

Why the Earth Quakes

By Prof. G. P. Service

WHY THE EARTH SOMETIMES QUAKES—It is Generally Supposed to Be Because It is Slowly Cooling Off Within, but there is a Curious Theory Ascribing the Trouble to the "Pear-shape" of the Earth.

"What causes earthquakes?"—R. M. C., Brooklyn.

The principal causes are: (1) The movement of under-ground rock masses yielding to the strain to which the crust of the globe is subjected by unbalanced forces. This is the cause of the majority of great earthquakes. (2) Volcanic eruptions sometimes cause earthquakes by upsetting the equilibrium of the rock strata in the neighborhood. (3) Local earthquakes, of no great intensity, may be caused by the fall of subterranean cavern roofs or the sudden subsidence of an increasingly heavy deposit of soil washed from the mountains by water. (4) Explosions of steam formed from sea-water that has penetrated into heated rocks, may also cause earthquakes.

Statistics show that when the departure of the poles from their mean places is greatest, or when a rapid change takes place in the direction of their movement, making a decided "wobble," earthquakes are more frequent than when the great whirling globe "sleeps" on a steadier axis, like a perfectly balanced top.

You will perceive, from all this, what a delicately balanced thing this huge globe of ours is. Its vast magnitude and immense weight make it tremble, with molecular as well as molar vibrations, like a heavily loaded elastic floor, which, though strong enough as a whole to bear its burden, shivers with almost imperceptible undulations at every shifting of weight, and impresses the sensitive observer with a consciousness of the strain that is being borne, a consciousness that sometimes becomes so startling that it is almost as if a cracking indicates a quick readjustment of the opposing forces.

The fact that most earthquakes occur along certain well-known belts of the earth's surface proves that within these belts the crust is less solidly adjusted to the strain. "Lines of weakness" exist there, with fissures and "faults" where, when the rocks begin to buckle under the strain, slips and downfalls take place which produce the effect of hammer strokes on the solid crust and send vibrations through the earth as strong as a giant bell.

Our territorial suggestion derived from studies of the precise shape of the earth is that the crushing and buckling forces which disturb the crust may arise, at least in part, from the tendency of the earth to pass under the pull of its own gravitation from a form slightly resembling the outlines of a pear to a truly spherical shape.

It is Professor J. H. Jeans who has assigned this peculiar result to the earth. According to his interpretation of the measures made by various methods the small end of the earth pear is in the southern hemisphere, and includes the lofty Antarctic continent, as well as a part of Australia, while the broader end is in the middle of the North Atlantic Ocean, and the belt or middle part of the pear includes the regions where the great continental masses of the earth exist.

Professor Jeans points out that the lines along which the chief earthquake regions are situated, follow the material circumference of the pear, where the disturbing forces would be most active.

If you will look at a school globe of the earth you will see the location of these regions. But, even if you had an exact model of the earth as large as a house you could not clearly see the pear-shape because the relative elevations and depressions on which it depends are very slight when compared with the size of the earth as a whole. This is complicated, too, with the flattening of the poles of the axis of rotation.

Many other curious conclusions have been drawn from studies of the earth's shape, all of which have some bearing on the question of the origin of disturbances within its mass, for when you have a huge body revolving swiftly, with perfect steadiness if it lacks symmetry. Upon the whole we may regard ourselves as very fortunate that the earth behaves as well as it does with regard to our comfort.

SMASHED BY HUN FIRE, CO. C NEVER FILTERED

[Continued from First Page.]

years old, but no better soldier lived than he.

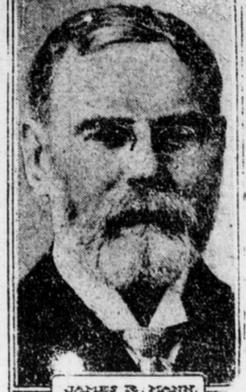
Howard Criner was killed by a direct hit with a 7mm shell, no part of him was ever found, he just dissolved.

Nauss was killed some time during August, during our occupation of Fismes and Fismette, and I can't find any one who was with him, but I can say that he was doing his duty.

All the men I have mentioned were of the best and constantly on the job. Corporal Willhild was killed while with a ration detail going into Fismette. Lieut. Zacharias made him a corporal just after I went into the hospital.

Fismes and Fismette were the hottest places this company ever got into and Chambersburg, Harrisburg, Bradford and every other place represented in this company,

Gillette Opposing Mann For Speaker of House



JAMES R. MANN

The entrance of Representative Gillette, of Massachusetts, into the floor of the Speaker's office at the House, against Representative James R. Mann, of Illinois, gives promise of a hot fight among the Republicans.

