

THE BEND BULLETIN

"For every man a square deal, no less and no more."

CHARLES D. ROWE, EDITOR

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WEDNESDAY, JAN. 6, 1909.

The New Year.

What will the new year bring to Bend and the Bend country? When January 1, 1910, dawns what will be the state of this section's development? Will the long-looked-for railroad be under construction, and will there be the growth and development that will naturally accompany the beginning of railroad building? These are questions in which every man, woman and child in Central Oregon is greatly interested.

The Bulletin believes there is one thing sure and certain, and it is that the new year upon which we are now entering will bring good results to this part of the state. One thing we lack and that is railroad facilities. Give the Bend country a railroad connecting it with outside markets and there would ensue here a development that would agreeably surprise the most sanguine. We have the promise of Harriman that he will give Central Oregon a railroad at once, and there are many indications that the Hill or some other great railroad system will also soon build through this section. While the route for the new road has not been definitely announced, yet General Manager O'Brien has expressed himself as believing the new road will be built up the Deschutes river to Bend and on south. According to all reports and indications, official announcement to that effect should soon be made.

Even though work on this line should be delayed, there would still be strong indications that the new year will place the Bend country in a far better position as regards the railroad than it is now. There are persistent reports to the effect that the Natron-Klamath Falls line will be built at once. This line crosses the Cascades and leaves the mountains in the vicinity of Odell, about 50 miles south of Bend. That would bring the railroad 45 miles closer than at present, and it would be an easy matter to build a line north from that point to Bend. In fact, that may be Harriman's intention, as it is known such a plan has been seriously considered.

But the road that the Bend country is pinning its hopes to is the Deschutes line. Mr. O'Brien has practically announced that the Deschutes road would be built and that work would be commenced on it during this month. The Bulletin believes that Mr. O'Brien knew what he was talking about when he gave that statement to the papers.

The year 1909 should bring good things to the Bend country. Many new settlers are moving onto land in the vicinity of Bend, land is being cleared, each week sees new fences, barns and houses dotting the landscape, and the foundations for many happy homes are being laid. It behooves all of us to do what we can to make it the best, happiest and most prosperous year this section has ever enjoyed.

The Oregon legislature will soon be in session. There are a number of very important measures that the coming legislature should pass, among them a new water code. The people of this section should keep in touch with what is being done by their law-makers. Drop them a letter or two requesting their support of the laws which you think the state needs. And

then watch the papers to see how your senator and representatives vote on the various measures. If you find their actions as legislators are not in the interests of the section they are chosen to represent, you will be prepared to cast your ballot intelligently against them if they ever seek re-election. In line with these remarks, it might be well for Bulletin readers to remember that Dr. H. P. Belknap of Prineville and H. A. Brattain of Paisley are the representatives, and G. H. Merryman of Klamath Falls the senator from this district.

Six months of prohibition has, on the whole, been a benefit to Crook county, according to the statements of various business men of this section. They report a decided increase of cash receipts, there is far less drunkenness than formerly and consequently fewer arrests, a marked increase in attendance of the Crook county high school is also attributed to the absence of saloons, and altogether there is a general opinion that the day of the saloon is ended in the county, if not in the city.—Prineville Review.

The above is the first paragraph in a column and a half article in the Prineville Review touching on the results of local option in Crook county. It shows a fair minded attitude on the part of Editor Kennedy, as the Review was the only paper in the county that came out openly in favor of the saloon during the "local option" campaign in June. His version of conditions at Prineville is descriptive of the whole county. Those who predicted that prohibition would ruin and "kill" Bend misjudged matters greatly. To say the least, business in Bend has been as good as it was during the wet regime, and that dreaded falling off of the town's business has proven to be a myth. Local option undoubtedly has come to stay. It's a good thing and the people will stand by it.

If you will take Foley's Orino Laxative until the bowels become regular you will not have to take purgatives constantly, as Foley's Orino Laxative positively cures chronic constipation and sluggish liver. Pleasant to take.—C. W. Merrill, druggist.

Bids Wanted

To supply wood for the Bend school, 45 ricks, size of sticks 24 inches long and not to exceed 10 inches in thickness; to be delivered and ricked in basement of school house. Limb wood preferred. Bids must state the kind and condition of wood, and a rick is to be 8x4x24. Bids to be in by January 9, 1909. The board reserves the right to reject any and all bids.

L. D. WREST, Clerk,
School District No. 12.

Patronize Home Talent—It Pays.



