

SCIENCE

FRIDAY, OCTOBER 12, 1888.

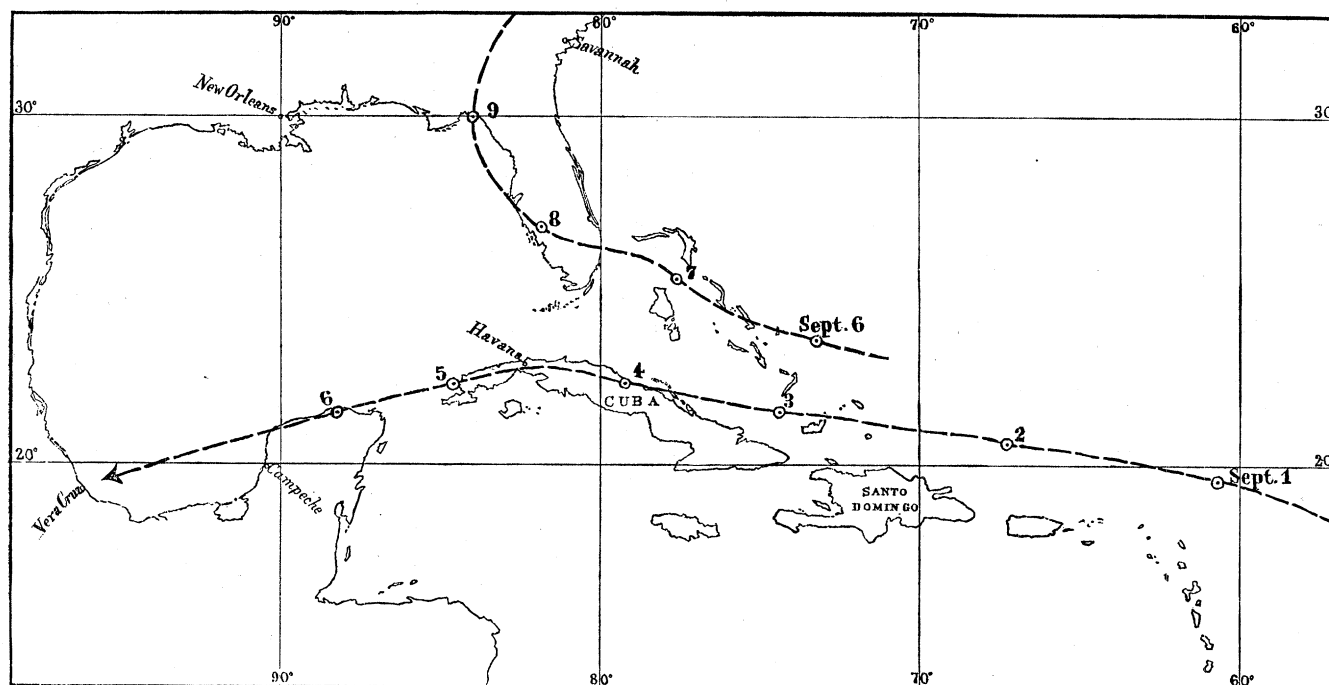
THE SUNDRY CIVIL APPROPRIATION BILL, passed by Congress, has finally been signed by the President, and the grants of money it makes have become available. Among these is one of a hundred thousand dollars, to enable the United States Geological Survey to begin an inquiry in regard to the feasibility of reclaiming the arid lands of the Far West. The sum is not as large as might be profitably used for this purpose, but it will enable a beginning to be made and an organization of the work to be effected. The amount of progress that may be made between now and July, 1889, is much less important than the determination reached by the government to enter upon this great work. This has not been hastily

SCIENTIFIC NEWS IN WASHINGTON.

The Cuban Hurricane. — Tree-Growth on Arid Lands: Forests have Little Effect upon Climate: They do promote Agriculture.

The Cuban Hurricane.

MR. EVERETT HAYDEN of the Hydrographic Office, whose visit to Cuba for the purpose of studying West Indian hurricanes has been mentioned in a previous number of *Science*, reports to the Hydrographic Office that upon his arrival at Havana he placed himself in communication with the Rdo. Padre Benito Viñes, of the Observatory of the Real Colegio de Belen, who has done every thing in his power to facilitate his work. Assisted by this eminent meteorologist, Mr. Hayden immediately began the investigation of the great hurricane that caused such destruction in the island of



TRACK OF THE CUBAN HURRICANE.

done, or without a full comprehension of the ultimate magnitude of the undertaking, or of the vast possibilities involved in it. The subject was very ably discussed, both in the Senate and House of Representatives, and, what is very remarkable, the debates took place at a time when the political excitement that pervaded both bodies was so great as almost to preclude the consideration of any new question of as great importance as this. It may not be that the amount of land that can be reclaimed from present worthlessness, and converted into rich agricultural lands, will equal in extent the entire area now under cultivation in the United States, as Major Powell has estimated; but, if one-half of this result is realized, the wealth of the country will be increased as it never has been increased before. Homes will be provided for additional millions of industrious people, and the amount of the natural products of the country will be increased almost beyond our present comprehension. It is an appreciation of these facts that causes us to consider the determination of the government to enter upon this great enterprise as the most important public business of the present year.

Cuba from the 3d to the 5th of September. One of the first features, and probably the most remarkable, noticed, was the exceptional and wholly unexpected change of direction in the onward movement of the cyclone on the night of the 4th, from about west by north to the south of west. Such a marked departure from the paths usually followed by these storms in low latitudes at once excited the curiosity both of Padre Viñes and the Hydrographic Office. The cause of this phenomenon seems to have been the presence, not far to the eastward, of another well-defined hurricane, which apparently exerted a marked influence upon the first and more violent one. This influence was shown in a variety of ways, but the details of its operation are still a subject of some uncertainty. According to Viñes, two barometric depressions, starting at about the same time and in the same neighborhood, exert a repellent influence upon one another in the upper currents. The reason assigned is, that the air, after rushing to the centre of the cyclone, rises rapidly, as in a sort of funnel, and when the top is reached (i.e., when, having reached an atmosphere of its own temperature, there is no longer a tendency to rise) the currents flow radially outward towards the circumference of the cyclonic area; and, when two depressions are near enough, these upper currents will meet and repel each