by Dr. Wilder during the early years of the university illustrate what can be done by an earnest man in spite of lack of facilities now regarded as essential. He had no assistance except from students; but little apparatus, for a long time there was not a single microscope in the laboratory and then but one which was rented; a departmental stenographer was unthought of in those days. It was under these conditions that many men now widely known for their contributions to science received their early training and under which Dr. Wilder published many papers.

In the earlier years Dr. Wilder devoted his attention to various zoological problems; but later he gave most of his time to a study of the morphology of the brain, and to a simplified terminology of the parts of the brain. He prepared nearly two thousand vertebrate brains, many of which are human, including thirteen from educated persons. This collection is now at Cornell University. In 1867 he devised the "slip-system of notes," the use of which has become universal.

His published works include "What Young People Should Know," 1874; "Anatomical Technology" (with S. H. Gage), 1882; "Physiology Practicums," "Emergencies," 1883; "Health Notes for Students," 1890; "The Brain of the Sheep," 1903, numerous reviews and articles in magazines and in the "Reference Handbook of Medical Sciences" and several musical compositions.

After his retirement from Cornell he lived at Chestnut Hill, Mass., and at his summer place at Siasconset, Mass., and devoted himself to the preparation of his autobiography and to a history of the regiment with which he served during the Civil War, the 55th Massachusetts Infantry. He was engaged all day upon this work the day before he died.

Dr. Wilder was twice married. His first wife, Sarah Cowell Nichols, to whom he was married in 1868, died in 1904. His second wife, Mary Field, died in 1922. Two daughters survive. They are Mrs. Shepard Stevens, wife of a Yale professor, and Mrs. Robert R. Reed, of Washington, Pa.

J. H. COMSTOCK

CORNELL UNIVERSITY

SCIENTIFIC EVENTS

CLÉMENT ADER AND THE AEROPLANE[1]

M. CLÉMENT ADER, one of the pioneers of aviation, has died at Toulouse, at the age of 84. It is claimed in France that he was the first man to fly in a power-driven aeroplane, and he had come to be regarded in France as "the father of aviation."

An electrical engineer by training and engaged in the government service in the Department of Ponts-et-Chaussées, M. Ader devoted himself passionately to the study of flight from a very early age. One of his first efforts was a man-lifting kite. He had a large bird cage built in his garden at Passy in order to observe the flight of birds.

In 1886 he began to build a flying machine, and after four years' hard work brought it to completion. It was called the "Eole." His enterprise attracted some attention, but the trials were held in great secrecy, and the public was not quite sure whether the "Eole" had flown the few feet which were claimed for it or not. A second model was built a year later, but was wrecked while being tried at Satory. However, the government had become interested in his work and placed funds at his disposal for a fresh attempt.

Eventually, on October 14, 1897, a third machine, known as the "Avion," built by M. Ader, flew, it is claimed, though the question will ever remain in doubt, about 300 yards in the presence of representatives of the Ministry of War. It was a curious structure, with folding bat-like wings and twin screw propellers driven by a steam engine. M. Ader placed his plans at the service of the government, but his machine did not inspire sufficient confidence, and his offer was refused. This was a bitter blow to him. He had had to face ridicule and incredulity enough during his unsuccessful attempts, but to be discredited after half a lifetime's work had been crowned with moderate success was more than he could bear. He gave up his research work, burned his plans, and went into retirement in his native village of Muret, in the Haute-Garonne.

As flight progressed the value of Ader's experimental work was recognized, and he has long been given his proper place in the history of aviation. Last summer he was made a Commander of the Legion of Honor; a monument is to be erected at Satory on the spot where he made his flights, and the original machine is preserved in the Musée des Arts et Métiers.

All French military aircraft are now officially referred to as *avions* as a generic term for heavier-than-air machines of all types. The name was chosen in recognition of M. Ader's services to aviation.

[1] From the London *Times*.

CAPTAIN AMUNDSEN'S PROPOSED FLIGHT TO THE NORTH POLE

CAPTAIN ROALD AMUNDSEN has sent a message to the London *Times* from King's Bay, Spitzbergen, under date of May 1, as follows:

When this article appears in print, and if everything continues to develop in accordance with our plans, the trial flights will be over, and the start may take place any day. Up to the present everything has conformed to

the program. The work of landing and putting together the machines has been satisfactorily performed, notwithstanding certain obstacles, due to the ice conditions, and during the opening days of May we shall probably have nothing to do but to wait for a fine weather forecast.

