THE BOSTON ADVOCATE, SATURDAY.

A Short talk about Earthquakes

For the Boston Advocate.

BY R. K. POTTER

rior, scientists cannot agree in regard to

the occurrence of several thousand earthquakes give some degree of probability the following statements:—" Parti-quakes are a little more frequent at the time of new and full moon than at half moon." Earthquakes are a little more frequent when the mon is nearest the earth than when it is farthest from it."

The structure at a greater depth is not certainly known, but there is reason to earth than when it is farthest from it."

The structure at a greater depth is not certainly known, but there is reason to earth than when it is farthest from it."

The structure at a greater depth is not certainly known, but there is reason to earth when mon is nearest the earth than when it is farthest from it."

The structure at a greater depth is not certainly known, but there is reason to earth it may be considerable depth of the sun and moon assist in producing leaves the sun and moon assist in producing certificates in the cut of the sun and moon assist in producing certificates in the sun and moon assist in producing certificates the sun and moon assist in producing certificate the sun and moon assist in producing certificates the sun and m

nature are always preceded and accompanied by earthquakes.

It is a noticeable fact that earthquakes Undoubtedly, therefore, there is close consignal for the outburst of the other.

Noverning waves of water or sound.

In order to study the earthquake with such specific or the forces which produce the earth quake.

Soverning waves of water or sound.

In order to study the earthquake with such specific or the forces which produce the earth quake.

The actual of the forces which produce the earth quake.

The actual of the forces which produce the earth quake.

The actual of the forces which produce the earth quake and the specific or the forces which produce the earth quake.

activity in the past and present. But rection of motion imparted to articles of we know little of their structure, origin furniture. or mode of formation. Such knowledge would form a key to many of the unsolved problems of the universe. In upon the results of such observations in solved problems of the universe. In upon the resuits of such owners assessment of the universe. That the public schools of the United States, employ over 300,000 teachers alto of internal action upon the crust.

From the time of its formation the crust where the computed; the sessions of the country of the focus may be computed; the sessions of the country of the focus may be computed; the sessions of the country of the focus may be computed; the sessions of the country of the focus may be computed; the sessions of the country of the focus may be computed; the sessions of the country of the focus may be computed; the sessions of the country of the focus may be computed; the sessions of the country of the focus may be computed; the sessions of the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be considered to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of the focus may be computed to the country of pressure from the interior substance, and has been affected by internal heat in a manner which may be illustrated by a the earth is always quaking at some baked apple. The crust or skin having point in its area. In countries which south cooled first has been acted upon by lateto frequently subjected to these move-cooled first has been acted upon by late-ral pressue from within strong enough to crush the skin together and buget four the construction of buildings. As a rule the construction of buildings. As a rule the construction of buildings. As a rule term of servicine the skin of the service of the skin of the service of the skin of the term of servicine the skin of along certain lines; the internal layers the motion of the most destructive earthat the same time being variously flexed, quakes is from west to east, and the folded jointed and otherwise disarranged, walls of buildings at right angles to the growls at the poor. at the same time being variously flexed, produced and otherwise disarranged, and otherwise disarranged, and otherwise disarranged, leads of buildings at right angles to the fine some places the interior has even motion are more likely to be overthrown in some places the interior has even motion are more likely to be overthrown of the keep or disarranged, which will be the left of the lef mountain chains. Mountains consist ment that the point of greatest resistance the other side. mountain chains. Mountains consist ment that the point of greatest resistance usually of a grantic axis or centre flashed on the sides by tilted stratified rocks. It follows that there may be two ways of constructing a building that shall be. Grantie is a very strong and durable of constructing a building that shall be, of constructing a building that shall be. Press. Elliot on Monday, Mrs. George Crant, wite of Dr. George Grant, was iffed rocks, which, from the very nature of its formation, presents certain lines of its formation, presents certain lines of the strong o

