FRIDAY, MARCH 13, 1908.



The Necessity for Legislation Restricting the Utilization or Rather the Waste of Subsurface Waters is Also Emphasized.

Flowing wells can probably be obtained in a number of districts in southeastern Oregan, and southwestern Idaho, according to a report issued by the United States Geological Survey as Water-Supply Paper No. 78. This report, which was prepared by the late Prof. I. C. Russell, is the result of a geological investigation in parts of Canyon and Owyhee counties, Idaho, and of Malheur and Harney counties, Oregon, made with the special object of discovering localities where flowing water can be obtained by drilling wells.

The presence of artesian conditions in an area is frequently inferred by geologists from a study of rock structure. In what is properly termed an artesian basin the layers of rock are bent downward, so as to resemble a pile of shallow plate-shaped dishes placed one within another. One or more of the beds of rocks is porous and allows water supplied by rain on its upturned edges to percolate into it. Above and below the watercharged layers are close-textured rocks, like clay, that prevent the escape of the water in the beds between them. A number of such structural basins are found in the regions studied by Professor Russell.

Significance of Springs.

Confirmation of the supposition that water under pressure exists beneath the surface in any area is found at many places in the occur- Prof. H. A. Howell, of Havana, Cuba, rence of warm prings-those with temperatures ranging from 60 degrees to 100 degrees F. As the water in artesian basins has descended from the surface, and as the temperature of the earth increases with depth, the deeper the water has penetrated into the rocks the higher will be its temperature. The increase in the tem- Prof. H. A. Howell, of Howell's perature of the earth below a depth American School, Havana, Cuba. "On of about 50 feet in temperature re- the night of February 3rd our baby gions is in general about 1 degree F. for each 60 feet, but there is conclu- cold, the next day was worse and the fancy block, 7@7sc; heavies, 6@7c; sion that in southern Idaho and ad- following night his condition was beef, bulls, 3m@4c; cows, 4@5c; jacent parts of Oregon the rate of desperate. He could not lie down increase is approximately I degree F. and it was necessary to have him in for each 45 feet in depth. At the the arms every moment. Even then depth of 50 feet the temperature cor- his breathing was difficult. I did not responds to the mean annual temper- think he would live until morning. At ature of the locality chosen, which in last I thought of my mother's remedy, grees F., so that if a spring in this we gave, and it afforded prompt reregion has a temperature of 65 de- lief, and now, three days later, he grees F., or 15 degrees above the tem- has fully recovered. Under the cirperature of the stratum of no sea- cumstances I would not hesitate a sonal variation, it would be safe to moment in saying that Chamberlain's conclude that the water rises from a Cough Remedy, and that only, saved depth of at least 675 feet below that the life of our dear little boy." For stratum, or 725 feet below the surface. sale by Frank Hart and leading drug-Such a spring would therefore serve gists. as an indication of the depth to which a well should be bored to penetrate the water-charged rock layer.

indication. Hot springs ordinarily rise from depths so great that even if they come from a well defined water-charged layer it would be unavailable as a source of supply for most purposes for which artesian water is used, as the expense of dril-ling to reach it would be unjustifiable. The report referred to, which may be obtained free of charge by apply- Complete Market Reports Corrected ing to the Director of the Geological Survey at Washington, D. C. contains discussion of the artesian conditions, illustrated by diagrams, and describes the various basins, whose locations are shown by a sketch map. A detailed account of the wells and

springs of the region is given, and suggestions are made in regard to the size of drill holes, casing of wells, and preservation of well records, the importance of which is too often overlooked.

Needs for Restrictive Legislation. The necessity for legislation restricting the utilization, or rather the waste, of subsurface waters is also emphasized. Owners should be compelled by law to case every drill hole in an artesian basin-that is, to place an iron casing or tube in the hole, made sufficiently tight to prevent water form rising outside of it. Such a casing should be put in every well

that remains open. The lower end of the casing should be just above the water-bearing bed. This should be done, not only in the interest of the owner himself, but because the escape of water from an artesian basin in excess of the natural overflow means a decrease in pressure on the portions remaining and consequently a lowering of the artesian head. In arid regions especialy the problem of economically using water and maintaining the artesian head is a matter of public concern. It should also be required by law that every artesian well when not in use should be securely closed, and that every abandoned well in an artesian area should be completely filled with impervious material. An artesian basin is not an inexhaustible reservoir, and every practicable means should be em-

ployed for its conservation and legitimate use.

