nine years ago, standing on the banks of the Columbia and looking at that stream rolling down, I made a prophecy that in the near future the columbia would flow in a different direction, and I would not be one bit surroused if the water just as if it were in a dish. It cannot run away because the bottom is sealed up. The evaporation takes place and it is brought to the surface by capillary attraction. When our water runs down to the sea and our great irrigator, the sun, which he stood it seemed to last Thursday.

Mr. Lewis, who has charge of the water-guaging department, will remain in the city all winter, and will carry on that work during the win down and a foot on the summit of the office and will make his head of Birch Creek Sunday after the Hemphill sheep. He reports the sun water-guaging department, will remain in the city all winter, and will carry on that work during the win down and a foot on the summit of the office and will make his head the office and will make his head. In speaking of the convention, which he stood it seemed to the same of the office and will make his head. In speaking of the convention, with the water-guaging department, will remain in the city all winter, and will carry on that work during the winter of the same and water the column in the city all winter, and will carry on that work during the winter of the same and water the column in the city all winter, and will carry on that work during th rection, and I would not be one bit surprised if the citizens of Mars looking through their telescopes should, in the not far distant future, observe canals on our planet the observe canals on our planet the

ment will go on until all the land that suffers for want of water will be supplied. We are living now in a quite different age. We can accomquite different age. We can accomplish so much more. We call the symporation takes place through the forces of nature to assist us.

We do not do it by drudgery and hard work and when we go to work there are no restrictions but what

I believe a change has taken place in the world and we are going to do going to make this land suitable to mite. We then planted out our wallive upon until uninvited poverty is unnecessary. It is a fact that great poverty is the accompaniment of than it ever was before. Why! either willful waste or careless

gladness when we think that in the gladness when we think that in the future, if we do our duty, that poverty may become unnecessary. Until recently the great powers of the world united in one effort, war, destruction. Let the recording angelesay that the United States has gone to work to accomplish good, not to

destroy, but to create. Now to my subject; I will do the best I can to make it clear and to give some ideas and also to get as Get some paper you can get enough

The question of irrigation always has the accompaniment of alkali with will stand to be irrigated with water it, and all of my observations, which where the pinklet paper remains have been considerable, I never yet pink for five minutes at a temperait, and all of my observations, which companied by a very large amount of irrigation purposes in most cases alkali. If the stream was downward taken. Potatoes and cabbage, and instead of upward, a large portion of a great many plants will grow in the the salt and alkali that we find would strongest kind of alkali that you can not be on the surface, it would be find, for instance, celery, onions and down below. If the precipitation was asparagus. These plants will grow less than the evaporation the salts in the very strongest kind of alkali. that they pump out of the ground at

Warsaw and Syracuse, would be on There is one thing that I have always found in semi-arid regions, and that is that ney are underlain with what we call hardpan. little meeting of irrigators not very long ago who use dchampagne, think they called it—they all survived to the control of late years there has been a very

large amount of attention paid to what they call nature's secrets. As never before in the history of the world people have gone to nature and tried to find out things.

There are things in nature that are very difficult for us to find out, but the important things for us to find out are those things that we can see and understand. If all of the people were to devote all of their spare time to the study of nature, all of the time they waste in worry, all of the time they waste in foolishness, they would get more enjoyment out of it than they would in attending a circus every day of their life. They would and this world an interesting place to live in.

This question of how the alkali comes, of how that hardpan comes why the alkali bothers us, the answer is all to be found in that open book of nature, and every one of you can verify the things I am going to tell you, and, perhaps, I will also find out many things that I don't know.

omets struck the earth once on a time and they baked it the same as bake a tile or a brick in a kiln and at that time that was the mos not hardly accept it, I could not re-ject. Quite recently we had a lesson from nature on rather a large scale.

tell me that the surface of the earth where the mud was thrown out became bake, and that when you struck it weld ring. It was a kind of pie crust all over. Now we find that what took place at Mt. Pelee has actually taken place here. There is not any question of it.

After the explosion the air took fire and the mud baked. Then there was a shower of ashes. What do we find hore? We ashower of ashes. What do we find the mud baked. Then there was a shower of ashes. What do we find hore? We ashower of the new opera hall will be wash out, but you can always change to to wash out, but you can always change to wash out, but you

fire and the mud baked. Then there was a shower of ashes. What do we find here? We find that hardpan is covered with a volcanic ash. In some places we do not find the ash, but the ashes were very light and there were terrible storms and tempests in those days and no doubt the ash was blown off, hence we find on one place only a trace in others not one place only a trace, in others no a trace, and in many places we find many of them. This hardpan here is not sedimentary. There are no fossil remains in it. I have broken it up and put it under a microscope and I failed to find the slightest trace of fossil remains.