We do not know on which day we shall start, but the start will be made at 4 o'clock in the afternoon, because at that hour the sun will be moving across the sky in such a way that for the next 12 hours no shadow from the wings of the flying boat will fall upon the solar compass, as the sun will be moving northward in the sky, drawing nearer to our course to the Pole.

On the completion of the trials the *Farm* and *Hobby* will proceed to the north coast of Spitzbergen. The meteorologists in the *Farm* will advise us in the morning when a suitable day for our flight arrives. We shall start from here in the morning and fly to the ships, which will be either at the edge of the Polar ice, or by the ice in one of the fjords. I can not say which alternative we shall choose. On arriving at the place selected we shall prepare for the final start.

The distance from the starting place to the Pole is 687 miles, which we expect to cover in eight hours in still weather. At first, with the machines loaded to full capacity, we shall fly at 93 miles an hour. As the load decreases with the consumption of petrol we shall reduce speed in order to save the engines. On the return flight the speed will be rather under 87 miles an hour.

My intention is to land as soon as our observations indicate that we are above the Pole. We shall then take careful observations in order to discover how far we are from the Pole before making our final spurt, which will be made on ski if we find that we are still a considerable distance away. Should we fail to discover a suitable landing place fairly near the Pole, we shall drop the Norwegian flag which we are taking with us, and then shape our course for Spitzbergen. A return without landing will not prejudice the geographical results, for at the height of 1,000 feet, we shall command an area 125 miles in diameter.

THE BRITISH SCIENCE GUILD[1]

THE annual meeting of the British Science Guild was held in the Salters' Hall on April 21, the chair being taken by the Right Hon. Lord Askwith, president of the guild.

Reviewing the work of the guild, the chairman directed attention particularly to its coordinative functions, linking together the operations of many different bodies, and to its efforts to bridge the gulf between men of science and the general public. Reference was made to the issue of the revised edition of the Catalogue of British Scientific and Technical Books, which now contains more than 9,500 titles of books, and should prove most valuable to students, libraries and manufacturers. Methods of obtaining "science publicity" are being considered but this demands the cooperation of leading scientific and technical societies. A new feature has been the formation of six standing committees (National Security, Parliamentary, Health, Research and Industry, Finance and General Purposes).

An address emphasizing the need of increasing knowledge of science among the public, and the application of scientific method to public affairs, was delivered by Sir William Bragg, who pointed out the contrast between the marvelously rapid development of scientific data and the meager facilities for letting the public know what was being done on their behalf. The forty millions of people in the British Isles are living on the direct application of science, and they should know what science has done and what it might do in the future. It is unfortunate that scientific men, who spend their days in wresting information from Nature in the laboratory, have not as a rule the supplementary gift of conveying scientific information in a popular form. Publicity for science is needed. If, as it is hoped, a proper organization for publicity in scientific matters could be created, there should be at its head a scientific literary man, and behind it funds sufficient to tide over the first period of its existence.

Sir Arthur Newsholme, speaking as chairman of the health committee, said that the average life of a child born to-day is some 10 to 12 years longer than it was 30 to 40 years ago. This is due to a better knowledge of the laws of health. What should be investigated are the causes of evils rather than their alleviation—as illustrated by the millions of headache powders and similar nostrums sold. Attention has been directed by the health committee to two defects in the births and deaths registration bill now before Parliament. There is no valid verification of the fact of death, and the certificate of death should be regarded as confidential and lodged with the registrar and not handed to the nearest relative.

Major the Hon. H. Fletcher Moulton (chairman of the research and invention committee) pointed out that in regard to industry there is a gap similar to that remarked on by Sir William Bragg in connection with publicity. Manufacturers of Great Britain are sometimes blamed for not availing themselves more freely of the results of scientific researches. There is, however, a gulf between the man working in the laboratory and the business man. An intermediary, who could demonstrate to the latter how he would benefit from the application of science, is needed. It is in this intermediate stage that Germany has made such rapid progress.

UNPUBLISHED PREPARATIONS FOR "ORGANIC SYNTHESES"

THE suggestion has been made that "Organic Syntheses," an annual publication of satisfactory methods for the preparation of organic chemicals, can increase

[1] From *Nature*.