GENERAL SCIENCE

Leading Science Journals Pledge Aid to Europe's War

Die Umschau and Nature Both Offer Support of Men Of Science to Service of Their Respective Causes

COMPLETE absorption of British scientific men in the task of winning the war is pledged in the leading editorial in the first post-outbreak issue of *Nature,* (Sept. 9) most widely circulated of British science journals.

"For the moment, the interests of pure science as an intellectual pursuit and discipline must remain in abeyance," the statement declares.

Blame for the war is fixed on "the cynical disregard of Germany for the rights of small nations," and it is asserted that the British people have accepted the challenge reluctantly, but with a grim determination that the cause which it holds just shall prevail.

The editorial, however, looks forward to a post-war world in which renewed efforts must be made to reconstruct a society of nations on a basis of justice and equity. No attempt is made to forecast the form which the new international cooperation will take, but the task is recognized as one that definitely must be undertaken.

The article says, in part:

"In no previous war has science played so great a part as that which will be demanded of it in the struggle that is at hand. For a time, while the issue hangs in the balance, it is the duty of the man of science to lay aside his just misgivings whether the greatest force of the human intellect should thus be harnessed to the forces of destruction. For the moment, the interests of pure science as an intellectual pursuit and discipline must remain in abeyance. The energies, the abilities, and the knowledge of each and every individual with scientific training must be directed without remission to the service of the Allied cause.

"Nevertheless, the end to be attained, and the end which science should hold ceaselessly before the eyes of the Allied peoples, is not destruction, but a constructive ideal—to ensure in the future such conditions as will make possible the advancement of all the peoples of the world without discrimination, according to the status and the traditions of each, in the light shed by (*Turn to page 222*)

THE WIDELY read German science weekly, *Die Umschau,* (Sept. 10) in its first issue dated after the declaration of war, declares that Germany's accomplishments under the Four Year Plan justify a demand for "Lebensraum" and formally pledges that German science and technology will support the Fuehrer "to the utmost."

The main text of the magazine, evidently edited before the outbreak of hostilities, has no mention of the war. But a supplementary leaflet inserted reads in translation as follows:

"The Fuehrer demonstrated, in his great speech before the Reichstag on September 1, that Germany must fight to protect the vital rights of the nation.

"Under the leadership of Adolf Hitler, the German people have worked for six years on their own reconstruction. Like the German workingman, the German scientist pledged himself to do his part toward the strengthening of the people. Here also the Fuehrer showed the way. The technical accomplishments—his edifices, his highways—stand before the eyes of all. Less evident, but not less important, are the fruits of German science, that first made it possible to solve the great problems of the Four Year Plan. The provision of raw materials was vastly increased — the erection of industry could go forward on a broad foundation. Innumerable new industrial materials were brought into being, and the social, hygienic and racial measures were carried through to the greatest extent.

"A people, that under its Fuehrer could carry out such mightly works in so short a time, has through that alone justified its existence and established its claim to living space (Lebensraum). No power in the world can restrain us from defending these rights to the utmost. With faith in our Fuehrer the whole German people will battle to the fullfilment of these demands. Like every other class, German science and technology will venture every pledge."

