RECENT SCIENTIFIC DISCOVERIES

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THE OREGONIAN'S HOME STUDY CIRCLE: DIRECTED BY PROF. SEYMOUR EATON

Note.—These papers on practical science have been prepared for The Oregonian's Home Study Circle by Professor William J. Hopkins, of Drexel Institute.

IX. SUBMARINE BOATS.

The study of submarine navigation is far from new. Within the last few years, however, it has been revived and pursued with renewed energy, especially in the United States and in France, and the performances of the boats have been followed by the public with great interest.

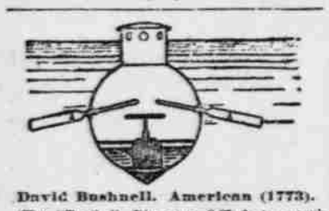
A submarine boat must first of all be habitable both on the surface and beneath it. Otherwise it is no more than a torpedo. It must be sufficiently under the control of the pilot and go down or up or to either side as he directs. Great speed is not necessary, but to be useful it must have reasonably great range of action. In other words, it must be able to operate at a reasonable distance from its port without becoming helpless and unable to return because of loss of motive power.

Habitability.

The principal thing necessary to make a submarine boat habitable is an adequate supply of air. For this the crew must depend upon the supply carried in the boat, or there must be communication with the surface through supply and exhaust tubes through which the air is forced by pumps. Both methods have been used, either separately or in combination. The more modern boats are provided with an abundant supply of compressed air in tanks, sufficient in some cases to enable the crew to live comfortably at the bottom for a day or longer, besides serving other purposes in the operation of the boat. Liquid air may possibly be serviceable for such purposes.

Methods of Propulsion.

The submarine boats of a century ago were propelled while under water by cars or a wheel. The cars projected through the sides with water-tight joints of oiled leath-



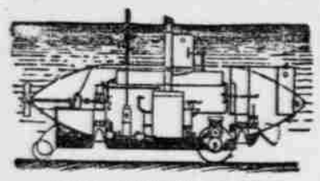
David Bushnell. American (1773).

(The "Turtle." Diameter, 8.25 feet; propulsion by means of oars; submersion through the introduction of water; armed with rudimentary torpedo; constructed of copper.)

er, and could be feathered or turned edgewise on the return stroke. What kind of a wheel was used is not clear, but it probably was not a screw. Since the invention of the screw, however, all boats have used it. In some of the earlier screw boats no motor was provided and the screw had to be turned by hand. The boat used with ultimate success by the Confederate forces in the Civil War was propelled in this way. Now, two forms of motor are usually provided. A steam, gas or oil engine can be used at the surface, but not beneath it, where there is no way of escape for the smoke or gases. The motor for propulsion under water is in general electric, although superheated water or compressed air may be used. A liquid-air motor would possess some advantages for such service. Two of the most successful French boats designed by Zede used electric motors only, supplied by accumulators. Their capacity is sufficient to give a range of action of 35 or 40 miles.

Methods of Submergence.

Submergence is accomplished principally by the admission of water into tanks arranged for the purpose. This is in some cases supplemented by vertical screws or by horizontal rudders or vanes. A boat in motion may be made to go under the water by changing the angle of the horizontal vanes, but if the forward motion should cease the boat without water ballast would rise to the surface again. Any boat which depends on the use of vanes for submergence is more properly a diving or plunging boat. Several of the modern boats can be steered in this way, among them those of Nordenfelt, Zede, Peral and Holland. In the Goubet, Baker and Tuck boats the angle of the propel-



Lake. American (1896).

(The "Argonaut." Length, 52.5 feet; diameter, 14.75 feet; propulsion by a screw actuated by a steam engine while afloat and wheels driven by an electric motor when submerged; submersion through a reservoir of water; emersion through a counterpoise; constructed of steel.)

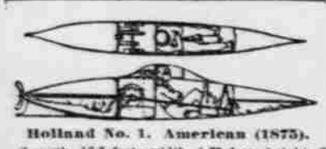
lers can be changed, thus changing the course. Another ingenious method of submergence is by a change in volume, which may be accomplished by the use of water-tight pistons. This, however, is only a particular way of admitting water ballast.