REAL ESTATE DEALS.

Farms and Lots Sold by Rihorn & Swaggart During the Past Few Days.

Rihorn & Swaggart, the real estate dealers have sold the following.

dealers, have sold the following lit was mud thrown out by the volcano and baked by the fire that followed the explosion. Now if we take the stone substances of the earth, and our soil is nothing but stone flour and organic matter—take limestone at partially burn it, that will liberate the alkali. Now, what would take place if this stone substance was submitted to a high temperature? The alkalis would be liberated.

But you will say that this hardpan dealers, have sold the following pieces of property:

dealers, have sold the following pieces of property:

dealers, have sold the following pieces of property:

One hundred and sixty acres, 14 miles near the Hill ranch.

The Dilatore family have moved onto the Daniels ranch, lately occupied by Joseph Snyder.

Mr. and Mrs. J. C. Koontz, of Echo, returned to their home thas morning after a short visit with friends here.

Mr. Allen, a new teacher in this schoolhouse in district No. 37, this morning.

The new school building erected den, for Carrie Pyle to H. L. Swaggart, to alkali. Now, what would take place if this stone substance was submitted to a high temperature? The alkalis would be liberated.

But you will say that this hardpan

the mountains, down by the sea, and in the Willamette valley they have not got the alkali there, but the streams there are downward, not upward. These regions of country have seen these violent volcanic actions take place has never been a

So all of this alkali in the soil liberated by the fire has not been washed away. It is soluble, that is

to another feature that you will all recognize. In much of this semiarid land underlaid with this hard pan the hardpan is not alike, in any profit, and for this reason it was

As there is a great deal of Alkali the lawyers, and it is easy for them Mr. Whistler will leave for Washing and Butter Creek

Is Left on the Surface.

These alkalies, this potash, that much of it as is ready for the gov. horses: we have here when we pour water ernment board.
onto it enters into a solution with Mr. Lewis, w eaves of the plant, the alkan wil.

We had some three hundred acres of ground in California and we want we can accomplish. A great man, Carlyle, said; "You never do but two things in earnest, never but two things: one is fighting and the other is making money."

ed to plant an orchard. The ground a time, during which he will finish not start alfalfa. We marked the ground out into 50-foot squares, and took a bar and punched a hole city for the remainder of the winder. ed to plant an orchard. The ground lown through the hardpan, which was not far from the surface. We then broke up the nardpan with dynaaut trees in the holes and went to than it ever was before. Why! (With us farmers the question why constantly confronts us.) We down as well as we could and then bored down and came to another

give some ideas and also to get near the truth as I can. I want every one here to feel perfectly free, and if I propound anything that is unreasonable, just stop me right unreasonable, just stop me right to handle it with a pair of forceps. Put this in the water.

plants most sensitive to the alkali,

Irrigate With Champagne. I have gropped another though been somewhere. Oh, yes; there was a father little meeting of irrigators not very Whi vived. I don't know whether the plant would stand it or not, how-

station at Union, they call it one horse there, we had a lot of alkan Mrs. Arthur Schott, Saturday Nov ground that we could get no seed to 7th. grow on. We dug down until we allowed the water to get out, we could grow anything on there just as well as we could on any other

of the drains depending on the rikali shown. If you have a porous supsoil, the drains can be far apart. By allowing the water to run away, you can get rid of sufficient alkali to get good land. In some cases where the fall is less than one foot in a hundred you will have difficulty in keeping the drains open. We hit on a happy thought—there is always a way of doing things easy-and dug a little well so that we could have it covered over with a board, and we let the water go in there. That well was Ignatius Donnelly, in his books on deeper than the drain, and the sedi-"Fire and Gravel," he accounts for ment was dropped down those wells, hardpan from the fact that he said and then we cleaned the wells out. deeper than the drain, and the sedi-

We made a success As to Different Kinds, There are different kinds of alkali. You will find that black alkali, socalled, is nothing but carbonate of not hardly accept it, I could not reject. Quite recently we had a lesson from nature on rather a large scale.

Mt. Pelee broke forth and vomited a large amount of mud and threw it all over the island, and after the mud was vomited out the air became in a condition that it took fire and set the whole amount of sold into salts, and condition that it took fire and set the word in the word i they do not injure growth seriously, unless there is a very large amount. Black alkali is always harder to

SURVEYS THIS WINTEN

Wet country. It is probably more moist now than it has been at any time since those violent explosions

J. T. Whistler Will Be in Pendieton But a Short Time-Mr. Lewis in

on Purifying soils.

washed away. It is soluble, that is the great point. Some of the lands they plant foods in would figure up several thousands of dollars per acre if they had to supply them with commercial fertilizers.

