

STORAGE OF WATER

F. B. HOLBROOK DISCUSSES IRRIGATION SUBJECT.

Says the Irrigated Fields After Once Fully Saturated Are Best Storage Reservoirs — Would Divert Flood Waters From Umatilla.

F. B. Holbrook, of Stokes, superintendent of the Oregon Land and Water Company's irrigation plant and tract of land at that place, has the following able and instructive article in the Oregon Daily Journal of a recent date.

Mr. Holbrook is a student of irrigation and all his findings are the results of diligent labor and experiment.

"To the Editor of the Journal—The government engineers are busy in this vicinity making surveys, observations, etc., relative to the location of a site for a storage reservoir in the foothills wherein to accumulate water for use in irrigating.

I am not a prophet, rather the son of a prophet; but I venture to say, let me report of these engineers be what it may, that it will be many years before any of the land in Umatilla valley will be brought under water through these storage reservoirs alone. It is well known that our government moves very slowly in all of its undertakings, and I surmise it will move slowly in these innovations.

But aside from this it seems to me that, at least in this instance, the powers are moving in the wrong direction, for, taking it the year through, there is enough water flowing through the Umatilla river to water more than they can hope to irrigate by the storage reservoir, simply by the construction of canals and the use of that water at flood season.

Suppose a canal was taken out of the Umatilla at Barnhart, or some other point farther down river, then run the ditch around south of Echo by Galloway and on over the divide into Columbia river valley, near Coyote. Such a canal would water about 200,000 acres, and there is plenty of water for this for eight months in the year.

It is a well known fact that a large area of Umatilla meadows and Butter creek country is served by water for a much shorter period of time than that each year and yet the result on land thus irrigated is that apparently full crops are produced. At any rate four-hill sage brush land is thus made worth from \$100 to \$200 per acre, based on its yield of alfalfa alone. Some of the land on Butter creek never has water for more than two months of the year and yet yields full crops.

Some will say that this excessive diversion of flood water would cause the Umatilla to go dry, but in this connection I desire to call the attention of the reader to Bulletin 124, issued by the United States senate, giving the message of our late president, William McKinley, or rather to that part of it showing that this diversion of water from running streams amounts to when the water is given back to the land through irrigation. To quote from said bulletin: "The following table, showing the increase in rivers from return or seepage waters, is the result of careful measurements extending over many years. They are taken from the reports of the state engineers of Colorado and of Wyoming and of the experimental stations of the Colorado Agricultural college.

Return Waters From Irrigation.
Powder river, original volume, 127.7 second feet; gain from seepage 86.9 second feet; number of miles, 25.

South Platte, original volume, 45.7 second feet; gain from seepage, 27.1 second feet; number of miles, 58.

Horse creek, original volume, 18.3 second feet; gain from seepage, 75.8 second feet; number of miles, 70.

"The addition to a stream of a greater volume of water than it carried originally would seem to partake of the miracle of the loaves and fishes, but this is not the case. These measurements were made during the latter part of irrigation season. The large increase comes from the greater volume diverted when the rivers run high. The fact that a stream like the South Platte, carrying only 98 second feet, should gain in less than 100 miles from the seepage of irrigated fields nearly twice as much as it carried when it left the mountains, is significant of the benefits which are to come to irrigators farther down by the further extension of the reclaimed area above."

Water used in irrigating is in large part returned to the drainage channels and can be again and again diverted for irrigation. On the Cache la Poudre creek, in Colorado, experiments recently made show that while the original discharge in the canyon was 127 cubic feet per second, the volume at a point considerably lower down on the stream had increased to 214 cubic feet per second after supplying 15 canals, and without receiving additional material drainage; an addition of more than two-thirds of the original volume, available to supply the canals lower down.