Although much popular enthusiasm has recently been aroused in France by the performances of two or three boats, we may leave them without further description and pass at once to the consideration of the boats which have the most interest for us—those of Holland and of Lake.

The Holland.

There have been three Holland boats. The first was a very small one, holding but one man, who propelled the boat by working the screw with his feet while half reclining in a very uncomfortable position. The boat was only two feet high and less than two feet wide. The second, known as the Plunger, the largest of the three, is complicated by a great deal of machinery. The third is the one of which we have heard so much in the last three years.

The appearance of this boat at once suggests the whale. It is 55 feet long, 10 feet in diameter and circular in section. At



Holland No. 1. American (1875).

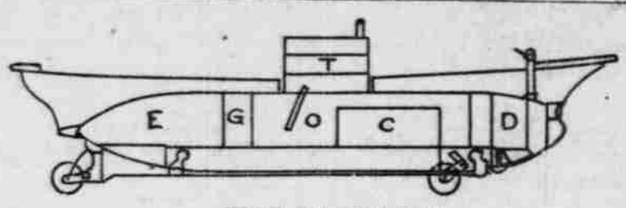
(Length, 16.5 feet; width, 1.75 feet; height, 2 feet; propulsion by a pedal and screw; submersion through the introduction of water.)

about the center of the back is the conning tower, in which the pilot stands, and a narrow platform extends lengthwise of the boat for use at the surface. Under it is a small storage space. The boat is propelled by a gas motor while afloat, and by an electric motor while submerged. Submersion is by water ballast or by horizontal vanes or both. The boat carries an abundant supply of compressed air, and is armed with torpedoes, two aerial and one submarine. The trials of this boat have been very successful, and her performance appears to be reliable. In her official trial before the Navy board about a year ago she made several successful dives and ran for a considerable distance ten feet below the surface, with scarcely an appreciable variation from the course. The course, when under water, is largely a matter of guesswork, as the compass inside a steel boat is of little or no service.

The proper function of a submarine torpedo-boat is said by experts to be, to act one part in a scheme of harbor defense or to clear an entrance of mines. It is much more limited than is generally supposed.

The Lake Boat.

Nearly if not quite all the boats except those of Lake are intended for war purposes only. Lake, however, has builded on a different plan and his boats are intended chiefly for peaceful pursuits. The fundamental difference is this: Other boats are intended to navigate between the sur-



THE NEW "ARGONAUT."

Length, 66 feet; D, diver's room; C, cabin; O, operating-room; T, conning tower; G, galley; E, engine-room.)

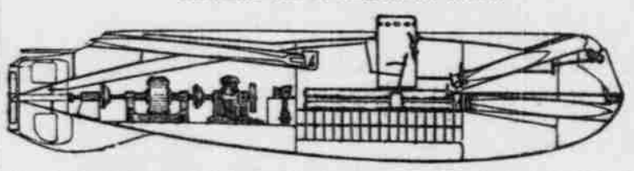
face and the bottom. The Argonaut, the name which Lake has given to each of his boats, is intended to navigate on the surface or on the bottom. Surface navigation is provided for in the usual way. For progressing on the bottom there are three wheels, one of which serves for steering. The other two are worked by the motors, and may be assisted by the screw.

The latest Argonaut, launched last Summer, has a regular yacht body built above the submarine boat, so that when sailing on the surface the crew can live as comfortably as on any surface boat. When it is desired to go to the bottom the crew retires into the metal shell, which is closed, and anchor weights are lowered until they rest on the bottom. Water ballast is then taken in and the anchor chains are wound up, pulling the boat down. By regulating the amount of water admitted the boat may be made to rest on the wheels with any desired pressure, according to the character of the bottom over which she is to proceed. Plenty of compressed air is carried in tanks, but its use is chiefly mechanical, as air is pumped in from the surface through tubes attached to floats.

The arrangement for giving the divers free access to the vessel when on the bottom is ingenious. The divers' room is tightly closed and compressed air admitted until the pressure within is the same as that of the water without. Then the door in the bottom is opened. Water cannot enter because of the air pressure, and the divers can easily step in or out, or a man can stand in the room quite dry and pick up articles from the bottom with a rake or fork.