Now I want to draw your attention

J. T. Whister returned to the city where he has been for a couple of weeks closing up the year's work in the government survey. It now has become so cold in the mountains and become so cold in the mountains and J. T. Whistler returned to the city the days so short that the work could not be followed further with

Union, before the irrigation convening this city.

I have lost the thread of my thought. These old farmers have not got a monopoly of language like the lowest of language languag ton, where he will be engaged a. M. L. Fix of Nye made a trip to winter in preparing his report, or as Camas Prairie Friday after some

nost sensitive part of a plant is the been done for the good of the cause. rown, and when the alkali is on the The conduct of the convention had surface that is the very worst place been clean, and no demands had been made and no action taken that should not have been. No one section had attempted to work to the disadvantage of another, and the convention was as a whole a success. The papers had all been of great inknowledge of the subjects and were County Court Bought a Photograph very instructive

Mr. Whistier will remain here for

Pleased-Several Severe Cases of Down in the Street-One Runaway Thumb Cut Off.

thinks that is a fine country and in the future. a few years those who have recently beautiful homes.

tack of the rheumatism. He has the future, been a sufferer from that disease for several years. of the critical condition of Lester, Cook Wagon, Granary and Personal

the oldest son of Mr. and Mrs. Cnas. Beale. He has been an invalid for several years. Mrs. William Kilgore, while tending to her household ducies, had the

north of town after a week's visit at Athena with her parents. While Uncle Tom Watts was moving his house across the street it took a slide and left Mr. Watts in somewhat an annoying position, for he didn't much like to live in the

While John King was coming from Weston his team became frightened and ran away, and soon was out of Mr. King's control. He was them to run away.

NEWS OF ATHENA

Have Moved to Washington-Visitors From Washington and Other Localities - Merchants Ordering

Holiday Goods. Milton, Nov. 13.-Mrs. Elsie Kil gore who has been here visiting her grandmother Mrs. Elizabeth Hopson. has returned to her home in Weston. F. E. Wilcox went to Walla Walla

Donald McRae, who formerly lived here, was in town Tuesday. Jesse Huffman, who was a student of Columbia College last year, arrived here Monday from his home at Leland, Idaho, and has resumed his studies in Columbia.

Clark Cunningham, formerly of Milton, but later of Dayton, Wash. is here visiting at the home of M and Mrs. George Edwards. Mrs. Helen Merrifield has returned from Walla Walla, where she has been visiting her brother, Mr. J. L.

College this week.

Next Tuesday evening the stock

McKay, Nov. 16.-Charles Kidder

Farms and Lots Sold by Rihorn county road to diverge from the Echo road to a point on the river neaf the mouth of Birch creek.

Rihorn & Swaggart, the real estate

The people on the south side of the river near the mouth of Birch creek, are building a footbridge across the river at that point Last Sunday a convention, (political or otherwise) was held near this point by politicians from Pendleton. Among the crowd were two ex-city marshals, an ex-justice of the peace, a prominent tobacco and cigar dealer, and others. There was a feast of beefsteak and sardines and a flow of

TRANSFER OF SHEEP AND SHEEP RANCHES.

b- but why continue?

Snow From Six Inches to a Foot Deep at Head of Birch Creek-Frieghters Tied Up by Snow and Bad roads-Will Build a New Resi-

ernment board.

Mr. Lewis, who has charge of the to the head of Birch Creek Sunday

and bad roads. Marion Smith of Pilot Rock is pre paring to erect a new residence. John Endicott's telephone -line is down across the road in several places on Bear Creek, and they are langerous for traveling

up at Ridge, bound for John Day

PHOTOGRAPHS OF CRIMINALS.

Outfit for Sheriff's Office. A couple of weeks ago the county new camera for convenience in taking the pictures of some of the men who come into the county jail, Many criminals have escaped the law in the past owing to the fact that there has been no way of identifying them once they are out of the jail.

Illness- Moving House Broke a crime, or who has a bad reputation, and whom the officers of the Causes Two More-End of a will have a picture taken of him, and law wish to remember, the sheriff the plate will be preserved for future Athena, Nov. 16 .- Joan Craten of use. Men who are convicted and this city, who spent the summer at sent to the penitentiary to serve a Pullman, Wash, at the home of his term for any offence will be photodaughter, Mrs Alph Coppic of that graphed and their pictures kept, as place, returned home Monday. He they generally come in good play in

taken homesteads will have some Morehouse took pictures of several of those who are now in the fall and E. L. Barnett is down with an at- this practice will now be followed in

FIRE AT SAXE STATION

Friday afternoon a fire at the ranch of Marion Jack, about one and a half miles north of Saxe Station, burned the cook wagon of the men at work on the ranch, an with it a small two-room house containing about 300 sacks of barley, the

on the place and they ate dinner as usual in the cook wagon, and having fire was discovered, and before they could reach the place both of the buildings were in flames and they could not get near them. The men were in the house at the time, with thrown out. The runaway team scared two other teams and caused them to see the time, with was no insurance on the barley of

FARLEY-REED.

