ASTRONOMER TELLS HOW AND WHERE TO BEST VIEW ECLIPSE

Residents of Portland May Reach Path of Totality in Three Different Ways-East or South Side of Columbia River Nearest Points.

BY SIDNEY D. TOWNLEY.

Professor of Astronomy, Leland Stanford, Jr. University.

Will Electuring at various places in the states of Oregon and Washington I have found that the people are becoming greatly interested in the rare astronomical event

on the afternoon of This interest is, for the most part, an intelligent one, and reflects credit upon the people of these states. They want to know what is to be seen, how best to observe the best to observe the phenomena and into the best posi-tion. All these

questions have been professor Townley. answered in my lec. Professor Townley. tures, but as The Oregonian reaches a much greater audience than I have been able to reach it seems to me to be well worth while to answer these ques-

tions again. First of all I want to warn the peorona and the stars will not be visible.

Eclipse Phenomena. What is to be seen at the time of an

eclipse? One of the most interesting spectacles is to watch the coming of the shadow. The shadow travels from west to east, or, for this particular eclipse, from northwest to southeast. In order to satisfactorily see this oncoming of the shadow it will be necessary to locate oneself on a hill or butte with a clear view to the northwest.

The order to antistactorily see this one coming of the shadow it will be necessary with a clear view to the northwest. The shadow approaches with great and the shadow approaches with great presents allowed the shadow approaches with great presents and the shadow approaches with great shadow approaches with great presents and the shadow approaches with great and Halines, and the chances for the shadow approaches and the shadow approaches with great and Halines, and the chances for the shadow approaches and the shadow approaches with great and Halines, and the chances for the shadow approaches and the shadow approaches and the shadow approaches with great and Halines, and the chances for the shadow approaches and makes and the chances for the shadow approaches and the shadow approaches a

Smoked Glass Necessary.

of the shadow and third contact. I believe it will be of greater interest for the amateur to watch the shadow rather than the contacts.

Observers not equipped with telescopes may make observations of various kinds, as follows: Alternate streaks of light and dark

on the ground—
(a) Observe the shadow bands at second and third contacts. Note their direction, number, changes and the length of time they are visible. A paper or sheet spread upon the ground will help in observing this curious phe-nomenon. No adequate explanation has

(b) If an accurate timepiece, the cor-rection of which is known is available, the times of second and third con-tact may be noted. The estimate for second contact should refer to the insecond contact should refer to, the instant when crescent sun, as a crescent
disappears, and not when the last brilliant point of the sun corresponding to
solar rays passing through a lunar valley, disappears. The same, but in reverse order, is true at third contact.

(c) Observers might note what stars
are visible to the naked eye, if they
are familiar with the constellations
which will be visible at that time.

(d) Valuable work may be done by
estimating the lengths of the polar and

estimating the lengths of the polar and of the equatorial streamers of the corona, estimating in terms of the moon's diameter, or by drawing an irregular curve around the moon which passes through the extreme ends of the visible streamers.

(e) Observers might look for evidence of sodiacal light surrounding the sun, and if it is visible, which is doubtful, then a sketch of its outline should be made with the sun and coronal outline near the middle of the sketch.

Observers provided with telescopes

Observers provided with telescopes can employ their time to heat advantage by studying the structure of the corona close to the sun. Is this formless, or composed of wide streamers, or great number of very fine streamers? Do these streamers go out radially from the sun's surface, or do they lie in all position angles? Do they seem to have a relationship to any promi-

have not personally inspected any of these locations except that at Goldendale. This these locations except that at Goldendale and others in the immediate neighborhood. There are two buttes less than two miles to the southeast of Goldendale which will be magnificent places from which to view the eclipse. The buttes rise several hundred feet above the surrounding valley, are cassly reached, and a wonderful unobstructed view from 15 to 25 miles both to the northwest and to the southeast can be northwest and to the southeast can be

Still higher stations may be obtained from the summit of the Klickitat Mountains, which lie between Goldendale and the Columbia River. The lo-cations may be easily reached from The Dalles by taking the ferry to Grand Dalles.

Columbia View Good.

On the south side of the Columbia the eclipse may be viewed as total along the river anywhere from Cascade Locks to within 10 or 15 miles of Umatilla. The center line of totality crosses the Columbia close to the mouth of the John Day Biver. The bluffs along the First of all I want to warn the people of Portland again that their city
is outside the path of totality and that
the peculiar phenomena of totality cannot be seen from there. Ninety-nine
per cent of the sun's surface will be
covered, but the light coming from the
I per cent which remains uncovered
will be sufficient to obliterate the
coropa and the stars will not be visible.
Central Oregon, the region of the least cated in the semi-arid region of North Central Oregon, the region of the least rainfall of the state. From a study of the meteorological observations taken at various places along the path of totality, and from a personal inspection of various places from Chehalis to Baker, I believe the chances for clear weather are better for the region from the Klickitat Mountains to Heppner than for any other locations in the state of Washington and Oregon.