Last month a merchant a thousand miles from Chicago wanted to place over his store an electric light sign he had heard about in Chicago. Made a special trip there for specifications and terms. Too high!

Mr. Merchant returned home and incidentally told the local electrician about his troubles. Mr. Home Electrician replied that he could reproduce the Chicago sign, with improvements, at a price that suited. And he did so.

JUST THINK THIS OVER, WILL YOU?

Problems That Confront The Irrigator.

[The following article is by H. L. McIntyre, of Spokane, Washington. Mr. McIntyre is an irrigation engineer who has been connected with the largest enterprises in the country for the past twenty years, and has been identified with nearly all the enterprises in eastern Washington. He has made a specialty of economical distribution of water and also of the installation of pumping plants. He is considered an authority on irrigation, irrigation pumping, and water systems. He is now acting as consulting engineer for several of the largest irrigation companies who have their headquarters at Spokane, the most prominent of which are Babcock & Moss, Loans and Mortgages, American Securities Company, and the Cook Clarke Company.]

Practical irrigation is scientific as well and covers a broad field in its many phases. The subject must, however, be treated locally, each small section of the country is a problem by itself and each irrigator on his own land must solve the problem largely for himself, and I shall try to tell him how to do it.

Original Soil Conditions.

It is the practical every-day side of this question which appeals to the farmer and fruit grower. He wants to know how much water to use, when to use it and how to use it. The "when," "how," and "how much" are the questions most vital to him. In order to know these things, certain facts about his particular tract of land must be ascertained before he is ready to irrigate practically and intelligently, namely:

First, the depth of soil.
Second, the relative position of top and subsoil.
Third, slope of surface for drainage purposes.
Fourth, slope and characteristic of subsoil for underdrainage.
Fifth, the percentage of moisture the soil holds stored, in its present condition.
Sixth, the water-holding capacity or amount of water the soil contains when in a state of complete saturation.
Seventh, the degree of fineness or grain of the soil.

With these seven questions solved you are ready to irrigate with some degree of certainty of what the result will be; and without knowing these you are like a man in the mercantile business without a set of books. It is a simple matter to learn these facts, as will be seen by the following:

First, the depth of the soil. The best way would be to bore auger holes at short intervals over your tract of land. Bore one foot in depth at a time, pull the auger, save the soil and put it in a glass jar and seal it up to prevent the moisture from evaporating. Bore the second and third foot and on down to the subsoil in like manner until you have a sample of each foot of soil.

Second, the relative position of top and bottom soil you have ascertained by boring holes in the first instance.

Third, the surface slope. If too level to determine by the eye, employ a surveyor to run levels over the ground and furnish you a map showing the elevations in one foot contours, or in squares of 100 feet. This will always be extremely useful to any one in the distribution of water for irrigation.

Fourth, knowing the depth of your subsoil at all points and the surface slope, the relative slope of the two is apparent.

Fifth, the percentage of moisture the soil holds stored in its present condition. Take the samples of soil you have in the sealed glass jars from your borings in the first instance. Weigh each sample separately, noting the part of the field from which it was taken, then dry each sample perfectly and weigh again. The difference is the amount of moisture in the soil, from which you ascertain the percentage of moisture in each foot of soil from the subsoil to the top.

Sixth—the water-holding capacity of the soil. This may be determined by taking a box one foot square and one foot high with a fine screen on the bottom. The capacity of the box will be one cubic foot. Now fill the box with soil, pour water on it with a sprinkler until the water drips off at the bottom through the screen. As soon as the dripping stops, weigh the box and deduct the weight of same. Then dry the earth out perfectly dry and weigh again. The difference between the two weights

gives you the amount of water the soil will hold in suspension, or its water-holding capacity. The soil is a sponge and you can only fill the voids with water. Having learned all the conditions above named, you know how much water it will require to bring about a certain percentage of moisture in land you wish to irrigate. You know how it drains, whether it leaches down or runs off in the subsoil. You can learn at any time whether your percentage of moisture is too low or too high, also how deep you can store water in the soil, and how much it takes to wet it one foot down.

