

CRUST BREAKS CAUSED GREAT EARTHQUAKE.

Geologist Says Pacific Coast
Disaster was Due to Move-
ment of Thin Outer
Shell of Earth.

CALIFORNIA IS IN TREMOR ZONE

Stricken Section Has Many
Shocks—May Be Connect-
ed With Vesuvius Cat-
astrophe.

From 1872 to 1890 there were no more than the usual regularly occurring slight tremors, but in the latter year San Francisco got a good shaking up as a reminder of what was to come. Nobody was killed. Then the earth resumed its usual rigidity and there were no disturbances until 1899. On a June night, in that year, the entire region in that section got a hard shaking up. There were two distinct shocks, preceded by a rumbling underground that badly frightened the entire population.

Robert T. Hill, a well known geologist, who is familiar with conditions on the Pacific coast on account of extensive investigations which he has made there, called attention to the fact that San Francisco was situated on an earthquake zone.

"From Alaska to the southern extremity of South America," said he, "along the Pacific coast there is a region where earthquakes are relatively frequent. They have occurred many times before in California and in the Pacific provinces of Mexico, as well as in Chili and Peru. Even in Panama, where the conditions are supposed to be comparatively quiet, there have been, despite a popular impression to the contrary, many dangerous disturbances. The canal zone has been visited by earthquakes to such an extent that they, in the opinion of many, constitute a serious menace to the lock level plan of constructing a canal."

"The more recent of the disturbances along this Pacific coast have been outside of the territory of the United States and have therefore not attracted much attention. Twelve years ago an earthquake more intense even than that which shook San Francisco followed the base of the Sierra Madre Mountains of North Mexico, changing the water courses and destroying the principal villages of that thinly populated section. In the year 1900 the city of Chilpancingo, the capital of the province of Guerrero was nearly destroyed by an earthquake of unusual intensity. Owing, however, to the remoteness of the place little notice was taken of the occurrence."

Professor Hill referred to numerous authorities, among them Chamberlain and Gille, to demonstrate that the western coasts had always been more or less subject to seismic disturbances. He spoke of the fact that the shores of the Pacific, which plunge steeply into the water, are more or less liable to convulsions of nature.

Volcanoes in Action.

"What the connection is between earthquakes and volcanic action," he continued, "is a question which has not yet been answered. Personally I think there is such a relation between the earthquake and that of Vesuvius, but there are not enough facts at hand, as far as our present knowledge of these phenomena goes, to enable us to prove anything. Earthquakes and volcanic eruptions are not always observed together, and indeed severe earthquakes may occur without any evidences of volcanic action. Science may one day solve this mystery, but so far we know comparatively little about the actual conditions which accompany such a disturbance as that of San Francisco."

"It is a prevalent and a common theory that along this zone of which I have spoken there are great movements and slippings of the rock, which sometimes, suddenly accelerated, gives rise to noticeable earthquakes. But even though the earthquakes be immediately due to such movements, there is something which causes the movements which is still unexplained. They are supposed to be due to the contraction of the cooling earth crust and changes in the matter in the interior of the earth."

"Until rather recently it was the tendency of geologists to attribute all volcanic seismic phenomena to exterior conditions of the crust of the earth, but of late serious attention has been given to the renewed study of the conditions of the interior."

After speaking of the various theories with regard to eruptions Professor Hill referred to his monograph on the "Mount Pelée disaster," in which Milne was quoted as saying that the eruption of 1851 was preceded by a great earthquake in Chili, nearly two thousand miles away.

"While admitting," he said, "that volcanic protrusions naturally may follow pre-existing lines of weakness, such as faults and fissures, the assuming also usually follows the volcano. Instances are even found in the San Francisco and the Mount Taylor regions of volcanoes far distant from oceanic waters without a trace of pre-existing fissures, where the magma has forced itself up through thousands of feet of sedimentary."

EDUCATING THE AFRICAN.

Views Expressed by Pixley Ka Isaka Seme, a Full Blooded Zulu.

To the average Anglo-Saxon the foreigner, particularly the Asiatic, the African, and the islander of the southern hemisphere, is a mediocre individual, may be all right, in his own sphere, but not a factor of importance in the modern world. The case is entirely different, however, at Columbia University, where, taking into consideration the vast population of the American States from which students are drawn, foreigners constitute a large percentage of those matriculated.

To this institution, mainly because of its reputation, partly because of its location, come men of all rank and classes—from North and South America, from Europe, from Asia, from Africa, in fact, from every place where the name of America and its seats of learning are known.



Pixley Ka Isaka Seme.

