

STARS ARE USED TO MEASURE TIME

John McNulty Explains Significance of the Term "Equinox."

DAY AND NIGHT ARE EQUAL

Sun Directly Above Equator and Northern and Southern Hemispheres Obtain Same Amount of Light—No Absolute Rest.

By John McNulty, Nautical Expert in charge of Portland Branch of Hydrographic Office.

Every day people use time. It is as necessary to our complicated modern lives as fire or food is. We only have to try the experiment of doing without time to learn this. Abolish time and its manufacturers, with all the instruments which are needed to keep account of the passage of time, and you would grow to the point of saying that time was the basis of everything. Nowadays every merchant and banker knows that time and money are interchangeable quantities in their computations. But, how many people you meet every day can explain just what time is, where does it come from? What is the foundation for its computation? Very few indeed.

Yesterday was Sunday, March 21, 1909. The astronomer says that this is the equinoctial season. People remark we are having equinoctial weather. If it should be stormy, and usually they have an indefinite idea that about this time of year this is so, that the equinoctial term should be used because of custom, etc. Some others more wise will say that if the season of equal days and nights, therefore equal and not two words from the Latin meaning equal nights, and they are correct. There is a good deal more involved, however, than it is interesting to know fully to understand all this.

ENTRIES FOR RACE WILL IN

Several Kinds of Time Used.

There are several kinds of time used in the world. Two are known as sidereal, or star, time, the other as solar, or sun, time. The earth revolves upon its axis, once around from star to star at any particular place and that is called a solar day. Once around from star to star again, the time is called a sidereal day. The latter is nearly four minutes shorter than the solar day, because the sun moves farther on during the 24 hours, in his yearly trip around the earth and the particular place in question, Portland, for instance, has to go a little farther to catch up to him to make it noon. We travel about 1000 miles per hour and four minutes more time is considerable if paid for at the Western railroad rates. The time irregular, Bohemian disregard of public demands by the sun necessitates that we get some one else to do the work; we cannot keep pushing our clocks ahead every 24 hours and back also in order to get the exact time. A rubber hour is of no more use than a rubber yardstick is. We need a certain definite duration of time that will be as regular as our machine clocks. The stars are the boys to do this, and it is sidereal time which is the best time measurer.

How Equinox Occurs. You can easily see that when the sun is following its path, that for part of the year it would be on the lower side of the extended equator circle, and would shine on the lower half of the earth more than the upper; this would be winter time, and it would be on the upper side of the time it would shine upon the upper half of the earth, would be in the portion of its path above the equator-extended circle. At the two crossings of these circles the sun would be on both, neither above the equator nor below; "crossing the line." Coming up, on coming from the south to north, he would be said to be in the Vernal Equinox; going down in the Fall he would be in the Autumnal Equinox.

Now take notice that he shines upon the equator directly at these two points, his light reaches as far south as the North Pole and as far north as the South Pole and on both sides to the edge of the earth; that is, his light covers half the earth as usual, but with this difference, that because he does reach the two poles and because the earth is turning constantly, all places upon the earth will be in the light side as long as they are in the light side, and therefore, "equinox." This is easier to see by taking a classroom globe and arranging it. This position of equinox has been calculated by astronomers and is used as the "middle post of the sky." When the sun's center is directly on this crossing point, it is said to be sidereal noon, yesterday, March 21, at Portland, when it was 7 hours, 19 minutes, 7 1/2 P. M. nearly. The City of Portland was directly opposite this Vernal Equinox. In Greenwich, England, when the sun is directly overhead at noon, it was just 32.38 seconds passed sidereal noon. The astronomers were all gazing through telescopes and watching clocks, measuring to nearby stars and plotting the exact point of this Vernal Equinox in the sky, so that it can be found at any time in order to keep exact account of the time. They must "tie-in" each point even as a survey on "tie-in" corner stakes for lots.

Vernal Equinox in Aries.

