pauper labor engaged in agriculture in all the world, and the agricultural labor in other lands than this receives less compensation than a toiler of the same land in any other industry.

Does any gentleman imagine to himself that Mr. Cannon's argument is an easy one to answer and refute? We confess we do not find it so. Unless we plant ourselves squarely on the free trade platform and agree that American industries and American labor shall be degraded to the level of the European, we are bound to admit that the existing arrangement is unfair to the agricultural producer. The manufacturer being protected against foreign competition and the farmer left unprotected, it follows that the latter has to pay the highest prices for everything he buys and accept the lowest prices for everything he sells. He pays for the protection of the manufacturer in the clothes he wears, the utensils he employs, the very plow he cultivates his crop with. But his product has no protection. It is sold in a free trade market. He helps everybody. Nobody helps him. He cannot be protected through the medium of the tariff, for he has no competition from abroad. He can be aided only in the way Senator Cannon proposes—by encouraging him to export his product. And this is the text of the amendment in which the scheme is formulated:

And from and after sixty days from the passage of this act there shall be paid, out of any moneys in the treasury of the United States not otherwise appropriated, to any exporter of wheat or wheat flour, rye, or rye flour; corn, ground or unground; cotton, hops, or tobacco, produced wholly in the United States and exported by sea from any port in the United States to any port of any other country, the following export bounty, by way of an equalization to agriculture of the benefits of this act to encourage the industries of the United States, to wit: Ten cents per bushel on wheat; 50 cents per barrel on wheat flour; 10 cents per bushel on rye; 50 cents per barrel on rye flour; 5 cents per bushel on corn; 10 cents per cental on corn, ground; 1 cent per pound on cotton; 2 cents per pound on hops; 2 cents per pound on tobacco. And all payments of bounty under this act shall be made upon negotiable vouchers, issued by the collector of customs at the port of clearance, upon presentation at the treasury or any subtreasury of the United States; and the secretary of the treasury is hereby charged with making and enforcing such regulations as may be necessary for the full protection of the exporters and of the government according to the true intent and meaning of this law.

The question is a practical, not a sentimental one. The question is whether it profits us as a nation to promote one industry and starve another. Will it serve the ends of general prosperity to enrich the manufacturers and the great commercial corporations while we permit the agriculturist to perish in neglect? Can we, indeed, know what prosperity means if the farming industry is extinguished?

Here is Mr. Cannon's proposition in a nutshell. He claims that the economic scheme is defective from top to bottom so long as it fails to make provision for the secure and permanent welfare of agriculture. He claims, further, that no amount of fostering care in other directions will avail if agriculture be left to perish. What do our statesmen think of this? Can any of them—among protectionists, we mean—point out the flaw in Mr. Cannon's theorem?

SCIENTIFIC MISCELLANY.

The peat coal now being turned out on a considerable scale in Norway is made by the process of Rosendahl, a Norwegian engineer, which consists in heating the peat in closed retorts to 250° C. for seven hours. The finished product retains 80 per cent of the original tar and gas. Analysis shows this coal to consist of 65 per cent of carbon, 16 per cent of oxygen, 6 per cent of hydrogen, 3.7 per cent of water, and only 5 per cent of ash, and its heating value is that of average bituminous coal. The cost of manufacture is about 60 cents per ton, the selling price being a little over $1.00 per ton, or about a quarter of the cost in Norway of natural coal. The peat coal has proven suitable for foundry work, and rooms have been heated with it at exactly half the cost of the same effect from ordinary coal.

The scheme of covering the Sahara with forest is pronounced by M. P. Privat Deschenel utterly impracticable, the arid plateaus being hopeless desert. On a limited scale, however, the valleys—most of which are favored with a small amount of water—may be successfully planted with tamarisk, acacia, eucalyptus and poplar, the last named tree having unexpectedly proven the most suitable. In the forest shelter, vegetables and fruit trees may be grown.

