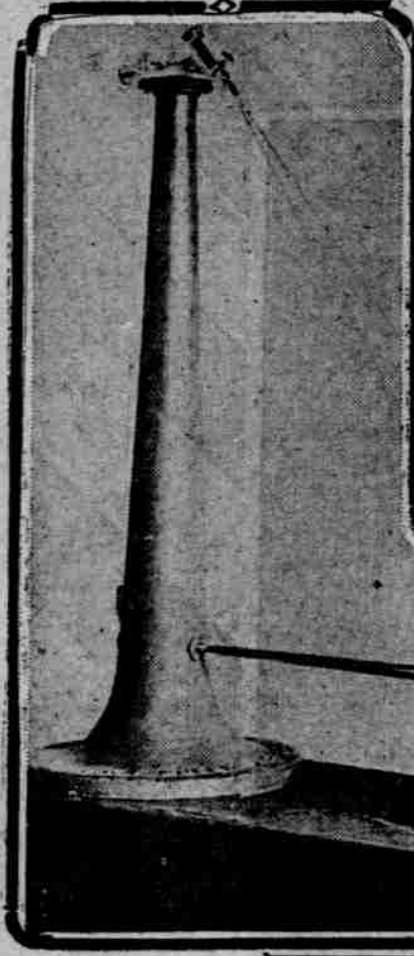


# EARTHQUAKES AND ERUPTIONS Of Startling Outbursts.

## STRANGE COINCIDENCE OF RECENT DISASTERS.

Recent Alaska Upheaval More Severe Than Terrible San Francisco Quake of 1906—Shake-ups of June in Alaska, Mexico, Chile, Japan and Philippines. Earthquake Scientists Tell of Their Work—Quakes Since 1688.



Seismograph—Earthquake Recorder. At Washington.

HAVE you ever been in the vicinity of an earthquake? If you have you will never want to go through another experience of the kind. If you have not it will cause shivers to glide up and down your spine just to read the experience of one who has passed through several of these terrifying earth phenomena.

Many earthquakes occurred while the writer was in the Philippines, especially on the Island of Mindanao. His first experience left him dazed and trembling with the feeling that the world was coming to an end. It was in 1904 when this island was shaken from end to end by one of the greatest earthquakes that ever occurred in that section of the globe. The ground seemed to rise up and strike you in the face. If you tried to stand up you fell down. Native shacks tumbled in all directions, carriages crawling along the road were thrown down, and altogether it seemed as if the world had gone topsy turvy.

But the peculiar part of the whole experience was the dreadful apprehensive feeling that seemed to smite one upon the first tremor of the earth. You have the same feeling, only probably intensified a thousandfold, as a person in the last stages of nervous prostration. It is a feeling as if something frightful were going to happen, and you are absolutely helpless in the face of the supernatural. And this sensation grows more intense the longer the shock continues. It has often happened that people have dropped dead from heart disease due to the terrific shock upon the nervous system.

