1873, and as F.S.A. about the same time and was president of the Hakluyt Society from 1889. In 1896 he was given the K.C.B., and other honors included a grand prix at the Paris Exposition of 1867 for the introduction of the cinchona cultivation into India; the order of the Rose from the emperor of Brazil, and of Christ from the king of Portugal. He married in 1857 a lady of the ancient family of Chichester. It is remarkable that the two branches of the family, both living in Devon, have never intermarried since the reign of Edward the Second, about 1310.

With Lady Markham he attended the meetings of the International Congress of Americanists at Stuttgart (1904) and Vienna (1908), and as president of the eighteenth congress (London, 1912), his support was most generous and energetic. He had hoped to take part in the nineteenth congress, held in Washington, December 27–31, 1915, for his heart was always drawn towards South American research, and he desired to aid it as far as possible. In a written message to members of the congress, he said:

I regret extremely to be unable to attend, for I am deeply impressed with the great value and importance of these meetings. They are intended, as one main object, to supply to the minds of young explorers and students the best methods of obtaining accurate information and of using it when obtained. I think it should be impressed upon the rising generation of Americanists that study alone is insufficient for securing really satisfactory results; and that exploration and the collection of antiquities is not enough. The two branches must be combined. The study and use of authorities is by far the most difficult. In using them the character of the authority to be used must be carefully considered as well as his opportunities and his date. One great stumbling block for young students, whether in the study or in the field, is the adoption of a theory, leading to the search for its support. . . . A true worker should have no theory.

I wish to submit my view to the congress that there is a splendid field for almost a life work in a study of the ancient civilization in the Peruvian coast valleys from Tumbez south. As yet it has not been touched by any one who is alike a diligent student with a profound knowledge of all that has been written in the past, together with the surveying, architectural and mechanical acquirements needed for a thorough examination of all that is to be found on the spot, and in museums. . . . I look upon a complete and thorough investigation of the history of the Chimu kingdom as one of the chief Americanists' desiderata.

Sir Clements Markham's life was full of achievements, such as would have been possible only to one fitted with extraordinary power and versatility. To have established in India and throughout the East, as he did, the cultivation of a prophylactic for the desolating malarial disease was a great service to humanity. Of boundless enthusiasm and tenacity of purpose, his ambitions were of the highest type, and his appreciation of the efforts of others to reach the points at which he aimed, was generous to the extreme. He was indeed a man in whom his countrymen could discern the best and most sterling qualities of their race.

A. C. B.

PRINCIPAL CAUSES OF DEATH IN THE UNITED STATES

ACCORDING to a preliminary announcement with reference to mortality in 1914, issued by Director Sam. L. Rogers, of the Bureau of the Census, Department of Commerce, and compiled by Mr. Richard C. Lappin, chief statistician for vital statistics, more than 30 per cent. of the 898,059 deaths reported for that year in the "registration area," which contained about two thirds of the population of the entire United States, were due to three causes—heart diseases, tuberculosis and pneumonia—and more than 60 per cent. to eleven causes—the three just named, together with Bright's disease and nephritis, cancer, diarrhea and enteritis, apoplexy, arterial diseases, diphtheria, diabetes and typhoid fever.

The deaths from heart diseases (organic diseases of the heart and endocarditis) in the registration area in 1914 numbered 99,534, or 150.8 per 100,000 population. The death or mortality rate from this cause shows a marked increase as compared with 1900, when it was only 123.1 per 100,000.

Tuberculosis in its various forms claimed 96,903 victims in 1914, of which number 84,366

died from tuberculosis of the lungs (including acute miliary tuberculosis). As a result of a more general understanding of the laws of health, the importance of fresh air, etc., due in part, no doubt, to the efforts of the various societies for the prevention of tuberculosis, there has been a most marked and gratifying decrease during recent years in the mortality from this scourge of civilization. In only a decade—from 1904 to 1914—the death rate from tuberculosis in all its forms fell from 200.7 to 146.8 per 100,000, the decline being continuous from year to year. This is a drop of more than 25 per cent. Prior to 1904 the rate had fluctuated, starting at 201.9 in 1900. Even yet, however, tuberculosis has the gruesome distinction of causing more deaths annually than any other form of bodily illness except heart diseases, and over 40 per cent. more than all external causes—accidents, homicides and suicides combined.

Pneumonia (including bronchopneumonia) was responsible for 83,804 deaths in the registration area in 1914, or 127 per 100,000—the lowest rate on record. The mortality rate from this disease, like that from tuberculosis, has shown a marked decline since 1900, when it was 180.5 per 100,000. Its fluctuations from year to year, however, have been pronounced, whereas the decline in the rate for tuberculosis has been nearly continuous.

The only remaining death rate higher than 100 per 100,000 in 1914 was that for Bright's disease and acute nephritis, 102.4. The total number of deaths due to these maladies in 1914 was 67,545, more than nine tenths of which were caused by Bright's disease and the remainder by acute nephritis. The mortality from these two causes increased from 89 per 100,000 in 1900 to 103.4 in 1905, since which year it has fluctuated somewhat.

Next in order of deadliness comes cancer and other malignant tumors, which filled 52,420 graves in 1914. Of these deaths, 19,889, or almost 38 per cent., resulted from cancers of the stomach and liver. The death rate from cancer has risen from 63 per 100,000 in 1900 to 79.4 in 1914. The increase has been almost continuous, there having been but two years—1906 and 1911—which showed a decline as compared with the years immediately preceding. It is possible that at least a part of this indicated increase is due to more accurate diagnoses and greater care on the part of physicians in making reports to registration officials.