There are fine hills near Rock Creek and Heppner from which the eclipse may be viewed. Still further to the east there are fine locations near Baker and Haines, and the chances for clear weather seem to be good.

the total phase will have ended.

Another hour and 10 minutes will be

Another hour and 10 minutes will be

Smoked Glass Necessary.

Second Drive \$1402.

Secon

THE BLUE SLIP

BY DR. PAINLESS PARKER

Why did you lose your last position? You were working conscientiously for your employer. You were doing your work as well as anyone could do it. You were earning your salary, yet you were given the "blue slip."

You were politely told that your services were no longer desired.

This happens every day in the business world and the unfortunate one is left in ignorance as to the real reason, which is frequently a bad breath or unsightly teeth.

The public objects to all things that are disagreeable. They prefer to meet people who are not

Other employes who necessarily come in contact with you during the day complain to the "boss."

He does not like to dismiss you when your work is satisfactory, still he must have regard for others who wish to work in a pleasant environment.

He does not want to hurt your feelings, so you leave without knowing the real reason why you were discharged.

Decaying and unsightly teeth are nauseating.

Bad teeth cause a bad breath.

You may say it is caused by your stomach, but nine times out of ten this stomach disorder is the direct result of decaying teeth.

You can insure both your health and position by having your teeth placed in good order.

You can have this done painlessly, inexpensively and without unnecessary loss of time by the Pain-

Your teeth will be inspected by an expert, who does nothing but examine teeth.

He will tell you exactly what it will cost, so there will be no uncertainty as to the expense. You will then be assigned to an operator skilled in the particular branch of dentistry your case re-

You will receive the service of an organization that is the result of twenty-six years of progress and

Do not delay another day. Visit our nearest office at once.

There will be no charge for the examination and you will not be urged to have work done.

Nineteen Painless Parker offices in the United States repair the teeth of over 100,000 patrons annually. Portland Office, 326 Washington Street, Corner Sixth.

Eugene Office, Seventh Avenue and Willamette Street.

This is the third of a series of articles by Dr. Painless Parker. The fourth will appear in next Sunday's Oregonian. Read each article carefully, as

required for the moon to pass over the sun and when the last of the sun's surface again becomes visible we have the

Many Young Men Already Have Received Ratings and Are "Somewhere in the Fighting Zone" Aboard Uncle

Sam's Warcraft-Naval Reserve in Need of 10,000 Men to Man New Boats.

SEATTLE SCHOOL, POSE FOR PHOTOGRAPHS

ORDERED means of delivery or obtain authority to amend your tariff. Your tariff provision must be compiled with." "OVER THE TOP" THRILLS

WELLS FARGO EXPRESS COMPANY MARTHA THORNTON DEAD WAR PLAY AT PEOPLES BRINGS

dents of Washington. Mr. Lipschutz has won several medals at National style shows. He is temporarily at 410 Central building.

Wells Fargo Express Company at Portland is instructed to make deliveries to the Carroll Public Market there in a letter from Public Service Commissioner Bigelow, of Portland, complained that the company refused to make such deliveries on the ground that one of the ground that the ground tha

FRANTIC APPLAUSE.

Empey's Spectacular Production Timely Well Directed and Carries

Excited audiences yesterday greated Over the Top" with wild outbursts of

with potential energy enough for a giant, and his work as a screen artist is amazingly finished for a new camera

The photography offers many cleancut, distinct and wonderful examples of
camera art. The blowing up of munitions intended for shipment to the
allies, conveys a sensational thrill, and
the battle scenes are so varied and
realistic, life in the trenches so vividly
portrayed that one instinctively realizes that Empey, who has passed
through the hell of the Flanders front,
and carries numerous scars to prove
his participation in its grim horrors,
must have given valuable aid in furnishing detail.

Just take your shoes off and then
put those weary, shoe-crinkled, aching,
burning, corn-pestered, bunion-tortured
bunions.
There's nothing like "Tiz." It's the
toes will wriggle with joy; they'll look
up at you and almost talk, and then
they li take another dive in that "Tiz"
bath.
When your feet feel like lumps of
lead—all tired out—just try "Tiz." It's
Ah' how glad your feet get; how comfortable your shoes feel.—Adv.

must have given valuable aid in furnishing detail.

