most part, must be placed outside our consideration. They never had a market in England. The fact is, these coins are much too numerous for any private individual to make any thing like a representative series of each class, and their acquisition must be left to national collections, where one naturally expects to find every coinage well represented. The result of our observations on the English side of numismatics will be found to be just the reverse of those on ancient coins, and in all cases prices have considerably advanced. Taking the sales of the last twelve months or so, we will note the prices of a few pieces, none of which can be said to be of very great rarity. Pennies of William the Conqueror, when fine, sold from £2 to £2 10s. each; a light groat of Henry VI., £7 10s.; another of Edward V., £7 5s.; a crown of Elizabeth with *m.m.* 2, £7 5s. and £7 10s.; another of James I., with reverse inscription QVÆ DEVS CONIVNXIT NEMO SEPARET, a common type, £7 17s. 6d.; an Oxford crown of Charles I., £11 11s.; Tanner's copy of the sixpence of Cromwell, over £50; a half-broad of Cromwell, £32 15s.; a half-crown *hammered* of Charles II., £8 8s.; a proof crown of George II., £11 5s.; a pattern crown of William IV., £21 10s., etc. Such prices as these a few years ago would have been deemed almost incredible. Even the ordinary pieces, if in any thing like fine condition, of the reigns of the Georges, William IV., and Victoria, many of which are only just out of currency, and some few still current, cannot be purchased excepting at high prices; and the copper coins and tokens of the seventeenth and eighteenth centuries have risen several hundred per cent in value. A corresponding result is also shown with regard to English medals of all classes. For some years the value of English coins had been rising steadily, but it was the Shepherd sale in 1885 which gave the great impetus, and since that time it would appear as though collectors do not place any limits on their bids if they happen to come across desirable acquisitions.

How, then, can this great change be accounted for? The answer to this question is a very simple one. The old class of coin-collectors is fast diminishing, and a new one has sprung up in its place. Twenty years ago there were in England a considerable body of collectors of ancient coins, but now they can almost be counted on one's fingers; while, on the other hand, for one collector of English coins there are now ten. This falling-off in the old stock is much to be regretted; for many a man in advanced life has been induced, by the sight of Greek and Roman coins, to open those books which had remained closed since he left school or college. On these small pieces of metal we find illustrated the myths of the gods and heroes of the Greek world; we are brought face to face with the portraits of the great generals of ancient times, Alexander the Great, Lysimachus, Julius Cæsar, and Pompey, of the long line of the Ptolemies of Egypt, of the kings of Syria, Cappadocia, and Bactria, and of the still longer series of Roman and Byzantine emperors and empresses. The student of palæography, too, will glean much information from the examples of various ancient alphabets, such as the Lycian, Cyprian, Phœnician, Greek, and Latin; and to the metrologist are laid open the various systems of weights employed by the great nations of the ancient world, and through these the principal lines of trade of the Greeks and Romans. The artist, too, will find on coins the various phases of ancient art clearly defined. They show art in its origin, in its growth towards perfection and in its perfection, in its decline, and in its degradation. These are but a few of the charms offered by the study of ancient numismatics, and it is these which will be lost when coin-collecting is abandoned.

Fortunately, while the general taste for these objects in England appears to have been on the wane, those who remained constant to the study of ancient numismatics have worked with all the more ardor, and in few departments of learning has more progress been made in the last few years. But the results of these labors, till recently, have never been embodied in a compact form, and were only to be found scattered over many volumes of periodicals and journals. The Clarendon Press has, however, taken the matter in hand, and, under the guidance of Mr. B. V. Head, has issued a 'Manual of Greek Coins' ('*Historia Numorum*'), which gives in a concise form the history and description of ancient Greek numismatics (*Athen.*, No. 3098, p. 357). It also deals with their art, metrology, types, etc. The work commences with the coinages of Europe, beginning with that of Spain, and, journeying eastwards to Greece proper, crosses over into Asia, and ends with the series of Africa. This is the order adopted by Eckhel over a century ago, and, being generally accepted by numismatists, has been followed by Mr. Head. The work does not claim to be complete, for it was impossible to aim at completeness when the author was so limited in space; but nevertheless the student of Greek numismatics will find in it all that he needs at first, and when he has mastered it, if inclined, he can easily turn to the more lengthy dissertations, a list of which is given by Mr. Head in his introduction. The work is of so recent a date that the extent of its influence on the numismatic world cannot at present be gauged; but that it will bear good fruit we do not for a moment doubt, and it may even increase the list of those collectors whose falling-off we are now regretting.

We may add that what has been done by Mr. Head for Greek numismatics had recently been done by several other well-known numismatists for English coins and medals; and this may, perhaps, in some degree account for their popularity at the present time. Two new editions of Hawkins's work on the silver coinage have been issued, Mr. Kenyon has written on the gold coins, Mr. Montagu has described the copper coinage, and Hawkins's long-promised work on English coins has at last appeared.