Mr. Gillette announced that his candidly had been unanimously endorsed by the representatives of the Massachusetts delegation and had received assurance of support from many others. It is reported that the Anti-Saloon League is preparing to make a fight against Mr. Mann because he fought the Hobson "dry" resolution some years ago.

can well be proud of every man in the company.

How They Won I was never more proud in my life than on August 9, when, after being wounded and no officer left with the company, Sergeant Kane was placed in command of the company. Kane was wounded and another sergeant took charge. Each N. C. O. and private knew his job and fought like veterans.

One man took an automatic rifle and laid in the street and after having the rear sight shot off of his rifle he continued to fire until he put the opposing machine gun out of action.

Miles Howe, whom you probably remember, went out and got himself a German lieutenant and then went out and got three more.

Nate Nesselson, of Bradford, crossed the Vesle three times as a runner and carried messages to battalion headquarters under heavy machine gun and shell fire.

Without exception the men of C Company fought and fought with their heads as well as with their guns.

His Brother Killed In the Argonne the only man of C Company of the 8th to be killed, was my brother, who had been commissioned in August and was in command of the company.

We had four men killed in the Meuse-Argonne offensive and forty-four wounded.

The Company fought as first line troops with every battalion, in the regiment and captured or rather took part in the capture of Hill 288 and Chateau Chény.

At Chateau Chény they sealed the neck of the Argonne and could not depress his machine guns and captured what was the key position to a further advance in the Valley of the Aire.

In the Thénacourt sector in the Weverre we had nine killed and had twelve men wounded, although in front line positions for eleven days.

The Terrible Toll Our total casualties for the war were twenty-six killed and about one hundred and sixty wounded.

Lieut. Zacharias escaped unhurt. In the capture of Fismette I sent him to support the 109th machine gun battalion for which I was afterward very thankful, as it left an officer with the company when they came out of that place.

It was a hot battle for five days later and was across the river a number of times with ammunition and rations.

In the Argonne he was sent to school with the 109th and rejoined the outfit on November 5 or 6, in the front lines at Hamont, where we were when the armistice was signed.

The Battle made this a hot sector although their infantry was thoroughly cowed.

The regiment conducted raids daily and always brought in Hun prisoners. The 109th machine gun district of Pennsylvania, has sent to a few of his friends with his New Year's compliments a little booklet containing his report to the Ordnance Department on his platform work of more than five months for the Liberty Loan and other government activities. Mr. Yeager is one of the most eloquent of public speakers of the country and his speaking tour was highly appreciated by the officials of the government. His speechmaking had the effect in many parts of speeding up the war work.

Mr. Yeager naturally feels gratification of patriotic service well performed.

Deaths and Burials FRED FARING Fred Faring, age 68 years, died Tuesday at his home of heart disease from influenza. He was for many years the caretaker at the East Harrisburg Cemetery. Funeral services will be held to-morrow afternoon, 3:30 o'clock, at the Rev. John Miller, pastor of the First Methodist Church, officiating. Burial will be made in the East Harrisburg Cemetery.

MRS. JOSEPH ENSMINGER Mrs. Joseph Ensminger, wife of Joseph Ensminger, died Tuesday at her home, 2463 Reel street. She was aged 74 years. Funeral services will be held Saturday afternoon, at 1:30 o'clock, at the Rev. H. R. Bender, pastor of the Bible Avenue Methodist Church, will officiate.

In addition to her husband, two children, Ralph Ensminger and Lester Ensminger, survive. Her father, two brothers and three sisters, Mrs. City Lodge, Order of Eastern Star, Burial will be made in Harrisburg Cemetery.

STATE POLICE EXAMINATIONS Twelve applicants for places on the State Police force to-day were examined by Acting Superintendent of State Police, Lutz at the Capitol. There are now fifty vacancies in the four companies.

CHICAGO BOARD OF TRADE Chicago, Jan. 2.—Board of Trade closed: January, 1.41 1/2; May, 1.25 1/2; Corn—January, 68 1/2; May, 69 1/2; Pork—January, 47 1/2; May, 43 1/2; Lard—January, 24 1/2; May, 24 1/2; Ribs—January, 28 1/2; May, 27 1/2.

