Startling Theory.

WESTERN CLYCLONES FOLLOWING THE TRACK OF EXTINCT VOLCANOS.

In his recent published book, the great British geologist, Professor Geikil, makes some very suggestive and uncomfortable statements respecting the stability of the surface of the earth in the Western and Southern States. As is well known, this eminent scientist has made elaborate researches of the geologic features of this continent, and his conclusions almost warrant the supposition that the cyclones, tornadoes, and other atmospheric disturbances which have lately sacrificed life and property in the western section of the United States, are but the precursors of incalculably worse evils. Professor Geikil's investigations in Europe and America have led him to conclude that, besides the familiar forms of eruptive energy displayed by the three hundred and twenty-five active volcanos of the present day, there occur, from time to time, periods of tremendous volcanic activity, when the molten lava, instead of issuing from a mere insignificant vent, like Vesuvius or Stromboli, wells out over expanses of thousands of square miles together, by stupendous fissures and chasms opened for it in long lines through the solid crust of the globe. To such fiery inundations he refers not only the enormous volcanic plains of the Far West:—

GREAT SEAS OF MOLTEN MATERIAL

which have covered entire regions with a level floor of igneous rock—but also the well-known basaltic plateaux of Ireland and Scotland, which he regards as due to the cooling of similar lava floods poured forth from the thousands of dykes opened by the volcanic energy of the tertiary period. In other words, our existing little volcanic craters may be regarded as mere moribund vents, indicative of a temporary epoch of waning activity which might at any time resume its terrific tidal energy. In this connection it is singular the this enormous field of ancient lava should oe the favorite hunting ground in this country of the dread tornado and the devastating cyclone. The coincidence is evidently more than accidental, and points to a relation like that existing between cause and effect. The grounds for this conclusion may be thus summarized: Eminent scientists, including Sir William Thompson, Sir George Airy, Professor De Beaumont and others, maintain that "the earth's crust is thinner in volcanic regions than elsewhere," and that the probabilities are that "the inner surface of this crust is furrowed and fissured." Now, by far the greater weight of authority in the division of scientists is on the side of those who hold that our globe contains a liquid nucleus; while its crust is "formed of more or less compact rocks that float on a mass of fluid or semi fluid lava." The heaviest of the rocks form the ocean beds; lighter ones the continent; while the mountains are composed of the portions that project the farthest into the lava, in exactly the same way that large ships draw more water than small ones. The planet we inhabit may be illustrated by a glass globe filled with water. Being endowed with absolute fluidity, it is demonstrable that, by giving the globe a brisk rotary movement on a vertical axis, it will turn without carrying the liquid around with it. Light substances or specks suspended in the water will appear to remain still,

DESPITE THE BALL'S ROTATION,

But will this always be the case, whatever the speed of rotation? It has been demonstrated by the eminent French savant, M. Champagneur, in a series of experiments in the laboratory of the Sorbonne, that "if the rotation be sufficiently slow the liquid will be carried around with the glass globe, the whole revolving as one piece or solid ball." The diurnal revolution of our globe, however, cannot be said to be slow. Its equatorial and bulging circumference being about twenty-five thousand miles, it follows that any given point on its surface at the equator is whirled around at the rate of over a thousand miles an hour, or sixteen miles a minute. The liquid nucleus cannot, therefore, accompany the solid

CRUST AS A SOLID BALL,

and at the point of meeting of the solid and fluid surfaces there must be considerable friction which will most probably develop that electricity which seems to be inherent in our planet; and this electricity, manifesting itself more powerfully and conspicuously at those thinner portions of its crust—in volcanic regions like the Western States—may originate these dreadful cyclones and tornadoes which have lately become such a source of terror to the inhabitants, more especially as they are almost uniformly accompanied by electrical manifestations. The momentous question, however arises. "Are these devastating windstorms only the warnings and the precursors of a more terrible cataclysm which is is to follow from below?" *Sunday Mercury.*

A Popular View of the Subject of Electricity.

The present electrical era, which really begun with the introduction of dynamo machines as a source of electrical power in place of the costly and feeble zinc cells, seems destined to last until the winds and tides shall furnish the power so cheaply that it will drive machinery, plough the fields, haul wood and draw water, and so will really do man's hard work for him. The future value of electricty is rated so high by clear-headed men of science that even so good a servant as steam has been to man sinks, by comparison into insignificance. An article in Blackwood's Magazine, sets the matter before the unscientific reader is so interesting a shape that the following passages are worth quoting.

