sor William H. Hobbs and included Professor Laurence M. Gould, assistant director, geologist and photographer; Mr. S. P. Fergusson, U. S. Weather Bureau, meteorologist and upper-air expert; Professor J. E. Church, Jr., meteorologist; Mr. Ralph L. Belknap, surveyor and geologist; and Mr. P. C. Oscanyan, Jr., radio operator.

The base of the expedition was established on July 7th at Camp Little on the shore of the Maligiak Fiord, about fifty miles east of Holstensborg, where a meteorological station was at once set up and balloon work undertaken. In all, some ninety pilot balloon ascensions were made and followed with the theodolite to an average height of about 7,000 meters. Many were followed to 10,000 meters, and one to about 14,000 meters.

Ballons-sondes, making use of the new Rosby deflating device, were sent up and in three instances the meteorographs which they carried were recovered with records intact after reaching, in one case, a height of 1,500 to 2,000 meters. In two cases planned for greater heights, though the device seemed to operate, the balloons were lost; but almost miraculously one of the meteorographs was later recovered intact after having reached the extreme height of 8,000 meters. No ascensions by ballons-sondes have hitherto been carried out in Greenland.

An exploring party consisting of Hobbs, Gould, Church and Belknap with four Greenlanders traveled by umiak, canoe and on foot and reached the margin of the inland-ice about one hundred miles east of Holstensborg. The entire journey occupied twenty-two days and was shortened by the failure to find game in the interior region. The inland-ice in this district presents an unusually gradual ascent and a way of penetrating it was found without great difficulty.

Pilot balloons were sent up from the margin of the inland-ice and followed with the theodolite to a maximum height of 5,500 meters. Others were sent up from above the ice itself and were followed *over its surface throughout* to a maximum height of 2,000 meters. These ascents are the first ever to have been made at such positions either in Greenland or the Antarctic.

Psychrometer and wind observations were carried out by Professor Church at three-hour intervals both day and night during the twenty-two day journey. Self-registering instruments loaned by the U. S. Weather Bureau have been left with Governor Bistrup at Holstensborg, who has arranged to have them read regularly throughout the coming year. Observations with a tide-gauge, loaned by the U. S. Coast and Geodetic Survey, have been regularly made at Camp Little. A triangulation survey of an area of about 1,000 square miles of rugged territory has been carried out by Mr. Belknap, and in all a score of mountain peaks having altitudes up to 4,300 feet have been occupied as stations. Glaciological studies have been carried out by Professor Hobbs, and a study of raised beaches by Professor Gould.

The first short-wave wireless station to be erected away from the immediate coast of Greenland has been established for the period of occupation at Camp Little. Messages were received from American, European and South American stations, as well as from Australia and New Zealand; and much has been learned concerning the suitable conditions for operation at such stations.

This expedition is preliminary only to that planned for 1927. A depot of equipment was therefore laid down at the margin of the inland-ice, and arrangements were completed to have pemmican and other supplies taken in to the same depot by dog-sled during the coming winter.

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SCIENTIFIC EVENTS

STATISTICS OF THE PHYSICIANS OF GERMANY IN 1926

ON the basis of the popular Reichs-Medizinal-Kalender, which, under the editorship of Prof. Julius Schwalbe, appeared again this year, for the first time since the outbreak of the war, Prinzing of Ulm, well known as a medical statistician, has published in the *Deutsche medizinische Wochenschrift* statistics on German physicians which are quoted in the *Journal* of the American Medical Association. The total number of physicians in Germany, with a population of 63,000,000, is 45,000, or 7.1 physicians to each 10,000 inhabitants. In 1913, the number of physicians was 34,000, or 5.2 to each 10,000 inhabitants. The highest percentage of physicians is found in the three cities Hamburg, Bremen and Lübeck (from 10.5 to 10.8 per 10,000 population); then follows Hesse-Nassau with 9.3. In Berlin there are 229 gynecologists, 248 surgeons, 145 ophthalmologists, 174 otorhinolaryngologists, 381 dermatologists and venerologists, 66 specialists in gastro-intestinal affections and diseases of metabolism, 177 neurologists and psychiatrists, 16 lung specialists, 147 pediatricians and 318 specialists in miscellaneous branches of medicine. In each hundred physicians in Greater Berlin, 34.5 are specialists, and for each 10,000 inhabitants there are 13.7 general practitioners and 4.5 specialists. The total number of physicians in Greater Berlin is 5,513, and the total number of dentists is 1,121. There has been a marked increase