MARKETS

New York, Jan. 2.—Aside from local fractions, which continued to weaken on the Brooklyn Rapid Transit receivership, firmness ruled at the opening of the first session of the new year on the Stock Exchange. Brooklyn Transit shares dropped 1 1/4 points and the 7 per cent. notes 3 points. Interborough Consolidated, pfd., losing 11 1/4. Reactions elsewhere were confined to fractions, excepting Mexican Petroleum, which fell 1 1/2. Coppers, shippings and a few high grade rails, especially Pacifics, contributed to the moderate strength of the general list, steels and motors also stiffening.

PRESIDENT GOES TO VISIT ITALY

Paris, Jan. 2.—President Wilson is on his way to Rome, where he is to be the guest of King Victor Emmanuel. The American President is expected to visit the Pope and also the Methodist College, and will continue his conference with the King, Premier Orlando and Baron Sonnino, foreign minister. The President is expected to reach Rome tomorrow. He will be met by the Italian King.

Important results are expected from his visit, which will be the last to the allied countries before the beginning of the peace conference.

Immediately after breakfast yesterday morning, the President went with Mrs. Wilson and Rear Admiral Cary T. Grayson, his personal physician, to the beautiful St. Cloud course, under gray but rainless clouds, and played golf for an hour. There was a quiet family New Year's dinner at the Murat residence. No business was put before the President. His only departure from the strictest of protocol was to devote the day to complete relaxation and repose came in the afternoon, when he received a New Year's call from President and Madame Poincaré and the Colonel Edward M. House, with whom he had no appointments.

The working machinery of the American commission has been thoroughly organized during the President's absence in England, and everything is virtually ready to begin business when he returns from Italy.

There appears no reason for altering the forecast made four weeks ago that the President would be back in Washington before the closing of the American Congress on March 4, or that, if necessary, he will return to his duties in the United States before the end of the year.

There are, however, some indications that the President's hope that his return will not be necessary may be realized.

Before leaving for Rome, President Wilson said a call on Madame Poincaré at the Elysee palace in return for the New Year's visit President Poincaré paid Mrs. Wilson in the morning.

Mrs. Robert Lansing, wife of the American secretary of state; Mrs. House, who have not yet been disclosed, of the peace conference; American war workers, members of the Red Cross and newspaper correspondents.

President Wilson, Secretary of State Lansing, General Tasker H. Bliss were among the guests. The drawing room was handsomely decorated.

JAMES M. YEAGER SENDS OUT NEW YEAR BOOKLET James M. Yeager, formerly United States Army, has sent to a few of his friends with his New Year's compliments a little booklet containing his report to the Ordnance Department on his platform work of more than five months for the Liberty Loan and other government activities. Mr. Yeager is one of the most eloquent of public speakers of the country and his speaking tour was highly appreciated by the officials of the government.

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MRS. JESSE E. B. CUNNINGHAM DIES OF HEART ATTACK



MRS. JESSE E. B. CUNNINGHAM

Mrs. Clyde B. Cunningham, wife of Jesse E. B. Cunningham, former Deputy Attorney General, died this morning at her home, 1915 North Front street, following an illness of several weeks due to heart disease. Mrs. Cunningham at present is associated in a law practice with Charles H. Bergner.

Mrs. Cunningham was widely known in the city of state. She was a resident of Waynesburg before her marriage.

The funeral services will be conducted Saturday afternoon at 3 o'clock in the Market Square Presbyterian Church, of which she was a member. Burial will be private.

Hears From Sor Who Is Training at Camp Grant

Word has been received by Mrs. Helen Porter that her son, Sergeant James H. Porter is in good health. Sergeant Porter is located at Camp Grant, Ill., and expects to be home soon.

MILD WEATHER TO BE REPLACED

Washington, Jan. 2.—The cold wave sweeping across the country from the northwest will cause a decided drop in temperatures east of the Mississippi river to-night and tomorrow, bringing the coldest weather of the winter to date.

Williston, N. D., at 8 o'clock this morning was the coldest place on the weather map, the thermometer there standing at 26 degrees below zero. In the upper Mississippi valley, the Plains States and Rocky Mountain and plateau regions below zero temperatures prevailed.

Rains probably changing to show in the Middle Atlantic States and Southern New England, and rains to-night and to-morrow in the South Atlantic States will be followed by unseasonably low temperatures, but the low mark of last winter is not expected to be reached in many parts of the east.

Chicago, Jan. 2.—The first cold wave of the winter spread over the Northwest, Southwest and Midwest States last night, delaying traffic in places. The mercury dropped twenty-five degrees in Chicago during the day and last night with hanging at ten above zero, while extreme temperatures were registered in widely scattered regions.

