EARLIER EARTHQUAKE WHICH KILLED 30,000

Strange Effects of Shocks Related After a Close Observation of All the Phenomena.

MEN HURLED OUT OF CHASMS.

Lakes Formed, Sea Deepened, Rocks Are Split and Rivers of Mud Set Flowing.

A previous earthquake that cost nearly 50,000 lives in Italy is described by William H. Hobbs, in his book on "Earthquakes." He writes:

The great earthquake which shook Calabria and northeastern Sicily in the year 1783 stands out in striking contrast with disturbances of other periods, for the reason that it was carefully studied by a number of men of more than average ability and trustworthiness. Not content with the studies of thse the Royal Academy of Naples sent a delegation with a staff of artists and prepared a bulky report of the greatest scientific value. No earthquake, ancient or modern, has been more carefully studied.

Calabria is a country which has many times been racked by earthquakes, and in no other country save Japan have the records been so long or so well preserved. The areas shaken have not been extraordinary for extent; but as regards both the geological changes and the losses of life by which they have been accompanied they range among the greatest in history.

The shocks of 1783, which cost 30,000 lives, came without warning on Feb. 5, 1783, and in the space of two minutes threw down the structures in numberless cities and villages scattered through Calabria and nbrtheastern Sicily. The great central granite mass of Calabria, which was but slightly disturbed by the first shock, was more heavily shaken by those which followed.

Turns a Well Inside Out.

During the earthquake the surface of the country heaved in great undulations, which were productive of nausea and which have the effect of the clouds having suddenly become motionless, an effect which is even observed from the deck of a tossing ship. Large trees swayed by the rocking were so bent that their tops touched the earth.

The fissures which appeared in the ground at the time of the earthquake were numbered by thousands and were found in many parts of the disturbed region. At many of these fissures displacements had occurred which, in some cases, amounted to as much as ten feet.

Sea Deepened at Messina.

Along the great fault line which followed the straight southeastern coast of Sicily, movement was especially noticeable at Messina, where the shore was rent and tilted seaward so that the quay sank fourteen inches, and the sea bottom was not only depressed in places but rendered irregular.

Men Thrown Out Alive.

Many fissures were observed to open and close alternately, and instances were not lacking where men and cattle were first ingulfed in the fissures and later thrown out alive by succeeding shocks, accompanied by a large volume of water and sand.

The closing of the fissures is said to have taken place violently, so that the walls were pressed hard against each other. Certain houses, which had been engulfed in the fissures, were afterward exhumed and found to have had their sides jammed together into a compact mass extended along the plane of the fissure.

Some of the Calabrian plains were found after the earthquake to be dotted with circular hollows, which, upon the average, had the size of carriage wheels, and which when filled with water to within a foot or two of the surface, appeared like wells. In addition to the well-like pools of water which occupied the circular hollows described, there were other water basins more deserving the names of ponds or lakes. One of these, in the vicinity of Semipara, to which the name of Lago di Tolfilo was given, was about a third of a mile in length and was so copiously fed by the springs ranged on a fissure in the bottom that all attempts to drain it proved futile. Vivenzio states that fifty lakes arose at the time of the earthquake and the government surveyors, who included smaller ponds, counted no less than 215. The first effect of the more violent shocks was generally to dry up the rivers, immediately succeeding which they were filled so as to overflow their banks.

Torrents of Mud Let Loose.

As earthquakes are frequent throughout the province it is seldom that some scars due to this process are not to be observed in all the deeper gorges. During the great earthquake of 1783 the great volume of water which welled up from below along the lines of these ravines so modified the usual process that the soil has been described as "dissolved" into great torrents of mud, which inundated all the low grounds after manner of mud lavas in connection with volcanoes. One such mud stream, formed at the time of the great earthquake, presented a front of 225 feet, with a depth of 15 feet.

TYPICAL SCENES AMONG RUINS LEFT BY FORMER EARTHQUAKES IN ITALY.

STREET IN MONTELEONE AFTER THE EARTHQUAKE

SOLDIERS SEEKING BODIES

CHURCH WRECKED BY EARTHQUAKE

RESCUING A GIRL, STILL ALIVE, AND TAKING OUT THE BODY OF A DEAD CHILD

The Secret Service and the Problems It Handles.

There is no branch of the government's work which is so little understood by the average man as is the Secret Service, or that is so hedged about with romance and glamour and unreality. And something of what is going on among Uncle Sam's detectives, whose alleged espionage of Congressmen enraged the lawmakers, may be of interest.