The most notable illustration of this, perhaps, is in the case of Pixley Ka Isaka Seme, who has recently distinguished himself as a prize orator and public speaker. Mr. Seme, who disclaims any princely title, is nevertheless a full blooded Zulu, descended from a line of distinguished chieftains, who, before the conquest by the British, were the controlling powers of Zululand. He gained his first knowledge of America and the English language through the American missionaries some ten years ago, and the faint ray of light which the missionaries showed him aroused in him the desire for more light and more knowledge. Believing that upon him rested the great responsibility of uplifting and bettering his people he came to America eight years ago to work and to study. After being graduated from Mount Hermon School in 1902, he entered Columbia, taking up work in the academic department, but not limiting his course of study to the purely classical subjects. History, political science, and anthropology have received much of his attention.

Besides his regular college work, Mr. Seme has mastered stenography and typewriting. He has spent several summers at farming, and has become proficient not only in the pursuits of the husbandman but also in the arts of the farmer wife, now including the canning of fruit. Further than this, the art of photography has received much of his attention, and having learned the inside and out of the camera he has turned to the automobile, and is now taking a course of instruction in the evening in one of the automobile schools.

After graduating from Columbia, Mr. Seme will go to Oxford for three years to study law, and then return to Zululand to take up the duties of Attorney General under the local British Government. Much misunderstanding exists between his people and the English rulers. Acting as mediator for his people, the young Zulu hopes to be able to eradicate all these petty difficulties and to bring each of the races to a better understanding and appreciation of the other.

The rule of the English, he believes, is a good thing for the Africans, bringing, as it does, civilization and higher development, and the recent uprising of the Zulus against the British therefore causes him much anxiety. The root of the whole difficulty lies, he believes, in the levying of the hut and poll tax, which some of his people apparently believe to be merely a means to drive them into the mines. With some one to present the cause of the people to the home Government, however, he is convinced that wrongs will be remedied and justice done.

All his people ask for, said he, is an opportunity to live and let live. They do not clamor for social equality, for that is an impossibility; but their aim and ambition is to be permitted to engage in international trade, restricted only by the necessary regulations of the home government as in the case of other colonies.

With a knowledge of American social life and "Yankee" business methods, with a mastery of many industrial problems, and with a first-class university education, Mr. Seme will return to his native land fully fitted to take up the task of raising his fellowmen to the higher planes of life, instilling into them a realization of their power and ability, and creating in the minds of the outside world a fuller and better understanding of a generally misunderstood race.—New York Times.

STORY OF OLD VESUVIUS

Always Sends Warning Messages before an Eruption.

ITS RECORD OF DISASTER

Since the Year 1631 Has Never Been Wholly at Rest—Early Accounts Unscientific and Imaginative—Most Countries of the World Bear Evidence of Volcanic Activity.

Vesuvius is one of a group of similar mountains in the Mediterranean Sea, its comrades being Etna, Stromboli and Vulture, which last gave the name to all mountains of this kind, says the New York Sun. Vesuvius stands on the southwestern shore of Italy overlooking Naples and the great roadways of Mediterranean commerce. In the midst of a most densely populated district, it has been more closely studied than any other volcano in the world. During the last 400 years fifty-six eruptions have taken place, when the mild flow of lava and rain of rocks has suddenly increased and sent destruction upon the inhabitants of the neighboring country.

Vesuvius has ever displayed the trickery of an unexpected assault. It sends messages of warning. In 79 A.D. the first of the great historic eruptions destroyed Pompeii and Herculaneum.

Vesuvius and Etna are examples of the creniform type of volcano. That is, they are cones with the top cut off and hollowed out like huge bowls. Many of the volcanic mountains in America have practically no crater, being rounded off at the summit. Nearly all of the mountains of the earth shaped like a cone are volcanic in their origin. When there is any action at all they are usually undergoing one of two processes, slow construction or swift ruin. For the most part, there is a sluggish flow of lava alternating with small explosions and the throwing of rock masses into the air. Falling rocks and other matter from within the volcano and the slowly exuding lava build up the sides of the mountain in sheets. The rude layers slope downward and outward. This structure gave observers who lived before our more scientific days the idea that the whole crust of the earth had been forced upward at a single point, sloping down to the side just as a tent will do when the central pole has been raised from beneath. This, however, was a mistaken notion.

