

Markings on Jupiter.' Other articles are: 'The Astronomy of the Nebulæ,' by W. W. Payne; 'The Coming Opposition of Eros,' by Mary Clark Traylor; 'The Limits of Vision,' by Edwin Holmes, and 'The Brightness of Star Light,' by J. E. Gore.

DISCUSSION AND CORRESPONDENCE.

THE UNIVERSITY OF WEST VIRGINIA.

WITH the final resignation of Jerome Hall Raymond, last March, from the presidency of West Virginia University, and the election of Dr. Purinton, of Denison, to succeed him, another turbulent period in the history of that institution has come to an end.

It is worth noting that no one of the six men who have served as presidents of the West Virginia University since its foundation in 1867 has proved generally acceptable to the people of the State, and that no one has been less acceptable than President Raymond. And yet, according to a statement made to the writer by one member of the University faculty who has always lived in Morgantown, no other president began his work under more auspicious circumstances. The board of regents had a good working majority of intelligent men who were deeply interested in the welfare of the University and who were anxious to give a hearty support to their enthusiastic young president. The people in the surrounding community and the members of the faculty were also more friendly and more inclined to be pleased with Mr. Raymond than they had been with any of his predecessors.

Notwithstanding all this, trouble was inevitable. The president was young, aggressive and thoroughly saturated with the spirit of unlimited, rushing expansion which had prevailed in the University of Chicago during the preceding five years. The faculty of the West Virginia University, on the other hand, did not at that time (1897) contain a single Ph.D. from any reputable university. Some of the professors were therefore naturally unfit to be in charge of any department in a modern college or university, and their unfitness became especially glaring through the new president's vigorous attempts to convert the old Morgantown institution into a miniature copy of the

University of Chicago. Several of the professors, moreover, not only lacked the training necessary to make them competent instructors in a university, but were in addition so addicted to financial schemes and to politics as to be a hindrance to the peaceful development of any state institution of learning.

Unhampered and alone, Mr. Raymond succeeded for a time in carrying out his plans in the management of the University. The University catalogue was entirely remodeled on the plan of the University of Chicago catalogue, and the studies were correspondingly rearranged; the summer quarter was added, and the four-quarter system with the 'quarterly convocations' was introduced; an unlimited elective system of studies leading to one degree only (B.A.) was adopted; faculty meetings were abolished, and the president's plans and changes were all carried out by means of committees of his own appointment.

All these changes and many others less fundamental, though scarcely less irritating to one or another among the professors, followed in rapid succession. One by one the older members of the faculty came to feel that they were entirely unsatisfactory and that the president would like nothing better than to replace them as soon as possible by men of his own selection. This led to a tacit or open combination of the greater number of the professors against the president—a result which might have been expected, especially considering the records of forced resignations, reappointments and quarrels of various kinds which formed a part of the previous history of the University. The opposition spread rapidly not only among the students and the people of Morgantown but also throughout the State, where it unfortunately developed into a narrow-minded support of 'West Virginians' as against 'foreigners.' The temper of some of the crudest of Mr. Raymond's enemies is well illustrated by the extravagant vulgarity of the attacks which were made upon him during the winter and spring of 1900 by the *Clarksburg News* and the *New Dominion* of Morgantown. The unpopularity of the president alike among the faculty, students and the people, especially the local people, was in addition much increased by his

pronounced antagonism toward smoking, drinking and dancing. His unflinching and uncompromising defence of the doctrine of evolution in season and out of season further brought him into sharp antagonism with the strong church-going element of the State.

Nor did the new members of the faculty whom the president brought to the university serve to strengthen his position, partly because the local animosity against the president was turned into suspicious reserve toward these who were supposed to be his friends, and partly because there was probably not a single one among them who did not disapprove of the president's policy in one or another essential point. It must be noted that the president did his utmost to secure the most able and well-trained young men that the salaries offered could procure; but the policy of the university was not in the least affected thereby, because President Raymond continued to settle all questions himself, and the new professors as well as the old were distributed among the various committees so as to insure a majority in favor of the president's views.

No fair-minded person can doubt that President Raymond worked as only a man in his best years can work for the advancement of the university. To be sure considerable energy and some money were wasted on untimely features, such as the premedical course, the domestic science, the department of pharmacy, the work for Ph.D., and the correspondence courses. But after all this has been admitted there can be no doubt that the standard of scholarship was raised through Dr. Raymond's efforts far above what it had ever been before in West Virginia.