Contracting Parties Are From Adams, Where They Will Reside, John A. Reed and Miss Mary Farley, of Adams, were married in the parlors of the Golden Rule hotel Thursday afternoon by County Judge

G. A. Hartman. The young people are well known in Adams, and were accompanied to this city by a party of friends and relatives who wished to attend the ceremony. Miss Farley is the adopted daughter of Maurice A. Baker, of since she was 2 years of age. and Mrs. Reed left last night for Portland and other valley points for a short wedding trip, after which they will return and make their home at

Farm Changes Hands, A deed has been filed by which Michael McCracken and wife have sold to Manuel Pedro for \$15,507.50 their ranch of 3906 acres stock land southwest of Pilot Rock. Pedro has bought all of the stock, sheep, horses and cattle on the ranch, and will conduct it in the future in connection with the other large ranch in

T. Warren, of weston, was guest of friends in the city. Hugh Glynn, of Atnena, was in the city today on a short business visit C. D. Ward, of Arlington, spent the

day in the city yesterday visiting friends. Mrs. J. Stanton, of Athena, was the

E. W. McComas left this morning for Portland, where he goes in the has built a residence near Fred interest of his warehouse company J. J. Balleray returned last night John Payden has the lumber on from a few days' visit in Baker the ground for a house near the new City, where he went on legal busi-

Christmas Is Coming

Remember Rader's Rockers and Rugs

WHEN YOU ARE

READY to select Xmas presents

REAL pretty and useful.

RECOLLECT we are always on the

RUSTLE for useful, pretty presents.

REMEMBER, too, and bear in mind the

RUSH usually made Xmas Eve. Come

RIGHT in now, make your selections and

REQUEST them set aside for you. Ask RADER to show you that \$3.50 OAK COBBLER

ROCKER that he is selling for \$2.50 It has

RODDED arms and is a daisy. And don't

RUSH away until you see him in REGARD to his HALL TREES and MIRRORS. They're

REGULAR beauties at wholesale prices. In oriental

RUGS we have some beauties we are giving away and you

RUN no risk of drawing and missing, but just

REMEMBER we GIVE them to you. The only

REQUIREMENT is that you buy a small bill to

REACH ten or fifteen dollars and you will RECEIVE a nice framed picture or a

REAL large oriental rug.

Our stock of Furniture and Carpets never was so complete as now. Two car loads just received and more on the road.

MAIN AND WEBB STREETS

Walter's Flouring Mills

Capacity, 150 barrels a day. Flour exchanged for wheat. Flour, Mill Feed, Chopped

etc. always on band

YOUR PLUMBING!

Have it done by a Scientific Plumber and you will not be bothered with bad breaks. Let us figure on your work. BECK, THE PLUMBER Daily East Oregons only 15 cents a week.



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reward for constant study and toil to please the people and give them glasses to rehas failed to do. We examine your eyes and make the proper correction. It is no gu ned free. We change lease

A. Blackburn, O. D.

liescke's eats eet

> The approval of all who most delicious but ne no higher in price..... COURT STREET

Grand Thanksgiving

CLOAKS, JACKETS, FURS, SKIRTS, DRESS GOODS. WAISTINGS

And a thousand other items throughout our Big Store. We must have room right away for our large stock of Holiday Goods now on the road and the prices we have placed on the above items will make business hum. Never in the history of Pendleton have such bargains been given as we will give during this sale. Many articles at one-half actual cost.

LISTEN

\$18.50 Jacket or Cloak, Thanksgiving sale \$15.65 \$15.00 \$13.50 " \$10.80 Big discount on Children's Coats

40 Ready-made Skirts, \$3.50 values Balo Price \$2.88 \$4 00 \$4.50 \$4.75

n pieces Fancy Dress Goods, worth from 35c to \$1.00 a yard, reduced to from 10c to 68c per yard Heavy Skirting in all colors, worth \$1 25. Thanksgiving price, 89c. Heavy Skirting in all colors "

Ladies', Children's and Misses' Shoes will go at unheard-of prices. All rips sewed free. Again, don't miss this sale, it means dollars in your pocket.

Lee Teutsch's Big Store

COR. MAIN AND ALTA