

The undercarriage is of tricycle form so placed that the machine can land and stand with the cabin horizontal, which will increase the comfort of the passengers and facilitate loading up when on the ground. The wheels are retractable during flight. The cabin is air-tight, and conditioned air at ground-level density is maintained when flying at altitudes. The machine is fitted with an automatic pilot, relieving the pilot of most of his physical work, and making him more analogous to the captain of a ship. The whole of the mechanical detail is controlled from the flight engineer's cabin, who has actually sixty-four dials on his instrument board, dealing with matters varying from engine and flying performance down to the condition of the air in the cabin. A new feature of this machine is an auxiliary wing that can be retracted when not required. It is shaped like the more familiar trailing edge flap, and thus can be used as an air brake for reducing landing speeds as well as providing the extra surface for increasing the flying speed range. This additional surface allows for a wing loading of 25 lb. per square foot for taking off and landing, which is increased to 32 lb. per square foot while flying with it retracted. The estimated speeds of the machine are 275 m.p.h. maximum, and 220 m.p.h. cruising, and its air endurance with the full load of passengers will enable it to operate non-stop to any European capital. With a decreased payload it will be capable of fast non-stop services on the Empire routes.

Neanderthal Man in Italy

IN more respects than one, the discovery of a skull of Neanderthal man in the Guttari cave at Monte Felice Circeo, about sixty miles south of Rome, is of unique significance for the study of the chronology and distribution of Mousterian man in Europe of the palaeolithic period. Owing to conditions affecting the use of the cave by man, it is possible to fix the date of occupation within tolerably accurate limits, while the sealing of the cave in Mousterian times which brought that occupation to a close, has not only preserved the evidence of Neanderthal man and his domestic economy intact but also saved it from the superposition of the debris of subsequent intrusions—conditions unique in caves of Mousterian occupation. The skull, now the third of the type known from Italy, was found on February 25, 1939, by Dr. A. C. Blanc of the University of Pisa, who with the Abbé Breuil, discovered the second of the Italian Neanderthal skulls. Dr. Blanc had already examined thirty-one caves at Monte Circeo and found in them evidence of both the Mousterian and Aurignacian cultures, but the present find was made in a cave which had been discovered on the previous day only by its owner, S. A. Guttari.

THE skull lay on the floor of an inner chamber of the cave among stones which appear to have been laid in a circle around it, while underneath it were bones of *Equus*, *Bos*, *Cervus* and *Sus*, some of which had been intentionally flaked. The floor of the whole cave was covered with fossilized mammalian bones,

antlers and skulls, including, in addition to those mentioned, hyæna and others, while elephant bones were found in a pool. All belonged to a warm climatic phase. This Neanderthal skull is the most perfect yet known, and in size approaches that of La Chapelle aux Saints. A fracture of the right temporal region points to a violent death; and the base of the skull has been opened extensively and the greater portion of the occipital foramen destroyed. The date of occupation is fixed by relation to the oscillation of sea-level at somewhere between 130,000 and 70,000 years ago; and Sir Arthur Keith, who contributed a prefatory note to an account, with illustrations, of Dr. Blanc's discovery in the *Illustrated London News* of July 5, regards these relics of Neanderthal man as contemporary with the lowest level of the Grotte des Enfants, Mentone.

Recent Additions to the British Museum (Bloomsbury)

SOME striking examples of West African art were among the more important of the recent additions to the ethnographical collections of the British Museum, which were reported at the meeting of the Trustees on July 8. Of these one was a gift of the National Art Collections Fund—a cast bronze head which was excavated at Ife, the religious centre of the Yoruba people, and is said to represent Olokun, the Yoruba deity of the sea. Discovered in 1938, it is in good condition, and shows traces of red paint on the head-dress. Probably it belongs to the fifteenth or sixteenth century, though the date is uncertain. Its modelling is of a quality unique among the artistic productions of negro Africa, and bears comparison with the finer sculptures of civilized art. The second example of African art is a carved ivory tusk from Benin, which bears figures of fish and animals, symbolizing the king in his supernatural aspects. There is a receptacle for magical 'medicine' at the larger end. No similar example is known. The gift to the Department of Manuscripts of the diaries of Robert Needham Cust, an Indian civil servant well known as an orientalist among scholars of the nineteenth century, will be welcomed by all who are interested in the history of Indian and oriental studies. The diaries were presented by his son, Mr. R. H. H. Cust.