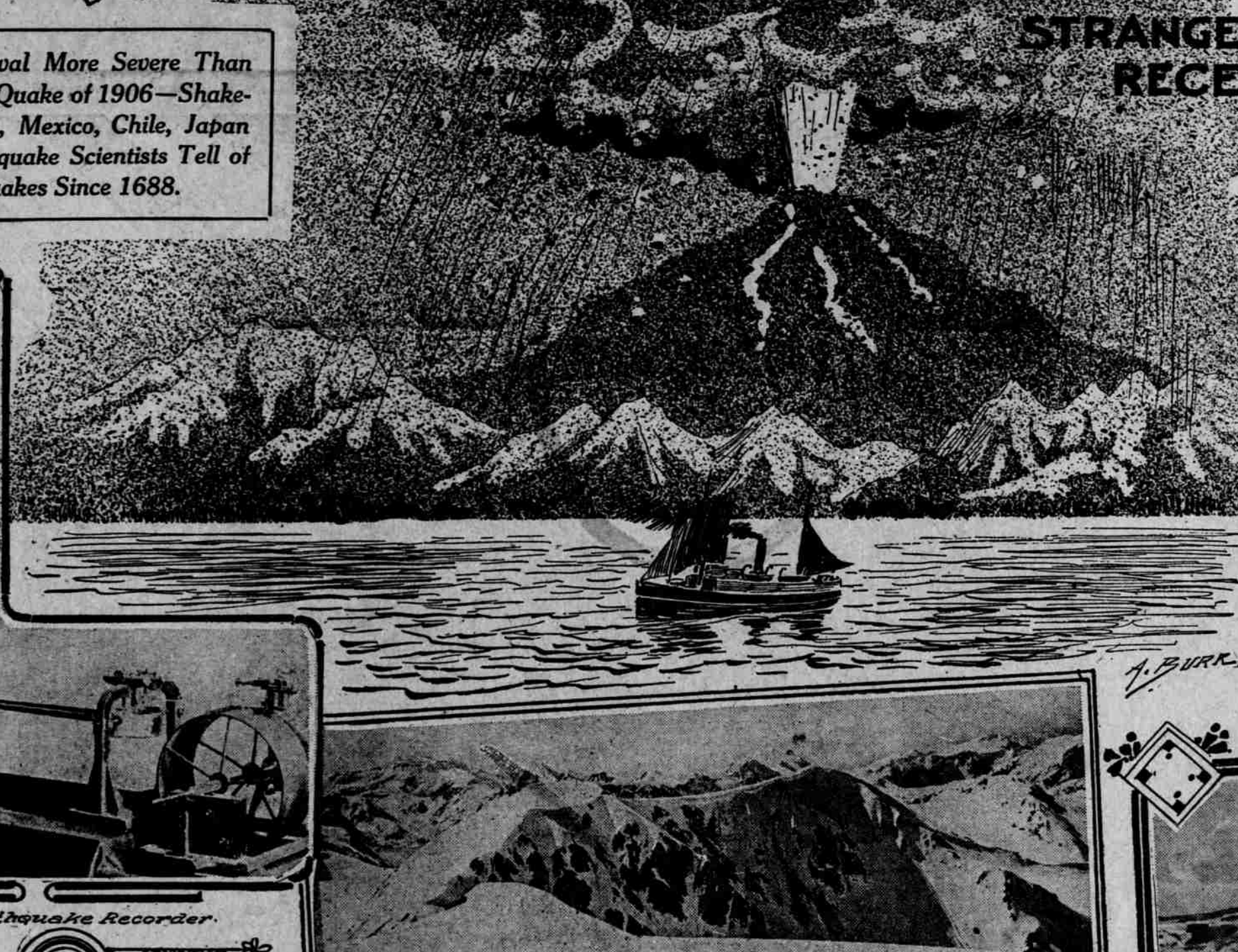
**Quakes in Many Places.**  
Within the last month reports have been received of earthquakes and volcanic eruptions in widely separated parts of the world. Only last week came the news of the great volcanic eruption and earthquake in Alaska. About the same time reports were received of a great earthquake at Jalisco and Colima, in Mexico, which caused much loss of life and destruction of property. Shortly after this came the news of a volcanic outbreak and earthquake in the Philippines Islands, in that section known as Moroland, around Mindanao and neighboring islands. This was followed within a few days by an earthquake in Japan, and about the same time several long-extinct volcanoes in India became active. After this dispatches reported earthquakes in Chile. All of these quakes were accompanied by violent volcanic eruptions in or near the vicinity of the shocks.

Scientists have been asked to give a reason for the many volcanic eruptions and earthquakes within such a short period of time but to all the questions the answer is the same: "There is no known reason to the scientific world." Several times in the past it is claimed, phenomena of this kind have occurred in various parts of the world, but it is rare.

The question has become a live issue with the scientists, and they are today investigating the problem all over the world. In their zeal to wrest the secret from mother earth, men have descended into the depths of volcanoes and walked about upon the bed of the crater within a few feet of the fiery boiling mass. Some have even taken moving pictures to photograph the phenomena to prove to the unbelieving world that they have actually performed this unheard-of feat. They wanted absolute proof, and thought the best way to get it was to have a picture taken while within the walls of the crater.

Other scientists, within the month, have permitted themselves to be lowered into the mouth of an active volcano by means of a steel cable so that they might take notes of the phenomena at close range. These are only a few of the daring feats performed by scientists recently.

