

# SCIENCE

FRIDAY, JULY 20, 1888.

WHEN THE SYSTEMATIC STUDY of Indian pictographs was begun by the Bureau of Ethnology years ago, it was supposed by those who collected the material that the carvings on rocks and wood, on barks and skins, when they were interpreted, would tell something of the history of the people who made them, as the hieroglyphics of the East have enabled modern scholars to construct the history of ancient dynasties and empires. This expectation has been disappointed. The Indian pictographs are either mythological, or, if they relate to events, it is to incidents in the lives of individuals who are not identified, such as his hunts, the number of scalps he took in battle, etc., or to such events in the history of the tribes as the great religious festivals. They throw no direct light upon the origin, age, or migrations of the tribes that made the pictographs. Indirectly, by the comparative study of the characters made by different tribes, the relations of those tribes may be determined. It is by this comparative study that the Indian pictographs are likely to prove most valuable to science.

THERE HAVE OCCASIONALLY been assembled, at intervals of from five to seven years, international congresses for the discussion of questions relating to crime and penal discipline. At those hitherto held, as at Frankfort, Brussels, London, Stockholm, and Rome, there has been a union of both official and non-official members, with similar privileges of voting on the questions at issue. The next congress is appointed to be held some years hence, at St. Petersburg. It would appear as if the spirit of Russian despotism had taken alarm at the proposal, although unwilling to prohibit such a meeting. But certain influences have been brought to bear upon the committee of arrangement, who have intimated a desire to restrict future decisions on the various questions to official delegates or State functionaries. These, in Russia and some other continental countries, are obsequious servants of the bureaucracy. Hence, if this intention is carried out, the congress may in such hands tend to become a mere clique, or the creature of conditional patronage of northern military despotism, and, as such, rather likely to meet with ridicule than respect from the free public opinion and intelligence of western Europe and America. The French Prison Society, Paris, has already issued a timely protest against this project. That society consists of some of the ablest and most intelligent members of the legislature and scientific bodies of France, and is highly respected at home and abroad. Its objections to the proposed change in the constitution of these congresses will doubtless obtain acceptance in Great Britain and America, and in free nations generally. If, in defiance of such opinion, the St. Petersburg congress is to be manipulated as proposed, its proceedings will be entitled to comparatively little consideration.

THE BILL TO PROVIDE for the eleventh and subsequent censuses has been passed by the House of Representatives, and will no doubt be adopted by the Senate before the adjournment of the present session. The salient features of the bill are similar to those of that which provided for taking the tenth census, except that the number of subjects of investigation are reduced to seven. These are population and social statistics relating thereto, manufactures, mining, agriculture, mortality and vital statistics, valuation, and public indebtedness. The statistics on other subjects included in

the tenth census, and which swelled its publications to twenty-two large quarto volumes, although very useful for general information, political discussion, and social science, are omitted because the same information may be gathered by and published from other bureaus of the government more satisfactorily and more economically. They are of continuing importance, and are not limited to the precise period when the census is taken. The number of volumes to be printed will probably be reduced to seven, and their publication will not be delayed as formerly.

THERE WILL BE HELD next year, during the Universal Exhibition in Paris, a large number of scientific congresses, — of zoölogy, anthropology, physiology, electricity, dermatology, and hygiene, — besides the literary congresses and those devoted to economics and the arts. The exhibition will draw to Paris a large number of strangers, and will therefore be a favorable occasion for these international re-unions. It is to be hoped that the scientific congresses of 1889 will be as satisfactory in their results as those previously held. As an admirable model, we would call attention to the International Electrical Congress of 1881. This congress decided upon a reform in electrical measures. Up to that time, each experimenter had employed that system of measures which best served his purpose. Thanks to the electrical congress, these variations are now at an end. In order that the congresses of 1889 may accomplish all that may be expected of them, it is desirable that programmes should be arranged well beforehand, and the scientific world will look to the organizers of the congresses for this needed guidance. In large part the proper organization of the congresses will depend upon the local scientific societies of Paris.