rior, scientists cannot agree in regard to want or mottled clay reaching to a sensing henomena. The first is already sometimes referred to as depth of from dive to fifteen feet; beneath a more remaining, the force of argument is about bluish in color, this stratum from thirty as strong on one side as on the other, as the other of the color o as strong on one side as on the other. Whatever statement may eventually prove to be correct, it will still be an undeniable fact, that the interior heat of the earth does, from time to time manifest itself at the surface in the form of which you can easily determine, as it replaces and the surface in the form of which you can easily determine, as it replaces and the surface in the form of which you can easily determine, as it replaces and the surface in the form of which you can easily determine, as it replaces and the surface in the form of which you can easily determine, as it replaces and the surface in the form of which you can easily determine, as it replaces and the surface in the form of which you can easily determine, as it replaces and the surface in the form of which you can easily determine, as it replaces and the surface in the form of the strata causing and sildes in the form of the strata causing and sildes in the form of the strata causing and sildes in the form of the strata causing and sildes in the form of the strata causing and sildes in the form of the strata causing and sildes in the form of the strata causing and sildes in the strata causing the stra of which you can easily determine, as it ment of the strata causing land sides what "they say."

Observations in regard to the time of the occurrence of several thousand earth, quakes give some degree of probability these in turn being models.

Although volcanoes and earthquakes the formation of fissues in the crust dumay happen independently of each other, yet volcanic cruptions of an explosive instift the shocks in Charleston seem to Expres justify the statement that the event was —T in reality a landslide caused by lateral same class

The earthquake focus is always miles It is a noticeable fact that earthquakes are more frequent in volcanic countries below the surface, and, as before stated, in the truicel certhquake the rection in the says nothing but she smiles. than elsewhere, and it also happens that in the typical earthquake the motion is than elsewhere, and it also happens that a cessation of one of these forces is a signal for the outburst of the other. signal for the outburst of the other. parently obeying laws similar to those

A study of the interior of the earth in of occurrence, duration and intensity of ten cents a month. A study of the interior of the earth in to connection with its mountain chains reconnection with its mountain chains reveals the fact that the crust is not of uniform strength throughout its extent. Mountains are the culminaing points of the earth—the scenes of the greatest of the earth—the scenes of the greatest of the carth—the scenes of the greatest of the grea

nomena must be referred to the action everything in their path, completing the

BY R. K. FOTTER.
the Atlantic const plain, according to
Obviously, until some definite conclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inteconsiderable portion of its area is as folclusion is reached concerning the inte
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considerabl lows:-An upper layer of fine yellow bar at Charleston was reported to have

-That she is a pupil in the School of -That he and she are both in the

-That he says it is a shame that they should both be in the same class and vet not be able to speak to each other

rection of motion imparted to articles of furniture.

—That Dr. Douglass's bill for attendance upon Gen. Grant was \$8,000
That Col. Fred Grant thinks it exorbifected several delicate instruments based tant. That everybody agrees with Col

What out of the 200 000 teacher

-That on a certain evening of a cer omena must be referred to the action everything in their path, completing the death interior.

Speaking of the geologic formation of far exceeding it in destructive effects.

It has account earthnucke a few forced

-That somebody in Brooklyn ha declared this column a " Yankee dodge. -That it takes a "Yankee" to give

-That the ADVOCATE still increases in popularity. That the increase of papers continues steadily.

-That the interest in this column

THEY SAY

(Specially reported for the Advocate)

That is well to remember that is well to remember that is you don't know may be of most significant that is well to remember that is not they were they were

for settlement.

-That every lassie has her laddie to sie has her daddy to knock on the floor

-That the G. K. G.'s and the J. V C.'s are the boys and girls after all.

-That the "First Industrial Exhibition" of the colored citizens of the District of Columbia held at Bethel Church exhibit.

-That many distinguished men and women of the city received new ideas of the culture, intelligence and ingenuity of the colored people of Washington from what they saw at the Exhibition.

-That specimens of the handiwork of colored mechanics would have ranked with the best productions of white labor.

—That in almost every instance or-ders were obtained for work by the ex-hibitors.

-That the exhibit was rich in the work of women

-That the exhibition seemed to em brace rather more of the results of in-tellectual than of industrial progress.

—That this same young lady was nominated as editor of the proposed That the Owen Percent of Suits

erm of servitude.

—That the wind sings to the rich and that delightful club, the J. V. C.

