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NEW LAWS FOR ANALYZING FOOD AND DRUGS.

There is a probability of increased interest during the next few years in methods of testing the genuineness of all articles of food, beverages, and medicines. Several of the States have lately passed laws authorizing official analysis of these articles wherever they are upon sale. Comprehensive laws of this kind have been passed within a year or two in Wisconsin and New York. And several States have lately enacted official inspection of particular articles; for example, Indiana required analysis of all fertilizers in market and of all the oils into which petroleum enters; Maine, of vinegar; Massachusetts, Nevada, and New Jersey, of milk; Ohio, of milk, butter, cheese, and meat, and of fertilizers.

Anything like censorship of ordinary dealings has generally been unpopular in America, and indeed, in recent years, in England. English laws of three or four centuries ago were stringent in punishing adulterations, but these laws were in great part repealed, and for a long time trade was left free, it being supposed that the seller would find his own interest promoted by selling a good article, and that the buyer would be able to judge of what he bought, and reject it if, not according to contract. And such laws as have been passed under the pressure of increasing necessity for protecting the public against adulteration, have, until very lately, avoided everything like censorship of trade, being confined to imposing damages or punishment for any fraud committed, provided the buyer could prove it. They gave him no help in advance. The purchaser bought coffee, sugar, or milk, as he found it on sale in the stores. He carried the article home as it was delivered to him. If there he found the milk watered, the sugar sanded, or the coffee composed in large part of burnt beans or something worse, he could complain, but in proving his complaint he was dependent on such evidence as he could himself command; his own testimony or that of his servants, perhaps, who first opened and used the article. In 1860, and again in 1875, Parliament passed laws for England intended to give purchasers the aid of a system of inspection. The leading features of the system are that inspectors and public analysts are appointed in various localities, and an inspector, or the town or city officers, or even an individual purchaser, may visit a suspected dealer, demand to buy a sample of his goods, carry the sample to the public analyst, and obtain an official examination. The report of the analyst that he finds adulteration becomes evidence, perhaps not conclusive, of the dealer's guilt. This principle of giving the general public the benefit of a system of scientific examination of whatever articles mentioned in the law are upon sale in the shops and markets, is just now winning adoption in this country. If the new laws are vigorously enforced attention will be drawn to all simple, trustworthy modes of detecting these commercial frauds.

The New York law was passed May 28, 1881, but was not to go into operation until the fall. To understand its method the reader must recall that in 1880 the legislature created a State Board of Health. There were, previously, local boards of health in particular cities. These are not abolished, but the State Board is clothed with power to work throughout the entire State in collecting and arranging information on the public health and mortality, supervising registration of births, marriages, and deaths, enforcing various sanitary laws, investigating alleged nuisances, and the like. By the new law to prevent adulterations this State Board of Health is authorized to "take cognizance of the interests of the public health as it relates to the sale of food and drugs and the adulteration of the same, and make all necessary investigations and inquiries relating thereto." The board is directed to prepare rules and regulations with regard to the proper methods of collecting and examining articles and for the appointment of inspectors and analysts, and may remove either of those officers who may be deemed incompetent. The rules and regulations are to be published in the book of statutes from year to year. The law includes every article used for food or drink by man, and all medicines for internal or external use, except mixtures or compounds recognized as ordinary articles of food not injurious to health, and distinctly labeled as mixtures, and except specific articles which the Board of Health, with the approval of the Governor, may declare to be exempted from the law. Every dealer is required by the law to serve or supply any public analyst or other agent of the State, or a local board of health who may apply and tender the value of the same, with a sample sufficient for analysis of any article of food or drugs in his possession. A penalty of fifty or one hundred dollars for a first or any subsequent refusal to sell a sample is imposed.

The scheme of the law is that these samples may be examined by the public analyst and his report may be used as a basis of bringing the dealer under punishment, and there is a distinct provision imposing a fine of fifty or one hundred dollars for a first or any subsequent offense of manufacturing or keeping for sale any article of food or drugs which is adulterated. It will not be necessary under the law to prove a sale, for knowingly keeping the adulterated goods in stock is enough. The law seems defective in not saying how the report of the analyst shall be used to secure the conviction of a dishonest dealer. This want may perhaps be supplied by a regulation to be adopted by the Board of Health, though the courts may probably hold that the dealer has the right to be "confronted with the witnesses against him;" in other words, that the analyst must, if required, appear in court and relate, under oath, the facts of the examination made by him.

The definition of adulteration given in the law is drawn

with more care than are other portions; it well deserves scrutiny of experts in this field. It is as follows:

An article shall be deemed to be adulterated within the meaning of this act.