THE LARGE AMOUNT of light sandy soils in some of the northern counties of Michigan which do not appear to respond favorably to ordinary methods of tillage, seems to call for investigation and experimental inquiry. Some persons doubt the possibility of their successful cultivation, and are disposed to scoff at all attempts in that direction. The fact that many persons have settled on these lands for homesteads, and after a few years have abandoned their claims and gone elsewhere for permanent homes, seems to countenance the doubt about their agricultural value. The hundreds of abandoned homesteads give sad evidence of misdirected labor and disappointed hopes. The question is, how to bring these lands into profitable cultivation by such methods of tillage and the use of such manurial materials as are within the reach of every farmer of moderate means. It does not include the use of stable-manure, for the reason that this cannot at present be obtained in sufficient quantity to supply the needs of the plains. No one need doubt the capacity of these sandy soils to produce crops if a sufficient supply of stable-manure can be obtained. The first question is, how to raise the crops on these lands that shall furnish the stable-manure. The problem briefly stated is this: with a light sandy soil of very porous quality, in a northern climate, subject to late frosts in spring and early frosts in autumn, and liable to midsummer drought, with no fertilizers except marl, salt, and plaster, can any methods of tillage or kinds of crops bring these plains into profitable cultivation for ordinary farming, stock-raising, or fruit-production? For many years Prof. R. C. Kedzie of the Agricultural College of Michigan has given thought and study to this problem, and in lectures and articles called attention to the subject. When the Hatch Bill became a law, it was felt that the time had come to take up this sub-

ject in a practical way. A farmers' institute had been held at Grayling, Crawford County, in which farming on the plains occupied most of the time and thought of those present. When it was determined to establish an experimental farm on the plains, the State Board of Agriculture fixed upon Grayling as the place, because it is in the heart of the jack-pine lands, is readily accessible by railway, is near a large deposit of marl, the people take a lively interest in the experimental work, and the Michigan Central Railroad offered to donate eighty acres of jack-pine land for the experimental farm. The tract of land donated, both as to soil and the natural products growing on it, is considered a fair average of the jack-pine plains. The experimental work at Grayling is only begun, and it is too soon to ask, "What shall the harvest be?"

THE STORRS SCHOOL Agricultural Experiment Station, Mansfield, Conn., has issued its first bulletin. The purpose of this bulletin is to explain to the public whom the station is especially intended to serve, the organization of the station, its spirit, and the character of the work thus far begun. It is the wish of those in charge of the enterprise to make its connection with the farmers of the State as intimate as possible, and to this end copies are mailed to all farmers in Connecticut whose addresses the station has been able to obtain, to a number of other persons within and outside of the State, as well as to the press. By the act of Congress, provision is made for the appropriation of fifteen thousand dollars per annum to each State and Territory, for the maintenance of agricultural experiment stations. Of the fund for Connecticut, one half is, by act of its last Legislature, intrusted to the Board of Control of the State Experiment Station, and one half to the Board of Trustees of the Storrs Agricultural School. The managers of the station recognize that its purpose is both to investigate and to teach, that its duty is to select for study such questions as are of the most immediate and practical importance to the agriculture of the State, and that its work will be successful in proportion to the intimacy of its connection with the farmers whom it represents. But they feel bound to accept the lesson taught by years of experience, in this country and elsewhere, to which we have already frequently referred, that the most valuable results will be obtained by selecting a small number of questions for investigation, by making them narrow and specific, and by studying them with the greatest possible thoroughness. And they desire to avoid, so far as may be, the error into which so many stations, in their early experience, have fallen, in failing to recognize that often the questions which seem most theoretical are really most practical; that the highest, and in the long-run the most useful, work for agriculture is the discovery of the laws that underlie its practice; and that not infrequently the interests of the farmer require that theoretical questions be considered first, for the same reason that the foundation of the house is the first part to be built. In using part of its resources for abstract research, the managers of the station feel assured that it is doing its highest duty, and will have the heartiest support of its constituency.

#### INTELLIGENT CITIZENSHIP.

WE had occasion recently to refer to the growth of the Old South Work. This work has been carried on in various ways, — by lectures, by tracts, and by encouraging the writing of essays on appropriate subjects.

