

SCIENCE

FRIDAY, MAY 18, 1888.

THERE IS NOW PENDING before Congress a proposition to enable the United States Geological Survey to carry on the agricultural work provided for by law. This movement was brought formally forward by the California State Grange in October, 1887. It is hardly necessary to dwell upon the desirability of collecting data as to the agricultural value of land. Work of this kind has been done in the States east of the Mississippi by State surveys and other institutions, but west of it Powell's report on the arid lands is almost the sole attempt. The work falls properly under the scope of a geological survey, as in this case it requires only little additional work to the topographical and geological surveys that are continuously going on, while under any other department it would require the organization of a new survey, and involve great expense. How much good work can be done by geologists in this line, is shown by the work of a number of State surveys, and outside the United States by the survey of Newfoundland, which carries on also the work of the land-office, and by several reports by members of the Canadian Geological Survey, who, in the maps showing the results of their reconnaissances, embody much that is of the greatest value to the farmer. As a matter of fact, the surveyors of the land-office in the United States as well as in Canada report in a general way on the character of the country, but general statements of this kind are not what is wanted. Information on the character of the land ought to be as definite as possible. If the lands were properly classified as to their agricultural, pastoral, and industrial value, the new settler would find at once the place suitable to his demands, the farmer would know how he can best develop the resources of his land, and great profit would thus accrue to the country in general. We print in another place an article by Professor Hilgard which shows the close relation between geological and agricultural conditions, and thus proves that the agricultural survey is properly a subdivision of the Geological Survey.

THE INTERNATIONAL COPYRIGHT BILL prepared by Senator Chace has been passed by the United States Senate, and it is understood that the leaders of the House of Representatives intend to give it a chance in that body before the close of the present session. This is good news to American authors, publishers, and to all classes of mechanics engaged directly or indirectly in the manufacture of books. A few English authors and some English mechanics are greatly excited over what is known as the 'manufacturing clause' of the bill, which requires that foreign books copyrighted in this country shall be immediately published here, and printed from type set up here; and the English printers have appointed a committee to secure the amendment of the bill if possible. The authors who have been loudest in their protests have been those, so says a cable-despatch to the *Philadelphia Press*, who have never had one of their books republished in this country, either with or without their consent; those whose works are popular enough to find a market in the United States being willing to submit to the extra tax which a separate edition for America subjects them to, in consideration of great advantages which the bill will confer upon them in enabling them to prevent pirating of their works in this country, and placing them in position to make terms with American publishers. The English printers and other mechanics fear, that, if the Chace bill becomes a law, many books copyrighted on both sides of the At-

lantic will be printed from plates made in America, and that their business will therefore be injured. It is only necessary to say, that, without the 'manufacturing clause,' no international copyright bill would be likely to be passed by the American Congress in the next ten years. Without it, the Chace bill would not even have been considered during the present session. We hope the time will soon come when the people of both countries will see their interest in unconditional copyright in both for the literary productions of the citizens of either, and the freest competition in the manufacture of books that are read on both sides of the Atlantic. Then authors will be allowed to have their books printed in London, or New York, or Chicago, as may be most convenient or advantageous, and readers will know that they are not paying unnecessarily high prices for their reading-matter.