in the number of woman physicians throughout the country. In 1913, there were only 195, while now there are 1,627, of whom 230 are assistants or "volunteers." There are 1,397 who have an independent private practice. Women physicians appear to prefer the large cities, in the main. In Greater Berlin alone there are 314; in cities of more than 100,000 inhabitants there are 565; in cities with from 50,000 to 100,000 inhabitants, 125; in cities with from 10,000 to 50,000 inhabitants, 196; in cities with from 5,000 to 10,000 inhabitants, 63, and in communes with less than 5,000 inhabitants, 134. In the small rural communities one finds very frequently women physicians who are married to physicians. In communities with less than 5,000 inhabitants, of 134 women physicians sixty-four were married to physicians. Women physicians are, for the most part, general practitioners. However, 116 are pediatricians and forty-three are gynecologists, while twenty-eight are specializing in both pediatrics and gynecology. There are twenty-eight women ophthalmologists, twenty-seven dermatologists and venerologists, fifteen neurologists, six surgeons, two otorhinolaryngologists, and twenty-seven specialists in internal and other diseases.

THE ROYAL PHOTOGRAPHIC SOCIETY'S EXHIBITION

THE Royal Photographic Society's Annual Exhibition at the Society's House, London, closes on October 9. According to a report in *Nature* the exhibits in the scientific and technical section that seem to be the most novel or the least often seen are some results obtained by a combination of the cinematograph and microscope, and a photograph of the ultra-violet spectrum of silicon by Professor A. Fowler, of the Imperial College. This is done in sections, from wave-length 2820–2420 Å.U. on ordinary plates, from 2250–1840 Å.U. on plates smeared with a fluorescent oil, and from 2150–1250 Å.U. on Schumann plates using a vacuum grating spectrograph.

Cinematography is more fully represented than it has been before. Dr. S. Bayne-Jones shows the life-history of the Penicillium, taking the pictures at the rate of two per minute by means of an automatic mechanism which also turns on the light. Dr. S. E. Sheppard and Dr. R. H. Lambert, of the Kodak Research Laboratory, have photographed the electrophoresis of rubber latex particles, the film showing the Brownian movement of the particles and their movements in an electric field. Mr. Loyd A. Jones, also of the Kodak Research Laboratory, has studied the growth of crystals using elliptically polarized light and the "Kodachrome" process, and he contributes films of six different substances in very realistic colors. There are several other films of the more usual type and also a collection of historic films, including the famous train film of Lumière Bros., which was the first ever exhibited to a paying audience (in 1895). Photo-micrography is associated with color processes in the four autochromes of Dr. C. F. Elam, of the Royal School of Mines, which show at a magnification of $\times 100$ various crystalline forms of silver nitrate taken between crossed Nicols. Dr. L. F. E. Johnson, besides two slides taken in a similar way, has two illustrations of fabrics as they appear under the microscope when illuminated by Rheinberg's differential color stop, which shows the warp red and the weft blue.

Of the numerous photo-micrographs taken in the usual manner we would direct attention to Dr. G. H. Rodman's series of 24 which illustrate the various forms of hairs occurring on plants which are recognized as liable to produce mischief (sting, etc.) in those who come in contact with them; Mr. J. H. Pledges' 9 photographs ($\times 10$) of an Indian mistletoe that has no leaves; cultural types of meningococci and gonococci from the Lister Institute of Preventive Medicine; and a series of the rabbit embryo in utero and rabbit placenta, each showing various stages in its development, by Mr. G. S. Sansom. There are many others of considerable merit and interest, and a large collection that shows the present results of metallography obtained in numerous laboratories where it is practiced, including the National Physical Laboratory. Viewing the photomicrographs as a whole, the difficulty of getting good results at certain rather low magnifications seems to have been entirely overcome, and they indicate that no more detail is obtained by increasing the magnification above about $\times 2000$.

Radiography and photographic printing in colors are as well represented as ever. The structure of emulsions, and the changes produced in the silver bromide grains, are shown by Mr. L. F. Davidson and the British Photographic Research Association, and Mr. L. E. Jewell shows the advantage of what he calls "relief illumination" in photo-micrography, that is, the mirror in the vertical illuminator is considerably decentered so that there is a mixture, in regulatable proportions, of oblique specular and diffused light. The General Motors Corporation of Michigan, U. S. A., contributes prints of its Midgley Optical Gas Engine Indicator, which records as curves the character of the combustion in automotive engines. Of the various trades exhibits, those that impressed us most were Messrs. Ross's rapid speed photographs of the last test match taken with a 40-inch $f/8$ Teleros lens from outside the ground, and Messrs. Ilford's illustrations of the method of making and testing their light filters.