The 'Old South Leaflets,' which have been published during the last five years in connection with the annual courses of historical lectures at the Old South Meeting-House in Boston, have attracted so much attention, and proved of so much service, that the directors have determined upon the publication of this general series, with the needs of schools, colleges, private clubs and classes, especially in mind. The leaflets are prepared by Mr. Edwin D. Mead. They are largely reproductions of important original papers, accompanied by useful historical and bibliographical notes. The aim

is to bring them within easy reach of everybody. The Old South Work is a work for the education of the people, and especially the education of our young people, in American history and politics; and its promoters believe that few things can contribute better to this end than the wide circulation of such leaflets as those now proposed. It is hoped that professors in our colleges, and teachers everywhere, will welcome them for use in their classes, and that they may meet the needs of the societies of young men and women now happily being organized in so many places for historical and political studies.

Some idea of the character of this series may be gained from the following list of the subjects of the first thirteen numbers, which are now ready: No. 1. 'The Constitution of the United States;' 2. 'The Articles of Confederation;' 3. 'The Declaration of Independence;' 4. 'Washington's Farewell Address;' 5. 'Magna Charta;' 6. 'Vane's "Healing Question;"' 7. 'Charter of Massachusetts Bay, 1629;' 8. 'Fundamental Orders of Connecticut, 1638;' 9. 'Franklin's Plan of Union, 1754;' 10. 'Washington's Inaugurals;' 11. 'Lincoln's Inaugurals and Emancipation Proclamation;' 12. 'The Federalist, Nos. 1 and 2;' 13. 'The Ordinance of 1787.' A large proportion of these early numbers relate to the Constitution and the history of its growth, which are now subjects of special interest to historical students.

The excellence of the essays which have been presented during the last seven years, in competition for the Old South prizes, have induced the offer of prizes again the present year. The competition for these prizes, which could well be imitated in other towns, is open to all who have graduated from the Boston high schools (including the Latin schools) in 1887 and 1888.

The subjects for the essays are, 'England's Part in the Crusades, and the Influence of the Crusades upon the Development of English Liberty;' and 'The Political Thought of Sir Henry Vane. Consider Vane's Relations to Cromwell and his Influence upon America.'

Forty dollars will be awarded for the best essay on each of the subjects named, and twenty-five dollars for the second best, making, in all, four prizes.

The Old South lectures for young people for the summer of 1888 will begin Wednesday afternoon, Aug. 1. The general title of the course will be 'The Story of the Centuries,' the special subjects being as follows: 'The Great Schools after the Dark Ages;' 'Richard the Lion-Hearted and the Crusades;' 'The World which Dante knew;' 'The Morning-Star of the Reformation;' 'Copernicus and Columbus, or the New Heaven and the New Earth;' 'The Age of Queen Elizabeth;' 'The Puritans and the English Revolution;' 'Lafayette and the Two Revolutions which he saw.'

Many of those interested in the Old South Work are also interested in the Massachusetts Society for promoting Good Citizenship. In response to the question which is often asked, the society has issued a circular telling what is the object of this society, and what its members are expected to do. It is the intention of the promoters of the society that it shall encourage and assist every thing which tends to make men good and intelligent. The good citizen is, as they express it, before all else the good man. As De Tocqueville saw it to be in his time, so we see it to be in ours, the success of a republican-democratic government depends upon the moral and intellectual capacity of the community. We need intelligence, education, conscience, and health, and it is to promote these that the society is working.

The immediate and special inquiry as to the nature of good citizenship leads to the study of political history and political philosophy, and the society wishes to see a more serious and thorough study of what the world's great thinkers in the past have thought and said upon government and the state; and they would encourage a more careful study of our American history and institutions, our constitutions and laws, and this in comparison with those of other countries. The members of the society individually, or in association with each other in clubs or classes, are urged to these studies for themselves, and to promote and assist such studies on the part of others. The society would have its members study the town and the town-meeting, the city, the commonwealth, the nation, and international relations, believing that by such broad studies in the history of pol-