Diarrhea and enteritis caused 52,407 deaths in 1914, or 79.4 per 100,000. This rate shows a marked falling off as compared with the rate for the preceding year, 90.2, and a very pronounced decline as compared with that for 1900, which was 133.2. Nearly five sixths of the total number of deaths charged to these causes in 1914 were of infants under 2 years of age.

Apoplexy was the cause of 51,272 deaths, or 77.7 per 100,000. The rate from this malady has increased gradually, with occasional slight declines, since 1900, when it stood at 67.5.

Arterial diseases of various kinds—atheroma, aneurism, etc.—caused 15,044 deaths, or 22.8 per 100,000, in the registration area.

No epidemic disease produced a death rate as high as 18 per 100,000 in 1914. The fatal cases of diphtheria and croup—which are classed together in the statistics, but practically all of which are of diphtheria—numbered 11,786, or 17.9 per 100,000, in that year, the rate having fallen from 43.3 in 1900. This decline of nearly 59 per cent. is relatively greater than that shown by any other important cause of death. The rate has not fallen continuously, but has fluctuated somewhat from year to year.

Diabetes was the cause of 10,666 deaths, or 16.2 per 100,000. The rate from this disease has risen almost continuously from year to year since 1900, when it was 9.7 per 100,000.

The mortality rate from typhoid fever has shown a most gratifying decline since 1900, having decreased from 35.9 per 100,000 in that year to 15.4 in 1914, or by 57 per cent. This decline has been almost as great, relatively, as that for diphtheria, and has been greater than that for any other principal cause of death. The total number of deaths due to typhoid fever in 1914 was 10,185. The marked decrease in the mortality from this disease gives emphatic testimony to the effectiveness of

present-day methods, not only of cure, but of prevention. The efficacy of improved water-supply and sewerage systems, of the campaign against the fly, and of other sanitary precautions is strikingly shown by the reduction of the typhoid mortality rate to the extent of more than five ninths in 14 years.

The principal epidemic maladies of childhood—whooping-cough, measles and scarlet fever—were together responsible for no fewer than 15,617 deaths of both adults and children, or 23.7 per 100,000, in the registration area in 1914, the rates for the three diseases separately being 10.3, 6.8 and 6.6, respectively. In 1913 measles caused a greater mortality than either of the other diseases, but in 1914 whooping-cough had first place. In every year since and including 1910, as well as in several preceding years, measles has caused a greater number of deaths than the much more dreaded scarlet fever. The mortality rates for all three of these diseases fluctuate greatly from year to year. The rates for measles and scarlet fever in 1914 were the lowest in 15 years, while that for whooping-cough was considerably above the lowest recorded rate for this disease, 6.5 in 1904, although far below the highest, 15.8 in 1903.

Deaths due to railway accidents and injuries totaled 7,062, or 10.7 per 100,000. This number includes fatalities resulting from collisions between railway trains and vehicles at grade crossings. The death rate from railway accidents and injuries is the lowest on record and shows a most marked and gratifying decline as compared with the rate for 1913, which was 13 per 100,000, and a still more pronounced drop from the average for the five-year period 1906–10, which was 15 per 100,000.

Deaths resulting from street-car accidents and injuries numbered 1,673, or 2.5 per 100,000. This rate, like that for railway fatalities, is the lowest on record and shows a material falling off as compared with 1913, when it was 3.2, and as compared with the average for the five-year period 1906–10, which was 3.7.

The number of suicides reported in 1914 was 10,933, or 16.6 per 100,000 population. Of this number, 3,286 accomplished self-destruction by the use of firearms, 3,000 by poison, 1,552 by hanging or strangulation, 1,419 by asphyxia, 658 by the use of knives or other cutting or piercing instruments, 619 by drowning, 225 by jumping from high places, 89 by crushing, and 85 by other methods.

SCIENTIFIC NOTES AND NEWS

A SUPPER will be given by the Harvey Society in honor of Dr. William H. Welch following his lecture upon Medical Education before the society on April 29. The supper will be given in Sherry's ballroom.

OSCAR T. SCHULTZ, M.D., professor of bacteriology and pathology in the University of Nebraska College of Medicine, Omaha, has been made director of the Nelson Morris Memorial Institute for Medical Research, Chicago. Max Morse, Ph.D., assistant professor of biochemistry in the college, has been appointed associate in chemistry in the institute.

R. E. COKER, Ph.D. (Johns Hopkins, '06), for several years director of the United States Fisheries Station for pearl-mussel investigation at Fairport, Iowa, has been promoted to be head of the division of scientific inquiry in the Bureau of Fisheries at Washington.

DR. D. H. SCOTT, F.R.S., professor of botany in the London Royal College of Science, has been elected a foreign member of the Royal Swedish Academy of Sciences, in succession to the late Count Solms-Laubach.

THE Founder's medal of the Royal Geographical Society has been awarded to Lieutenant-Colonel P. H. Fawcett, for his explorations and surveys on the upper waters of the Amazon; and the Patron's medal to Captain F. M. Bailey, Indian Army, for his exploration of the Tsangpo-Dihang River in the hitherto almost unexplored country where it breaks through the Himalayas. The Murchison award has been made to Lieutenant-Colonel Whitlock, R.E., for his work in connection with the delimitation of the Yola-Chad boundary in 1903–5, and the Yola Cross River boundary in 1907–9; the Back award to Mr. Frank Wild, second in command of Sir Ernest Shackleton's transcontinental Antarctic Expe-