

*THE BERLIN EXHIBITION OF HYGIENE  
IN 1882-83.*

THE committee having in charge the preparations for, and the direction of, the German exhibition of hygiene, decided wisely, it seems to us, to substitute for the usual premiums a scientific report upon all objects shown, and possessed of real merit. At the close of the exhibition in the autumn of 1883, the work of preparing this report was placed in the hands of Dr. Börner of Berlin. The first part of his report has recently been published, and is soon to be followed by a second and concluding volume. This report contains a number of papers upon topics of the greatest interest to students as well as to the interested general reader. Drs. Wolffhügel, Sell, Löffler, König, and Baginsky, among others, have contributed, each in his own field of work, articles that have all the value of special treatises upon the topics assigned to them.

This exhibition, which came into existence in consequence of the direct exertions of the *Deutsches verein für öffentliche gesundheitspflege*, was to have been opened in May, 1882. A fire, however, destroyed in a few hours the completed building and contents. A new and more secure structure, with a larger collection of articles, was ready in the following year, and was opened to the public on May 12, 1883, under the patronage of the Empress Augusta. This was not a display of new things only, but a very complete exhibition of what has been done, or is now doing, for the protection of human life. Many of the objects exhibited have been secured by the Prussian government as a foundation of a permanent museum of hygiene.

The author truly enough asserts that exact science is extending constantly its territory within the domain of hygiene, and then adds with equal satisfaction Prince Bismarck's official declaration that the best work of medical science lies, not in the curing of disease, but in the higher office of preventing it. A study of the German exhibition of 1883, and of that at London in 1884, shows once more that the Germans may fairly claim the leadership in the scientific investigation of questions that belong to hygiene, while to the English still belongs the credit for the technical execution that brings the results of these investigations to the protection of the public health.

Nothing in this exhibition attracted more notice than the pavilion of the Imperial health office, — a model building, containing a com-

plete collection of the apparatus used in the investigations of the infectious diseases, and in the examination of articles of food. The relief plan of Berlin, prepared by Prof. H. Gruner for this exhibition, is another proof of the excellent work carried on in this city in the department of hygiene. The plan, in addition to the peculiarities of the surface of the ground, gives the soil in section to the ground-water level, making apparent to the eye the great difficulties in the way of a thorough system of drainage, now accomplished under G. Hobrecht's energetic direction. A visit to the very extensive and successfully managed irrigation fields of Berlin was an instructive addition to the plans and descriptions of this work shown at the exposition. In the years since the war of 1866, a very valuable work has been done in Berlin by an association of ladies, and largely under the direction of Frau Lina Morgenstern, in the people's kitchens, which are, in effect, schools for instruction in the proper and economical preparation of food. This was all well shown, together with a large collection of articles of food and drink in all stages of preparation, and also in all degrees of adulteration.

The best form of shoe is the subject of an instructive paper by Dr. F. Beely. The various forms of shoe tried in the German armies were exhibited, with indications of defects and merits, from the time of Professor Meyer's first publication at Zurich, in 1857, upon the proper shape of the shoe. The military authorities of Germany have made a careful study of the subject. The normal form finally adopted by them closely resembles a much-advertised English one.

Another public necessity, well represented in the exhibition, and made the subject of an exhaustive paper by Dr. Lassar, is that of baths and laundries. Among these stand easily first the public baths of Bremen, built in the years 1876-77, at an expense of a hundred and twenty-five thousand dollars, not including the cost of the land. A bath here, with all the conveniences of the best private house, may be had for twenty-five cents, while one provided with all that is really necessary can be had for six cents. It is not necessary to add, perhaps, that a large part of the capital was given.

Institutions for the care of the poor, prisons and reformatories, were well represented by plans, models, and statistical tables, notably the great prison at Plötzensee, containing at present a population of two thousand, and the workhouse at Rummelsburg, — both mod-

*Bericht über die Allgemeine deutsche ausstellung auf dem gebiete der hygiene und des rettungswesens. Breslau, 1885. 8°.*

els of their kind. Tenement houses and schools, as exhibited, present nothing of unusual interest. The first-named are distinctly inferior to the better English models.