The path of the sun around the earth is known as the ecliptic, because it is there when the sun is in this plane that there are eclipses. On each side of this ecliptic there are constellations of stars. As the year passes away, the sun climbs down from antiquity with their names, being thought by the ancients to have great bearing upon human affairs, and even at the present day foolish or misinformed people calling themselves astrologers, fortune-tellers and like names accept money for giving out information as to human affairs as "predicted by the stars." Many of them, as I have found by personal questioning, did not even know the difference between a star, a planet or a constellation. Of course these are the worst in the business; but the most dangerous are the better educated

ones and even they could not pass a good examination in astro-physics. Another thing to be considered when speaking about the Vernal Equinox is that from the time the sun's center passes it this year until it passes it next year, even this Vernal Equinox has moved to a certain extent; another illustration of the old truth in physical science that there is no such thing as "absolute rest," and all motion is relative. Because of the fact that the axis of the earth is turning, and the plane of the equator necessarily must turn, and the point where it meets and crosses the ecliptic, of course, moves.

North Star Changes.

The ecliptic being a circle, it has 360 degrees, and this first point of Aries, or the Vernal Equinox, moves each year just about 50.248-seconds of arc per year, according to Newcomb, our great American astronomer. This causes the north ecliptic pole to execute a circle upon the sky once in every 25,800 years; that is, what was our North Star 25,800 years ago is not the same as now, and in the future it will change again. Therefore, it can be seen that even the Vernal Equinox, our most important point, is not steady, is variable and the only point in the heavens from which to take our time from is an imaginary one. Mankind has been casting about at wondering all adown the centuries for Variableness, inconsistency and making those characteristics faint; whereas it is the most characteristic thing of Nature. No absolute rest exists but in abstract mathematics, and they are not interesting. What is interesting because she is in motion, is according to Nature and concrete.

Uncle Sam Keeps Time.

The timekeeper of this continent is Uncle Sam. His wonderful starry astronomical observatories are places of magic almost. Skilled men are always to be found in the observatories as long as your arm, and only after the accomplishment of marvelous tasks. On this coast, Uncle Sam sends out time signals from a little observatory down on the California coast through the Western Union wires, which set all the clocks upon their true bearings. The United States Hydrographic offices of the country, one here in the Portland Custom-House, have wonderfully exact chronometers and time balls and a connection with the observatories, from which the exact time can be obtained any day as nearly as machinery will give, subject to change because of heat and barometric pressure changes only. But this is another phase of the question and must be left for another occasion.

GENERAL INTEREST SHOWN IN MARATHON.

Of 16 Entries Made, Six Are Portland Men—Track Is Duplicate of Eastern One in Size.

Sixteen of the best runners in the Northwest have entered the "Oregon Marathon" to be run in the Oregon building, Friday, March 26. The contest has brought some of the finest distance runners there are to Portland and has developed others. For this alone the race deserves credit. There is nothing more for civic pride than to be able to say, "Our men did this" or "our men won that." Something of the same feeling that made Oregon watch three Oregon boys at the Olympic games will make hundreds go out to the Oregon building to cheer on, perhaps to victory, the little coterie of Portland runners that will represent the city.

No less than six of the 16 entrants are Portland boys, either by adoption or by birth and the manner in which the crowd will rally round them should give one of them courage enough to lift the trophy. The Portland representatives are: Fred Walby, Portland Y. M. C. A.; an second in the Seattle Marathon; A. Wallace and Harvey Belmont, both of the local Y. M. C. A.; G. B. Knudson, unattached, a Portland barber, and A. R. Dorris, a recent addition to the ranks of the Multnomah Club. The Lincoln High School will have Norman Nash to root for and the plucky youngster will deserve all the rooting he gets.

Canada will be represented by Burns, of Calgary, and Vanderlip, of Toronto. Seattle is represented by Harvey Donaldson, Y. M. C. A., and Walter Spangler, S. A. California sends J. C. Wright, of Los Angeles. Italy is represented by the diminutive Slato, Norway by Birch, of Aberdeen, and the United States by the runner, Wilson, of Portland.

With these countries, states and cities so well represented, it will be hard if the race cannot produce something "worth while."