CHIEF JOHN E. WILKIE.

At Washington there are a couple of rooms in the Treasury building with "Secret Service Division" emblazoned over the door set aside for the service. In one of these sits Chief John E. Wilkie and his assistant, W. H. Moran. The other is occupied by a dozen clerks. The doors are always open, and any casual stranger may wander at leisure through them and endeavor to draw upon his imagination to the extent of seeing the mighty wheels go round. In thirty-seven other cities in the country there are branch offices located in the various post office buildings, and in each of these is an official in charge. The words "Secret Service" appear over the doors, yet they are democratic and open to the public as is the Washington office. The number of men in the service is known only to the men who are directly in charge of it. There are probably four or five to each office, or perhaps a force of not more than 200 men altogether. No one knows who these men are except the directors of their actions. If a man tells you he is a Secret Service sleuth you could have no better evidence of the fact that he is not. The men in the service say nothing about it, while the man outside of it will often slyly drop a hint that will impress his fellows and enable him to surround himself with an air of mystery and an importance which is popularly attributed to the post.

An interesting member of the Secret Service force is the "shadow." Shadows are like poets; they are born, not made. The shadow must have just the qualifications that make him the least conspicuous man on the street. He must be a man who is absolutely regular and uninteresting, and who would never catch your eye if you met him on the street forty times a day. The man he is shadowing is likely to see him many times. He must have the ability of always being apparently about his own business and oblivious of his victim. Yet he must be a man of prompt judgment, quick in action, able to extricate himself from all sorts of difficulties and still not betray himself.

All sorts of work is necessary, and the motto of the Secret Service man is to push it to the earliest possible completion. There has been much illegal fencing of government land in Nebraska, for instance. In order to determine who were the offenders it was necessary to resurvey great tracts of country. Technical men were pressed into service and the detectives took charge of them and actually did the work of running these lines. They go underground and work as miners or into financial institutions as clerks. All variety of man is needed, and whatever emergency is met with there is just the man for the work.

The Secret Service never forgets and never stops work on a case that it has once taken up. It is said always to get its man sooner or later. The offense is ever revived and kept alive, as an indictment against a man may be, and sooner or later he will return and be caught. There are no counterfeiters of any importance that have escaped detection for long. An occasional man may make a few bills and pass them and lose his nerve and retire. He may never be found out, but if he keeps it up for any length of time he will be caught.

An estimate has been obtained from banking institutions from all over the country, and upon them is based an approximation of the amount of bad money in circulation. For paper money it is estimated that there is but one counterfeit for every $100,000 in currency. In coin it is figured that there are probably $3 of bad money to every $100,000. This is regarded as near an approach to an absence of counterfeit money as can be reached.

SOMETHING FOR EVERYBODY

Love-making on postal cards is in violation of the postal regulations of Russia.

New York City has more automobiles run at the public expense than any other two cities in the world.

M. Paris, a young scientist of the Pasteur Institute, claims to have discovered the secret how to make sapphires.

J. Pierpont Morgan belongs to thirty-five clubs, and his membership dues figure over $7,000 annually. August Belmont is a member of thirty-four and Chauncey M. Depew belongs to thirty-two.

A company has been organized in Georgia with a capital of $3,000,000 for the purpose of developing Suwannee Falls to furnish electricity for the operation of electric railroads to be constructed in Southern Georgia and Florida.

The ideal meal consists of bread, butter and cheese, according to Dr. J. E Squire, who delivered a lecture to the British National Health Society. "These foods," he said, "contain all the elements necessary for the proper working of the body, and thus form a complete meal."

While there is an abundance of suitable timber in Brazil, it is difficult to find many districts where the trees suitable for lumber are close enough together for profitable work. Transportation causes much difficulty, often making it impossible to transport logs to a mill or lumber to a market.

Lincoln's ancestry has been traced to Samuel Lincoln, who lived at Norwich, England. Emigrating to America, he settled at Hingham, Mass., in 1633. Some of his descendants, who were Quakers, settled in Rockingham county, Va. The president's grandfather removed to Kentucky. Thomas Lincoln, the president's father, was a carpenter.

A Zurich newspaper published the following advertisement in English: "Residing board house among a charming set of mountains. Very beseeming for families or singular individuals. Shadowed glades and amiable place for resting for guests of the cure. All facilities for mountainous expedition. Excellent kitchen, with lager beer running from the tap."