THE SUCCESS of the 'land in severalty' law as an agency for the civilization of the Indians depends upon many conditions, some of which are little understood by legislators, or even by the officials of the Indian service. "Cannot the government protect a man from lazy Indians who eat up his crops?" asked an intelligent member of a South-western tribe of a white man whose acquaintance he had made. A little questioning disclosed the fact that this Indian had planted ground and raised some corn. About the time the crop was ready to gather, his wife's brother arrived for a visit, and brought his whole family, and showed no inclination to go away as long as the corn lasted. His white friend asked him why he did not turn them away, but he said he could not. And this was a result of a state of society over which no individual Indian has control, but which is appreciated by very few white men. An Indian is just as much bound to share his provisions with his relatives or the members of his clan, if they desire it, as to furnish food for his children. This man saw the injustice of this, but knew no way to escape it without the help of the government. There are 'lazy Indians' in every tribe, and the industrious ones are certain to have as many visitors as they can accommodate, and the overflow will camp in the front yard. How many white farmers trying to get a start in life, even if the land was given to them, would succeed under such circumstances? Another obstacle to the success of the 'land in severalty' experiment is the natural indolence of the Indians, — an indolence that is hereditary, and the necessary result of the kind of life which the present generation and their ancestors have led. "The white man gets up and goes to work before it is light, but an Indian never wakes up until he is hungry," said a native of the Indian Territory twenty years ago; and the policy that does not recognize this fact, and seek to overcome the indolent habits rather than to destroy them by force or by placing the Indian in unequal competition with white men, is unscientific, and will certainly fail. The only hope that good will come of the severalty law, therefore, is in the execution of it with discretion, and in postponing the settlement of Indians upon lands of their own until they are prepared for it. It may be necessary, also, to protect industrious Indians from impositions by all of their own and their wives' relations.

THE SELECT COMMITTEE of the Senate of the Dominion of Canada, appointed to inquire into the value of the country north of the Saskatchewan watershed, has presented a report which is founded on a vast amount of new and valuable information. The inquiry shows that much of this region, which was considered a few years

ago part of the uninhabitable polar regions, may become settled in course of time, as it possesses considerable natural resources. The great length of navigable rivers facilitates communication. The extent of continuous lake coast and river navigation is estimated at 6,500 miles, broken only in two places there situated upon the Great Slave and Athabasca Rivers. It is stated that there is a pastoral area of 860,000 square miles, arable lands to the extent of 274,000 square miles, while 400,000 square miles are considered useless for cultivation and stock-raising. The climate of this region is described as more favorable, as is generally assumed, and comparable in certain districts to that of western Ontario. It appears that there is an abundance of fish, and an ample supply of wood suitable for building-purposes. Among the mineral products, special attention is called to the extensive auriferous area and to the large petroleum-fields. The energetic attempts of Canada to develop the resources of the country have led to an increase of immigration to their western provinces. Undoubtedly the present inquiry will help to direct attention to the resources of those remote regions.

ECONOMY OF FOOD.

IN February we sent out from the office of *Science* a circular letter to a number of physicians, political-economists, and others likely to be posted and interested in the economy of food. In this letter we called attention to Prof. W. O. Atwater's article on the subject in the *Century* for January, and stated that it is generally believed that even those who wish and try to economize in the purchase and use of food very often do not understand how, and that while they consult carefully the prices they pay, and judge from these the nutritive value of the articles, they are frequently misled.

Our questions sought for information as to the existence of a considerable tendency among people of moderate means to bad economy in the following respects: first, in the purchase of food either of needlessly expensive kinds or ill-balanced quantities; second, in the cooking of food; third, in the actual waste of food, that is, the throwing-away of nutritious material instead of consuming it economically; finally we asked for suggestions as to such means as might be deemed appropriate for correcting any of these forms of bad economy that might exist.

Responses were received from various portions of the country; and while the evidence was generally to the effect that there did exist a considerable tendency among people of moderate means to bad economy, there were several noteworthy opinions to the contrary.

Mr. P. H. Felker, editor of the *St. Louis Grocer*, stated that he has had an experience in the retail grocery trade, and does not think that people of moderate means exhibit bad economy, as a rule, in the purchase of expensive kinds of food. Nor does he believe that much is thrown away by poor people. His experience is, that those who pay for what they buy do not waste, but that those who do not intend to pay, but expect the world to give them a living, are careless and wasteful.