Every one remembers the terrible San Francisco earthquake of 1906, with its loss of hundreds of human lives and the great destruction of property running into millions of dollars. Men who have made the earthquake life study say that the recent quake in Alaska was a more terrific shock, or rather a series of shocks, than those which caused the ruin of San Francisco. They declare that if a quake of such a severe nature were to occur in San Francisco



Hubbard Glacier and Mountains Forced Out Into The Bay Two Miles By Earthquake.



Curious Inside Wall Of A Volcano—Only Photo Ever Taken Inside A Crater.

or any other densely populated section, the ruin and loss of human life would be ten times greater than it was in California. The earthquake in Alaska in June, 1912, will stand out prominently as one of the most severe ever recorded in North America.

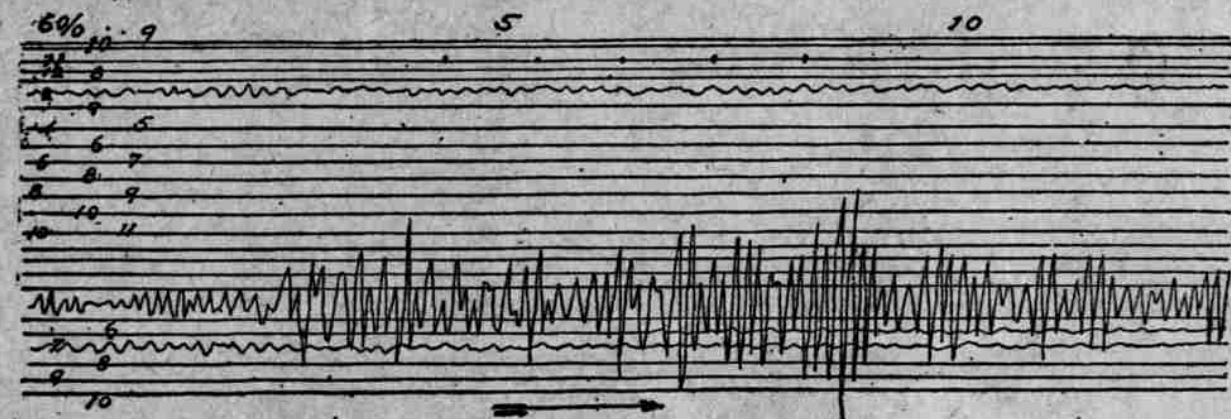
**The Recent Quake in Alaska.**  
The towns of St. Paul and Wood Island, in Kodiak, Alaska, were buried beneath two feet of lava, ashes, sand and pumice stone, and other villages suffered in like manner. Spouting hot ashes, flames and rocks, shaking the earth with explosions, terrifying the natives with noises, lightning and smoke-filled skies; a livid glare by night extended many miles into the heavens and high mountains hundreds of miles apart burst into flames and created a reign of terror in Southwest Alaska. Cordova was awakened by a mighty rumbling and cannoning of the mountains Lilliana and Redoubt, more than 100 miles away.

An area within a radius of 700 miles of the volcanoes was devastated. Ashes three and four feet deep fell about Kaniak and extended to Sitka, more than 700 miles distant from the volcanoes. Mount St. Augustine was also in active eruption at the same time, and all the splendid farms and grazing lands around Kodiak were buried in an ash deposit two feet deep. The villages whose inhabitants, mostly natives, are believed to have perished were Cold Bay, Katmai, Kanatuck, Douglas, Savonkooski and Kemgamute. All the crops on the island were destroyed and the splendid farms and grazing lands and ashes that fell in the water. The water supply was polluted by decaying fish, while the springs were buried under the ashes.

Ralph S. Tarr and Lawrence Martin are two of Uncle Sam's earthquake specialists in the Geological Survey at Washington. These scientists for many years made a study of the phenomena of earthquakes and volcanic eruptions with special reference to the last great Alaska earthquake of September, 1899. The result of their investigation has just been published by the survey and



Type Of Extinct Volcanic Peak.



Seismograph Record Great Alaska Earthquake Of June 7, 1912. - Washington, D.C.

coming toward us, preceded by great geysers shooting into the air more than 40 feet.