The Argonaut is provided with pumps for sand or coal, and is designed to be

HOLLAND NO. 3. AMERICAN (1806).



(Length, 55 feet; diameter, 10 feet; propulsion by a gas motor while afloat and electricity while submerged; submersion through the introduction of water; armed with torpedoes.)

used for recovering cargoes from wrecked vessels, as well as for all kinds of divers' work, such as cleaning ships' bottoms and laying stone under water.

Note—This course concludes the course in "Scientific Discoveries."

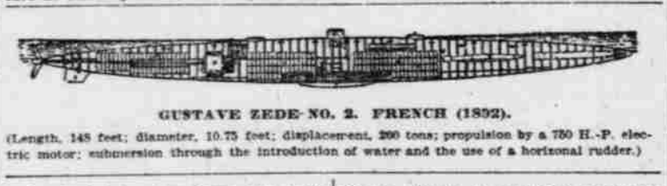
EAST SIDE AFFAIRS.

Need of Renaming Schools—Other Matters.

It has been suggested that much confusion could be avoided by renaming several of the schoolhouses on the East Side. In that part of the district there are the Central on East Thirteenth and East Stark, and the North Central on East Twelfth and East Burnside streets. The Albina Central on Mississippi avenue and Morris street, and even the Thompson building is sometimes called the Central. When first erected, the Central in East Portland was the central indeed and the North Central was properly named, but these names no longer mean anything as far as location is concerned, but are confusing and misleading. The Albina Central was the second building put up in old Albina and was central as far as that section is concerned. It is a small four-room structure. It is considered that all these East Side schoolhouses with the name Central might be named in such a way as to remove all confusion.

Removing Old Schoolhouse.

Jack Donaldson, who purchased the two parts of the old Holladay school-building for $35, has disposed of one part for $22 to a man, who will use part of it in a structure at Cascade Locks. Already the half



GUSTAVE ZEDE NO. 2. FRENCH (1892).

(Length, 148 feet; diameter, 10.75 feet; displacement, 200 tons; propulsion by a 750 H.-P. electric motor; submersion through the introduction of water and the use of a horizontal rudder.)

he bought is being torn down. The work is a pretty hard job and much debris is left over. The other half will be disposed of in some way, and the grounds will be cleared, which will greatly improve the appearance of the school property.

East Side Notes.

Mrs. George, wife of W. F. George, of Dawson, will leave for Dawson City the last of June to join her husband, who has been in Alaska for some time.

The dwelling of G. Tourman, on East Twenty-fourth and Fremont streets, was entered yesterday, and a gold watch, chain, three gold nuggets, and some other articles were taken.

A bicycle path will be constructed along West avenue, Mount Tabor, between the Base and Section roads. Road Supervisor Kelly with a force will commence work this morning. A double path will be built.

The grave of the late Rev. C. R. Thoburn, in Lone Fir cemetery, was specially decorated Wednesday by the Ladies' Society of Centenary Methodist church. Some of the boys of the Sunday school also placed flowers on the grave.

Mrs. C. R. Thoburn and her children have arrived at Hutchinson, Kan. She stopped over at San Francisco for a few days and then proceeded on her trip. Mrs. Thoburn will spend the Summer with her mother and get the rest she so much needs.

Work is progressing along East Tenth street between East Glisan and Belmont streets. Sidewalk lumber is distributed the entire length of the street, and the graders have their work under way. The contractor seems determined to get the improvement completed as soon as possible.

George B. Prettyman, of Rockwood, has been made bicycle tax-collector for that neighborhood. It will be quite a convenience for that section. Now that the path on the Base Line road is about completed, the owners of wheels living along the road should jump at the chance of paying their tax.

Dr. Wise will go to Tillamook on June 10.

CONVENTION-RATE MEETING

Transcontinental Lines Will Confer at 10 A. M. Today.

A call has been issued for a meeting of the representatives of the Northern Pacific, Southern Pacific, Great Northern, Canadian Pacific and the O. R. & N., at the office of General Passenger Agent Hurlburt, at 10 A. M., today. The object of the meeting is to make a mutual agreement on round-trip rates to the National Republican and the National Democratic conventions, at Philadelphia and Kansas City, respectively.