Recommends Chamberlain's Cough Remedy.

"As long ago as I can remember my mother was a faithful user and friend of Chamberlain's Cough Remedy, but never in my life have I realized its true value until now," writes Point, \$1.60 per 100; Olympias (120 was taken sick with a very severe

THE MORNING ASTORIAN. ASTORIA. OREGON.

tubs, 12c; 50s, 12c; 20s, 12sc; 10s, 12sc; 5s, 12sc. Standard pure: Tierces, le less; compound, tierces, 8c; lesf, Blank books Raisins-Loose muscatels, 3-crown, 7@7hc; 4-crown, 7h@8c; bleached seedless Sultanas, 9h@12c; unbleach-Latest Quotations in the Portland Market. Up to the highest standards ed seedless Sultanas, 8@83c; London layers, 3-crown, whole boxes of 20 pounds, \$2.00; 2-crown, \$1.75. Canned salmon-Columbia River, Each Day Giving the Wholesale 1-10 talls, \$2.10; 2-10 talls, \$3.00; Prices of Commodities, Farm fancy, 1-fb flats, \$2.25; 1-1b flats, Produce, and Vegetables. Bookbinding \$1.40; fancy, 1-10, ovals, \$2.75; Alaska talls, pinks, 95c; red, \$1.40; nominal, 2s, talls, \$2.25. Spices-Cloves, 25c 1b; chillies, PORTLAND, March 10. - Further 13ac th. shipments of California butter to this After strictly modern methods Salt-Bales of 75-2s, bale, \$2.15; market are expected within a few bales of 60-3s, \$2.15; bales of 40-4s, days, and it is quite proabable that bale, \$2.15; bales of 15-10s, bale, \$2.15; local prices will be put down this bags, 50s, ine, ton, \$16.50; bags, 50c; week in order to meet the competigenuine Liverpool, ton, \$18; bags, tion from the South. This is the sea-Printing son of flush production in California, 50s, 1-ground, \$13.50; 100s, ton, \$13; R. S. V. P., 20 5-1b cartons, \$2.25; and it is always a few weeks earlier R. S. V. P., 3-th cartons, \$1.75; Livthan that of Oregon. As yet there is erpool, lump, per ton, \$20.50. no serious accumulation of Oregon Nuts-Walnuts, 151@20c per tb; stocks here, but production is steadily Of every description filberts, 16c; Brazils, 20c; pecans, 14 increasing and the necessity of a low-@20c; hickory, 8c; Virgina peanuts, er price is generally felt in the trade. 61c; Jumbo Virginia peanuts, 7c; Jap-Grain, Flour, Feed. Wheat-Club, 82c; Valley, 82c; 10c; Ohio, 25c; cocoanuts, dozen, 90c anese peanuts, 64c; chestnuts, Italian, bluestem, 84c; red Russian, 80c. @\$1.00; pine nuts, 17hc fb. **Our Facilities Are** Oats-Producers' prices: White, Produce. \$28; gray, \$26@27. Butter-Country creamery, 321c@ Flour-Hard wheat, patent, \$4.80; 38hc; city creamery, 37hc; store, 15@ straight, \$4.00; graham, \$4.50; rye, \$5; the Best 16c; butter fat, 333@36c. whole wheat flour, \$4.45; Dakota, Eggs-Ranch, candled, 18@19c. \$6.40@6.60; Eastern rye, \$6.60; Cheese-Young America, 17c; Ore-Pillsburg, \$7; Corvallis, \$4.40. gon full cream, flats, 15@15. Rye-\$1.40 per cwt. And we promptly execute all orders Honey-Dark, 11@12c; amber, 12 Corn-Whole, \$32.50; cracked, @13; fancy white, 141@15. Poultry-Old roosters, 9@10c 1b; hens, 12@13c 1b; dressed stock, 1@ \$33.50 per ton. Hay-Wholesale selling prices; Valley timothy, \$17@18; Eastern lic higher than live; ducks, 14@15c Oregon, \$20@21; clover, \$14@15; J. S. Dellinger Co. tb; turkeys, live, 11@12c lb.; dressed, alfalfa, \$12@13. 15c fb; geese, live, 9@10c fb; pigeons, Grain bags-Domestic, 84c; Calold, \$1 per dozen; squabs, \$2@3 per cutta, 9c. dozen. Millfeed-City bran, \$24.50; coun-Astoria, Oregon Vegetables. try bran, \$25.50; city shorts, \$26; Cabbage-\$1@125 cwt.; cauliflower, country shorts, \$27; chop, \$22; mid \$1.85 crate; celery, \$4.00@5.00 crate; dlings, \$30.50. parsley, \$1.25; hothouse lettuce, \$1.00 Barley-Producers' prices: Brewing @1.25 box; head, 75c dozen; spinach, \$28.50; feed, \$27; rolled, \$28@29. box, \$1.25; Brussels sprouts, 8c; arti-Buckwheat-\$36 per ton. chokes, 90c@\$1.00 dozen; tomatoes, Cereal Foods-Rolled oats, cream, Have You Seen \$4.50@5.50 crate; peppers, 221c 1b; 90-1b. sacks, \$7; lower grade, \$6.50; beans, green and wax, 20c fb; peas, oatmeal, steel cut, 45-th, sacks, \$8; 10c fb; egg plant, 20c fb; beets, \$1.00 9-1b. sacks, \$4.25 per bale; oatmeal per cwt.; turnips, 75c@\$1 per cwt.; (ground), 45-th. sacks, \$7.50 per barcarrots, 50c@\$1 per cwt.; cucumbers, The Wash? rel; 9-1b. sacks, \$4.00 per bale; split \$2@2.50 dozen; green onions, 40c peas, \$4.50 per 100-1b. sacks; 25-lb. dozen. boxes, \$1.25 per box ;pastry flour, Potatoes-Buying price, 40@50c per cwt.; sweets, \$3.50 per cwt. 10-lb. sacks, \$2.75 per bale. Fresh Meats and Fish. In Our Hardware Window Onions-Buying, price, \$2@2.25 Oysters-Shoalwater Bay, per galper cwt. lon, \$2.25; per sack, \$4.50; Toke Hops, Wool, Hides, Etc. Hops-1907 crop, 4@51c tb. lbs.), \$6; Olympias, per gallon, \$2.25. Wool-Valley, 16@18c; Eastern Fresh Meats-Veal, fancy, 100 lbs., The Foard & Stokes Hardware Co Oregon, 12@18c, as to shrinkage. averag, 9@9hc; 100 to 150 lbs., 8@ Cascara Sagrada (chittim bark)-She lb.; large and coarse, 5@7c; hogs,

