

PURE WATER SUPPLY WORRIES SCIENTISTS

At Philadelphia, on the banks of the Schuylkill, a neat brick building is now in course of erection in which a million gallons of this filthy stream will be daily converted into pure, sparkling water, free from organic impurities and bacteria. The site has been purposely chosen below the city's slaughter houses, where the river is teeming with microbial life, is foul to the sight and smell, and as dangerous to the taste as prussic acid, in order to demonstrate, beyond the shadow of a doubt, the efficiency of a system of water purification which is destined to revolutionize existing methods of supply water to cities. Across the Delaware river at Camden, a more convenient location could have been secured for this plant at one-half the cost of that on the Schuylkill; but filthy and evil smelling as the Delaware river is, laden with disease germs as its sand has been shown to be, its waters are clean in comparison with the open sewer into which the Schuylkill has been converted; and this consideration determined the directors of the United Water Improvement Company to pay a large rental for the opportunity to use for their demonstration what their engineer called the "rottenest water" in Pennsylvania. The city of Philadelphia is spending over thirty million dollars on a slow sand filtration plant in the hope of reducing the high death rate from typhoid fever which has long characterized the city. When the enormous outlay was authorized, the art of water purification had advanced no further than sand filtration; and although it was known that sand filtration could only reduce the typhoid rate to a degree, and could not entirely eliminate the dread germ from the water, it was the best and most scientific method of water purification on a large scale then known to the world. Purification by ozone was but an interesting laboratory experiment. Since then an electrical genius has advanced it to a commanding position—far above that of any previously known method of purifying water for cities. Suddenly the entire science of public water supply has been revolutionized. Great and costly filter areas, uncertain in operation, incomplete in efficiency, and expensive to maintain, have in a day, as it were, been made obsolete and unnecessary. The vaunted reduction of typhoid fever by sixty or seventy per cent becomes, by ozone sterilization, a full hundred per cent. The necessity of seeking distant and unpolluted supplies, with the great cost of transportation, is now done away with; for almost every city has, at its own doors, water that can, by ozone purification, be made as wholesome as the best of mountain springs, and even freer from bacteria. To the late Professor Tyndall is attributed the prophecy that before many years a city would be able to take its sewage, and, by a perfected system of purification, convert it into its own water supply. It is not likely that the great English scientist in-

tended his prediction to be taken literally. Nevertheless, it has come true. If it were necessary or otherwise desirable, a city could take its own sewage and convert it into a clear sweet stream of sparkling water. This is science's latest contribution to the comfort and safety of human life. That the foulest water, full of disease germs and filth, could be purified and sterilized by ozone and made fit for human consumption was known fully a dozen years ago. That the same process of purification removed all objectionable taste, smell and color from the water was also known. Even the tinge imparted to water by iron was found to be easily removed; but, as already stated, this was at first but a laboratory experiment. Later some attempts at a practical application of ozone to the water supplies of cities were made, but until the Dutch scientist, Vosmaer, invented a method of producing the silent brush discharge without the use of dielectrics, the attempts invariably failed through the breaking down of the dielectric. To sum up the advantages of ozonization over sand filtration, the evidence shows that:

1. Ozonization gives absolute bacterial purity; filtration does not.
2. Ozonization costs less for installation and operation, the difference in some cases being only one-sixth for installation and one-quarter for operation.
3. An ozonization plant can be built to supply the largest cities in a few months; a filtration plant takes years.
4. The purifying machinery covers a few hundred feet in case of ozonization; in filtration any acres are needed.
5. With ozonization the nearest body of fresh water can be purified for human consumption regardless of its condition; with filtration this is not possible in the neighborhood of large cities.
6. With ozonization the degree of purity is constant; with filtration it is imperfect, intermittent, and dependent on the care of attendants.
7. An ozonizing plant can have its capacity doubled at slight cost, in little time, and with a reduction of the ratio of operating expenses; in filtration, costs are doubled throughout and years of preparation are required.
8. During epidemics ozonization gives the water supply absolute sterility; filtration can only do its best, which is imperfect.
9. Ozonization destroys the bacillus dysenteriae, the supposed cause of cholera morbus and other summer diseases involving great infant mortality; filtration does not appear to affect it.
10. Ozonization destroys the spores of crenothrix, which fill the water mains with organic growth and diminish their capacity; filtration does not.
11. Ozonization frees water from objectionable colors, odors and taste; filtration does this imperfectly.
12. Finally, ozone aerates and regenerates the water; filtration does not.