The O. R. & N. took the ground that it was fitting and proper to make the same rate from North Pacific Coast points as those named by the Southern Pacific from California points—$88.50 to Philadelphia. This rate, as well as $60 to Kansas City, it has already announced. There is little question but that uniform rates will be agreed upon between the lines.

STILL SHIPPING SHEEP.

Fifty-six Cars Sent Out of Oregon for Chicago.

The eastbound movement of sheep still continues without abatement. R. S. Scott, of Spokane, sent out a train of 22 cars of sheep from Heppner, May 29, to Idaho. These will there be fattened and thence sent on to Chicago.

Perry & Martin, of Durand, Mich., shipped out 19 cars of sheep Wednesday from Heppner to Crystal Springs, N. D., on the Northern Pacific, whose ultimate destination is also Chicago.

Fifteen cars of sheep were sent out yesterday from Grass Valley, on the Columbia Southern, to Thomasville, Colo., to be fed for the Chicago market.

PAN-AMERICAN EXPOSITION.

Southern Pacific and Santa Fe Will Return Exhibits Free.

The Southern Pacific and Santa Fe will each soon issue a circular to apply on exhibits to the Pan-American Exposition, at Buffalo, N. Y. These will provide for the free return of all property (except horses) exhibited at the exposition that has paid full tariff rates to the same. The Central Freight Association has advised its concurrence in this arrangement. Effort is now making by the Transcontinental Freight Bureau to have all lines members of the bureau join in this arrangement.

Note—This course concludes the course in "Scientific Discoveries."

PERSONAL MENTION.

J. J. Howser, of Medford, is registered at the Perkins.

R. M. Smith, of Spokane, is registered at the Portland.

L. C. Palmer, of Bridal Veil, is registered at the Perkins.

Mrs. C. P. Hogue, of Oak Point, is registered at the Perkins.

Miss Maud Ashley, of Walla Walla, is a guest of the Imperial.

George M. Love, of Jacksonville, is registered at the Imperial.

W. H. Kirkman, of Walla Walla, is registered at the Perkins.

J. C. Fitzhewry, of Los Angeles, is registered at the Portland.

D. M. C. Gault, a Hillsboro newspaper man, is at the St. Charles.

D. H. McCarty and wife, of Tacoma, are guests of the Imperial.

W. H. Conyers, an attorney of Clatskanie, is registered at the St. Charles.

J. H. Lewis, of Seattle, politician, registered at the Portland yesterday.

S. S. Cook, of Vancouver, Wash., is at the St. Charles, preparing to depart for Nome.

George G. Bingham, an attorney of Salem, is at the Imperial, accompanied by his wife.

Dave Bachman, a prominent mining attorney of San Francisco, is stopping at the Hotel Portland.

M. Newhouse, a well-known citizen of Benton County, is registered at the St. Charles, from Corvallis.

George N. Fawcett, bailiff of the County Court, who suffered a slight stroke of paralysis some weeks ago, has assumed his duties again.

R. G. Smith, an attorney of Grant's Pass, was at the Imperial yesterday, en route for Weston, Umatilla County, where, he says, that other Smith who is running for Congress and he are going to have a round-up.

A. F. Thane, local manager for G. W. McNear, and T. W. Smith, local manager for Girvin & Eyre, returned yesterday from San Francisco. They endured the fogs, bubonic plague excitement, and other features of San Francisco's environment for two long weeks, and then started North, glad to return to a land where plagues never come and crops never fail.

NEW YORK, May 31.—H. M. Viete, of Seattle, registered at the St. Denis Hotel today.

WASHINGTON, May 31.—Postal Inspector Frank Sharp, of Tacoma, is in Washington.

Through the Heart of the Rockies.

In purchasing your tickets to the East from the O. R. & N. or Southern Pacific ticket offices, call for the Rio Grande Western Railway in connection with the Denver & Rio Grande or Colorado Midland. The route takes you by way of the quaint and picturesque Salt Lake City, and through the Heart of the Rocky Mountains. Stop-over allowed at Salt Lake City on all through tickets. Most magnificent scenery in the world. Fast trains. Through sleeping and dining-cars to Denver, Omaha and Chicago. Inquire at office, No. 253 Washington street. J. D. Mansfield, General Agent.