Beeswax-Good, clean and pure, 22

@She per th.

Professor Russed calls attention to the fact that while warm springs may indicate the presence of a watercharged layer that would supply flowing wells, a hot spring, or one make a business of that sort of thing." having a temperature of more than "Of course. I know that. I read the 100 degrees, is not so favorable an article."-Philadelphia Press.

Apparent.

"Pardon me," began the new ac quaintance, "but are you the Mr. Cadley Nuritch who wrote that magazine article last month for us?" "Yes," interrupted Nuritch, "but of course you'll understand that I don't

February Official Tide Tables

Compiled by the U. S. Government for Astoria and Vicinity.

MARCH, 1908.					MARCH, 1908.				
A. 1	М.			Low Water. Date.			P. 1 h.m.		
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steers, 5hc@6c; muttons, medium a25c per ID. size, 10@11c; large and coarse, 8@9c. Clams-Little neck, per box, \$2.50; razor clams, \$2.00 per box.

Fish-Halibut, 6c; black cod, 8c; black bass, per lb., 20c; striped bass, this region is approximately 50 de- 'Chamberlain's Cough Remedy, which 13c; smelt, 7c; herring, 5hc; flounders, 7c; sturgeon, 12hc; sea trout, 18c; tom lobsters, 25c lb.

Fruit

cranberries, \$7.00@9 per barrel.

Dried Fruits-Apples, 9@10c per pound; apricots, 27@29c; peaches, 11 @13c; pears, 111@14c; Italian prunes, 7hc per pound; black, 6@7c; bricks, extra star, cases, 21hc; headlight oil, 75c@\$2.25 per box; Smyrna, 16@17bc | cases, 19hc; iron barrels, 12hc; elaine, per pound; dates, Persian, 61@7c per pound.