## HEALTH MATTERS.

### Grinder's Consumption.

DR. CANEDY of Shelburne Falls, Mass., recently read a paper before the Franklin District Medical Society on grinder's consumption, being the results of his observations on the grinders employed by a cutlery company at that place, numbering, on an average, forty men and boys for the past twenty-five years. During the ten years just ended, twenty-three grinders have died with chronic disease of the air-passages, and three are now confined to the house with similar affections; and five in whom the disease has made considerable progress are still at work in the cutlery. Of all the occupations in which the workers are compelled to inhale an atmosphere loaded with irritating dust, as coal-mining and iron and metal polishing, none seems more certain or fatal in its effects than grinding. Investigations made at Sheffield, Eng., fix the average period which grinders can work at thirteen years. The first symptom which manifests itself is cough, soon followed by shortness of breath upon exertion, as walking up hill. During all this time an inflammatory process is going on in the lung, which results in a gangrenous or purulent condition; the patient having fever, and often a terrible cough. During this attack the patient is confined to bed from ten to twenty weeks. After six weeks an abscess forms in the lung, and, when the pus is expectorated, improvement begins. The progress of some cases is exceedingly slow; some of the patients living ten years or more, after being compelled to leave the shop by their cough, most of the time in chronic invalidism, and dying at last from the exhaustion dependent upon pulmonary disease.

In spite of all treatment, the inevitable tendency of the disease seems to be toward a fatal termination, and Dr. Canedy states that he has never seen any recoveries. The picture which is given us in this paper is a most distressing one; and it would seem that some attention should be paid to the subject by those in power. The improvements which have been made in unhealthy trades by the substitution of sanitary for unsanitary conditions have been so marked that some of them can certainly be applied to the reduction of the great suffering and mortality among the cutlery grinders. The State Board of Health can here doubtless find an opportunity to do more good work in a field in which it has so long and so well labored.

THE CHILDREN OF NEW YORK.—At a meeting of the New York County Medical Association, Dr. Charles A. Leale presented a paper on the prevention of chronic disease among the children of New York City. The facts which formed the basis of this paper were obtained by Dr. Leale and his associate physicians, from their gratuitous visits to the tenement-houses of this city during the summer of 1886. Their work extended over a period of six weeks, during which time they visited 3,659 families, representing 7,146 adults and 10,086 children. Of these, 217 adults and 3,376 children

were found sick; measles, diphtheria, scarlet-fever, scrofula, and syphilis being the prevailing diseases. In nearly every instance the sick children were not only without proper medical attendance, but were living in places rendering complete recovery to the majority almost impossible. To give the sick children the benefit of fresh air, 6,312 free tickets were distributed for the excursions of the St. John's Guild Floating Hospital, where they and their parents were given a sufficient quantity of good foods. Twenty-four very sick children were sent to a hospital on Staten Island, where they remained for a week or two. In the final report of one of these physicians, he gave it as his opinion that the great death-rate among children under five years of age was attributable to over-crowding, filth, filthy habits, and bad drainage. He says, "Upon a hot summer's day to enter a room in a rear house, whose walls were cracked and besmeared with refuse, and perhaps dead vermin, occupied by a family of six or eight, harboring three or four boarders, upon the floor of which might be seen soiled linen, particles of food, and children, with a mother standing about the red-hot stove, washing and cooking, and perhaps attending to a sick child, lying in a dark bed-room, suffering from cholera-infantum, diphtheria, or scarlet or typhoid fever, was a spectacle frequently indeed brought to my attention." Another physician observed a great number of cases of diseases of the eye and ear, especially among those subjected to bad hygienic conditions. All the houses, without exception, were overcrowded and in a filthy condition, the rear houses being dark and badly ventilated. In one apartment having three rooms, from twelve to fourteen persons were often found; in some of these, father, mother, and grown-up sons and daughters all sleeping in one room, without any regard for delicacy or decency. A third member of this visiting corps describes the small yard of a rear tenement, containing an open cesspool, around which groups of sickly children were playing; these children being stunted in growth, pale, and, as a rule, having some form of ophthalmia. Of thirty children found in one of these small yards, only one could be said to be in vigorous health.