Daily Treasury Statement.

WASHINGTON, May 31.—Today's statement of the Treasury balances shows:

Available cash balance	$146,665,538
Gold	65,922,504

TO THE ELECTION JUDGES

ED W. BINGHAM OFFERS THEM SOME PRACTICAL ADVICE.

Frauds Upon the Ballot Should Be Guarded Against—Amendment to Registration Law Suggested.

PORTLAND, May 31.—(To the Editor.)—On the eve of another election, I consider it a suitable time to call attention to some provisions of our election laws, and some pernicious practices that ought not to be tolerated, with the hope that it may result in a stricter observance of the law, and bring about a more fair ballot and a more honest count.

Provisions in the law for the guidance of judges and clerks of election have been grossly disregarded in the past. One means of securing a stricter observance of the law, and of preventing fraud, has never been systematically employed. I refer to the provisions of section 18 of the Australian ballot act of 1891, whereby several candidates may unite in appointing an agent at each polling place and file the appointment with the judges. Thus responsible and known persons only will be in the room during the time of receiving and counting the votes. There should be concert of action on the part of these agents of the political parties or of the candidates, so that some of them will be constantly on duty and guard against frauds which might be attempted in spite of the watchfulness of the judges, or even with their connivance. The statute is stringent enough, but it is not self-enforcing. It must be invoked or put into force by the action of some one, and this should be the work of these agents, whenever the judges or clerks or others violate the plain provisions of the law. Section 70 of the act punishes by fine of not less than $500, or imprisonment of not less than one year in the penitentiary, any judge or clerk of election "who shall willfully disregard any of the provisions of the act, or who shall negligently fail to enforce any of the provisions of the act, or who shall, in the counting of the ballots or in making the returns thereof, willfully disregard any of the directions or requirements of the act."

When these agents observe any such misconduct on the part of the judges or clerks, or by one or more of them, it is peculiarly their duty to call the offender's attention to the provision of the statute and his delinquency. Some of the other judges or clerks may have observed the illegal act, but not like to call attention to it for fear of raising a disagreement in the board, whereas, if these bystanders or agents called attention to the illegality of the act, then they would not hesitate to take action to enforce the law and immediately put a stop to the illegal proceeding.

Frauds Upon the Ballot.

In my judgment, the time when the most frauds upon the ballot are practiced is between the closing of the polls and the actual counting of the ballots. Some years ago I saw one of the judges, while the count was in progress, industriously engaged in taking the ballots out of the box and unfolding them, smoothing them out and looking them over, having a dozen or 20 of them at one time thus under his hands, all the time holding a very small indelible pencil in his fingers. Ostensibly, he was merely getting them ready for the next judge to read them aloud, but considering that 20 per cent of the ballots are not fully marked, I could not help wondering what the gentleman would be doing in the lonely hours of the night with that little pencil. There would then be nothing to prevent his marking here and there for a candidate in a group which the elector who had cast the ballot had overlooked or omitted to mark. I was a transient visitor, and it would have done no good to have temporarily stopped the game.

Such practices can best be prevented by the constant watch of these agents of the political parties and of the candidates and to keep up the watch they should act in concert, and relieve each other, so that at no time shall the ballots be exposed to danger of alteration, addition or substitution, from the time they go into the box until the last one has been taken out and duly counted.

Section 23 of the act plainly directs that the ballots shall be taken out of the box "one at a time by the chairman" and read and tallied, "while it remains in his hand, and while one of the judges not of the same political party as the chairman overlooks the ballot." No such officer could have any legitimate use for a pencil while so handling the ballots. And the judge seen with one in his hand, or observed in taking out of the box a second or additional ballot before the former ballot was duly read and counted, should be immediately called to account. His attention should be called to his violation of the law, to his willful disregard of that provision of the act, and the attention of the other judges and bystanders should be called to his misconduct and the willfulness of it. I do not think any judge or clerk would take chances of conviction if he was thus supervised. It is only by concert of action that such watchfulness can be maintained and such frauds prevented. Any law can be defeated if its provisions are thus grossly violated with impunity. Any system of book-keeping or checks, designed to prevent or to discover frauds, can be rendered useless if the accountants conspire to ignore them and are permitted to make false entries. No doubt the laws might be improved by good amendments, but if the amendments were not observed or enforced any better than some of the present good provisions it would not avail.