"Electricity has long been a subject which had little interest except for the lovers of scientific research. A generation has not yet altogether passed away in which all industrial use of electricity was unknown; and the only practical application of knowledge in regard to it was not only to apply it usefully, but only to check its powers of destruction. Fifty years ago lightning conductors were the only electric works in common use; and the proper construction of these themselves was so little understood that to this day such appliances are constantly made and put up in the worst possible way for effecting their purpose. Now all this is changed. The thick network of wires that disfigures all our great cities is a daily demonstration to all of electricty being put to most important practical uses, and our means of communication are such as the most imaginative fairy tale that ever was written could not excel for wonders. But wonderful as has been the development of the telegraph, it appears likely that ere long we shall look upon it as but one, and by no means the most marvelous, of countless applications of electricity. We seem to have discovered a giant whose powers are illimitable, yet whose strengh can be applied to do the delicate and subtle work—who is always ready for duty, and whose energies can be drawn out in a thousand ways—whose strength can be generated at one place, and carried to another for use, without serions loss—who can accumulate his vigor, so that, if it is not employed for a time, he can then do the work much harder than he could do continuously, who will begin working, and stop working at a touch—who will bore our hardest rocks, and carry our gentlest whisper to a friend miles away—who will be always docile, noiseless, untiring, never capricious, and ever on the alert.

"If what has already been accomplished in this now rapidly-expanding region of practical science is wonderful the future prospect is still more so. A few years may bring about a state of things in which men will be astonished that they could have thought the appliances of 1880 practical and convenient, and the wonders of steam engine be to us as the loom of old days was to those in whose generation the Jacquard was introduced. That the development will be rapid and the more useful, in proportion to the general interest taken in it by the public, is sure, and it is hoped that what has been said may tend to promote such a feeling of interest in a subject which is daily proving itself to possess substantial benefits for all."—*N. Y. Telegraph.*

Mr. Augustus Watson's Notion.

New notions are yet the order of the day in regard to the weather, as well, as all other things. The *Cincinnati Commercial*, thus alludes to the latest of these. "To make assurance doubly sure, and to lay the Signal Service completely in the shade, Mr. Augustus Watson comes forward with an invention all his own of storm and flood signals, by means of the telegraph and the cannon; not the toy cannon with which Young America amused itself yesterday, but the real, though now useless engines of destruction, lying around loose and useless in the various National arsenals, and which, if properly employed, he confidently claims, would save more than $100,000,000 annually in damaged hay, grain and other crops, with many more more millions of other property as well as thousands of lives, and all at the trifling cost of more or less gunpowder. It is a stupendous scheme, worthy of the brain of another king of cranks. Our inventor claims that his plan is authorized by law, but the Signal Service refuses to test it. The idea seems to be to have good-sized cannon stattoned in cities, county-seats and principal towns, in charge of court-house officials, newspaper editors, fire companies or military stations, if there be any. Assuming that the storm has formed and started on its travels, the first cannon or lines of cannon reached by its advancing edge, are to be fired off in a certain minutely described order. Each gun in the line of the storm wuold now be in turn discharged, and every farmer hearing the sound would receive instant and certain warning to stop cutting and quickly get his hay or grain already cut under cover, or into cocks or shocks, all of which he would, of course, promptly do. It would not be necessary to point the cannon skywards like the Trachian soldiers, who sped their arrows into the clouds to frighten and drive away the storm. Church bells, also, should be rung and steam whistles, blown to increase the general noise. not, of course, as in olden times, when in France and Germany. as well as in England, bells were rung in order to protect the inhabitants from the evil spirits raging in the storm, but simply to warn the people of the coming rain and give them a chance to get in out of the wet. It is a wonderful invention. There would be a perpetual Forth of July and the amount of gunpowder wasted would exceed that already being wasted by the Government in shooting the sun up and down, for which senseless purpose no less than $18,250 is expended annually for gunpowder alone. It is extremely doubtful, however, whether gunpowder would be superior to the Signal Service."

Our very best friends have a tincture of jealousy even in their friendship, and when they hear us praised by others will ascribe it to sinister and interested motives if they can. —Col. C. Colton.

Rich gifts wax poor when givers prove unkind.—Shakespeare.