The most striking illustration of this general advancement is perhaps to be found in the equipment and management of the university library at the beginning and at the end of Mr. Raymond's administration. Before his arrival the books were all inside an iron railing, and in charge of a lady who did not pretend to know anything about the classification of books. Her chief function was to see that the books did not disappear. The place was open less than six hours a day, and during those hours the space outside the iron railing is said to have been the noisiest and most disorderly place on the

campus. This fall a thoroughly modern library building is being finished, and, what is more to the point, the library has been as pleasant, orderly, and well arranged as any one could wish during at least the last two years, that is, ever since the present librarian was able to bring order out of the previous chaos. The library is now open from 8 a. m. to 10 p. m., every week-day, and from 4 to 6 p. m. on Sundays and holidays. The amount of money which was spent for current literature and books under President Raymond's regime was also about all that could reasonably have been asked for, and this money was largely spent under the direction of the young instructors whom he had brought there, because there seemed to be very little demand for more literature from the older professors. Several departments of the university are now fairly well equipped with standard and recent literature.

Another striking illustration of how Mr. Raymond endeavored to raise the standard of the work done in the university is found in the changes which he introduced in the scientific departments. At the beginning of his administration botany, zoology, physiology, anatomy, and materia medica were taught by one man (an M.D.). During the last two years anatomy was not taught, and the other four subjects were represented by two Ph.D.'s and one M.D. Another Ph.D. was appointed assistant professor in chemistry. The department of physics was not changed, but it was well known that this was due only to the fact that the president could not change everything at once.

The climax came in the spring of 1900 when the president asked the board of regents for the resignation of five of the old professors, and in addition formally expressed his disapproval of two others as well as of the director of the experiment station. This step, bold and ill-advised as it seemed, was partly a measure of self-protection, for some of the men whose resignations were demanded were then openly doing everything in their power to bring about the downfall of Mr. Raymond. The board of regents did not grant the president's request, because four of the nine members composing the board were at this time opposed to the president, and further, because to grant such a request then

would almost certainly have brought the University into the politics of the State during the elections of last fall. The failure of the board to support the president on such an important matter left him, on the other hand, no other dignified course than to resign. The following letter of resignation was indeed promptly sent to the board :

TO THE HONORABLE BOARD OF REGENTS.

Gentlemen : I hereby place in your hands my resignation of the Presidency of West Virginia University.

I am moved to do this, and thus to give up some of the most deeply cherished hopes of my life, because I see no prospect of final success in my work.

It is impossible to build up a university save on the basis of sound morals and sound scholarship with the generous cooperation of those engaged in the work. I have asked the removal of certain men known to you and to me and to the community to be grossly deficient in one or all of these regards. This demand your honorable Board has refused to grant for reasons which I cannot deem sufficient. I therefore ask you to relieve me of my responsibility for the conduct of the University, this act to take effect June 2, 1900.

Respectfully,

JEROME H. RAYMOND.

The board refused to accept this letter of resignation by a vote of five to four. President Raymond's friends on the board thereupon persuaded him to withdraw the letter.

As soon as the fall elections were over two of the resignations which Mr. Raymond had asked for were demanded by the board of regents (by a vote of five to four). The men refused to resign, and the subject was brought into the courts. The right of the board to dismiss the professors was sustained by the court by a vote of two to one, the judge who voted against the board being a relative of one of the dismissed professors. A private libel suit was at the same time instituted by one of the dismissed men against the president. This suit is still pending and is not expected to be dropped, because the prosecuting attorney is as bitter an enemy of the president as is his client.

The last chapter of President Raymond's career in West Virginia followed in the spring. The legislature was in session, and appropriations had to be asked for by the board

of regents. The report which they submitted to the legislature is a strong, well-written statement of how the University affairs were managed. Nothing could, however, stem the tide of feeling which had been worked up against the president. The legislature ordered an investigation into the affairs of the University. The essential points of the report which was submitted to the legislature by the committee appointed to carry out this investigation are contained in the following paragraph closing the report :

Your committee was at great pains to investigate the criticisms that have been generally made through the state in regard to the executive head of the University. A great deal of testimony was before the committee upon this subject. The president of the University is to be commended for his zeal and energy and devotion to the work of his office. We, however, regard some of his views and policies as not suited to the conditions as they exist among us. This together with his youth and inexperience and want of tact in dealing with men lead us to the conclusion that the best interests of the University would be subserved by a change in the presidency thereof. We are led to this conclusion by the overwhelming force of the evidence before us in our investigation, and we, therefore, recommend that such change shall be made.