Objects of the Registration Law.

The present registration law was not intended so much to prevent unqualified persons from registering as to furnish means to detect and to facilitate the detection of persons guilty of attempting to vote illegally. Yet with all the talk, I have not yet heard of an arrest for perjury or other offense since the registering began. Surely, if men have falsely sworn to their places of residence or other qualifications, it might have been discovered ere this. It is not necessary or advisable to wait until election day and to arrest only when the illegal voter appears at the polls.

No registration law can give much satisfaction if it permits electors to vote, notwithstanding that they have neglected to register. The law should make it quite easy to register (by mail as now, for instance) and it should then declare, that if not registered the individual should not be allowed to vote. But the former registration law of 1885 was held unconstitutional for this very reason, and that decision stands unreversed, and it was not considered safe to take the chance of reenacting a law with the same provisions in it. The act, however, should be at once amended in this particular, and the constitutionality of the amendment could then be tested, without jeopardizing the law.

As it is, the act of 1899 requires every unregistered elector to present to the judges at the polls his affidavit together with that of six owners of real estate in the county, all in writing, duly signed, establishing his right to vote. Yet the law is liable to be abused, and this safeguard rendered abortive. Like other provisions its efficacy depends upon the three judges at each polling place. If they accept every such affidavit as conclusive or satisfactory and permit the individual to vote, it will go a long way to render the registration law useless, and all the trouble it put good citizens to of no benefit.

It may be at some polls two or three such complacent judges may be found, who will so grossly fail in their duty as to accept such affidavits as sufficient, when they should be carefully investigated. The judges have express authority in the act to issue subpenaes to compel witnesses to appear before them, and they are not hindered in the least from compelling the elector to actually produce his six witnesses before them.

By the law the affidavit is not made even prima facie evidence of the elector's right to vote. The law merely requires him to start his case by introducing that amount and character of proof. It is left wholly in the control and sound discretion of the three judges at each polling place, how much more proof they shall require, and whether to require the witnesses to appear before them for cross-examination, and as to how much proof or testimony in rebuttal they will hear.

If any excuse is to be allowed for not registering, and if any investigation and trial at the polls of the right of the unregistered applicant to vote is to be allowed, this discretion must be vested somewhere. If it is exercised in the interests of the many good citizens who have registered, the duly registered and unchallenged electors should not be delayed or hindered at the polls, and if there are any who must be delayed or inconvenienced at the polls, they should be the unregistered, or the registered who have not given their true place of residence, or who have fraudently registered.

The Sheriff in the first place should arrange the entrances and exits so as to facilitate the handling of such suspicious cases without holding up those registered and unchallenged electors who may be in the line just behind the unregistered. And the judges at each polling place should so control the coming and going at the polls as not to permit such unregistered and challenged applicants to delay and hinder the well-known and registered from casting their ballots.

Yet, after all, there is little but public opinion to compel the Sheriff in the first instance and the judges at the polls on election day to do their whole duty in these particulars. Sheriff Frazier is a candidate for re-election. In this county the Republican party has a majority of the judges at all or nearly all of the polling places. If they or the majority of them fail properly to conduct the polls the responsibility should be fixed upon that party, and particularly upon its party managers, and I know of no weapon the electors have more powerful than their ballots. If things go right or wrong at the polls, pass the word around, and let those who do not get a chance to vote, there or elsewhere, by their ballots express their approval or disapproval of the course of the dominant party.

Plan to Block the Polls.

It has been currently said cliques of owners of real estate, willing to lend themselves to the scheme, have signed—or will hold themselves in readiness and conveniently near by to sign—such affidavits, in order to facilitate the voting of such unregistered characters as the "bosses" want to make use of, and that if these men are not allowed to vote, they can, when the time arrives, block the polls with them anyhow. Such schemes cannot succeed without the connivance or gross mismanagement of the judges at the polls.