CAUSE OF TYPHOID-FEVER. — Investigations made by Beumer, Peiper, and others seem to have demonstrated that a ptomaine produced by the typhoid-bacilli when injected into animals may cause a disease resembling typhoid-fever. This ptomaine was discovered by Brieger, and named by him 'typhotoxine.' It is this substance, and not the germ directly, which is the cause of typhoid-fever in man, according to the most recent theory. The *London Medical Record*, in commenting on these researches, draws the following conclusions from them: "1. The symptoms and alterations observed in animals in which cultures of typhoid-bacilli had been injected are due to the toxic substances secreted by these bacilli. 2. The noxious germs, which secrete the typhotoxine, are reproduced in the intestinal canal. From these the ptomaine is taken up by the circulation, and carried to all the organs liable to be affected by this poison. 3. It is most probable that the same takes place in abdominal typhoid-fever of man. 4. A first infection induces immunity against the injurious effect of a later infection, even of large quantities of the toxic substance. 5. Further experiments and careful clinical investigations are necessary in order to establish a scientific support of the theory of immunity from infections of sterilized cultures containing not more than a determined quantity of typhotoxine. 6. In case this theory be an ascertained fact, the reproduction of the same immunity in man would be justified by commencing with very minute doses of typhotoxine, which would be gradually increased according to the results obtained."

A TEST FOR THE CHOLERA-BACILLUS. — Bujwid, in the *Zeitschrift für Hygiene*, describes a chemical test for the detection of the presence of the cholera-bacillus. He adds to a bouillon-culture of the bacillus from five to ten per cent of ordinary muriatic acid. In a few minutes a rose-violet color appears, which increases in intensity for half an hour. It remains unchanged for several days. This re-action occurs in bouillon-cultures ten to twelve hours old, and in gelatine-cultures after twenty-four hours. The coloring is increased by heat. It is claimed by Bujwid that this color is characteristic of the bacillus of Asiatic cholera, and distinguishes it from all others.

## BOOK-REVIEWS.

*The Elements of Political Economy, with Some Applications to Questions of the Day.* By J. LAURENCE LAUGHLIN. New York, Appleton. 12°.

THE author of this work is impressed, as many other people are, with the importance of a more general training in economic science. Almost all of the questions with which our national government will soon have to deal are of an economic character, or involve economic considerations; while the conflict between labor and capital shows the importance of economic science in purely industrial affairs. To supply the needed information, it will be necessary to introduce the study of economics into our high schools and academies, and for this purpose good elementary treatises are necessary. Such treatises, however, are by no means numerous; and hence a work like Professor Laughlin's is to be welcomed. It is intended as an introductory work merely, and for the use of schools: "The main topics are treated, the fundamental principles are emphasized, but no effort is made to produce a detailed and exhaustive treatise" (p. vii.). The author's object, we think, has been successfully accomplished. The adaptability of the work to school use must, of course, be tested by actual practice; but it certainly has many of the qualities that such a work ought to have. The division and arrangement of topics are excellent, and the style clear; while the choice of matter is appropriate to an elementary treatise. The work is divided into two parts, the first demonstrating the principles of the science, the second applying them to the economic problems of the day. The doctrines and method of the work are those of the standard English school. Indeed, that school seems to have been followed a little too strictly; for, though its method is the leading and most productive one, yet the comparative and historical methods have their uses.

Professor Laughlin gives the usual definitions of 'wealth' and 'value,' and the usual account of the agents of production. He lays special stress, however, on the important function in contemporary industry of the skilful industrial manager. In treating of exchange, he follows Mill in the main, while adopting something from Cairnes on the subjects of supply and demand, and foreign trade. On the subject of distribution he holds the views that have prevailed generally among English writers, with the fiction of the wages fund left out. He argues that "the proportional shares of labor and capital out of the product will depend upon the relative scarcity and abundance of labor and capital" (p. 186); while "the productiveness of a country's industries determines whether the general level of wages shall be high or low" (p. 198). Interest, or the share of the capitalist, he considers a reward for abstinence merely, while the profit of the industrial manager is treated as the wages of a superior kind of labor.

In the second or practical part of the work, Professor Laughlin seeks to apply economic principles to such questions as socialism, taxation, free trade, and others, while recognizing that such questions cannot be settled by economic considerations alone. His remarks on the subjects of money and taxation, if generally read, can hardly fail to be useful. He condemns socialism, as all economists do, and holds that the prosperity and advancement of the working-classes depend on their own mental and moral improvement. He favors individualism, and deprecates undue interference by the State, holding that "it is high time that the weak and narrow-minded recourse to the State for legislation on every conceivable subject should be abandoned for a greater growth of self-help and a more independent and self-confident manhood" (p. 349). The book may be commended not only for schools, but also for private students, and we should be glad to see it extensively read by the working-people.

*Animal Life in the Sea and on the Land.* By SARAH COOPER. New York, Harper. 12°.

IT is impossible to give, in large type, in the space of about three hundred double-leaded, duodecimo pages, a satisfactory account of several hundred species of animals, from the lowest to the highest. Yet this is what the author attempts in this volume; and she throws in, besides, a chapter on coral-reefs, and many pages about fossils. The result is a curious cross between a grammar-school text-book