A.—In the case of drugs 1. If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down in such work.

2. If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on materia medica, it differs materially from the standard of strength, quality, or purity laid down in such work.

3. If its strength or purity fall below the professed standard under which it is sold.

B.—In the case of food or drink.

1. If any substance or substances has or have been mixed with it so as to reduce or lower or injuriously affect its quality or strength.

2. If any inferior or cheaper substance or substances have been substituted wholly or in part for the article.

3. If any valuable constituent of the article has been wholly or in part abstracted.

4. If it be an imitation of or be sold under the name of another article.

5. If it consists wholly or in part of a diseased or decomposed, or putrid or rotten, animal or vegetable substance, whether manufactured or not, or in the case of milk, if it is the produce of a diseased animal.

6. If it be colored, or coated, or polished, or powdered, whereby damage is concealed, or it is made to appear better than it really is, or of greater value.

ENGLISH AS THE SPEECH OF THE FUTURE.

The success of the English-speaking peoples as colonists and their superior prolificness are not the only reasons for thinking that the English tongue is destined to dominate the world. The flexibility and terseness of the English language has made it the language of international telegraphy, and from statistics just collected it appears to be the great newspaper language. In other words, it about equally divides the newspapers of the world with all other tongues combined.

The total number of newspapers and periodicals now published is given in H. P. Hubbard's forthcoming "Newspaper and Book Directory of the World," as 34,274, with a circulation of about 116,000,000 copies, the annual aggregate circulation reaching, in round numbers, 10,600,000,000 copies. Europe leads with 19,557, and North America follows with 12,400, the two together making over nine-tenths of all the publications in existence. Asia has 775; South America, 699; Australasia, 661; and Africa, 132. Of all these, 16,500 are printed in the English language, 7,800 in German, 3,850 in French, and over 1,600 in Spanish. There are 4,020 daily newspapers, 18,274 tri-weeklies and weeklies, and 8,508 issued less frequently. It appears that while the annual aggregate circulation of publications in the United States is 2,600,000,000, that of Great Britain and Ireland is 2,260,000,000.

THE LOSS OF THE JEANNETTE.

In the loss of the Jeannette another vessel has been added to the list of sacrifices to Arctic exploration. Fortunately the commander of the expedition, Lieutenant De Long, and nearly all of the other officers and crew, have been saved, and strong hopes are entertained with regard to the safety of the rest. Before the Jeannette sailed from San Francisco, July 8, 1879, Commander De Long announced his intention to retreat upon the Siberian settlements in case of disaster to his vessel. The disaster came, and the retreat has been effected with as great success as could have been expected under the circumstances.

On the 19th of December, 1881, the Governor of Eastern Siberia telegraphed that three months before two boat loads from the wrecked Jeannette had reached a remote part of the Siberian coast, near the mouth of the Lena; and the announcement was quickly followed by a dispatch from Engineer Melville, as follows:

"IRKUTSK, Dec. 21, 2:05 P.M.

"Jeannette was crushed by the ice in latitude 77 deg. 15 min. north, longitude 157 deg. east. Boats and sleds made a good retreat to fifty miles northwest of the Lena River, where the three boats were separated in a gale. The whale boat, in charge of Chief Engineer Melville, entered the east mouth of the Lena River on September 17. It was stopped by ice in the river. We found a native village, and as soon as the river closed I put myself in communication with the Commandant at Boloemga. On October 29 I heard that the first cutter, containing Lieutenant De Long, Dr. Ambler, and twelve others, had landed at the north mouth of the Lena. The Commandant at Boloemga sent instant relief to the whaleboat party, who are well. Ninäeman and Noras arrived at Boloemga on October 29 for relief for the first cutter, all of whom are in a sad condition and in danger of starvation, and all badly frozen. The Commandant at Boloemga has sent native scouts to look for them, and will urge vigorous and constant search until they are found. The second cutter has not yet been heard from."

The Jeannette was last seen September 3, 1879, steaming northward toward what is now known as Wrangell Island. The course since then is unknown, save that it must have been westward for about a thousand miles. The place of the disaster was about five hundred geographical miles northeast of the mouths of the Lena, the nearest known land, the New Siberian Islands, being about a hundred and fifty miles away.

THE Arizona, of the Guion Line, during the past summer, made five trips between New York and Liverpool, via Queenstown, averaging 7 days 12 hours and 4 minutes for each trip between New York and Queenstown. The Elbe, of the Bremen Line, has made the passage westwards in 7 days 10 hours and 25 minutes.