The Marathon race received its impetus from the revival of the Olympic games at Athens in 1896. In those games, Louis Spiridon, a Marousi peasant, finished the race along the course made famous by the battle of Marathon, starting on the plain of Marathon and finishing at the arena at Athens, a total distance of 26 miles 385 yards. The whole history of the Marathon has been one of unceasing glory. It is the greatest of the ancient Greek legends and the greatest of the modern Greek legends. Phelippides bore the news of the Athenian victory at Marathon to Athens, the story of the Marathon has been told as a heroic deed of the supreme tests of endurance and determination. Phelippides gave his life to carry the news, at a nervous tension did he run the course. Of him Browning wrote:

"To end, his motto; once to shout, thereafter he mute;

"Athens is saved!" Phelippides dies in the shout for his deed.

ENGLISH RACING BEGINS

TWO BIG EVENTS SCHEDULED FOR THIS WEEK.

Whitney's Delirium Only American Entry—Billiard Championship—Other Sports.

The racing season in England begins today. Two important events are scheduled for the week, the Lincolnshire Handicap and the Grand National Steeplechase next Friday. H. P. Whitney's Delirium is the only American candidate for the Lincolnshire, August Belmont's entry having been declared out some time ago.

Several eminent billiardists have entered for the National 18 1/2 ball-line championship contest which begins Monday at Madison-Square Garden, New York. New York City each afternoon and evening will consist of 500 points up, the prize being \$1000 and 5 per cent of a purse of \$3000 added to the entry fees, and net gate receipts.

The American players entered are George Suttou and Calvin Demaree, of Chicago; A. G. Cutler, of Boston; W. T. Kline, of Philadelphia; George Strossen, Ora C. Morningstar, of New York. Lewis Cure, of Paris, is the only foreign entrant.

"Philadelphia Jack" O'Brien and Stanley Ketchel, of Montana, will meet at the National Athletic Club, New York, next Friday. They are matched to box ten rounds.

Beginning Tuesday and lasting the remainder of the week, the Boston racquet

TWO OF M'CREIDIE'S PLAYERS, SNAPPED AS THEY WERE WORKING OUT AT SAN LUIS OBISPO.



J. M. OLESON, SHORT STOP.

McIntosh Confident of Arranging Match Shortly.

AMERICANS WIN IN BERLIN

McFarland and Moran Given Ovation in Presence of Crown Prince.

BERLIN, March 21.—In the presence of the Crown Prince and an immense throng of spectators, the American team, composed of Floyd McFarland and James Moran, finished winner of the six-day bicycle race at 10 o'clock tonight and received a magnificent ovation, the cheers of the crowd being mingled with the strains of "The Star-Spangled Banner." The Americans won by a full lap. The track measured 1/4 mile to the mile. Slat, of Holland, and Berthel, of France, finished second. The total distance covered was 325 miles, 312 less than McFarland and Moran made when they won the six-day race in New York in 1908.

McIntosh Confident of Arranging Match Shortly.

McIntosh's offer is a purse of \$5000, to be divided 60 per cent to the winner and 40 per cent to the loser. Each man will be required to put up a forfeit of \$5000 with his signed articles. McIntosh served as the announcer of the boxing films which were shown at the Auditorium today. It was the universal opinion that Burns has not received full justice in the descriptions of the match, due to a disparity in size. In the last three rounds, as Burns came up against his fact-matched weight, but always ready to do his share of the forcing, there were shouts of "Good boy, Jimmy," and when Referee McIntosh had signalled him to stop the bout, spectators broke into a shower of hisses, despite the fact that Johnson was present.

OREGON PLANS INDOOR MEET

Trainer Haywood Hopes to Get Line on Freshmen Material.

UNIVERSITY OF OREGON, Eugene, March 21.—(Special.)—Preparatory work being made at the University for the college indoor meet, scheduled for next Friday evening, the freshmen of the Wrestling will be the main feature of the meet. Under the training of Joe La Salle, a number of efficient grapplers have been developed. The management has arranged to return to Eugene prominent merchants in Eugene will furnish medals for the winners.

Besides the wrestling events, there will be the short sprints, the high jump, the pole vault and the shotput. A week later the university will send a team of eight men to the Multnomah indoor meet, which takes place on April 2.