Looking For Work?

Enroll in the I. C. S. and you will not have to look long. The demand for technically trained men is far in excess of the supply. Obtain the technical knowledge contained in one of our Courses and you will soon be one of the thousands that owe their success to our instruction. We can help you qualify at home, in spare time, and at small expense, for any of the following positions:

Mechanical, Electrical, Steam, Civil, or Mining Engineer; Draftsman; Architect; Bookkeeper; Stenographer; Show-Card Writer; Window Dresser; or Ad. Writer.

Write TODAY, stating which position interests you, to

INTERNATIONAL Correspondence Schools
Box 799, SCRANTON, PA.
OR CALL ON OUR LOCAL REPRESENTATIVE

Salem, Or., April 20, 1904.
International Correspondence Schools, Scranton, Pa.

Gentlemen: In reply to your request asking for my opinion of your schools as a student, will say I am well pleased with your methods of instruction, and the faculty you have of making your lessons so plain and easily understood. Any person with a common school education cannot help but be benefited by pursuing a course in which he is interested.

In so far as I have pursued my course, could not suggest any way to improve your methods of instruction. I beg to remain,
Yours truly,
FRED A. LEGG.

Class L. A. C. 625,334

Free Circulars

R. W. WITTICHEN,
Local Agent.
F. X. HOLL,
Asst. Supt.
McKay Bldg., 3rd P. Stark,
PORTLAND, ORE.

Turner Items.

L. M. Waggoner is visiting at the home of his granddaughter, Mrs. V. J. Edwards.

L. Cavanagh and his painter, Mr. Welty, were seriously hurt Tuesday by falling 20 feet in Mr. Cavanagh's new hop house.

L. N. Commons and family and C. A. Nordyke, of Scotts Mills, recently visited at the home of C. A. Bear.

M. W. Roberts, wife and son from Washington, are moving on the Duncan farm to take A. Smith's place. Dairying will still be continued.

The M. E. church is being papered and painted, and will be formally dedicated September 23d.

R. O. Thomas and wife are on a trip to California, the former to attend the meeting of the Knights Templar.

How is This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure. F. I. CHENEY & CO., Toledo, Ohio.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by his firm.

WALDING, KINNAN & MARVIN,
Wholesale Druggists, Toledo, Ohio.
Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c per bottle. Sold by all druggists.

Take Hall's Family Pills for constipation.

Oregon

State

Fair

44th
Annual
Exhibition

Sept.
12 to 17
1904

Salem, Or.

The greatest fair in all respects in the history of the state.

\$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address P. J. CHENEY & CO., Toledo, Ohio.
Sold by all druggists, 75c.
Take Hall's Family Pills for constipation.

TIME CARD NO. 26.

No. 2 for Yaquina—
Leaves Albany 12:45 P.M.
Leaves Corvallis 1:45 P.M.
Arrives Yaquina 5:40 P.M.
No. 1. Returning—
Leaves Yaquina 7:15 A.M.
Leaves Corvallis 11:30 A.M.
Arrives Albany 12:15 P.M.
No. 3 for Detroit—
Leave Albany 1:00 P.M.
Arrives Detroit 6:00 P.M.
No. 4 from Detroit
Leave Detroit 6:30 A.M.
Arrives Albany 11:15 A.M.
Train No. 1 arrives in Albany in time to connect with the S. P. south bound train, as well as giving two or three hours in Albany before departure of S. P. north bound train.
Train No. 2 connects with the S. P. trains at Corvallis and Albany giving direct service to Newport and adjacent beaches.
Train No. 3 for Detroit, Breitenbush and other mountain resorts leaves Albany at 1:00 p. m., reaching Detroit about 6:00 p. m.
For further information apply to EDWIN STONE, Manager.
T. COCKRELL, Agent, Albany.
H. H. CRONISE, Agent, Corvallis.

Excursion Rates to Yaquina Bay. On June 1st the Southern Pacific Company will resume sale of excursion tickets to Newport and Yaquina Bay, both season and Saturday-to-Monday tickets will be sold. This popular resort is growing in favor each year, hotel rates are reasonable, and the opportunity for fishing, hunting and sea bathing are unexcelled by any other resort on the Pacific coast.

REDUCED EXCURSION RATES.

From S. P. and C. & E. Points to the Seaside and Mountain Resorts for the Summer.

