

THE LOCATION OF CITIES WITH RESPECT TO VOLCANIC DISTURBANCES

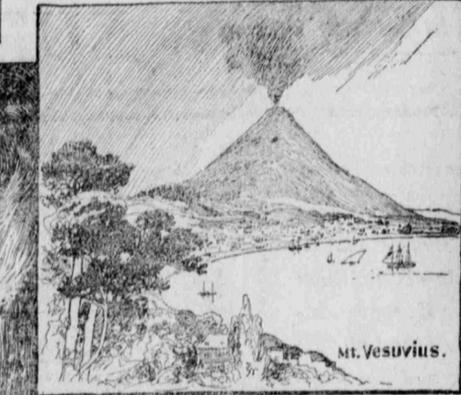
SCARCELY have the ashes and lava cooled above the cremated bodies of the volcano's victims, hardly have the streets been dug out, the ruined buildings exposed, the devastated plantations revisited, than active preparations have been begun for the rebuilding of the ruined cities and the rehabilitation of estates that have been practically destroyed. All this is a tribute to human energy and progress; but the recon-

struction of a city like St. Pierre, Martinique, and a reoccupation of a country like the devastated north coast of St. Vincent are altogether different propositions from the rebuilding of a city temporarily razed through disastrous conflagration. In addition to the causes which operate to the partial destruction of the latter, the former have great natural forces to combat which cannot be brought within the scope of the human will or made amenable to artificial regulations. American scientists, in fact, are already alive to the possible recurrence of such disastrous catastrophes and are discussing preventive measures to obviate similar terrible losses of life and property in the future.

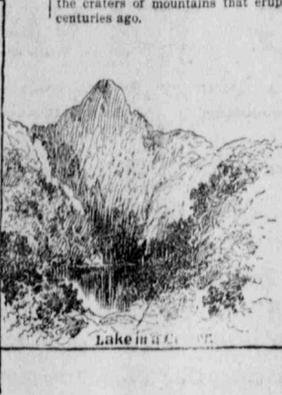


A Volcano in Eruption.

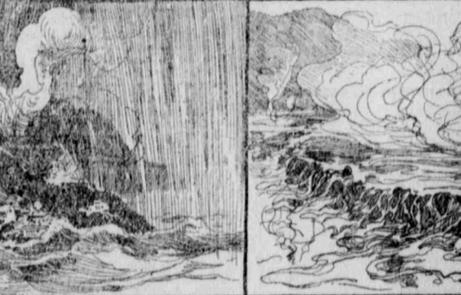
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Mt. Vesuvius.



Lake in a Crater.



A Town Built in a Crater.



A Boiling Crater.

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volcanoes and in many cases even around the crater brims of volcanoes supposedly extinct. There is some occult attraction in those quiescent, smoking monsters, but, aside from this, there are generally reasons in the physical features of the adjacent country or seacoast for the location of settlements near the volcano. Pompeii was situated on the bay of Naples at the base of Vesuvius owing to the

great beauty of the view outspread from that spot, and became in consequence the resort of wealthy Romans, who built their villas there. In the West Indies it happens that nearly all the good harbors in the volcanic islands of the Lesser Antilles are in close proximity to the volcanoes. Several of these harbors, in fact, are to all appearances the craters of mountains that erupted centuries ago.

land of Guadeloupe consists of two parts, the mountainous, containing the great "soufriere," or sulphur mountain, and the level tract beyond Salt river, which is of coralline formation. The Guadeloupe volcano has sent out smoke and vapors within recent years and may at any moment vomit a flood of lava down upon the town of Basse Terre, lying along the bay at its base. As the prevailing winds among these islands are constantly from the northeast, their Atlantic coasts have few safe harbors, all commerce being carried on along the "leeward," or Caribbean, shores. In the island of Martinique there is no good anchorage between the roadstead of St. Pierre and the landlocked bay of Port-de-France, about twelve miles distant, and as there is a vast tract of fertile country adjacent to the roadstead it was quite natural that a town should grow up right where it did, at St. Pierre. Mont Pelee had not been in active eruption within the memory of man, and though it smoked and rumbled occasionally it was not considered really dangerous by the natives of Martinique. They considered only the natural and commercial advantages in the location of their town and will probably ignore the warning that has been given them and relocate it on or near the same spot.

The best harbor of Martinique's nearest island to the south, St. Lucia, happens to lie at its northern end as far as any other from its smoking soufriere. It is completely land inclosed, with a narrow entrance and deep water within, and is considered the best for its size in the West Indies. The hills above this port of Castries have been fortified at great expense by the British government, and the island is called a second Gibraltar.