3.50 box; limes, 75c per 100; oranges, 10-case lots, 71c. new navels, \$1.75@2.50 box; grapefruit, \$3.50@4.00 box; bananas, 5c Naphtha, cases, 19hc; iron barrels, Ib.; crated, 5hc lb.; tangerines, \$1.40@ 12hc. 1.50 box; pincapples, \$4@5 dozen.

Groceries, Provisions, Etc.

Sugar (sack basis)-D. G., \$5.65; boiled, 5-barrel lots, 53c; 1-barrel XX, \$5.45; beets, \$5.45; Golden C, \$3.50; extra C, \$5.15; powdered, \$5.80; boxes, 55c cwt. advance over sack bbls., 17hc; cases, 24hc. Motor, bbls., basis; fruit or berry sugar, \$5.65; 17hc; cases, 24hc. 86 degrees, bbls., boxes, 55c cwt. advance over sack 30c; cases, 37hc. Engine Distillate, basis (less ic if pai dfor in 15 days). bbls., 10c; cases, 17ic. Coffee-Mocha, 24@28c; Java, fancy, 25@28c; Java, good, 20@24c; ton lots, 72c; 500-tb lots, 8c less; less Java, ordinary, 17@20c; Costa Rica, than 500 lbs., 84c; red lead and lithfancy, 18@20c; Costa Rica, good, 16 arge, ac higher than white. @18c; Arbuckle, \$16.63 cwt.; Lion, \$15.88 cwt.; Colombia coffee, 14c lb.; Salvador, 111@141c.

Rice-Imperial Japan, No. 1, \$6.25; Southern Japan, \$5.25@5.75; broken, 5c; head, fancy, \$6@6.75.

Sago and Tapioca-6hc.

Provisions-Hams, large, 13c; small, 13c; picnic, 9hc; boiled hams, 22c; boiled picnic, 28c; breakfast, burrows of the prairie dog, often, it is bacon, fancy ,22c; English, 15hc; dry salted short clears, 10c; backs, 10c. Dates-Golden, 60-fb boxes, 6@69c; owl give a third rattle. And whenever

1-1b packages, 8c; Fard, 15-1b boxes, \$1.40 box. Lard-Kettle-rendered tierces, 111c;

Tallow-Prime, 5c; No. 2 grease, 2@6c per Ib. Oregon Graperoot-Per 100 pounds \$3@5. Hides-Dry hides, No. 1, 12hc fb; dry, No. 1, 12c lb; dry salted, one-6c; catfish, 11c; shrimp, 10c; perch, third less; dry calf, 14c tb; salted steers, 5c pound; salted cows, 4c fb; cod, 10c; salmon, silversides, 9c; stags and bulls, 3c tb; kip, 5c tb; steelheads, 11c; chinooks, 12c 1b.; calf, 9c tb; green stock, 1c less; sheepskins, shearlings, 10@25c; short wool, 30@40c; medium and long wool, according to quality, 50tb9Cc; \$1.75@2.50 box; common to good, \$1 dry horses, 50c@\$1; dry colt, 25c; an-@1:50 box; pears, \$1.75@2.00 box; gora, 80c@\$1; goat, ocmmon, 10@ Oils, Lead, Etc. Coal Oil-Union and pearl and astral oil, cases, 18hc per gallon; water 5@6c; California ags, white, in sacks, white, iron barrels, 11c; cocene and

cases, 28c. Turpentine-In cases, 72c; in wood Tropical Fruits-Lemons, \$2.00@ barrels, 69hc; in iron barrels, 65c; in

Linseed Oil-Raw, 5-barrel lots,

51c; 1-barrel lots, 52c; in cases, 58c; lots, 54c; in cases, 60c. Gasoline-Union and Red Crown,

The Wily Owl.

A party of horsemen were traveling along Bridge creek, a tributary of Bad Water river, Wyoming, when their horses suddenly shied off the track at the sound of a "rattle." Search was made for the snake, but it was finally found that the sound proceeded from the burrowing owl, which lives in the said, in company with the rattlesnake, Seated on a post the party heard the they passed the spot it gave warning by its rattle, and the horses always shied off the track in alarm,-American Naturaliet

ASTORIA



Successors to Fourd & Stokes Co.