The Rev. Dr. John H. DeForest, a veteran Congregational missionary, at Sendai, Japan, has been decorated by the imperial government with the Order of the Rising Sun, the distinction having been conferred in recognition of his services in dispelling anti-Japanese misconceptions among Americans. Dr. DeForest has been doing mission work in Japan for thirty-five years.

Venison was selling not long ago in Vermont for 8 cents cheaper than good beef, for the slaughter of deer was unprecedented this year. The usual bag for the state is about seven hundred and fifty, but careful estimates indicate that upward of two thousand deer have been killed. As the meat cannot be taken out of the state except by a hunter from out of the state who has paid a $5 license fee, most of it remained to afford cheap living while it lasted.

Paris is at present interested in the maharajah of Kapurthala, who is there with his wife, whom he first met in Madrid as a dancing girl. Anita Delgado was graceful and beautiful, and the maharajah lost no time in winning her regard. He took her to Paris to be trained for the position she was to occupy and she developed into a handsome woman of dignity and presence. Later he carried her to his home in India and last winter married her with Oriental ceremony.

In a letter to the Boston Transcript favoring humane education in the public schools, a correspondent says: "In one public school in London, England, where, in the course of twenty years, 7,000 children were given a thorough humane education (during this period, which would make many of these boys men of twenty-five and thirty-five), not one of them was ever arrested for a criminal offense, demonstrating the value of humane education to prevent crime, as well as cruelty."

Mme. Johanna Gadski has brought to this country a fad that has become quite the rage in Germany, where it was introduced by no less a personage than the crown princess herself. It is a new form of visiting card, containing not only an elaborately engraved border, but a silhouette of the person it represents. The custom calls for a design appropriate to the holder's station. Thus, in Mme. Gadski's case the prima donna's head is framed in a border of laurel, while a lyre forms the base of the design. The card is not only unique, but exceedingly pretty and effective.

The Rev. James E. Cassiday of St. Mary's Catholic church, Fall River, Mass., who was one of the leaders of the successful no license fight in that city, has served notice that in his parish at least the new prohibitory law is not going to be a dead letter if he has anything to say in the matter. "Already the newspapers are discussing ways and means for practically nullifying the verdict," he recently told his congregation. "I serve this notice that so far as St. Mary's parish is concerned, liquors will not be sold contrary to law. Neither myself nor my priests will enter a house with the blessed sacrament where liquor is sold in any tenement. This is a fair warning."

EARTHQUAKE CENTER.

Calabria and Sicily Often Before Visited by Disasters.

Calabria and Sicily, which were so disastrously visited by the recent seismic disturbances, form the center of the earthquake district of southern Italy. The last serious earthquake in Calabria occurred in September, 1905, when 3,000 persons lost their lives and over thirty towns were destroyed. Two thousand two hundred alone were reported as being buried at Martirano. Calabria is in southern Italy, forming the southern part of the former Kingdom of Naples. It is divided into three provinces—Cosenza, Calabria and Catanzaro.

The full force of the recent earthquake seems to have centered on Sicily. The two principal cities affected there are Messina and Catania. The former is almost at the extreme northeast point of the island, and is separated from Calabria by the Straits of Messina. It is in close proximity to Mount Etna. Messina, next to Palermo the chief commercial town of Sicily, with upward of 90,000 inhabitants, is situated on the Strait of Messina and is overshadowed by a range of rugged rocky peaks. It has experienced many vicissitudes. It was an important place in the time of the Romans, and bore a part in the naval wars of Caesar and Pompey. In A. D. 843 Messina was taken by the Saracens, who in turn were dispossessed by the Normans in 1062. Messina has been the scene of many battles and sieges, and has been so often devastated that there are no important relics of antiquity. During the eighteenth century Messina was overtaken by two overwhelming calamities—a fearful plague in 1740, from which 40,000 persons died, and an earthquake in 1783 which destroyed almost the entire town.

Catania is due south from Messina and is situated at the foot of Etna. The city is of noble appearance from the sea, with regular and spacious streets paved with lava, of which material the numerous public buildings are constructed. It has a population of over 100,000. A natural mole of lava incloses the harbor, and an expensive artificial breakwater protects the city.

In Italy, as in Japan, earth tremors are almost incessant, but most of them are so slight as to be revealed only by the seismographic records. While the whole country, from the Lombardy plain to the toe of the peninsula, has had more than its share of earthquake disasters, the north has been visited less frequently than the south.