Charles N. Chapin of Providence, R.I., is another of the dissenters. He believes that there can be little question that there is a tendency to purchase needlessly expensive qualities of all kinds of food, but he is certain that there is not nearly as much extravagance absolutely among such persons as there is among the rich or even well-to-do, and he doubts very much whether there is relatively as much. According to his experience, day-laborers, workers in mills and factories, and the poorer class of mechanics, do not as a rule purchase as fine a quality of meat and groceries as do those in better circumstances. There is a large grocery in his city whose patrons are chiefly well-to-do or rich, and this grocery has never taken out an 'oleo' license; while in the stores in the poorer parts of the same city, and in the manufacturing villages, oleo is sold in large quantities, sometimes almost to the exclusion of butter. The dealer in choice groceries informs him that he sells five barrels of Haxall flour to one of St. Louis, while in the mill villages the proportion is two to one in favor of St. Louis. A butcher having some of the best trade in Providence, and also having a

store in a neighboring manufacturing village, states that he sold cheaper and leaner meat in the village than in the city, yet this same man says that some of his most extravagant customers in the city were among the poor. As at this point Mr. Chapin makes an important suggestion, we quote his words: "And just here, it seems to me, is the place where an error has crept into Professor Atwater's article, and also into the report of the Massachusetts Labor Bureau. In the case above mentioned the majority of the persons who bought at the city store were rich, and those who were not were chiefly coachmen, washerwomen, janitors, and persons who were objects of charity; in other words, those who were brought into comparatively close contact with the rich, and who hence aped their manners and tastes. Such people are often the most extravagant in the world. I think it will be found that it is chiefly in neighborhoods or in stores where the rich and poor purchase together that an inordinate extravagance will be found on the part of the poor. I am positive that in our manufacturing villages and in the manufacturing sections of this city, the working-people, while requiring good food, do not consume such a high grade of goods as do those in better circumstances." In regard to the actual waste, — non-consumption of foods purchased, — Mr. Chapin holds that all evidence goes to show that the poor are much more economical than the well-to-do or the rich. In Providence the swill-contractor gets the same amount of swill from less than six thousand persons in the wealthy part of the city as he does from over twelve thousand persons in a manufacturing district; and the swill in the former case contains a large amount of nutritive material, while in the latter case it consists chiefly of bones, codfish-skins, parings from boiled potatoes, etc. Mr. Chapin believes that the use of novel or artificial articles of food, such as canned goods, oleo, glucose, cottonseed-oil, baking-powders, etc., tends to make living cheaper, while these foods are in many cases just as palatable as the more expensive. Mr. Chapin finally suggests that it is, after all, a question whether any but a very few, the very poor, need to practise much greater economy than they do. While it is true that the neck is as nutritious as a sirloin steak, it is equally true that the latter is more palatable. A man would be comfortable in patched clothes and a room with whitewashed walls and a bare floor, yet we do not consider it a sin or even unwise for the majority of even wage-earners to make their surroundings agreeable.

Mr. David Murray of the University of the State of New York has serious doubts whether the prejudice which Professor Atwater speaks of, against the purchase of cheap food, exists to any very considerable extent.

We have also to class among the doubters of the waste of food Mrs. M. Fay Peirce, New York, author of 'Co-operative House-keeping.'

Mrs. Fay's experience is, "that Americans, especially men, crave meat three times a day; and if they can get it, they have it. No doubt," she says, "they could do with meat once a day, and make up in milk and eggs. The fact remains the same, that the human system prefers a great deal of meat; and may not the enormous energy and enterprise of the American people, and the large average of mental work which as a nation Americans accomplish, be in great measure due to the national indulgence in meat? In answer to the first question, I should therefore hesitate to say that too much meat is purchased by our people. Second, Roast meat and broiled meat are, of course, infinitely more enjoyable than boiled and stewed meats. No matter how exquisitely flavored the *ragouts*, the appetite will tire of them; but of beefsteak and mutton-chops broiled, or of roast beef and roast mutton, etc., people never tire. You cannot, however, roast or broil cheap and tough meat: hence Americans buy the roasting and broiling pieces. If they liked a savory stew as well, of course they would save their money and buy it. The simple fact is, that no art of the cook can equal the flavors of nature. Roast and broiled meat is meat *au naturel*, and, as long as the poor man can pay for it, he may be expected to indulge in it. Moreover, no doubt such meat is far more exhilarating and nourishing than boiled and stewed meats. Third, I do not believe that poor people throw away any thing they can eat. I believe that every thing they buy is eaten except the bones and the potato and squash parings; and, in general, the women who do their own