

the national effort, it was decided to maintain the provision for the current year at the same level as that of 1939, namely, £2,149,000. These considerations, he said, have lost none of their force, and despite the increasing strain on the national finances the Government, after considering a report from the University Grants Committee, have reached the conclusion that if the universities are to continue their present contribution to the national effort the provision for 1941 must be maintained at the existing level. He expressed the hope that local authorities will take similar action.

Precautions against Blister Gas Attacks

As a precautionary measure, which is being taken to cope with the possible use of blister gas by the enemy in aerial attacks on Great Britain, pharmacists are to be asked to provide supplies to the public of 'bleach cream'. The Ministry of Home Security, which has been in collaboration with the Pharmaceutical Society, is responsible for the scheme. Briefly, the Ministry has invited all proprietors of pharmacies, by a letter addressed to each one of them, to make 'bleach cream' available for members of the public in the event of blister gas being dropped in the vicinity of their pharmacies. The plan is quite simple; it is that the proprietor of each pharmacy, having been provided by the local authority with two enamel pails and a supply of 'tropical bleach' for the preparation of bleach cream, should, when and if gas is first used, place the pails furnished with cream on the pavement outside his shop with a poster instructing the public how to apply it. No charge would be made to the public, and it has been agreed with the Pharmaceutical Society that pharmacists should be asked to perform this service without payment as part of their contribution to the national effort.

An Ichthyosaurian Fossil

ACCORDING to a report published by the daily Press, a nearly complete skeleton of an Ichthyosaurian, or fish-shaped fossil reptile, has been found in the shaft of the Hermann Göring Mine in the northern Harz Mountains. It is to be studied by Prof. J. Weigelt, of Halle, who estimates its length as 5-10 metres, or nearly 17 feet. Such well-preserved large skeletons are very rare and difficult to extract from the rock in a perfect state. The largest Ichthyosaurian skeleton in the British Museum, which was obtained from the Lower Lias of Lyme Regis, Dorset, would measure about 24 feet in length when it was complete. Several known Ichthyosaurian skulls from the Lias belong to individuals which must have been at least 30-40 feet long. One of the finest of these large skulls, from Lyme Regis, is exhibited in the rooms of the Geological Society of London at Burlington House.

Classification of Ships and Machinery

THE Thomas Lowe Gray Lecture to the Institution of Mechanical Engineers on January 24 by Dr. S. F. Dorey was on the "Progress in Marine Engineering as Influenced by the Classification of Ships". The

classification of ships sprang out of the ancient practice of marine insurance, and has been in vogue for nearly two centuries. There are many classification societies; but the best known is Lloyd's Register of Shipping of which Dr. Dorey is the chief engineer surveyor. These classification societies serve the interests of shipowners, shipbuilders, engineers, underwriters and others, and each of them has rules relating to the construction and maintenance of ships and their machinery. Giving a sketch of the development of marine machinery since the earliest steamboats, Dr. Dorey traced the rules by which Lloyd's Register has influenced progress. From the first specification for machinery, right through the period of its construction and at regular periods during its life, Lloyd's surveyors have duties to perform, and the whole shipping industry owes much to the impartial and exceptional way those duties are performed. From its very constitution a classification society is strictly impartial; it is a form of voluntary control of an industry by the industry for the general well-being.

Factory Canteens

THE Factory (Canteens) Order of the Minister of Labour, whereby all factories doing Government contract work and employing 250 persons are required to provide canteen facilities either in or near the workshops, has opened up new problems to the management of factories (*Electrician*, Jan. 17). In the first place, factory meals will, of necessity, be inexpensive, and of the various cooking processes involved, boiling and steaming will be in preponderance for such items of diet as stews, steamed puddings, rice and vegetables of various kinds. Ample steaming oven accommodation must therefore be made for the large quantities of steamed food, and steam boiling pans for greens, stews, etc. Electric cooking has the advantage that the air is not vitiated by the products of combustion, and ventilation problems are, therefore, usually less acute. The usual number of air changes per hour normally allowed for a kitchen is of the order of 20-60; this could be modified, depending on the provision for natural ventilation. In using electricity for thermostatically controlled instantaneous boilers to deliver water near boiling point, it is best to arrange that the demand occurs during the peak period of the load on the public power station.

Molybdenum and Tungsten in the Caucasus

IT is announced by "Russia Today" Press Service that large molybdenum and tungsten works have been opened recently in Kabardino-Balkaria, in the Caucasian mountains. The plant is situated at the foot of Mount Tyrny-Auz. Soviet geologists began to prospect for ores on this mountain in 1934. At an altitude of 9,850 ft. they discovered large deposits of rich molybdenum and tungsten ores. Owing to the situation of the Tyrny-Auz deposits, however, the extraction of the ores has presented a difficult problem, and local weather is severe. Everything about the workings is mechanized. The ore, which is extracted by means of electric drills, is brought away

from the face by electric trains, sent to the surface by conveyer belt and lowered to the works at the foot of the mountain by cable hoists. The ore mine has four electric power stations and a central air-compressing station. There is an electric sub-station underground. The nearest centre to the new works is Nalchik, capital of Kabardino-Balkaria.