If this means anything to us, it means that the irrigated fields are the best storage reservoirs, for by placing the water in them, through canals it can be used over and over and in increasing volume. I am positive this is the best solution of the difficulty for this section, at least. The Umatilla at present carries a large volume of water in the flood season, and by utilizing this water the stream will be very greatly enlarged in the dry season, from seepage, or return waters, and the 200,000 acres before mentioned, will be increased in value from \$25 to \$100 per acre in excess of the cost of the construction of the canal for the diversion of the waters, of which

we have an abundant proof, shown by the results of land irrigated by flood waters in this vicinity.

Given water, there is no more productive land in the country than in this great basin between the Blipes and Cascades, and the Columbia on the north. We are favored with open winters, when irrigating can be done almost any day. Our springs are early and seasons consequently long. Our alfalfa is ready for the first cutting in May. We can ripen fruits earlier than any other place in Oregon. In fact, this is one of the most favored spots in the country in all save water, and there is enough of that going to waste past our doors to water from 100 to 200 quarter sections.

Do not understand that I am opposed to the storage reservoirs as advocated by the government; on the contrary, they seem to be the sole salvation of certain sections of our country; but our valley presents a peculiar problem and one which can, I think, be more quickly solved in the way I have outlined. Should the mountain reservoirs come later, well and good; it would likely be the means of enlarging our irrigable area and thus be of great benefit to our state and nation."

F. B. HOLBROOK.

A Serious Mistake.

E. C. DeWitt & Co. is the name of the firm who make the genuine Witch Hazel Salve. DeWitt's is the Witch Hazel Salve, that heals without leaving a scar. It is a serious mistake to use any other. DeWitt's Witch Hazel Salve cures blind, bleeding, itching and protruding piles, burns, bruises, eczema and all skin diseases. Sold by Tallman & Co.

Another Irrigation Company.

The Portland Irrigation Company yesterday made application to the state land board for the right to reclaim and irrigate 12,037.54 acres of land in Lake county. The company proposes to take the water for irrigation from the Chewaucow river and Augur creek, and the cost of building the necessary canal is fixed at about \$150,000, while the cost of maintenance will be \$1.50 per acre. Edwin Mays, president of the company, was appointed the selecting agent, and George S. Nickerson, of Lakeview, the company's engineer was appointed engineer by the board, and the request of the applicants was granted.

Ladies and Children Invited.

All ladies and children who cannot stand the shocking strain of laxative syrups, cathartics, etc., are invited to try the famous Little Early Risers. They are different from all other pills. They do not purge the system. Even a double dose will not gripe, weaken or sicken; many people call them the Easy Pill. W. H. Powell, Houston, Texas, says nothing better can be used for constipation, sick headache, etc. Bob Moore, Lafayette, Ind., says all others gripe and sicken, while DeWitt's Little Early Risers do their work well and easy. Sold by Tallman & Co.

Farms for Sale.

We now have listed for sale some of the best wheat farms and stock ranches in the county. All the places are well improved and well supplied with water. Also some very desirable city property. Call and get prices.

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Kodol Gives Strength.

By enabling the digestive organs to digest, assimilate and transform ALL of the wholesome food that may be eaten into the kind of blood that nourishes the nerves, feeds the tissues, hardens the muscles and recuperates the organs of the entire body. Kodol Dyspepsia Cure cures indigestion, dyspepsia, catarrh of the stomach and all stomach disorders. Sold by Tallman & Co.

Pendleton people are loyal to Pendleton's business enterprises. That is the reason the Ross Ice & Cold Storage Company have had to put on two wagons and then can scarcely handle the trade. Give us your orders and we will take care of it if we have to put on four times two wagons. Phone Main 1881.

If you are troubled with impure blood, indicated by sores, pimples, headache, etc., we would recommend Acker's Blood Elixir, which we sell under a positive guarantee. It will always cure scrofulous or syphilitic poisons and all blood diseases. 50 cts. and \$1.00. F. W. Schmidt & Co., druggists.

Do You Want a Cab? When you want prompt and reliable service call up phone Main 161. The McKay Cab Co.