Science News Letter, September 30, 1939

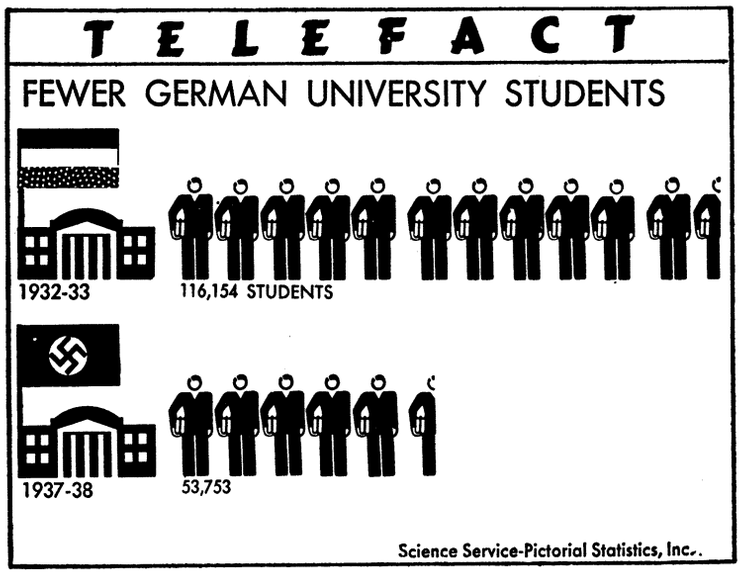
PHYSICS

Air In Stratosphere Is Hot Enough To Boil Water

AT 38 miles above the earth's surface the temperature is 100 degrees Centigrade, the boiling point of water, Dr. Fred L. Whipple, Harvard astronomer, told the meeting of the International Union of Geodesy and Geophysics in Washington, D. C.

Dr. Whipple's discovery was accomplished with a new type of "meteor speedometer" which uses the appearance of shooting star tracks in the sky to tell temperatures in the stratosphere far beyond the reach of man.

With his new apparatus Dr. Whipple obtains very accurate measurements of the height, brightness, velocity and de-



celeration of meteors which flash briefly in the area about 30 to 60 miles above the earth.

At heights of 70 miles above the earth the temperature is found to be 20 degrees Centigrade, ordinary room temperature.

The basic principle of Dr. Whipple's apparatus is to revolve a fan blade in front of a telescope-camera lens in such a way that if a meteor flashes down across the field of view, its fiery path is broken at measured intervals. This gives an indication of speed and deceleration. One such thermometer is located at Harvard Observatory in Cambridge, while the other is at Harvard's Oak Ridge station, 24 miles away.

Science News Letter, September 30, 1939

METALLURGY

Rustless Steel Effective At Very High Temperatures

HOT steel news from England: Rustless steels have been produced which maintain a reasonably protective film at temperatures in excess of 1,000 degrees Centigrade and at the same time have useful strength. This will be important to the chemical industry. Dr. W. H. Hatfield, director of the Brown-Firth Research Laboratories, Sheffield, reports this accomplished by modifying the chromium and nickel in steel compositions and also by adding other elements, such as tungsten, molybdenum, cobalt and titanium.

Science News Letter, September 30, 1939

There are more miles of highway in Michigan than in all of China.

MEDICINE

Doctors Cure One Ailment But Report New Menace

Baby Is Saved From Influenzal Meningitis With Drug; Worker on False Teeth Develops Silico-Tuberculosis

SUCCESS in treating one ailment and the discovery of a new industrial health menace are reported to the American Medical Association.

A two-year-old baby girl suffering with influenzal meningitis recovered after treatment with sulfapyridine, widely hailed for its pneumonia-curing properties. Influenza itself has so far failed to yield to either this drug or related chemicals such as sulfanilamide.

"We knew of no published report of this type of meningitis in which treatment with sulfapyridine had been successful, but it seemed advisable to try it," Drs. Tom R. Hamilton and Frank C. Neff, of the University of Kansas Hospitals, state in their report.

Other types of meningitis have been successfully treated with sulfanilamide and there was no other specific remedy to try. The little girl, arriving at the hospital after a 100-mile ambulance trip from her home in Waverly, Kans., in a prostrated condition with high fever and other dangerous symptoms, was much better after four days of sulfapyridine treatment. After a week she was well enough to go home and recovered completely within 16 days after the start of her illness.

The new industrial menace, reported by Dr. Louis Siltzbach, of New York City, is the danger of silicosis, the lung disease that threatens workers in "dusty trades," attacking dental technicians who polish false teeth with pumice or the substitute known as "pummy."

A young Russian Jewish immigrant paid with his life for this knowledge which may save thousands of his fellows who polish with pumice or "pummy" from a similar fate. For 19 years, from the time he left school at the age of 16, he worked at polishing dentures in a dental laboratory. Because of the large

HOW THEY GROW

Even the deer hunter seldom witnesses the whole cycle of antler growth during the summer months. From W. N. Dirks, amateur naturalist of Oakland, Calif., come these pictures which show how rapidly the growth takes place. On April 15, pedicles arose on the frontal bone of the deer and the summits of these pedicles became filled with a network of blood vessels, and a bony secretion became deposited (left). The other two pictures were taken on May 5 and May 25.