Detection of Toxic Gases

WE have received a copy of Leaflet No. 12, "Methods for the Detection of Toxic Gases in Industry: Organic Halogen Compounds" (H.M. Stationery Office, 1940. 2d. net). Ten substances are covered, including tetrachloroethane, pentachloroethane and carbon tetrachloride. One of the most toxic of the group is tetrachloroethane. The method of detection is by the use of a special lamp burning pure alcohol in a supply of the air under test. The halides are decomposed and react with a small copper screw in the nozzle of the lamp, giving a green coloration to the flame.

Marie-Alfred Cornu, For.Mem.R.S. (1841-1902)

ON March 6 occurs the centenary of the birth of the distinguished French physicist, Marie-Alfred Cornu, who for thirty-five years held the chair of physics at the Ecole Polytechnique and who in 1896 was elected president of the Paris Academy of Sciences. Born at Chateaufort, near Orleans, he had a brilliant career as a student at the Ecole Polytechnique and the Ecole des Mines, and was made a professor at the former at the age of twenty-six. His investigations carried out in the next ten or fifteen years raised him to the highest rank of experimentalists. Using Fizeau's methods he re-determined the velocity of light; with Baille, in the cellar of the Ecole Polytechnique, he re-determined the density of the earth, and among his memoirs of this time were some on the theory of electrostatics in which he explained the potential theory of Gauss and Green, then little known in France. His later work included valuable researches in spectroscopy. He was admitted a member of the Paris Academy of Sciences in 1878 as successor to A. C. Becquerel, and in the same year received the Lacaze Medal, and also the Rumford Medal of the Royal Society. In his own country he served on the Bureau des Longitudes, and as president of the International Commission of Weights and Measures. He was a foreign member of the Royal Society, and an associate of the Royal Astronomical Society. As Rede Lecturer at Cambridge in 1899, he discussed "The Wave Theory of Light and its Influence on Modern Physics". He was not only a successful experimentalist and a leader in scientific thought, but also a great teacher. He died on April 11, 1902. Three years later the French Physical Society struck a medal in his honour.

The Night Sky in March

THE shortening night reaches equality with the day at the spring equinox, March 21d. 0h. U.T. The moon is full on March 13 and new on March 27. A partial lunar eclipse occurs at the full and an

annular eclipse of the sun at the time of new moon, but both eclipses are invisible from Great Britain. A notable occultation takes place on March 5, when both the disappearance and reappearance of α Tauri (Aldebaran) can be favourably observed subject to weather. As seen from Greenwich, the disappearance of the star behind the moon's unilluminated edge (moon near first quarter) is at 19h. 16.1m. at position angle 108° from the north point of the moon's image; the subsequent reappearance is at 20h. 29.1m. at 242° . On March 8, λ Geminorum is also occulted, the disappearance seen from Greenwich being at 21h. 20.4m. at position angle 97° (Add 1 hour to all these times to read in Summer Time.)

Of the planets visible this month, Jupiter and its close companion, Saturn, are in the western sky at sunset; they are not far from the moon's slender crescent on March 3 and 30. Mars continues as an early morning star, in the constellation of Sagittarius. The planet is moving about 3 minutes of Right Ascension per day eastwards amongst the stars. Venus and Mercury are now stars of the dawn, being in conjunction with each other on March 3 at 13h. Mercury reaches greatest western elongation (28°) on March 25, but Venus is drawing towards the sun's place until superior conjunction on April 19. In mid-March, Sirius souths about 1 hour after sunset.

As night sets in, the bright stars of the familiar winter constellation are declining westwards. Amongst the less spectacular constellations east of the meridian is Coma Berenices. This constellation contains a loose cluster of stars which, about March 15, comes to the southern meridian at 2h. summer time at an altitude of 65° . East of this cluster is the position of the north galactic pole. A long-exposure photograph (200 minutes) taken with the 100-inch reflecting telescope at Mount Wilson "records fully as many recognizable nebulae as stars" (Hubble). The farthest of these nebulae recorded on the photograph are thought to be at an average distance of the order of 500 million light years. Thus in the general direction of the galactic poles—unobscured by the vast gas and dust clouds of our stellar system—we look out into remotest space.

Announcements

ON medical advice, Sir Edwin Butler, formerly director of the Imperial Mycological Institute, has resigned from the secretaryship of the Agricultural Research Council.

DR. FRANZ VERDOORN, editor of *Chronica Botanica*, has been appointed research associate in the Farlow Herbarium, Harvard University.

THE Rockefeller Foundation has agreed to continue until the end of 1941 its grant of £1,200 a year for research in cellular physiology at the Molteno Institute, University of Cambridge, under the direction of Prof. D. Keilin.

IN 1938 there were 15,111 cases of smallpox in the United States. Of these, 14,106 occurred in the States north of Ohio and west of Mississippi, where vaccination is not compulsory.