The bay of Kingstown, in St. Vincent, lies at a distance of about ten miles from the soufriere which has been in such active eruption recently as to destroy all the adjacent plantations and thousands of lives, sending its volcanic lava and ashes not only all over the island, but over Barbados, nearly 100 miles away.

About seventy miles south of St. Vincent is the island of Grenada, the southernmost of the volcanic chain, the principal town of which is built upon the brim of a crater invaded by the sea. There is another crater in the interior of Grenada, and if it were to explode there would be little hope of saving any settlement on the island.

In glancing over the world it will be seen that nearly every volcano within a town or a harbor, sometimes both conjoined, and at other times, not only in the Lesser Antilles, but in South America, Mexico, Italy, Japan and in our own country, Herculaneum, Pompeii and St. Pierre are not the only cities that have been destroyed by overconfidence in the virtues of old Vulcan, who is said by the ancients to have held a restraining power over the interior forces of the world.

In point of fact, it is hardly possible to locate a town or city that can be considered as wholly safe within the seismic or volcanic area. The vast forces within the earth's interior by which water is converted into superheated steam and rocks are reduced to molten mud and incandescent sand are beyond all human control, illimitable in their scope and cannot be evaded or resisted.

FREDERICK A. OBER.

PROFESSOR REGINALD A. FESSENDEN AND OUR GOVERNMENT'S WIRELESS TELEGRAPH SYSTEM.



The exhaustive experiments which have been conducted at Roanoke Island for the past year and a half have shown conclusively, according to experts like General Greely, chief of the signal service, that the United States government has now the best wireless system of telegraphy in the world. No attempt has been made to cover long distances yet, but as far as messages have been sent, between sixty and seventy miles, the apparatus used has surpassed the Marconi and the Slaty-Arco in clearness, accuracy and speed. The method is entirely separate and distinct from any other, says Professor R. A. Fessenden, who has conducted the experiments at Roanoke, the "coherer" being dispensed with and the receiver used being positive in its action and absolutely reliable. The speed far exceeds that of the Marconi system and is capable of competing with the land lines, the inventor says, which the others up to the present time cannot claim. Professor Reginald A. Fessenden, who has superintended the government experiments at Roanoke, is thirty-six years old and was born in Canada, but belongs to a New England family. He is well known as a chemist and electrician.

THE KING'S LITTLE TABLE.

Although King Edward VII. has been reported as extraordinarily active and well for one of his years so burdened with overwhelming cares of state, he



has ordered a refreshment table for use in the private box and retiring room of whatever theater he may be attending. This table is provided with compartments for refreshments, both solid and liquid, calculated to rejoice the inner man of such a bon vivant as his majesty.

A candle once extinguished may never be rekindled in an Austrian royal palace.

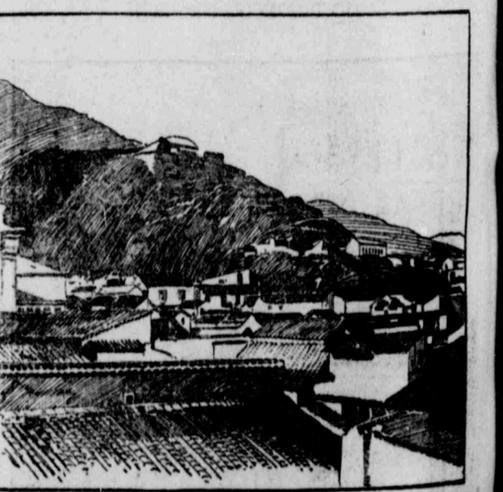
DONATELLO'S BRONZE PULPIT.

It is said of the famous sculptor Donatello, who was born in Florence, Italy, in 1386 and died 1466, that he was equally triumphant with a "St. George," an "Annunciation," a "David," an equestrian statue or that wonderful bronze pulpit in San Lorenzo at Florence, which is herewith illustrated. One of the revivers of sculpture in Italy, De-



natello particularly excelled in works of bronze, like the one shown in the illustration, and in "relievo." His work, which was highly appreciated during his lifetime, has continued in favor through all the centuries that have since elapsed.

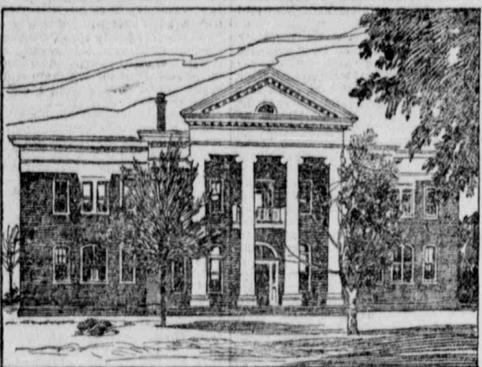
AN IMPORTANT VENEZUELAN RAILWAY TERMINUS.