Seventh—effect of water and air on soil. When you begin to experiment, you will be surprised to find the saturating capacity of soils, even in the same field, are so very different. A good illustration of this condition is given in Mr. Campbell's work on "Dry Farming," which in substance is as follows: In one glass is one pound of the largest buckshot we could find; in another glass is one pound of the very smallest bird shot we could obtain; have a one ounce druggist's graduate. With this graduate we measured precisely one ounce of water and turned onto each glass. We then shook each glass to be sure that every shot was moistened all over. This covered each one with a thin film of water exactly as the moisture is retained around each little particle of soil. It is not possible in our illustration to get rid of the free water, or that portion between the shot, except by tipping the glass over to allow all the water, which is not held in film form, to drain out of the graduate. Measuring carefully the amount of each glass, we find to our surprise that the fine shot contains nearly thirteen times as much water as the coarse shot. Here we have a practical demonstration of how the water-holding capacity of the soil is increased by finely pulverizing and making it form a condition most favorable for the movement of moisture by capillary attraction and the most perfect development of roots. The shot, before it was put into the glasses, was carefully weighed on fine druggist's scales, to be sure we had the same quantity. Both glasses are filled to the same height with the coarse and fine shot and both glasses are of the same size.

Every irrigator should read and study Campbell's "Dry Farming Methods," for the very first requisite to be a successful irrigator is to be a first-class dry farmer. If you can't dry-farm, you can't irrigate.

I say to all, "Don't irrigate too much." The following comment by Prof. S. A. Beach, of Iowa, is the best thing on this subject I have seen. He says: "How do roots get food from the soil? We used to think the ends of the roots were like little sponges and that they absorbed the water from the soil, but we now know better. As a matter of fact, however, the tip end of the root is calloused to force its way through the soil, and that just back of this calloused tip is a soft, spongy portion which takes in the moisture from the soil. Old roots take up very little moisture, but the new growth of the rootlets accomplishes this work. Now when the soil is so full of water that the air is shut off, no new roots are formed, and no new water is taken up, and the tree suffers as a consequence." The professor is absolutely right. The length of the growing season covers a period in this country of about fifteen days, and if every condition is right for this time, your crop is practically insured. On the other hand, if you chill the ground by too much water and fill it so full of moisture that no air can reach the roots, you have lost several days of the best of your growing season, and taken many dollars out of your own pocket, a mean thing to do to yourself.

Shallow soils with gravel or open subsoils leach the moisture away very rapidly and there is less danger of over saturation, but the continual pouring of water through such soil will also carry away the fertilizing elements which are in solution and soon deplete the soil. Find out how much water your soil will hold in suspension and irrigate accordingly. The soil is a chemical laboratory and you are the chemist. The soil must have moisture, air, and the heat of the

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F. O. MINOR, Resident Agent

UNLESS IT'S A GOOD STORE IT WILL NOT PAY to ADVERTISE IT!

UNLESS you know a person—unless that person comes into your life in some way—you are not greatly concerned about whether he is good or bad, desirable or objectionable.

It's so with a store. The people who never visit it care nothing about it one way or the other. It doesn't exist—for them. But—when they are persuaded to patronize it—when they come to turn the spot-light of their attention on it—when it comes to have a part in their lives, as some stores must have in all lives—then it's different; then it DOES matter whether it strives to win confidence; it does matter whether or not its price concessions are genuine, dependable.

If it meets all tests that a good store must stand when it is advertised—when it thus invites the critical attention of people—then advertising "makes" the store. If it fails in most of the vital things—if it proves, under the light of publicity, not to be much of a store, THEN ADVERTISING WILL NOT PAY—for it will emphasize shortcomings as well as merits.

For these same reasons it is generally assumed that the store which does not advertise is seeking to avoid close inspection and comparison, and that the store which does is courting them.

sun to keep the chemical action at work, making plant food. When you have too much water in the soil, there is no air, hence no chemical action. With too much air, there is no moisture, and no chemical action. With proper moisture and cultivation the chemical action is complete (the capillary attraction bringing up the moisture from the lower levels to the top mulch.) Here the sun and air manufacture the fertilizing elements and the next rain or irrigation washes them down to the roots to be taken up by them. The process repeats itself without end, so long as we water and cultivate properly. Cultivation is more important than irrigation and in the arid regions one is of little use without the other. And don't forget that a weed is a pump and that it pumps water out of the soil at a very rapid rate.—Pacific Homestead.

(Continued next week.)

You would not delay taking Foley's Kidney Remedy at the first sign of kidney or bladder trouble if you realized that neglect might result in Bright's disease or diabetes. Foley's Kidney Remedy corrects irregularities and cures all kidney and bladder disorders.—C. W. Merrill, druggist.

C. S. BENSON,
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