Along with this change, it is the further opinion of your committee that there should be a complete reorganization of the board of regents, and that in such reorganization there should be no local regent appointed upon the new board.

There can be no doubt that the report of the committee reflected the prevailing sentiment in the legislature. The investigation could, however, not have been very thorough since it lasted but two days ; nor could the report submitted have been exclusively intended to improve the management of the affairs of the University. This is clearly shown for instance in the following paragraph.

In view of the great prominence given in colleges to physical exercise, the committee is of the opinion that the instructor in the gymnasium, who now receives a salary of only eight hundred dollars, should receive the salary of a full professor.

The instructor in question was an undergraduate student whose record of scholarship

during at least one quarter of the year '99-'00 fell below the average necessary for permission to continue his studies.

Mr. Raymond's administration ended precipitately after this report had been presented to the legislature. To the bill providing funds for the maintenance of the University was added a clause which stipulated that none of the funds could be used until Mr. Raymond's resignation had been accepted by the board of regents. Both the president and the board that had supported him were thus legislated out of office.

The new board met in June and elected Dr. Purinton, of Denison, to the presidency of West Virginia University. The following additional changes have since been made in the management of the instruction at the University: The professor of botany was dispensed with on economic grounds, and the department of botany was left in charge of the professor of zoology. The professor of philosophy was given the department of economics, the new president taking charge of the department of philosophy. The premedical and the domestic science departments were abolished, and the head of the domestic science, a Ph.D. in sociology, was made assistant professor of sociology. One of the two professors who had been compelled to resign in the fall by the old board of regents was reelected for one year, and for that year was given a leave of absence without pay. The departments of English literature and rhetoric were divided, and the English literature was given to a Morgantown lady without university training, who had attained some local literary distinction as secretary of the Morgantown Fortnightly Club. The assistant in rhetoric was offered an assistantship in mathematics, and on refusing to teach mathematics was dropped. The professor of German the following day went before the board in regard to their action on the assistant in rhetoric, and as a result the latter was reinstated with an increase of salary of three hundred dollars.

In view of all that has happened at West Virginia University during the past year, it is not easy to foresee what will be its history in the immediate future.

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CANNONADE AGAINST HAIL STORMS.

TO THE EDITOR OF SCIENCE: My attention has been called to an article by Professor W. S. Franklin, in your esteemed journal of September 27, page 496, on the control of the weather.

Professor Franklin's argument for the rational plausibility and possible effectiveness of cannonading with vortex rings 'for *inaugurating* at will the storm movements of atmosphere' is very surprising in view of two facts: 1st, Stiger and his followers do not maintain that the rising vortex rings *initiate* storms, but that they *destroy* storms, at least hail storms, turning them aside from their intended paths or converting the hail to rain; 2d, the cannonade against hail has been prosecuted for centuries, and the special vortex ring cannonade has been practised by tens of thousands during the past three years, and yet thus far there has not been reported a single case where cannonading has been logically demonstrated to have been effectual. Hail storms move, divide and pass by on either side, develop and decay, just the same whether the cannons are fired or no! The popular faith in cannonading that seems to prevail among the peasantry of southern Europe is a craze that has no scientific basis whatever. If Professor Franklin has any faith in this process he has but to submit it to a thorough experimental trial: Get a dozen of his neighbors to load their rifles with five ounces of gunpowder, which is the charge recommended by Stiger, leave off the wad so as not to burst the guns, and all fire away as fast as possible when a hail storm is approaching. After actually witnessing the failure of this process let him sit down and calculate approximately the relative amounts of energy in the explosions and in the hail storm.

The importance of unstable equilibrium in the atmosphere is a matter that has been so thoroughly investigated since the days of Espy, that Professor Franklin has only to study the modern literature of meteorology and the mechanics of whirlwinds in order to realize the folly of his argumentation.

The Weather Bureau needs, and hopes to obtain, the hearty cooperation of the best men in American science in order to overcome the dif-