Great interest attaches at present to the railway systems of Venezuela in view of the important part they may play in the trouble which is feared down there. There are three different railways of account in the country, the English built line connecting the port of La Guayra with the capital city, Caracas. It is only thirty miles in length, but climbs the mountains to a height of 3,000 feet. The road from Porto Cabello to Valencia and the German line from Valencia to Caracas, not over 200 miles in all, are the other two. The chief trouble now is about collecting the government guarantee of interest on the amount of railway bonds which have been practically repudiated. The scenery along the railways is magnificent, and the valleys they traverse are exceedingly rich, but the country at large is too poor to support extensive and expensive lines.

pillar of cloud rises from it by day and a pillar of fire by night is in reality a coal mine which has been burning for several years. In the year 1900 7,233,979 kegs of steel wire nails were produced in the United States. Approximately only one person in six in Chicago leaves the city in summer for a vacation or for the season. This contemplates that 300,000 people are absent from Chicago in summer for periods of two weeks to three months, leaving 1,500,000 to the mercies of the city as a summer resort. England spends \$45,000,000 a year on her paupers, Scotland \$4,500,000, Ireland \$1,000,000; France spends less than 47,000,000. Baltimore pays about \$300 a year for its display of flags on the municipal buildings.

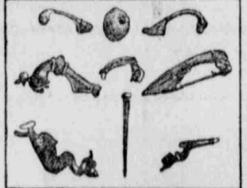
LIBRARY BUILT BY THE STUDENTS OF TUSKEGEE.



The most interesting fact about the library building recently dedicated at the Tuskegee (Ala.) Normal and Industrial institute is that it was practically constructed from foundation to roof-tree by the students. Andrew Carnegie gave them \$20,000 for a library building, but the plans were drawn by the school's director of industries, students dug the cellar, made and laid the bricks, erected the frame, covered it and installed the heating apparatus and electric lighting. So this structure, which is southern colonial, 50 by 100 feet, will stand as a monument to the energy and proficiency of Tuskegee students.

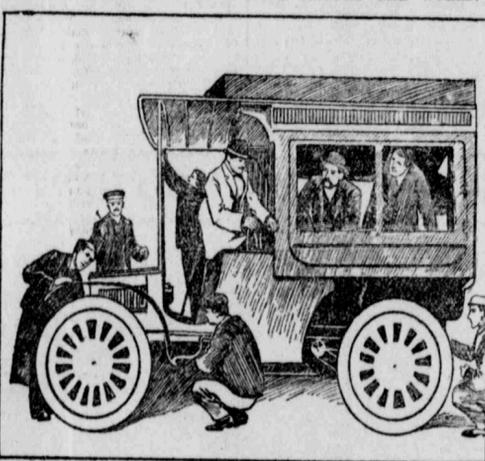
RECENTLY DISCOVERED ROMAN BROOCHES.

It is well known that England was anciently occupied by the Romans, and even if history were silent on the point the many recent discoveries would convince the most casual student. One of the latest is that of remains found at Bush



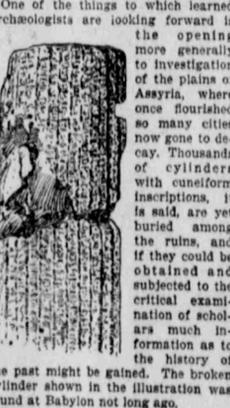
Hill park, where they were least expected. Besides broken pottery, idols and shillings of terra cotta there were some fine Roman brooches, as shown in the illustration. One of these was set with blue stones, another was jeweled at the point and cup and still another was perfect even to the bend or spring of the pin. There were also in this collection a bronze hairpin and an ornament shaped like a dolphin.

AN AUTOMOBILE NOW ON A TOUR AROUND THE WORLD.



The automobile which recently started on a tour around the world and which is shown in the illustration is called the *Fast Partout* and carries two gentlemen, Dr. Lehweiss and Mr. Cudell. It is a twenty-horsepower Panhard machine, with four vertical cylinders, incandescent spark ignition, dynamo for recharging the battery while in motion, ample reservoirs for water and oil and with a total weight of about three tons. The journey is already well under way, and the party is due to arrive at St. Petersburg shortly, whence a route will be taken to and across Siberia and to New York, via Japan, Sandwich Islands, San Francisco, New Orleans and Chicago, eight months being estimated for the completion of the tour.

