

## Pioneers in the Art of Healing.

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### 6.—Robert Koch.

THE NAME OF ROBERT KOCH is not perhaps so well known as it should be, for we do indeed owe a great deal to this stern-looking, bearded, bespectacled German bacteriologist. He was born in Hanover in 1843, studied medicine and whilst practising as medical officer at Wollstein began his researches which were to have world-wide repercussions.

In 1876 he did nothing less than obtain a pure culture of the anthrax bacillus, and from this initial discovery was able, in 1883, to announce the discovery of his method of preventive inoculation against that affliction. Already he was hailed as great, and through his subsequent work on the septicaemia of wounds and splenic fever was made professor of bacteriology at the Berlin School of Medicine. Later even higher honour was given him by the appointment of director of the then new Institute of Health there.

By his improved methods of investigation into bacteria he transformed the whole science of infection. It was in 1882 that his further work on microscopy and bacteria enabled him to make his most famous discovery, that of the rod-shaped bacillus of tuberculosis. The following year he led a German expedition to Egypt and India to study cholera. This led him to the isolation of the comma bacillus which causes the disease. For this discovery his Government awarded him a prize of £500.

Koch's researches into consumption continued and he had high hopes that in tuberculin he had found an agent to counteract the workings of the disease. Unfortunately this optimism, shared by many of his contemporaries, was not to be justified, for although tuberculin has two valuable uses in the diagnosis of the disease and in the detection of affected animals for food, it has not yet proved of much value in curing it, although it is used on a limited scale in certain treatments. In 1901 a congress met in London to discuss tuberculosis and Koch was one of the leading speakers. He startled the audience by asserting that tuberculosis in man and in animals was not the same thing, especially stressing the then little-understood fact that there was more danger of infection from human sufferers than from milk or meat. This caused the British Government to appoint a commission of its own to investigate the problem.

After his initial work on T.B., Koch turned to other matters and went to South Africa to study rinderpest in 1896 and returned there in 1903 to devote his attention to cattle diseases; he was always most curious about the parallel of animal illness to that of man. A few years afterwards he went to East Africa to see what he could find out about sleeping-sickness, then almost unprobed, a mysterious plague upon the white man in hot lands.

Robert Koch was undoubtedly one of the world's greatest bacteriologists, equalled perhaps only by Pasteur, and his approach to the problem of germs startled many of the medical men of his time and shocked not a few. By his great discovery of the tuberculosis bacillus he proved to a then doubting world that the disease was the effect of malignant germs.

He received many honours and much praise for his varied and far-reaching work and was awarded the Nobel Prize for medicine in 1905. Through his discoveries the way was made clear for much later research and experiment into curing diseases which although, as in the case of T.B., are not yet with us, are certainly far nearer attainment than they were before he started his work.

## Influenza Research.

### Vaccine Trials to be Held this Winter.

THE MEDICAL RESEARCH COUNCIL, in conjunction with the Ministry of Health, is to organise trials of influenza vaccine this winter. About 15,000 volunteers—including a large number from industry, and others from among hospital nursing staffs, university students and similar groups—will take part.

The trials were due to start early in December. Two vaccines will be used: one selected on the experience of last winter's pilot trials and the other similar in type to those which have been available for a number of years. Both are being produced in this country.

The following note gives the background to this winter's trials:

#### Two Types of Virus.

There are two types of influenza virus. The big epidemics which occur in this and other countries every few years have been due to Virus A. The other type, due to Virus B, occurs more frequently and is present more or less all the time. Virus A is the main cause of the high mortality and serious dislocation of industry which is a feature of influenza epidemics.

Although ordinary hygienic measures—good ventilation, avoidance of over-crowding and so on—may play a helpful part in reducing the incidence of virus influenza, the infection spreads so easily and so widely that immunisation of large numbers of the population would be advisable if a suitable means of vaccination were available.

In 1951, as the result of research into the Virus A type of influenza, the matter was given special consideration by the Ministry of Health, and the Medical Research Council formed a Committee on Clinical Trials of Influenza Vaccines to carry on and co-ordinate the work. In the winter of 1951/52 with the aid of volunteer groups in the nursing staffs of hospitals and in the universities, some preliminary small-scale tests using specially prepared vaccines were completed. The results of these tests have put the Committee in a position to organise trials of a selected vaccine on a much larger scale in the winter of 1952/53.

The trials are due to start early in December and it is hoped to include about 15,000 volunteers grouped in centres throughout the United Kingdom.

Two vaccines will be used, one selected and prepared as the result of last year's trials and—as a contrast—a vaccine similar in type to those which have been available for a number of years.

In each place where a trial is made half the volunteers will be inoculated with one vaccine and half with the other. Special records of their health and illnesses will then be kept for the following three months, and it is hoped that in the event of some of these groups being attacked by Virus A influenza it will thus be possible to assess the preventive effects of the new vaccine as compared with the old.

## Pre-Reformation London.

ST. THOMAS HOSPITAL, that splendid foundation the façade of which is seen on the south of the Thames, against the Houses of Parliament, was founded in 1313 as an Almonry or House of Alms for converts and poor children; two years later the House was developed on a much larger scale and was practically refounded. After the dissolution its site, then in Southwark, was purchased by the citizens of London.

At that time in the fourteenth century, London was as well provided with hospitals as with convents and religious houses. They were St. Bartholomew's; Elsing, Spital; St. Giles, Cripplegate; St. Mary, Spital; St. Mary of Bethlehem; St. Thomas, Southwark, and the Lazar House of Southwark.

St. Bartholomew's, most ancient and richest, belongs to Norman London. Elsing, Spital was founded in 1329 as a

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