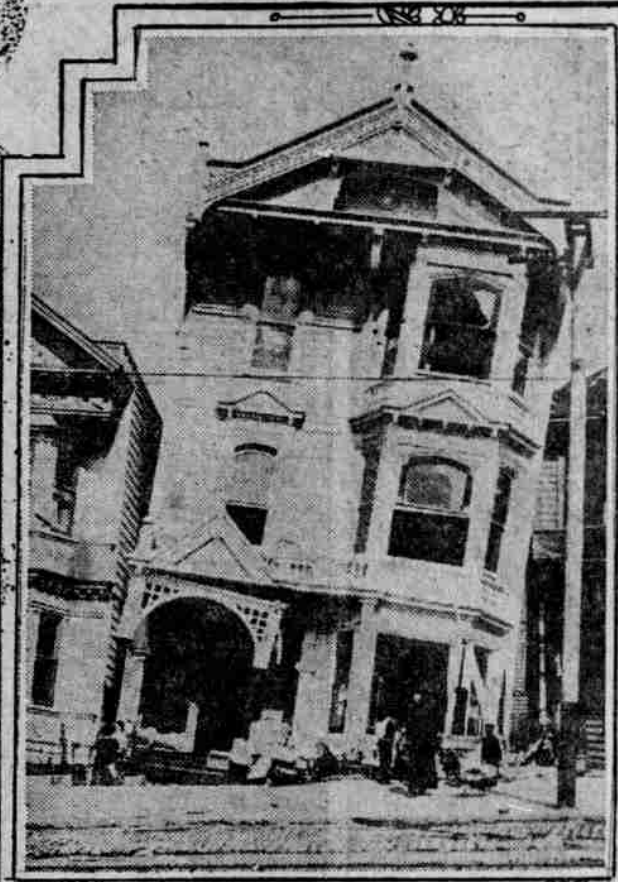
**Crashing Glaciers Terrific.**  
"While these great waves were rushing upon the shore, the ground was swaying and breaking in long jagged cracks that seemed to go to the bottom of the earth. Confronted both front and rear by waves and floods, with the ground trembling under our feet and the thunder of crashing glaciers in our ears, it is small wonder that we ran around in a frenzy, not knowing which way to go, fearing every second the ground would open up and swallow us or the vast icebergs would fall down and crush us. Another party of five men camped a short distance from us ran back and forth while the earth was rocking and swaying like a cradle. A stream which separated this party from us was temporarily divided by the earthquake, which permitted them to cross over to our camp, but a little later this same stream was once more a raging torrent.

**The Alaska Quake of 1899.**  
Almost nothing was known up to 1905 of the remarkable physical changes effected by the earthquake of September, 1899. The Yakutat natives knew there had been changes in the islands of Disenchantment Bay, where they hunted seal each year, but they knew nothing more. The white prospectors who were in this region during the earthquake never returned to see what changes took place. There was but one newspaper account of the earthquake, and the scientists say they were totally unprepared for the remarkable phenomena found upon their visit there during the Summer of 1905.

C. E. Hill, a resident of Yakutat at the time of the last great earthquake, gives a thrilling description of it. "The shake of September 10 did all the damage," said Mr. Hill. "We were in our tent and could not get up and stand on our feet at first. The mission rocked until the church bell rang, and if anything was needed to complete the terror of the natives it was the ringing of the bell. Just as the earthquake ceased, we saw a wonderful thing happen on the bay. There the water began roaring in great tidal waves. There were three of them following each other at intervals of five minutes, and we stood and watched the bay rise 15 feet from low tide to a foot above the highest tide point. The bay itself was full of small pools whirling trees, lumber and drift wood around and around so fast the eye could hardly follow them. They circled like a wheel. The water was thrown into a mass of foam. The whirlpool caught the chute of a new sawmill below us and carried it away in a twinkling.