Much care is being taken with the freshmen material, as Bill Haywood depends upon them to bring Oregon through another successful track season, since great deprivations were made in the ranks of last year's champion team by many failing to return to college.

On the first good day an all-freshman track meet will be held to test the first year material. On May 5 a meet will be held between the freshmen of the university and teams from Portland, Salem and Albany preparatory schools. An offer has been made to the Portland school to pay the expenses of 10 or 12 star track athletes to Eugene for this date.

Lawton to Hold Race Meet.

LAWTON, Okla., March 21.—Official announcement was made here today of a track and race meet to be held here April 27 to 29, inclusive, which it is believed will attract between 300 and 500 head of the best racing horses on the Western turf, as well as some of the most prominent jockeys in the country.

Skaters Lead by Six Inches.

BUTTE, Mont., March 21.—The team of Scholtz and Hardy, with the former skater, was six inches in the lead tonight at the end of the first night's contest in the six-day roller skating race. Scholtz's work was marvellous, his distance for the hour's skating being 19 miles.

Nelson Will Fight Britt.

CHICAGO, March 21.—Battling Nelson will fight Jimmy Britt in Australia some time next fall, it was announced today by Hugh McIntosh. The battle probably will be fought at Sydney, N. S. W.

White Sox Rained Upon.

SAN FRANCISCO, March 21.—The baseball games between Chicago White Sox and Pacific Coast League teams were postponed today on account of rain.

Mauretania Sets New Record.

LIVERPOOL, March 21.—Boeing at noon Friday the Cunard liner Mauretania set up a new record of 600 knots for a day's run eastward.

PORTLAND UNIQUE CENTER

Not Only Has Teams in Two Leagues, but Is Headquarters for Third.

PLAYERS SOON IN ACTION

Casey's Cubs Leave for Medford Tonight for Practice and Coast Season Will Open Week From Tomorrow.

BY W. J. PETAINE.

Portland, now occupies a unique position in the baseball world. In addition to being represented by two clubs in different leagues, this city is also actively interested in a third baseball organization, for it is to be the headquarters of the newly organized Internomountain League. With a club in the Pacific Coast League as well as the Northwestern, and the headquarters of the latter organization centered here, the election of William H. Lucas to the head of the new circuit has added prestige to Portland as a baseball center. McCredie's White Sox will inaugurate the 1909 baseball season at Los Angeles one week from tomorrow, and Casey's Cubs will journey to Medford tonight to open the Spring practice tomorrow. This means that the baseball players enrolled on the roster of the two Portland teams will soon be in action and the hungry fans will come into their own.

City Will Be in Limelight.

The importance of Portland as a baseball town will attract considerable attention during the season. It means that the Eastern fans who read the baseball dailies and weeklies will speculate upon the fact that something like 35 baseball players will be drawing salary from the McCredies this season. It also means that the Portland clubs will have a heavy outlay for material and uniforms. The Northwestern League Club's road uniforms are already here. These uniforms will not be worn in the practice game, but will be turned over to Medford on the way to Seattle for the opening of the season. During the practice period the players will wear the old white uniforms of last season and some of the old uniforms discarded by the Pacific Coast League team which is now using them at San Luis Obispo. Equipping one baseball team is not calculated to ease one's peace of mind, for the players very usually get together in their measurements, and to sending the club owners must secure a supply of bats, for each player requires about six or eight sticks from which to make his selection of two or three to be used by him alone during the season.

Use 100 Bats in Season.

All players are more or less superstitious about bats, and very few will permit another member of their team to assign a particular stick to which he has taken a fancy. At this rate the McCredies figure on using 100 bats in the season, and possibly more. The players may not like grain, the left or the handle or something else which appears trifling to the average fan, yet it is of great importance to the player. For instance, when a halflayer breaks a bat with which he has been hitting the ball frequently, he almost invariably accuses another one of equal merit. Some players will try out seven during a season before they secure one that suits their fancy. Another thing that bothers baseball managers considerably is transportation. As a rule the Portland club has furnished single berths for each player, but frequently it is impossible to secure the required number and the managers must always be looking out for accommodations. A good instance of the superstition that annoys baseball managers occurred last year when Tom Rafferty was assigned to berth 12. He did not notice it until the next morning, and on leaving the depot a black cat crossed in front of him. Tom swore long and loudly and proclaimed to Manager McCredie that the "links" were on him. As a matter of fact, the cat falling in front of him for seven straight games, and laid off for several days.