The formation and growth of these mountains is more or less irregular, and from time to time the inner pressure breaks through the sides and alters the regular conical shape. Streams of lava flow out of the fissures, forming new protuberances that gradually build anew the whole mountain. Vesuvius has been moderately active in this manner for many centuries. Since the year 1631 Vesuvius has never been wholly at rest. In that year 18,000 lives were lost. The clouds of steam that came from the rush of water into the hot mass below the surface condensed and fell in a boiling rain that scorched everything with which it came in contact. The very sea drew back the skirts of its dark blue robe and then swept forward again far beyond its old limits. The last of the great convulsions before the present one occurred in 1872. The inhabitants of the affected district fled as they did recently to Naples and even as far as Rome.

"The lava fields are among the most extraordinary of Vesuvian phenomena. Rock heaped upon rock—not ordinary stone, but boulders such as might be made by fusing iron with coal refuse and glass—rough, jagged rocks armed with teeth and claws and seamed with fire, scoriated, petrified streams, masses of matter resembling a monster's wrinkled hide, fantastic shapes, they lie jammed together by an irresistible force, twisted, thrown one against another in nightmare confusion."

"The vast extent of stony acres under the bright sunlight is blackish gray in color, bare, monotonous and desolate. At evening the sun gave it a tone of old copper, and the light, gradually fading, left it a dull bronze, deepening in tone until the night enfolded it in gloom. Early in the morning, as one looked at it from the observatory, with the sun rising behind the mountain, it had the blue of a plum."

"Vesuvius is the most interesting of the world's volcanoes because of its close connection with human history, from the day when Spartacus assembled his gladiators to the present time."

Most of the countries of the earth bear evidences of volcanic activity. In America this appears to have been confined pretty largely to the West, the valley of the Mississippi being a dividing line between the volcanic and non-volcanic territory. The western region which has been affected by disturbances from beneath is called The Great Basin. It includes part of New Mexico, Arizona, California, Nevada, Colorado, Oregon, Wyoming, Washington and other States. This volcanic territory extends south into Mexico and to the Andes in South America.

Extinct Craters There.

Professor J. F. Kemp, of the chair of geology of Columbia University, said that the earthquake in San Francisco was not to be reckoned as among the unexpected things.

IDLENESS AMONG THE RICH

Causes Discontent and Ill Will in Working Class.

Mrs. J. G. Phelps Stokes, of New York, formerly Miss Rose Pastor, in a recent address before the American Academy of Political and Social Science, on "The Condition of the Working Women of the United States," said:

"Much of the hardship of the working classes is consequent upon the fact that they are obliged not merely to support their own families, but to contribute whether they will or not, to the support of the families, which live in idleness and luxury upon the products of the working people's toil. It is the nearly universal recognition of this fact among the working people of our country, that leads more than all else to strikes and industrial disturbances, to ill-work, to class hatred and to that craving for larger justice which underlies the socialistic programme."

"The working woman sees, or at least feels, that excessive toil on her part would be unnecessary if the burdens of production were more fairly distributed and if waste prevailed less widely. Excessive hours of toil and consequent craving for relaxation and refreshment lead naturally to the seeking of safety or



Mrs. J. G. Phelps Stokes.

recreation after the day's work is done, and conditions under which alone safety and recreation can be had by the average working girl. In our large cities are far from conducive to the highest standard of living.

"Many troubles are caused to the less serious minded working girls through natural, though foolish, attempts to imitate the habits and dress of those who live and dress extravagantly. Money needed for the relief and aid of a sick neighbor or for food or clothing for a younger brother or sister is often squandered on imitation jewels or other finery, where no other motive exists than one of vanity and vain glory prompted by the extravagance and ostentation of the rich."

"The working woman knows that there is no true charity except where there is true sympathy, and that true sympathy can exist only in proportion as there is true understanding of personal needs and feelings. Most self-respecting working women would rather go without asking for aid of any kind until they are half starved and half frozen than accept the doles of hard hearted men in high places or by the doles of ostentation."

"Even when charitable societies seek in as kind a manner as they know how to provide relief for those genuinely in need the methods which they sometimes pursue to ascertain the reality of the need are most harmful."

"This prevailing distinction that is commonly made between 'worthy' and 'unworthy' applicants for relief is most mistaken and unfortunate. No man or woman is so degraded as to be unworthy of aid to a better and worthier life. The relief must be suited to the sufferer, but relief of the right kind need never be withheld."

Time Limit for Dinner

Eight men, exclusive of the butler, are required to serve a dinner of twenty-four covers, one being allowed for every three diners. Another is stationed in the pantry to "run in" the courses. Absolute order and silence reigns among these men, who perfectly understand the butler's cabalistic signs. Electric signals pass constantly between chef and butler.