In some late experiments on the bursting of small fly-wheels, the first wheel tested, 15⅝ inches in diameter, burst at a speed of 6525 revolutions per minute, or a rim speed of over five miles a minute. A timber casing around the wheel was completely demolished, and a piece of the rim was shot like a bullet through four inches of pine and 2½ inches into the hardwood floor.

A new x-ray tube, with adjustable cathode, shows that the exact position of the cathode enormously affects the penetration of the rays, a change of a third of an inch giving a range of penetrative power from the highest almost to none at all.

The use of ether for forcing plants has given Mr. Johannsen, of the Agricultural High School at Copenhagen, results so decided as to suggest great possibilities for florists and market gardeners. The plants are etherized by being placed for twenty-four to ninety-six hours in a closed vessel filled with ether vapor, cylindrical glasses being used for small plants and oil-painted boxes lined with tin-foil for larger ones. The cost of etherizing lilacs is said to have been from a cent to a cent and one-half for each plant. In the experiments of the last three years, tulips, lilacs, etc, etherized late in the fall and then placed in a hothouse developed much more rapidly than usual, and had a pretty color and great durability. Little benefit was had from ether applied before the middle of September. Trials on a greater variety of plants are planned for this year, and a study of the effects of varying and repeated doses of ether will be made. The ether being very inflammable, great care must be taken to keep it away from lighted matches or any flame.

An incandescent lamp of three or four candle power is used by M. Paul Noel, a French entomologist, for capturing insects that swim in ponds at night. The lamp is connected by wires to a small storage battery on the bank of the pond, weighted by a semicircle of iron, and placed over a net having an opening two feet and a half across. The net is of coarse pack-thread, closed by a string. The weighted lamp and the net are slowly sunk in the water, the lamp is lighted, and insects fish, lizards, frogs, tadpoles and larvae of every kind rush up to it. The string is pulled, quickly capturing several pounds of victims.

Flourine, remarkable both as the most active of the chemical elements and as the only one forming no compound with oxygen, was with great difficulty isolated by Moissan in 1887. Its liquefaction, just announced by Professor Dewar, adds a new and extraordinary detail to the chemistry of cold. The gas liquefies at a temperature of 185° below zero cent, and the product is a yellow mobile liquid which has lost the intense chemical energy and become entirely inert.

New discoveries of rocks dangerous to navigation show no signs of diminishing, not less than 209 rocks and shoals not before known having been reported to the British Hydrographer in 1896.

A singular eruption was witnessed early this year by a postman who was crossing the sands of Skeidara, in the south of Iceland. A sudden long, groaning sound drew his attention to a glacier about two miles in front of him, when he saw huge masses of ice thrown into the air from the glacier, followed by a flood that swept down upon the level sands, carrying everything before it. Turning his horse, he fled to the station of Nupsstad. On returning to the sands six days later, he found them covered by a belt of ice-floes or waves about four miles wide and seventy to ninety feet high, reaching from the glacier to the sea, a distance of at least twenty-five miles. Six newly formed torrents rushed from the glacier on the opposite side of the ice-field. The eruption is supposed to have some connection with the severe earthquakes of last summer.

A scorpion carrying a flower is the curious sight seen not long ago by an Aden correspondent of nature. The flower was a large blossom of what is locally known as the white-gold mohur tree, and the creature held it over its back by one claw, curling up its tail to assist. The nearest tree from which the flower could have been obtained was thirty feet away, with two or three steps and a low stone parapet intervening. This fact seems to prove that the scorpion carried the flower through intention, though whether as concealment, to shield itself from the bright lamp light, or for some other purpose, is unknown.

Scorpions are not known to feed on vegetable substances nor to construct nests.

It might puzzle many to say why the feathers of birds rest closely against the body even in the strongest wind. A German naturalist has made experiments showing that in the birds flight through the air the feathers are electrified positively and the white down negatively causing an attraction that smooths down the feathers.

The surprising theory that whooping cough is contagious only before the patient begins to whoop is advanced by Dr. Weill, a French physician. From many cases of exposure he has satisfied himself that all risk of infection ceases at the beginning of the whooping stage or very soon after.