

FOOD ADULTERATION.

The subject of food adulteration has of late attracted a great deal of attention, as from time to time developments are made showing to what an extent the nefarious traffic is carried on. The yeast powder men were probably the first of the class to be investigated, and they did not come out with clear skirts by any means. But there are many other branches of manufacture and trade which need to be closely watched also. Local attempts to regulate the sale of food have, on account of limited jurisdiction or other causes, generally proved inadequate for the purposes for which they were designed, and wise laws—national, if possible—should be enacted, which will afford adequate protection both to consumers and honest manufacturers.

About a year ago a member of the National Board of Trade placed at the disposal of the Executive Council of the Board the sum of \$1,000 for a prize, or prizes, to be given for the best act, or acts, accompanied by an essay, designed to prevent injurious adulteration and regulate the sale of food, without imposing unnecessary burdens upon commerce. A committee of experts was appointed, one of whom was a physician, one a chemist, one a lawyer and one a merchant, this committee having authority to pass upon the essays, and when their labors were completed, to give to the President of the Board an act, to accomplish the purpose described.

The competition instituted by virtue of this resolution ended October 1, 1880. The committee of experts awarded the first prize (\$500) to G. W. Wigner, F. C. S., of London, an analytical chemist of high reputation; the second prize (\$300) to Vernon M. Davis, of New York, and the third prize (\$200) to William H. Newell, M. D., of Jersey City. They also, in accordance with the resolution, prepared the draft of a national act designed to prevent future deleterious adulterations. The committee who made the award and who prepared the bill, consisted of John S. Billings, M. D., Surgeon U. S. A., Vice-President of the National Board of Health; Prof. Charles F. Chandler, President of the New York Board of Health; the Hon. B. Williamson, Ex-Chancellor of New Jersey, and A. H. Hardy, Esq., of Boston. In the composition of this committee are included the sanitarian, the health officer, the chemist, the jurist and the merchant. In the treatment of the subject the advantages of their varied experience and special knowledge have been obvious.

The act or bill referred to has been drawn up and presented to Congress. The influence of all citizens is asked to secure the passage of the proposed law, a copy of which has been transmitted to us, and which we shall publish next week.

This subject is a most important one for the community. We buy things in packages, boxes, jars or bottles, purporting to be certain substances, when in reality they are not what is represented. We are apt to eat things injurious to us, unknowingly, and all these dangers are incurred simply because some manufacturer is not satisfied with a fair profit, but wants to get rich quickly at the expense of his customers. Whenever we see a factory where they are making up any article of food, with the forbidding "no admittance" sign up, we always suspect the products of that place. But how is one to tell without an examination of each article, and each sample of it? There ought to be heavy penalties attached to food adulteration. People who steal horses, or money, or anything else of the kind, are considered thieves, and are put in prison for a term of years. But a man may steal another's health, which cannot be replaced, by selling goods which are deleterious; yet he will hold up his head in the community and be considered, when rich, a "smart" man. We hope to see the time come when such people are classed with highwaymen and other thieves. You can have some grain of respect for a man who stands up and takes a chance when robbing you; but for the thief in the dark, the pick-pocket, the man who vitiates the food you eat, you can have none.

CHINESE WOMEN'S FEET.

An American missionary, Miss Norwood, of Swatow, some time since described in a New York Times paragraph how the size of the feet is reduced in Chinese women. The binding of the feet is not begun until the child has learned to walk. The bandages are especially manufactured, and are about two inches wide and two yards long for the first year, five yards long for subsequent years. The end of the strip is laid on the inside of the foot at the instep, then carried over the toes, under the foot, and around the heel, the toes being thus drawn toward and over the sole, while a bulge is produced on the instep, and a deep indentation in the sole. Successive layers of bandages are used till the strip is all used, and the end is then sewn tightly down. The foot is so squeezed upward that, in walking, only the ball of the great toe touches the ground. After a month the foot is put in hot water to soak some time; then the

so often seen on the woman's face is derived. The origin of this custom is involved in mystery to the Westerns. Some say that the strong-minded among the ladies wanted to interfere in politics, and that there is a general liking for visiting, chattering and gossip (and Chinese women can chatter and gossip), both and all of which inclinations their lords desired, and desire, to stop by crippling them."

TUNNEL THROUGH THE PALISADES.—Chief Engineer Katta is getting his machinery on the ground, preparatory to building a double track tunnel through the solid mass of rock known as Bergen hill, for the New York, Ontario and Western railroad. Its length will be 4,225 ft., and it will extend from Weehawken, on the Hudson river, westward to the Hackensack meadows at New Durham. The time within which this work is to be accomplished would have astonished people born before the era of modern engineering, as the contract says all must be complete one year from date, November 19, 1880. The eastern approach cut measures 150 ft.; the tunnel proper, 4,225 ft.; western



COMPRESSION OF CHINESE LADIES' FEET.

bandage is carefully unwound, much dead cuticle coming off with it. Frequently, too, one or two toes may even drop off, in which case the woman feels afterward repaid by having smaller and more delicate feet. Each time the bandage is taken off, the foot is kneaded to make the joints more flexible, and is then bound up again as quickly as possible with a fresh bandage, which is drawn up more tightly. During the first year the pain is so intense that the sufferer can do nothing, and for about two years the foot aches continually, and is the seat of a pain which is like the pricking of sharp needles. With continued rigorous binding the foot in two years becomes dead and ceases to ache, and the whole leg, from the knee downward, becomes shrunk, so as to be little more than skin and bone. When once formed, the "golden lily," as the Chinese lady calls her delicate little foot, can never recover its original shape.

Our illustrations show the foot well bandaged and unbandaged, and are from photographs forwarded by J. W. Bennington, R. N., to the *Scientific American*, and who writes: "It is an error to suppose, as many do, that it is only the upper ten among the daughters of China that indulge in the luxury of 'golden lilies,' as it is extremely common among every class, even to the poorest—notably the poor sewing women one sees in every Chinese city and town, who can barely manage to hobble from house to house seeking work. The pain endured while under the operation is so severe and continuous that the poor girls never sleep for long periods without the aid of strong narcotics, and then only but fitfully; and it is from this constant suffering that the peculiar sullen or stolid look

approach cut, 2,700 ft. The earth cut comprises 131,000 yards; loose rock, 9,000 yards; solid rock, 44,500 yards, exclusive of 79,607 yards on the tunnel proper. Height of tunnel, 20½ ft.; width, 27 ft. The shafts, five in number, involve 2,103 ft. of rock cutting; area, 7 x 15. The track will rise 25 inches per 100 ft. to a point near the meadows, and then fall 40 inches per 100 ft. The new railroad will give a third route through the rocky barrier of the lower Hudson, of which the Delaware, Lackawanna and Western and the Erie are the first two.

PALMETTO PARCHMENT.—People of the Southern States discovered that smooth, strong and pliable parchment can be manufactured from the palmetto of Florida and other Southern States. The parchment can be washed, rubbed and handled just like cloth, and the writing will not be effaced. It can be cheaply manufactured, and is likely to come into general use for conveyances, land office receipts, etc. As much as 60% of the weight of the palmetto can be utilized in paper making.

EXTENSIVE SHIP BUILDING.—Ship building on the Clyde was unusually active last year. Two hundred and forty-one vessels of all kinds were launched, of a total, officially, 239,000 tons, an excess of 71,000 tons over 1879. Their marketable value represents an outlay of about \$30,000,000.

The American Institute of Mining Engineers held its opening session at Philadelphia Tuesday evening.