WHY AND WHEREFORE OF EARTHQUAKE SHOCKS.

By Prof. William Hallock, of Columbia University.

What the great earthquakes of recent years mean from the point of view of the scientist is discussed in an interesting way by Prof. William Hallock, dean of the faculty of pure science in Columbia University, in the New York Times. He is quoted in part as follows:

"While the disaster in the south of Italy, from a human standpoint, is appalling, probably the most awful catastrophe in man's history of man, it cannot be regarded as so important an indication of the earth's scientific vagaries as the quake in San Francisco. The disturbance on the Pacific coast extended for an area of over 200 miles, while the actual place of disturbance in Italy was very much smaller. Of course, to the minds of the superstitious and the scientifically disinterested, there is in an earthquake an extraordinary element of unknown horror, of an impending disaster that lies under our feet, over which we have no control, no forecast, and no means of protection. It comes suddenly and in a few seconds, perhaps, destroys hundreds of thousands of human beings.

"The actual mystery of the earthquake is only partly explained in scientific research, that by deductive theories only manages to pacify our awe of the unknown. There are things we know about the interior of the earth, and many things we don't know but would like to. We are ourselves merely the crust of the earth, which scientists have variously estimated to be from ten miles to fifty miles below us. From the inner edge of this crust to the center there are, presumably, gaseous matter substances of excessive heat. The temperature of the center of the earth, which has been sensationally declared to be 'inconceivable' by Flammarion and others, is probably not so at all. Calculating a conception of these inner temperatures of the earth by the increasing heat that miners find as they descend deeper and deeper into it, it may be assumed that the probable temperature of the earth is about equal to that of an arc light or an electric furnace, which is about 5,000 to 6,000 degrees Fahrenheit.

"The idea that liquid gaseous material in the center of the earth resembles a vast volume of air, in a toy balloon, for instance, is not scientifically accepted. The entire earth is pressure rigid. It is subject to differences of load caused by the shifting of that load. It is the incessant readjustment of balances in the integral rigidity of the earth sphere that causes earthquakes.

"Imagine the tons upon tons that are carried from the mountains to the sea by the rivers! The Mississippi river alone probably bears continuously millions of tons from the mountains to the ocean. Necessarily a pressure taken from one place and increased in another too suddenly causes a cave-in, or releases a pressure from below, which makes the upheavals we call earthquakes.

"It is an accepted theory in the scientific examination of the earth's substance that it is as nearly pressure solid as it can be, but not wholly so, a conclusion that leads us to believe that the adjustment of pressures is becoming steadier as the years progress. The displacements shown by the cracks in the San Francisco earthquake were only a few feet. Geological observation of prehistoric earthquakes shows that the earth made fissures and slides of 20,000 feet. Take the evidence in geological survey of Mount Shasta, in California, and the probable South American catastrophes of prehistoric time. But there is no actual scientific assurance of the breadth and immensity of these gigantic upheavals. We are still in a state of theoretical conclusion about earthquakes. Actually our knowledge is comparatively limited; there is no possible forecast of earthquakes. The seismograph merely registers a disturbance when it is occurring.

GREAT EARTHQUAKE DISASTERS AND THEIR RECORDS IN LOSS OF LIFE.

1. Sicily—Year, 1137, 15,000 killed; year, 1693, 100,000 killed; year, 1783, Messina and other towns of Sicily and Italy overthrown, many thousands killed 2. Syria—Year, 1158, 20,000 killed; Antioch, year, 526, 250,000 killed. 3. Naples—Year, 1456, 40,000 killed; year, 1626, 70,000 killed. 4. Yeddo—Year, 1703, 200,000 killed; Japan, year, 1896, 35,000 killed. 5. Lisbon—Year, 1531, 300,000 killed; year, 1733, 50,000 killed. 6. Algiers—Year, 1716, 20,000 killed. 7. Pekin—Year, 1731, 100,000 killed. 8. Grand Cairo—Year, 1754, 40,000 killed. 9. Kaschau, Persia—Year, 1765, 40,000 killed; Persia, year, 1893, 12,000 killed. 10. Central America—Year, 1797, 40,000 killed. 11. Venezuela—Year, 1812, 20,000 killed. 12. Peru and Ecuador—Year, 1867, 25,000 killed. 13. St. Pierre, Martinique—Year, 1902, 25,000 killed. 14. Northern India—Year, 1905, 19,000 killed.