When one considers how much effort has been devoted to secure as good election laws as we have, and how much remains to be secured of amended before we can expect much improvement, it is disheartening. But there is only one thing for us to do. We must keep on endeavoring against the wrong and contending for the right course. That is what our ancestors did to give us the ballot, and it is our plain duty and interest to follow their example in order to preserve and protect it. If more of the good citizens would co-operate in the matter, it would be much better.

ED W. BINGHAM.

A TRAVELING MAN'S OPINION

A well-known New York traveling man, at the Portland, yesterday, said: "I have crossed the continent nine times in the last five years, but I never before had so quick and pleasant a trip as this one. I came by the O. R. & N., of course, and it would be hard to imagine a finer train, better service, faster time or grander and more varied scenery. The sleepers are as comfortable and elegant as first-class hotels; the diners serve nearly everything you can get at a metropolitan restaurant, and serve it well and at reasonable prices; and the buffet observation car is a whole city club on wheels, with library, reading and writing-room, cafe, bar and barber shop, all condensed in one. And the time is greased lightning! Think of flying from New York to Portland in four days, and from Chicago to Portland in three! Talk about modern progress! You can get a half-century of it boiled down to a few hours in one O. R. & N. 'Chicago-Portland Special' trip!"

AT THE HOTELS.

THE PORTLAND.

S Strauss, San Fran
G L Gilbert, San Fran
C Ruston, Jr, N Y
Ben F Block, N Y
Ed Daniger, N Y
S Manheimer, N Y
Fred W Graham, S F
J W Flynn, New York
J E Manerhan, S F
Miss B McKinley, Roseland
W H Kuplemann, N Y
F M Smith, Spokane
Lillian Sharpe, Jr, Providence
Dr J H Lindsey, Fall River, Mass
M Greenwald, N Y
Martin H Well, N Y
J A Fairchild, S F
F E Rohrer, Los Angls
Edwd N Camp, Chgo
Mrs N F Mills, Missoula, Mont
F Lincoln, N Y
J Joudreon, New York
Mrs W H Goodwin, Jamaica Plain, Mass
Miss Goodwin, do
Mrs W P Warren and baby, Cambridge
Goodwin Warren, do
S W Zenaner, N Y
Jas Hamilton Lewis, Seattle
C H Remier, St Paul
Geo Z Buffum, St L
Bartlett Sinclair, Boise
J C Fitzhenry, Los Ang
S H H Emmett, Vancouver, Wash
Emil Pursch, San Fr
H L Whitelock, Reading, Pa
Carl Weissputn & dtr, Troppau, Austria
Chas P Cote, St Louis
H J Ottenheimer, S F
John B Wright, Washington, D C
Francis T Simmons, Chg
Geo Hanson, San Fran
Mrs E L Whitney, Bonner's Ferry, Idaho
Miss Stella Whitney, do
H H Abbott, city
John S Pinney, Cincinn
H Edsell, Portland
Dudley McAdow, Mgr Keller
Mr & Mrs Elmers, Astoria
Jac Fishel, San Fran
Jos H Clark, San Fran
Geo H George, Astoria

Columbia River Scenery.

Regulator Line steamers, from Oak-street dock, daily, except Sundays, The Dalles, Hood River, Cascade Locks, and return. Call on, or 'fone Agent for further information.

THE PERKINS.

Mrs Thos McClelland, Forest Grove, Or
C E Paul, Holyoke, Col
Geo E Allen, Salem
S M Yoran, Eugene
J L Delarme, Montreal, Colo
F Cook, Astoria
Mrs F Cook, Astoria
A C St John, Chehalis
H A Purcell, Chehalis
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Miss O'Brien, do
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H Davidson, Seattle
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H S Bartlett, San Fr
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Mrs C P Hogue, Oak Pt
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Gaylord W Cooke, S F
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J J Howser, Medford
R S Wilson, Medford
H S Hobart, Kan City
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Miss L Hickman, do
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UNIVERSITY IS CLOSED

FINAL EXERCISES OF METHODIST INSTITUTION.

Its Work Will Hereafter Be Merged With That of Willamette University.