Aside from the spectacular phases of the magnificent production, the story takes the spectator from America to France, Germany and Belgium, with Empey, the soldier-author-lecturer, as an American who enlists in the British army following the sinking of the Lusi-tania, is wounded, and goes to the front as a Captain when America be-comes involved in the war. The plot-ting of spies is vividly pictured, ham-mering home the dangers at home as well as on the firing line.

well as on the firing line.

James Morrison gives a splendid
characterization of the young American
who proves a coward and then redeems himself at a crucial moment. Lois Meredith is alluring and dainty as the heroine and Betty Biythe is seen to splendid advantage.

THREE SERVING, TWO TO GO Yakima Couple Soon to Have Five

Sons With Colors.

YAKIMA, Wash., June 1.—(Special.)
—Three of the five sons of Mr. and Mrs.
A. C. Marks. of this city, already are serving in the United States Navy, and a fourth, their youngest, has obtainer their promise that he shall be permitted to delice the average of his houst. their promise that he shall be permit-ted to follow the example of his broth-ers as soon as he attains the age of 18, which will be within a few months. Their eldest son, who is married is en route here with his wife, who will remain with his parents when he, too, enlists and makes it a clear 100 per enlists and makes it a clear 100 per

cent family.

Mr. and Mrs. Marks are both natives of Berlin, Germany. Their three sons already in the service are Joe, Leo and Edward. Bob is the youngest and the eldest is Frank.

Phone your want ads to The Orego-nian, Main 7970, A 5095.

For Tired Feet, Sore Feet, Tender, Aching, Swollen, Calloused Feet and Painful Corns



Tendency to Constipation?=

USE THIS LAXATIVE!

Dietitians advise a "careful diet," but that is trouble-some to most people; physical culturists advise "certain exercises," which is good if one has both the time and the inclination. Doctors advise diet and exercise and medicine. The question is, shall it be a cathartic or purgative med-icine? Or a mild, gentle laxative?

Thousands have decided the question to their own satisfaction by using a combination of simple laxative herbs with pepsin known to druggists as Dr. Caldwell's Syrup Pepsin. A small dose gives a free, easy movement of the bowels. It is the best substitute for nature herself. In fact, since the ingredients are wholly from the vegetable kingdom it may truthfully be said it is a natural laxative.

Its positive but gentle action on the bowels makes it an ideal remedy for constipation. The dose is small, and it may be taken with perfect safety until the bowels are regulated and

The druggist will refund your money if it fails to

NO INCREASE In spite of enormous increased laboratory costs due to the War the manufacturers of Dr. Caldwell's Syrup Pepein are sacrificing their profits and absorbing the war taxes, so that this family laxative

Dr. Caldwell's DYRUP DEPSIN The Perfect Laxative

to have a relationship to any prominences?

Observation Piaces Told.

The residents of Portland may reach the path of totality in three different ways—they may go north toward Chehalls, or east toward Goldendale or east on the south side of the Columbia. The chances for clear weather are better on the east side of the Cascades than on the west side.

If one journeys to Chehalls some favorable locations may be found on the hills east of that city. The vegetation there, however, is dense, and the ap-

Reading Left to Right in Positions as Noted: First Row—(1) Cyrus T. Langeson, (6) Carl E. Sloan, (7) Vernon L. Wright, (12) William J. Evans, (13) Paul V. Finch, (15) Andrew T. Smith, (19) Earl C. Jackson-Second Row—(2) Raiph M. Casterter, (3) Delvin L. Peterson, (4) George E. McElroy, (5) Harvey R. Skow, (8) Leo Gandolph, (9) Tony J. Zimmerman, (10), William S. Teed, (12) Arthur R. Isakson, (14) Wilson A. McLaughlin, (15) Donaid L. Fairbanks. Third Row—(3) Natham B. Thomas, (6) Adam G. Weber, (7) Arthur M. Rich, (9) George O. Nelson, (18) William, P. Schoof, (19) John E. Euson, (20) Cobe H. Wartman, (21) Harold J. Davis. Fourth Row—(1) Carl B. Cummins, (5) Guy W. Nelson, (16) Arden E. Fugate, (12) Oscar E. Thurmond, (16) Emerett D. Sword. Fifth Row—(2) Charles W. Kilen.

Albany Men May Be Picked Out From the Following Locations, Rending Left to Right: Second Row—(1) Edwin F. Fortmiller. Third Row—(1) Royal L. Thomas, (2) Wilton B. Stevens, (4) Kenneth C. Stevens. Fourth Row—(3) Floyd L. Shortridge, (4) John M. Clark.