**Deaths From Earthquakes.**  
Just across from Yakutat is the Island of Kaniak. Before the earthquake an old Indian graveyard, about six feet above high tide, was located on this island. It was out on a point, and suddenly we noticed the point, graveyard and all disappear, slip out of sight. There was in the graveyard a very high pole, with a cross on top, and we soon discovered this cross way out, with four or five feet of it sticking out of the water and still upright. The next day we took a boat and rowed right over the place where the graveyard had formerly been, and looked down into the water. We could see the tops of trees. In several places we made soundings, but could find no bottom. A little farther along the shore we found marks of a number of gigantic water spouts. They had bored great holes in the ground, and had carried the sand and earth inland and scattered it a foot deep over acres of ground. From every indication the force of water spouts and waves must have been irresistible, and Yakutat must surely have been washed away had the tidal wave swept the bay at high instead of low tide. The earthquake was a magnificent sight, but hardly one a man would hunt up for the sake of seeing it."

It will be seen that the Yakutat Bay earthquakes rank among the great earthquakes of the world. But it is in decided contrast with other earthquakes which occur in places of rather dense population. In Japan 729 people were killed, 12,293 injured and more than 200,000 buildings destroyed in the shocks of 1891. In the Charleston earthquake 27 persons lost their lives and 55 others perished by cold and exposure. Many houses were destroyed, and many more damaged. During the first of the great earthquakes of India (Assam, 1897) practically all the buildings in 145,000 square miles were laid in ruins. In the second (Kangra, 1905) 18,815 lives were lost, and the destruction of property was enormous, 112,477 buildings being destroyed. In California, in 1906, 200,000 people were made homeless, but only 708 lives were lost directly by the earthquake. There was, however, great destruction of buildings, largely due to fire, their value being more than \$300,000,000. In the Riviera earthquake of 1887, 640 people were killed and more than 570 injured. More than 50,000 people were killed in six minutes in the historic Lisbon earthquake of 1755, practically the whole city being thrown down. About 20,000 lives were lost in the



Typical Scene After An Earthquake.



Alaska Volcano In Action.



Locomotive And Cars Thrown From Track By Recent Great Earthquake.

great Calabrian earthquake of 1655, 43,000 in 1632, between 32,000 and 60,000 in 1823, 800 in 1905, while the loss of life in 1908 was more than 100,000.

**Birth of Volcanic Islands.**

In contrast with all this, there was no recorded loss of life as a result of the former Yakutat Bay earthquakes; and the only property damage, No known aside from the loss of a rowboat and some tents, provisions and clothing by the prospectors of Disenchantment Bay, was the shattering of the roof of an uninhabited log cabin in outer Yakutat Bay and the cracking of a few chimneys and slight damage to a wharf in Sitka Bay.

Some of the great earthquakes of South America and New Zealand, likewise in thinly populated districts, have doubtless been much like the Alaskan shocks in inflicting but slight damage to the human race.

In Alaska, and especially on the Aleutian Islands, there are many active, and recently extinct volcanoes. In fact, there are so many along the coast that a detailed record would lead to confusion. All the active volcanoes, however, have few exceptions are situated close to the sea on the Alaskan peninsula and the Aleutian Islands.

The Aleutian Islands that rise overnight and disappear the next night are numbered among the unusual and most puzzling freaks of nature. But among the northern corner of Umanak has been the scene in recent years of more violent volcanic activity and has undergone greater changes than any other part of Northern Alaska. In this spot early in May, 1758, accompanied by thunder, earthquake and steam, a volcanic island was suddenly thrown up from the depths of the sea. No longer ago than the Summer of 1858 the waters were once more convulsed and shrouded in steam and fog, and a second volcano was born. These are among the islands known as the Aleutian group. The natives of that section claim one island may be thrown up overnight, while another disappears and say this has continued for many years.

A resident of Umanak has given a vivid description of how these islands are born. He says: "One night a few miles away, I saw a column of smoke, beneath which something black appeared to be rising. During the night fire appeared in its place and at times became so bright that every object could be clearly distinguished for miles around. Then an earthquake shook our island with terrific roaring from the mountains at the south. The rising island tossed stones a distance of 50 miles. At sunrise the earthquake ceased, the flames diminished, and the newly-risen island was seen, shaped like a black pointed cap. A month later it had risen considerably higher. Meanwhile fire was thrown up continuously. While the flames gradually died out, the smoke and steam continued for four years and eight years later seal hunters found the water warm and the ground so hot that no one could walk upon it. That is how the island was born." (Copyright, 1912, by William L. Alderfer.)