The exercises that closed the career of the Portland University took place yesterday evening in the University chapel at Sunnyside. A large and appreciative audience gathered to witness the splendid programme which had been prepared for the occasion. At 8:30 the programme opened with music by the Messrs. Brown, Epping, Stanley and Gill quartet, followed by an eloquent prayer by Rev. S. A. Starr, D. D. The orator of the evening, Rev. L. E. Rockwell, Ph. D., was introduced by President Whitaker. His subject, "Mile-a-Minute Man," was handled in an able manner, and was received with close attention by the audience.

"Star of Eternity," sung by W. A. Montgomery, was followed by the main feature of the evening, the conferring of the degrees and diplomas.

Rev. L. E. Rockwell, pastor of Centenary Church, received the degree of Doctor of Divinity from the university. The degree was conferred by President Whitaker, with complimentary remarks. The degree of Master of Arts was then conferred upon Rev. George H. Haley, pastor of the Methodist Church at Warrenton, of the class of 1897. Rev. Willard E. Stearns, pastor of the Methodist Church at Rainier, Wash., and also of the class of 1897, received the same degree.

The following students received degrees: Miss Mattie R. Leavitt, of Molalla, Or., received the degree of Doctor of Philosophy; Seth Leavens, of Cascade Locks, degree of Bachelor of Arts; August F. Buche, of Portland, degree of Bachelor of Arts. In the normal department, Miss Emily Canuto and Marietta Lydia Aldrich received the degree of B. F. D.

At the close of the exercises, President Whitaker, the faculty, students and invited guests repaired to the dining hall, where an elegant repast had been prepared. President Whitaker was chairman, and occupied the place of toastmaster. Dr. L. E. Rockwell, Dr. S. A. Starr and other ministers, were present. During the banquet, short talks enlivened the time. Dr. Whitaker spoke very feelingly of his connection with the institution. He expressed the hope that the students would stop short of nothing but the highest round in the ladder.

Overdue Ship Safe.

SAN FRANCISCO, May 31.—The overdue ship Benny Clement, 300 days from Hamburg for Kiao Chou, is reported to have arrived at her destination today. Ninety per cent reinsurance had been paid upon her.

Pears'

Pears' soap is dried a whole year. That's why it lasts so.

KILL THE BABIES

Careless Mothers Who Use Dangerous Purgatives.

A Menace to Mankind Easily Avoided by the Use of a Rational Remedy—Every Mother Should Heed the Warning.

The slaughter of the innocents was nothing in comparison with the destruction of infants caused by "physic."

Not so very long ago the poor little sufferers were usually forced to swallow violent purges, and it was luck if they got over it all right.

The stomach and bowels of the baby are sources of constant discomfort. The milk food sours in the baby's delicate little insides, and forms curd, and the fermentation of this undigested substance makes gases which produce wind colic. Then the little people begin to scream with agony, and the excited mother or nurse pours down the physic.

That's the time for the use of Cascarets Candy Cathartic. If the babe be suckling, the mother makes her milk mildly purgative by eating a Cascaret. Older infants eat a little piece like candy. In all cases Cascarets are mild but positive, never grip nor gripe, stop sour stomach, move the bowels naturally, and put things right as they should be.

Now, mamma, buy and try Cascarets today. It's what they do, not what we say they'll do, proves their merit. All druggists, 10c, 25c or 50c, or mailed for price. Send for booklet and free sample. Address Sterling Remedy Co., Chicago; Montreal, Can., or New York.

CCC This is the CASCARET TABLET. Every tablet of the only genuine Cascarets bears the magic letters "CCC." Look at the tablet before you buy, and beware of frauds, imitations and substitutes.

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A contented mind and a healthy body follow the use of O'Sullivan Rubber Heels. That is why they are called the heels of happiness. And the reason why they content the mind and comfort the body is because they are made of virgin rubber. Be sure to order by the name, not just "rubber heels."

Your dealer will attach O'Sullivan Heels to the shoes you are now wearing for 50c.—the same as for the poor heels that won't last half as long—when you encounter substitutes send 35c. and outline of heel for sample pair to O'Sullivan Rubber Co., Lowell, Mass. Say "Golf" Heels if you mean it.—Price is the same. Say Golf Soles and make remittance 75c.

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