This volume closes with a review by F. O. Kuhn, architect, in Berlin, of structures exhibited by plan, for the shelter of soldiers in times of peace. The most conspicuous example shown was the new caserne at Dresden,—a complex of buildings, containing shelter for seven thousand men. A characteristic feature of this caserne is the complete separation of the rooms for day use, sleeping, eating, washing, and working,—an arrangement from which the Saxon authorities already claim a marked improvement in the health of the inmates.

If Dr. Börner's second volume is as satisfactorily edited as this has been, the work will have a permanent place in the history of preventive medicine.

#### COMFORT AND LONGEVITY.

JOSEF KÖRÖSI is the director of the Bureau of statistics in Budapest, and he has apparently brought to his work a mind well adapted to the difficult task of handling figures in bulk. The essay which he presents to us under the above title was read in September last, before the Association of hygiene in Berlin, and in it he has confined himself to a few points only. He has endeavored to determine the influence which the varying pecuniary conditions of life, with their attendant privileges or privations, have upon the longevity of the people of his city. For convenience he recognizes four classes, according to their endowment in worldly goods; those who are very rich at one end of the category, and those who suffer from abject poverty at the other. Between these extremes lie the great mass of the people, whom he divides into the middle class and the ordinary poor.

He does not claim that his figures possess an absolute mathematical value, because he could not determine the number of living individuals in each category; but by excluding children under five years of age, and taking the average age of those dying during a period of eight years, he found that

The rich class averages . . . . .	52 years of life.
The middle class averages . . . . .	46 years 1.1 months of life.
The poor class averages . . . . .	41 years 7 months of life.

From this it is obvious that the possession of wealth, and the resultant exemption from

privation, lengthen the average life nearly ten years.

The second point which he studied was the relation existing between epidemic infectious diseases, and the pecuniary status of the different grades of the community. Upon this point he finds that poverty does not exercise a uniform influence upon the occurrence of these diseases: indeed, viewing them as a whole, the well-endowed, excepting the very richest, are more seriously afflicted than the poor.

Viewing the infectious diseases separately, he finds that cholera, small-pox, measles, and typhus are more prevalent among the poor, while diphtheria, croup, whooping-cough, and scarlet-fever are more prevalent among the rich. Consumption and pneumonia claim the poor, and brain-troubles attack the rich.

In view of legislative action regarding the abodes of the poor, Körösi next studied the influence of basement tenements upon the occurrence of epidemics; and he found, that, taking the infectious diseases as a whole, they are 60% more frequent in the cellar than in the elevated tenements.

The cellar residence, however, does not favor all diseases alike. Measles and whooping-cough are very prevalent there, croup less so, while diphtheria and scarlet-fever are 10% less frequent among cellar inhabitants than among those more loftily housed. This is in accordance with statistics from other places, and notably from Boston, where epidemics of diphtheria have swept over the finest parts of the city, and have left the low sections and cellar regions almost exempt.

Lastly, Körösi considers the influence of crowding upon epidemics. To obtain a standard, he noted the number of rooms in each house, and the number of people occupying them. Combining these figures, he obtained the average number of persons per room. A possession of one or two persons to each room was taken as normal, while three, four, and five persons per room were considered overcrowding. He found that the intensity of some infectious diseases was notably increased in the crowded tenements. This increase amounted to 364% for measles in houses inhabited by more than five persons per room. Whooping-cough is likewise greatly intensified by crowding. On the other hand, it does not appear that scarlet-fever and diphtheria are similarly favored by the increased number of people in the house. These are rather surprising conclusions, and may find their explanation when we discover the manner in which these various diseases are transmitted from person to person.

*Ueber den einfluss der wohlhabenheit und der wohnverhältnisse auf sterblichkeit und todesursachen.* Von JOSEF KÖRÖSI. Stuttgart, Enke, 1885. 8°.