-That there will be no lack of friends

veals the fact that the crust is not of uniform strength throughout its extent.

activity in the past and present. But rection of motion imparted to articles of we know little of their structure, origin or mode of formation. Such knowledge would form a key to many of the unsolved problems of the universe. In upon the results of such observations in general terms, mountains are also rethe past. The seismograph, a telegrapic ted States, employ over 300,000 teach has been subjected to enormous lateral scope, for determining the slightest trepressure from the interior substance, and instrument it has been ascertained that the been ascertained that manner which may be illustrated by a the earth is always quaking at some baked apple. The crust or skin having cooled first has been acted upon by lateral pressue from within strong enough to ments certain precautions are taken in has signed a degree, freeing the slaves crush the skin together and bulge it out the construction of buildings. As a rule in Cuba from the remainder of their along certain lines; the internal layers the motion of the most destructive earthfolded jointed and otherwise disarranged, walls of buildings at right angles to the growls at the poor. in some places the interior has even motion are more likely to be overthrown forced its way through the crust. This than those which are parallel to it. It is a brief explanation of the origin of is also true as shown in the recent moveified rock, which, from the very nature building may be weak and flexible so of its formation, presents certain lines of that it shall offer little resistance, and ures and fissures.

per, becomes doubled up and crumpled when held and pressed upon laterally. If, then, there is greater resistance on one side than on the other, it gives rise earthquake country," says a recert writer, to unequal flexing; thus we might prove that the pressure did or did not act un- with a light flattish roof made of shinequally from the two directions. In the gles or of sheet iron, the whole resting former case we speak of the pushing on a quantity of small cast iron balls ladies will again have the privilege of carried on flat plates imbedded in the inviting one gentleman each, to aid side and the resisting side, and naturally the steeper slope is toward the side of foundations; chimneys to be made of them in cutting, fitting and making greatest resistance. Observation shows sheet iron carried through holes free of aprons. that the Appalachian mountains exhibit the roof." this kind of structure. Furthermore, beginning somewhat south of Raleigh, N. C., and extending along the tide-wa- which shocks are transmitted; hence the ter region, past Washington, Baltimore, Romans sunk many wells in earthquake and eastern New York, there is a line neighborhoods to protect their buildings. 25th of this month. of weakness caused by the fragmental Soft strata, deep canals, canyons and, character of the strata which forms in fact, any means which will suffice to the eastern slope and rests upon the break the line of transmission will antit covers nearly three acres of granite axis of the mountains. This swer the same purpose. Yet, in the ground, and cost about 1,000,000 faults, folds and fissues. Lateral pres- known, the uncertainties surrounding sure acting under these circumstances the event render widespread ruin and create a constant tendency of the frag- disaster almost inevitable in cases of mental strata to slip down the granite severe shocks. bed upon which it rests.

A gradual subsidence or seaward motion of the Atlantic coast has been no- an earthquake, sometimes preceeding it ticeable for several years and the recent and at other times following it. earth movements seems to have been a rapid culmination of long existing but of the sea bed which lifts the water to a gradual activity.

mate cause, like that of all similar phe- ers, fifty or sixty feet high, deluging pot of a certain city

seems to come horizontally or vertically Augustus.

seems to come horizontally Augustus.

seems to come horizontally or vertically Augustus.

seems to come horizontally augustus.

seems to com of the earth—the scenes of the greatest and other timepieces; motions, or, di- able young ladies is really extravagant.

Scientific observers have already persults of internal action upon the crust. apparatus by means of which the depth of ers. That they are paid annually From the time of its formation the crust the focus may be computed; the seismo- \$62,000,000. at the same time being variously flexed, quakes is from west to east, and the mountain chains. Mountains consist ment that the point of greatest resistance usually of a granite axis or centre flanked is often the point of complete destruction. weakness in the nature of faults, flex- the shock may pass over it as the wind over a light shrub, or an attempt might be made to make the building stronger the foreign-built houses are made accord-

> ing to the second plan. "The safest plan for a house in an "is a strongly framed timber house,

The presence of standing water in strata seems to break the force with weakness is increased by numerous midst of all precautions thus far made

> An enormous sea-wave, commonly called tidal wave, usually accompanies

This wave is caused by the upheaval corresponding height and the falling of radual activity.

corresponding height and the falling of certain city a certain number of miles

One geologist thus expresses it. "The this water in turn produces a circular away spent a week and three days in earthquake on the Atlantic seaboard was wave with a constantly increasing area; another certain city which adjoins a a grand slip of the coastal plain caused in this respect it is like an ordinary larger certain city. by the sudden dislocation of an area 100 wave. In mid ocean the only danger,

—That Dr. Douglass's bill for attendance upon Gen. Grant was \$8,000 That Col. Fred Grant thinks it exorbitant. That everybody agrees with Col Grant

-That the public schools of the Uni

-That out of the 300,000 teachers

there is not 1000 polored teachers in the

-That the Queen Regent of Spain.