On and after June 1, 1904, the Southern Pacific, in connection with the Corvallis & Eastern railroad, will have on sale round trip tickets from points on their lines to Newport, Yaquina and Detroit at very low rates, good for return until October 10, 1904. Three-day tickets to Newport and Yaquina, good going Saturdays and returning Mondays, are also on sale from all East Side points, Portland to Eugene inclusive and from all West Side points, enabling people to visit their families and spend Sunday at the seaside. Season tickets from all East Side points, Portland to Eugene, inclusive, and from all West Side points, are also on sale to Detroit at very low rates, with stop-over privileges at Mill City or any point east, enabling tourists to visit the Santiam and Breitenbush hot springs in the Cascade mountains, which can be reached in one day. Season tickets will be good for return from all points until October 10. Three-day tickets will be good going on Saturdays and returning Mondays only. Tickets from Portland and vicinity will be good for return via the East or West Side at option of passenger. Tickets from Eugene and vicinity will be good going via the Lebanon-Springfield branch if desired. Baggage on Newport tickets checked through to Newport; on Yaquina tickets to Yaquina only. Southern Pacific trains connect with the C. & E. at Albany and Corvallis for Yaquina and Newport. Trains on the C. & E. for Detroit will leave Albany at 7 a. m., enabling tourists to the hot springs to reach there the same day. Full information as to rates, with beautifully illustrated booklet of Yaquina bay and vicinity, timetables, etc., can be obtained on application to Edwin Stone, manager C. & E. railroad, Albany; W. E. Coman, C. P. A., Southern Pacific company, Portland, or to any S. P. or C. & E. agent. Rate from Salem to Newport ... \$5.00 Rate from Salem to Yaquina ... \$4.50 Rate from Salem to Detroit ... \$3.50 Three-day rate from Salem to Newport \$3.50

Summer Excursion Rates and Special Train Service Now On Between Portland and Clatsop Beach.

The summer schedule of the Astoria & Columbia River railroad has been inaugurated between Portland, Astoria, Gearhart and Seaside, in connection with special round trip excursion tickets to all Clatsop and North Beach points, and train leaves Union depot 3 a. m. daily and runs through direct, arriving at Astoria 11:30 a. m., Gearhart 12:20 p. m. and Seaside 12:30 p. m. The Portland-Seaside Flyer leaves Union depot every Saturday at 2:30 p. m., arriving Astoria 5:50 p. m. and runs through direct, arriving at Gearhart 6:40 p. m. and Seaside 6:50 p. m. In connection with this improved service, special round trip season tickets are sold from Portland to all Clatsop and North Beach points at rate of \$4.00 for the round trip, good for return passage until October 15. Special commutation tickets, good for five round trips, are sold from Portland to same points for \$15.00, good to return until October 15. Saturday special round trip excursion tickets from Portland to all Clatsop and North Beach points on sale every Saturday at rate of \$2.50 for round trip, good to return Sunday. Tickets sold from Portland to North Beach points are issued in connection with I. R. & N. steamers from Astoria and baggage is transferred to and from depot and steamer dock at Astoria free of charge, and all tickets sold by the O. R. & N. Co. from Portland to Clatsop and North Beach points are interchangeable and will be honored on trains of this company in either direction between Portland and Astoria. For additional information address C. A. Stewart, agent, 248 Alder street, Portland, Oregon, or J. C. Mayo, G. F. & P. A., Astoria, Oregon. Seaside souvenir of 1904 will be mailed to your address free upon application. Write for it. 7-1-2m

70 " HOURS " 70 PORTLAND TO CHICAGO No Change of Cars

DEPART FOR	TIME SCHEDULES From Portland, Or.	ARRIVE FROM
Chicago	Salt Lake, Denver, Ft. Worth, Omaha, Kansas City, St. Louis, Chicago and East.	5:25 p. m.
Portland Special	Salt Lake, Denver, Ft. Worth, Omaha, Kansas City, St. Louis, Chicago and East.	7:10 a. m.
Atlantic Express	Salt Lake, Denver, Ft. Worth, Omaha, Kansas City, St. Louis, Chicago and East.	8: a. m.
St. Paul Fast Mail	Walla Walla, Lewiston, Spokane, Walla Walla, Pullman, Minneapolis, St. Paul, Duluth, Milwaukee, Chicago, and East.	8: a. m.

Ocean and River Schedule. For San Francisco—Every five days at 8 p. m. For Astoria, way points and North Beach—Daily (except Sunday) at 8 p. m.; Saturday at 10 p. m. Daily service (water permitting) on Willamette and Yamhill rivers. For fuller information ask or write your nearest ticket agent, or A. L. CRAIG, General Passenger Agent. The Oregon Railroad & Navigation Co., Portland, Oregon.