FANDOM AT RANDOM

NOT having a left handed pitcher enrolled for the Northwestern League Club, Judge W. W. McCredie has signed Pender, the Vancouver Tri-City Leaguer, for a trial with Casey's team. Pender is an ambitious young fellow and is anxious to take a chance in a regular league.

"Dolly" Gray, the Portland boy who made a splendid showing in the Northwestern League as a fielder last season, and who is now coaching at Columbia University, has signed with Bloomington of the Three Eye League for the coming season. If Gray can develop a batting eye, he will be a star some day.

Catcher Harrigan, one of the young catchers to be tried out by Portland, writes from his home in Kansas that he is anxious to get into action. He informs Judge McCredie that he does not care how many catchers he will have to back for a job, for he says he will only have to work all the harder and likes the prospect.

TRAVELERS' GUIDE.

CANADIAN PACIFIC

Less Than Four Days at Sea WEEKLY SAILING BETWEEN MONTREAL QUEBEC AND LIVERPOOL

Two days on the beautiful St. Lawrence River and the shortest ocean route to Europe. Nothing better on the Atlantic than our Empress. Wireless on all steamers. First-class \$60, one class cabin \$45. First-class agent, or write for sailings, rates and booklet. F. R. Johnson, P. A., 142 3d St., Portland, Or.

NORTH PACIFIC S. S. CO.

S. S. Geo. W. Elder Sails for Eureka, San Francisco and Los Angeles March 18, April 1st, 15th, 29th. Ticket office 132 Third street, near Alder. H. YOUNG, Agent.

TRAVELERS' GUIDE.

COOS BAY LINE

The steamer BREAKWATER leaves Portland every Wednesday, 8 P. M. for Astoria, Coos Bay, North Bend, Marshfield and Cannon Beach. Passenger fare, first-class \$1.00, second-class 80c, one class cabin \$45. Inquire City Ticket Office, Third and Main Streets, or Astoria Dock, Phone Main 109.

SAN FRANCISCO & PORTLAND S. S. CO.

Only direct steamer, after daylight sailing. From Astoria Dock, Portland, 4 P. M. S.S. Rose City, Mar. 26, Apr. 9, etc. S.S. Senator, Apr. 2, etc. From Lombard St., San Francisco, 11 A. M. S.S. Senator, Mar. 27, Apr. 10, etc. S.S. Rose City, Apr. 3, 17, etc. J. W. Ransom, Dock Agent. First-class \$60, second-class \$40, one class cabin \$45. Main 202—Astoria Dock. M. J. ROCHE, City Ticket Agent, 142 3d St. Phone Main 402, A 1402.

SAVINGS BANK DEPOSITORS

And others having from one hundred dollars up which they desire to produce an income in proportion to the earning power of money in the Northwest should consult me about the investments I have to offer.

T. S. McGRATH Lumber Exchange Bldg. Portland, Oregon.

LADD & TILTON BANK PORTLAND OREGON ESTABLISHED 1859

OLDEST BANK ON THE PACIFIC COAST

Capital \$1,000,000 Surplus and Undivided Profits \$500,000

THE BEST STREET INSURANCE IS THE BITULITHIC PAVEMENT

LUMBERMENS NATIONAL BANK Second and Stark Streets CAPITAL \$250,000

HARTMAN & THOMPSON BANKERS CHAMBER OF COMMERCE solicit small check accounts and offer every convenience to depositors, regardless of the amount deposited

A BROAD HINT To wise depositors. Bankers are making oil investments. Why not invest your own money direct with practical oil operators and make the banker's profit? Booklets showing how and why free upon request. MARK E. DAVIS, 1004 Broadway, Oakland, Cal.