From the seating of guests until the ladies leave, not more than eighty-five minutes should elapse, for long dinners are now considered bad form.

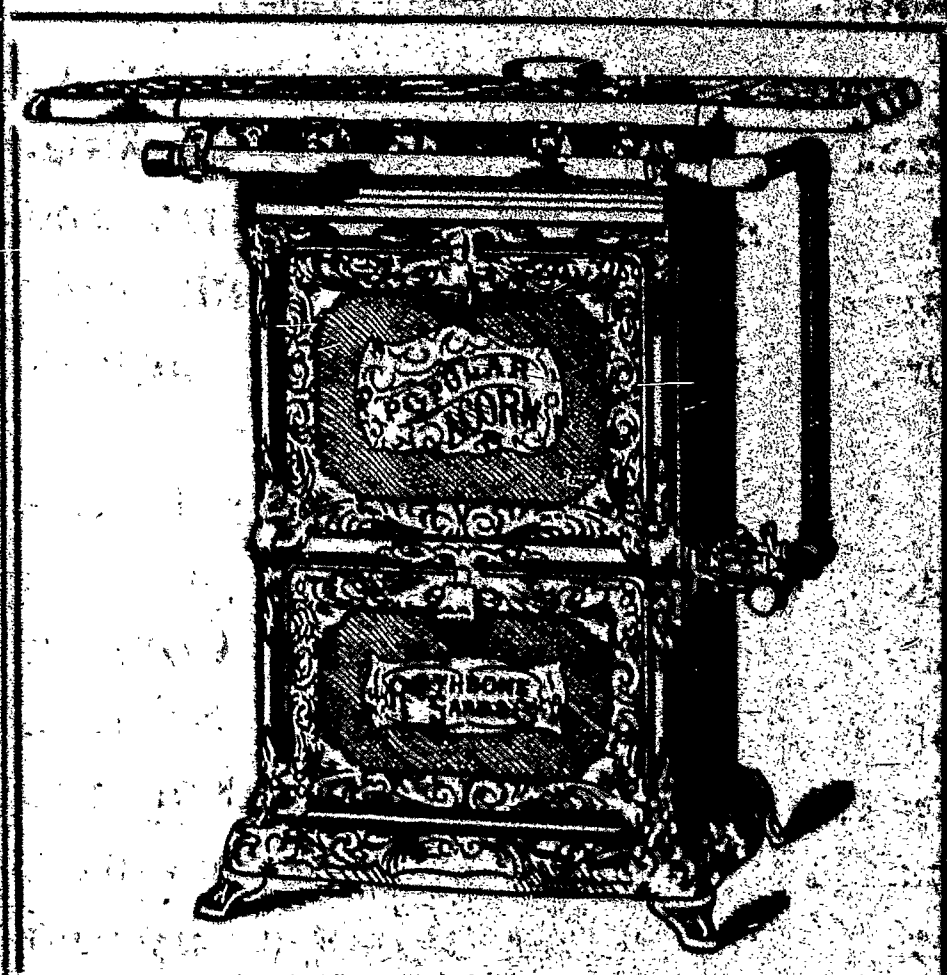
Upon these occasions scarcely a member of the domestic corps escapes some special duty. The housemaids assist the pantry maid. After each course twenty-four silver plates and countless small silver must be carefully cleaned, wiped very dry, and then polished with champagne before being put away. Nearly two hundred pieces of engraved crystal ware must be washed and polished, and it is too costly and brittle to be hastily handled.—Everybody's Magazine.

What to Eat

Bread and Butter is the food for muscular work, according to Dr. E. F. Willoughby. The perfect diet for those who are neither faddists nor teetotalers is eight ounces of cooked meat, twenty-four ounces of bread, eight ounces of potatoes, two ounces of cheese, two ounces of bacon, one ounce of butter, half a pint of milk per diem. Green foods are desirable additions to any diet.—London Times.

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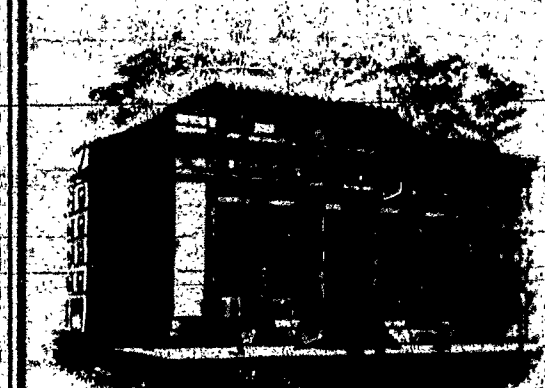
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