-That the wind sings to the rich and

-That the world is full of people that keep on climbing after they have in the railway carriage at the East reached the top of the ladder without Depot, Monday noon, on her way noticing that they have started down on

-That at the reception for Mrs. Preson the sides by tilted straiffed rocks, I follows that there may be two ways ident Clereland at the reception for Mrs. Present on the sides by tilted straiffed rocks, I follows that there may be two ways ident Clereland at the redeemed of Mrs. Granite is a very strong and durable of constructing a building that shall be, Pres. Elliot on Monday, Mrs. George rock compared with most forms of strat- in a measure, earthquake proof. The Grant, wife of Dr. George Grant, was

-That at a meeting of the Student Aid Society's sewing circle on Tuesday evening, each lady invited one gentle-

-That the Student Aid Society will

-That they are soliciting donation of aprons for the sale, and that already many have contributed.

-That on Thanksgiving evening there will be in addition to the sale musical and literary exercises, and re-freshments.

-That on next Tuesday night, the

...That Thursday night is now the regular night. That Sunday is not excepted. That this of course is sub rosa.

-That the latest pronounciation of matrimony is, " matter o' money.' -That Thanksgiving occurs on the

-That the largest theatre in the world is the new Opera House in Paris.

-That the largest suspension bridge is the one between New York and Brooklyn

francs.

-That the loftiest active volcano, Ponocatanetel in Mexico. That it is 17,748 feet above the level of the sea.

—That the longest span of wire in the world, is used for a telegraph in In-dia, over the river Kisnah. That it is more than 9000 feet long and is 1200

-That a certain young lady from a

-That a certain young man had cerby the student dislocation of an area to wave. In many be to passing ships or occasing this may be to passing ships or occasing the standard of the certain boung and nature. Bishop T. W. Dudley, author of the this particular case the immediate cause in mental than the student of the section, although the ultilibrough the ultilibrough the pressure of the certain small number of days after article "Why I am a churchman," in nents where the waves necessarily drag the departure a certain small number of days after article "Why I am a churchman," in heart of the section, although the ultilibrough th

.- That in almost every instance or rs were obtained for work by the ex-

-That the exhibit was rich in th

-That the exhibition seemed to e orace rather more of the results of inellectual than of industrial progress

-That there was one young lady who is pretty well known, among the guests at the reception held at the residence of the rector of the Reformed Episcopal Church last Friday night.

-That this same young lady was nominated as editor of the proposed ournal which the mg society that was formed that night will probably bring out in January.

-- That the refined and courteous young letter carrier of Worcester was een in town this week at the Battle o Bettysburg with one of the members of that delightful club, the J. V. C.

-That they just caught a glimpse o the belle of Worcester as she disappeared in the railway carriage at the Eastern Newburyport.

-That Charles Monckney, the invertor of the Monckney wrench which ignorantly called the monkey wrench, living in poverty in Brooklyn

-That he sold the patent for \$2,000 and that now millions are annuall made out of the invention.

-That there will be no lack of friends o get the condemned anarchists at Chicago a new trial.

-That the lack which they ar troubled with, will be a sudden vernowering lack of breath. That heng unable to respire, they will expire -That both big brothers are named

Will. That serious rivalry is threatened. -That the student from Phillips Academy, is growing taller, stouter and better looking. That this is the opin-ion of one of the ladies on whom he called last Sunday while in the city.

-That it was a hard struggle for him to return to the Academy so early that evening, and leave behind him all the

-That his right hand man was with him as usual.

-That he thinks he is capable of lov-ng. That she doubts it. That time will tell. -That Bert Islew is not responsible

for the last two items in this column last

BERT ISLEW.

Don't fail to attend the Grand Musical and Literary Symposium, which takes place next Tuesday, Wednesday and Thursday evenings. You will thus be able to "catch on" to lots of what "They Say."

Kentucky.

LOUISVILLE KY., Nov. 9, '86. The Knights of Labor treat their Colored men vote here as freely as

The Episcopal Church is gaining in

The expert type-writer of this city is James Bryant, a young man in the em-

communicants.

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Mr. FRED WHITE, Accompanist. Prof. J. S. ROBERTS, Musical Di--rector and General Manager.

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ETC., NEATLY DONE.

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