"That man is a great believer in water." "Temperance advocate?" "No; he's a milkman."

COLLEGE OPENED.

Agricultural School Filled to Overflowing This Year.

Organization of classes at the Corvallis Agricultural college is complete now, and recitations begin this morning, says the Corvallis Times. Though more than 200 new students are on hand, they have already learned the routine, and are able to find their places with precision.

For 48 hours the 30 members of the faculty have had their hands full in passing upon the credentials of new applicants, in assigning them desired places in the various courses and in bringing order out of chaos. Four hundred young people threading their way through the labyrinths of preliminary organization makes a buzz and bustle next to terrific.

The college buildings are full of new faces. A little Eastern Oregon neighborhood that sent three new students last year, returned its little quota this time with six additional applicants for admission.

Sick Headache absolutely and permanently cured by using Moki Tea. A pleasant herb drink. Cures Constipation and Indigestion, makes you eat, sleep, work and happy. Satisfaction guaranteed or money back. 25 cts and 50 cts. Write to W. H. Hooker & Co., Buffalo, N. Y., for a free sample. F. W. Schmidt & Co., druggists.

You may cause idiots to philosophize, may cause donkeys to forgo thistles—but do not think of driving common horse sense into the head of a conceited person.



Mrs. Hughson, of Chicago, whose letter follows, is another woman in high position who owes her health to Lydia E. Pinkham's Vegetable Compound.

"Money seemed but poor and paltry compared to health, and yet a few dollars invested in Lydia E. Pinkham's Vegetable Compound brought me good health. I suffered for several years with general weakness and bearing-down pains, caused by womb trouble. My appetite was frightful, and I would be awake for hours, and could not sleep, until I seemed near weary in the morning than when I retired. After reading one of its advertisements I decided to try the merits of Lydia E. Pinkham's Vegetable Compound, and I am so glad I did. No one can describe the good it did me. I took three bottles faithfully, and besides building up my general health, it drove all disease and poison out of my body, and made me feel as spry and active as a young girl. Mrs. Pinkham's medicines are certainly all they are claimed to be."—Mrs. M. E. Hyattson, 347 E. Ohio St., Chicago, Ill.—*Special benefit by original of above letter proving genuineness cannot be produced.*

If the slightest trouble appears which you do not understand, write to Mrs. Pinkham at Lynn, Mass., for her advice, and a few timely words from her will show you the right thing to do. This advice costs nothing, but it may mean life or happiness or both.



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Rheumatism

"THE PAIN KING."

Those who have ever felt its keen, cutting pains, or witnessed the intense suffering of others, know that Rheumatism is torture, and that it is rightly called "The King of Pain."

All do not suffer alike. Some are suddenly seized with the most excruciating pains, and it seems every muscle and joint in the body was being torn asunder. Others feel only occasional slight pains for weeks or months, when a sudden change in the weather or exposure to damp, chilly winds or morning air brings on a fierce attack, lasting for days perhaps, and leaving the patient with a weakened constitution or crippled and deformed for all time.

An acid, polluted condition of the blood is the cause of every form and variety of Rheumatism, Muscular, Articular, Acute, Chronic, Inflammatory and Sciatic, and the blood must be purged and purified before there is an end to your aches and pains. External applications, the use of liniments, plasters, do much toward temporary relief, but such treatment does not reach the real cause or cleanse the diseased blood; but S. S. S., the greatest of all blood purifiers and tonics, does cure Rheumatism by antidoting and neutralizing the poisonous acids and building up the weak and sluggish blood.

Safe and reliable in all forms of Rheumatism. It makes the old acid blood rich, and the pain-tortured muscles and joints are relieved, the shattered nerves are made strong, and the entire system is invigorated and toned up by the use of this great vegetable remedy.

If you have Rheumatism, write us, and our physicians will furnish you out charge any information desired, and we will mail free our book on Rheumatism.

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