A CUNEIFORM INSCRIPTION.



One of the things to which learned archaeologists are looking forward is the opening more generally to investigation of the plains of Assyria, where once flourished so many cities now gone to decay. Thousands of cylinders with cuneiform inscriptions, it is said, are yet buried among the ruins, and if they could be obtained and subjected to the critical examination of scholars much information as to the history of the past might be gained. The broken cylinder shown in the illustration was found at Babylon not long ago.

In some parts of South Africa much damage is done by baboons, which go in large marauding parties to rob gardens.

LATEST FLYING MACHINE.



The latest form of flying machine seems to be a reversion to the original types when men had an ambition to soar without the knowledge necessary for the purpose. An American who desires his name withheld for the present has invented what he calls a "flier" which does not depend upon a gas bag attachment, like the airships of Santos-Dumont and Von Zeppelin, but is self dependent and moves like an immense parachute. Like most of the new machines, however, it has not been subjected to a rigid test by actual experiment.

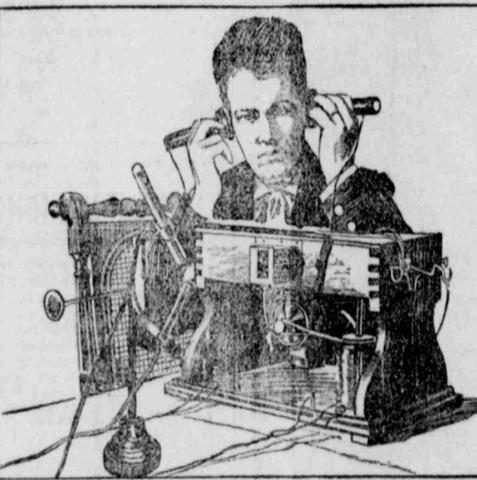
A PARISIAN PLAYWRIGHT.

Henri Leon Emile Lavedan is the full name of the latest playwright to set Paris agog over his work, for a storm of criticism, favorable and adverse, is whirling around his recent production, "Marquis de Priola." Lavedan is about forty-two years old and has been many years engaged in writing. He first



wrote for the press, then novels, then plays. He was made an "immortal" two years ago. His first success was made with a comedy called "Une Famille," and, though some of his work would hardly be allowed in the American family, it is in great vogue in France. He has been called a deep student of psychology and is said to be well versed in the technique of the up-to-date litterateur.

CALLED ONE OF THE MOST REMARKABLE MACHINES IN THE WORLD.



In this illustration is shown a peculiar machine which, owing to the different functions it performs, has been called one of the most remarkable, at all events the most unique, in the world. It is known as the "photophone" and is so constructed that it makes a portrait of an operator while his speech is being recorded. One of the most recent of the world's wonderful inventions, it is hardly safe as yet to predict its future.

O'ER LAND AND SEA.

The Swedish government is disposed to adopt electricity on its entire railway system. Several of the Swiss cantons have officially decided to adopt the simplified French orthography introduced by the French ministry of education some months ago. A gold weighing machine in the Bank

of England is so sensitive that an ordinary postage stamp if dropped on the scale will turn the index on the dial a distance of six inches. Artesian wells sunk 1,200 feet in Washington reach abundant water at 70 degree temperature. While German farmers are always growing about hard times, statistics

show that within the last eighteen years the value of farm animals has increased at the rate of \$20,000,000 a year in Germany. A boat carrying six persons has been towed on the Moselle by a Malay kite six and one-half feet long. Headway was made against a somewhat rapid current, and the traction could have been increased by adding more kites. Throughout Egypt there are at present

ten cases of plague, of which three are at Zagazig and seven at Port Said. The total number of cases since April 7 is 111, of which forty-six have proved fatal and fifty-five have been cured. Only nineteen of the seventy Berlin tram lines are now worked by horse traction. The Buffalo water system cost \$3,000,000, and \$250,000 a year is expended by that city for electricity. New York,

Boston, Chicago, Philadelphia, Cincinnati and Pittsburg are the only cities which expend more than Buffalo for electric light. Night schools established a year ago in Honolulu to teach English to Hawaiians have been abolished because of nonattendance. The "burning mountain" of Montel, in Aveyron, France, which is often mistaken for an active volcano because a

pillar of cloud rises from it by day and a pillar of fire by night is in reality a coal mine which has been burning for several years. In the year 1900 7,233,979 kegs of steel wire nails were produced in the United States. Approximately only one person in six in Chicago leaves the city in summer for a vacation or for the season. This contemplates that 300,000 people are ab-