

things innumerable in liquors and wines, are adulterations that touch the economy of every household, if they do not bring a visitation of the doctor, and involve the services of an undertaker.

THE EFFECT OF THESE ADULTERATIONS ON HEALTH AND ON TRADE.

ON HEALTH.—From dangerous adulterations, a few die. Deleterious adulterations cause or intensify the ill-health of many. It is not necessary to translate into popular language long chapters from the National Pharmacopœia, from a treatise on materia medica and therapeutics, from a standard work on toxicology, or from an authoritative system of medicine, in a vain attempt to estimate, even approximately, the number of deaths and the amount of sickness caused by adulterations of food and drink. The articles used in adulteration are known, and the effects of such articles when taken into the human body are known. Other essential factors, as quantity employed, percentage of admixture, chemical modifications by culinary processes, habits of individuals, etc., are unknown, and conclusive generalizations become impossible. Speculation in the midst of such chaos tends, on the one hand, to sensational exaggeration, and, on the other hand, to belittle a real public danger. Here, as elsewhere, the true scientist awaits facts and avoids alike the creation of a public panic or the infusion of a false sense of public security.

ON TRADE.—It is not necessary that mankind should eat and drink things dangerous to life and injurious to health that trade may flourish. In fact, trade flourishes best under a policy of honesty. Tradesmen and the community are mutually responsible for the evils of adulteration. The people greedily ask for

cheap and attractive goods. The supply adapts itself with measureless cunning to the demand. One more unscrupulous than the rest attracts customers by colors that do not reveal to ignorance the poison lurking within. Others must follow his example or retire from the field. A daring dealer imitates the flavor of a genuine article by a cheaper mixture, and his neighbors must follow suit although they may know that they are scattering the seeds of sickness among the unconscious. The greater part of mankind find the struggle to obtain the necessities of life so hard that any apparent opportunity to economize is eagerly seized. Purveyors of food and drink compete with each other, not only by reduction of profit, but by cheapening quality. He who reduces quality most in reality and least in appearance can win in the great battle of the "survival of the fittest." Human ingenuity is taxed to the utmost; the whole earth is explored to obtain and put to use the means of success. Men have come to look upon fraudulent adulteration as commendable enterprise. Injurious adulteration is winked at by most. Necessity of trade is pleaded as an excuse for dangerous adulteration, even when its prevalence is deplored. The mutual concealments and deceptions of producers and consumers tend to educate the public in dishonest ways. The heart of man is hardened towards his neighbor whom he cheats, and the conscience is deadened when gain is secured at the expense of another's health or life. As the world's commerce would not be diminished by cessation of adulteration, it is very evident that the net residue of the practice is to corrupt and deprave trade, without increasing its profits. Much the greater portion of the manufacturers and merchants of food and drink would