O. C. T. CO.'S PASSENGER STEAMERS
POMONA
and Altona leave for Portland daily except Sunday at 7 a. m.
Deck: Foot of Trade Street.
M. P. BALDWIN, Agt.

MARK ET QUOTATIONS TODAY

"Make Salem a Good Home Market"

Poultry—at Steiner's Market.
Eggs—Per dozen, 22c.
Hens—8c.
Young chickens—8c.
Harritt & Lawrence,
Eggs—Per doz., 22c.
Hop Market.
Hops—19@25c.
Potatoes, Vegetables, Etc.
Potatoes—1 1/2c.
Onions—2 1/2c.
Wood, Fence Posts, Etc.
Second growth—\$5.75.
Ash—\$3.00 to \$3.75.
Grub oak—\$6.50.
Cedar posts—12 1/2c.
Hides, Pelts and Furs.
Green Hides, No. 1—5c.
Green Hides, No. 2—4c.
Calf Skins—4@5c.
Sheep—75c.
Goat Skins—25c to \$1.00
Grain and Flour
Oats—Buying, \$1.10 per cwt.
Barley—\$21 per ton.
Flour—Wholesale, 2.75.
Live Stock Markets
Steers—2@2 1/2c.
Cows—1@1 1/2c.
Sheep—\$1.50@2.00.
Dressed veal—4@5 1/2c.
Fat hogs—5@5 1/2c.
Hay, Feed, Etc.
Baled cheat—\$10@11.
Baled clover—\$9.
Bran—\$22.50.
Shorts—\$24.00.
Eggs, Butter and Cream.
By Continental Cream Co.
Eggs—16c, cash.
Butter—22 1/2@25c.
Butter fat—22 1/2c, at station.

PORTLAND MARKET.
Wheat—Walla Walla, 79c.
Valley—83c.
Flour—Portland, best grade, \$15@16.70; graham, \$3.50@4.00.
Oats—Choice white, \$11.20@12.5.
Barley—Feed, \$20 per ton; rolled \$22.
Millstuff—Bran, \$19.00.
Hay—Timothy, \$14@15.
Potatoes—Fancy, \$1.25@1.40.
Eggs—Oregon ranch, 23@24c.
Poultry—Chickens, mixed, 9 1/2@10 1/2 per pound; turkeys, 14@16c.
Pork—Dressed, 6 1/2@7c.
Beef—Dressed, 4@6c.
Veal—6@7c.
Mutton—Dressed, 4@5c.
Hops—1903 crop, 22@25c.
Wool—Valley, 19@20c; Eastern Oregon, 10@17c; McHair, 30c for choice.
Hides—dry, 16 pounds and upward 15@15 1/2c.
Butter—Fancy creamery, 22 1/2c.

O. R. & N. OREGON SHORT LINE
AND UNION PACIFIC

Three Trains to the East Daily. Through Pullman standard and tourist sleeping cars daily to Omaha, Chicago, Spokane; tourist sleeping cars daily to Kansas City; through Pullman tourist sleeping cars (personally conducted) weekly to Chicago; reclining chair cars (seats free) to the East daily.

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DR. GUNN'S ONION CURE FOR COUGHS, COLDS, HOARSENESS & BRONCHITIS.
Best Remedy for Children. Pleasant to take and safe in an overdose. The old original Home Cure Sold by all Medicine Dealers in large bottles for 50¢. Made only by DR. GUNN & CO., Philadelphia, Pa. Write us we will send you a Sample Bottle Free.

Have You Ever Ordered Your Groceries from
Harritt & Lawrence
If not, you are away behind the times. However, they are always glad to see new patrons, and if you call on them, you will be more than pleased. You will find them at the corner of Commercial and Ferry streets.

Burlington Route
Free Information About the World's Fair
If you have any idea of visiting the World's Fair this year, ask me today for a copy of our World's Fair Folder. It tells just what you want to know about railroad tickets, baggage arrangements, sleeping car berths, how to reach the Exposition grounds, what to do when you get there, how to see the Fair to the best advantage, how to get a boarding place, and answers nearly every question of this character that may be asked. Contains maps of the Fair grounds, of the City and of the Burlington Route. Free for the asking—A postal card will do.
A. O. SHELDON,
GENERAL AGENT BURLINGTON ROUTE,
100 THIRD STREET, PORTLAND, ORE.