The cold wave was unaccompanied by snow east of the Mississippi. In northwest Texas a blizzard raged, and in Nebraska and South Dakota similar conditions were reported. In Wyoming, temperatures ranged from sixteen to thirty-seven degrees below zero, and it was twelve below at Denver.

Train service was seriously affected in western Kansas and Colorado, as well as in northwest Texas, but temperatures were moderating in Colorado.

In the far Southwest, Flagstaff, Ariz., reported eighteen below, Amarillo, Texas, six below; Pecos, N. M., two below, and even Mexico had freezing weather.

In the Chicago district forecast the cold wave is expected to continue through Thursday and Friday.

Clearing House to Pay Honor to C. A. Kunkel

The members of the Harrisburg Clearing House Association will meet in the board of directors' room of the Commonwealth Trust Company to-morrow afternoon at 1:30 o'clock, to take appropriate action on the death of Charles A. Kunkel, formerly president of the Mechanical Trust Company. Arrangements will be made for the members to attend the funeral in a body.

CITY BUILDING DROPS DURING YEAR

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Sergeant Pruss to Be Mustered Out of Army

Permits were issued to David J. Horwitz for the erection of two two-story frame houses at 1155-57 Cumberland street, and at 1155-57 similar residences in Twelfth street, 100 feet north of Herr street, for \$400.

To Go to Australia

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SERGEANT JOHN PRUSS

Sergeant John Pruss, stationed at Camp Greenleaf, Ga., is expected home soon. He is the son of Mr. and Mrs. B. Pruss, of 628 Ross street. Before leaving for the service he was employed by the Pennsylvania railroad.

POLICE COURT DRUNKS MAY BE PHILANTHROPIC

Whisky to Be "Donated" to Hospital Instead of Confiscated

A new plan for disposing of the liquor found in the possession of offenders gathered into the toils of the police is under consideration by Mayor Keister to-day. Incidentally, the plan would give even an ordinary drunk with a half-pint a gilded opportunity to figure as a philanthropist.

The new plan is to ask the prisoner to sign a release on his liquor, with the stipulation that he donates it to the hospital, if that institution desires to make use of it. The Mayor and police officers remain firm in the belief that prisoners should not be given their liquor, even though a Chester county judge has ruled that it is illegal to keep a prisoner's liquor.

A factor that would give decided impetus to the manufacturer's benevolent impulses, it is said, would be a flat from the desk sergeant that unless they give up their drink they would stand a good chance of getting the maximum fine in police court.

Mayor Keister said he has not yet secured an opinion from City Solicitor John E. Combs, but he is confident, however, now that it is illegal to appropriate drink held in incompetent hands. He is taking the new phase of the matter under consideration tomorrow.

The matter was called to Mr. Keister's attention this morning following receipt of news from Coatesville, where Mayor Swing adopted the ingenious scheme outlined above.

NEW POST OFFICE IS TOO SMALL

of the traffic formerly carried by express companies.

"Speaking of the present building, there is one large space, the Federal court room, which takes up nearly the entire floor and which is used only six weeks in a year. With our plant right in the new station we could take care of Harrisburg easily enough with our twenty-five branch stations. In these speedy days mail work cannot be done on the trains; it is transacted at terminals. As for a general delivery room this would be no great puzzle; a special room might be rented somewhere in the heart of the town, but this, of course, is a detail."

Postmaster Sites concluded, therefore, that there is no immediate necessity for enlarging the present office, but sincerely hopes that the Pennsylvania folk will go through with their tentative plans to erect a great union station where the local post office can permanently settle in the modern standardized conditions conditions being introduced to other commonwealths.

OPEN HOUSE AT P. R. R. "An open house yesterday for the members of the Pennsylvania Railroad and other interesting events were included on the day's program.

The P. R. R. Y. M. C. A. held an open house yesterday for the members of the Pennsylvania Railroad and other interesting events were included on the day's program.

NOTICE OF ANNUAL MEETING The annual meeting of the stockholders of the First National Bank of Harrisburg, Pa., will be held in the banking room of the First National Bank Building, 111 North Second street, between the hours of 11 and 1 o'clock, for the election of directors for the year 1919. The presence of all the stockholders is requested, and for the transaction of such other business as may properly come before the meeting.

NOTICE—Letters of Administration on the Estate of Charles A. Kunkel, late of Harrisburg, Dauphin County, Pa., deceased, having been granted to the undersigned residing in Harrisburg, all persons indebted to said Estate are requested to make immediate payment, and those having claims will present them for setting.

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