Utilization of Coal

THE British Coal Utilization Research Association held its first annual meeting in London on June 28, when Sir Evan Williams, the president, gave an account of its first year's work, which has been largely concerned with the erection and organization of its research station in Fulham. It has been a subject of reproach that the coal industry has been largely indifferent to promoting efficiency in the utilization of coal. They now foresee, the president said, that the future will call for fuels of accurately controlled characteristics; the development of these is being investigated. The programme of research includes work on pulverized fuel firing which, it is believed, will play an increasingly important part in industry, and also on combustion in the fuel bed.

The study of producer gas is to receive greater attention in view of its present importance in heavy industry and its potential application to mechanical transport. Great store is laid by the coal industry on the open coal fire, and efforts are being made to minimize its admitted defects—smoke and labour. It is recognized that coal-burning appliances have suffered in comparison with gas and electrical appliances owing to the neglect of scientific principles in design, and it is hoped to raise the standards of performance and eliminate inferior and ineffective appliances. Efforts are being made to advance the use of coal for cooking. A solid fuel cooker has been designed for use on railways. Some of these have been installed on trains, including the *Coronation Scot*. It is believed that gravity feed firing will play a considerable influence on hotel and institution cookery in the future.

Collective and Economic Security

POLITICAL and Economical Planning (P E P) has issued two broadsheets dealing with the economics of collective security and instruments of economic security. In the former, relations between economic policy and a fresh effort to realize collective security are discussed and the necessity of military support for economic collaboration is emphasized, and the importance of ascertaining how far geography and the balance of strategic forces would permit military assistance if needed before inviting smaller countries into a system of collective economic security. The maintenance of peace through collective political and economic security involves the application of principles similar to those which would be appropriate in time of war. The measures of self-defence now required of a system of collective security may be classified as those required for preserving and promoting the free exchange of goods and services between members of the system; steps needed to ensure that the advantages of participation in economic relations on those terms should no longer be available to nations which do not subscribe to the conceptions inherent in the free exchange system and which now only participate in that system to destroy; and measures for extending assistance to neutral countries to enable them with safety to enter the orbit of the free system. Civilization's resources, it is urged, should be used to maintain civilization, and the main economic implications of a policy of collective security are discussed in some detail, including the question of reciprocal aid, the utilization of limited resources, the difficulty of overvalued currencies, the possibility of organizing markets and Nazi political and economic exploitation. If civilization is to be preserved it cannot be in isolation. Its basis is international, and there is no alternative to collective measures.

THE second broadsheet, emphasizing the need for industrial reorganization, classifies the possible measures under four heads, according to their connexion with Government commercial policy, with the improvement of trading methods, with the

finance of international trade and with export and import subsidies. The absence of any coherent British trade policy is criticized. The United Kingdom has a strong bargaining weapon for securing increased reciprocity in commercial relations with individual States in view of the importance to them of British import purchases, and it is suggested that 'most favoured nation' treatment might be withheld from countries which resort to unfair trade practices. Much could still be done to improve the mechanism of economic co-operation and the importance of control schemes and cartels being operated in the public interest and particularly in the interests of economics is stressed. The questions of export credits, import subsidy, and of selecting the appropriate measure for different purposes are then discussed, the final emphasis being laid on the need for more moral courage to form the nucleus of a system of collective economic security in which the benefits of free exchange would be limited to the free exchange group.

Employment in 1938

THE report of the Ministry of Labour for the year 1938 shows that on the average for the year the numbers in employment were about 120,000 less than in 1937 although higher than in any previous year except 1937, and more than 20 per cent higher than in 1924, when the series of comparable statistics was begun (Cmd. 6016. London: H.M. Stationery Office, 1939. 2s. net). The seasonal fluctuations were less than usual, the maximum variation in the rate of unemployment among insured persons in the general scheme being only 0.5 per cent as against variations of from 2 to 5 per cent in previous years. Seasonal improvement in the first half of the year, however, was much less marked than usual in the building and contracting industries, brick manufacture and the distributive trades, and was almost entirely offset by a decline in metal and metal goods manufacture, engineering, the textile industries, especially in the cotton industry, and the normal slackening in coal mining. In the second half of the year the seasonal decline in building and public works contracting, transport, distribution and the hotel and boarding-house service was counterbalanced by improvements in the textile industries, metal goods manufacture, and the vehicle and mining industries. The effects of the recession of 1937-38 were spread very unevenly over different areas of the country, being most marked in the north-western area, in which employment declined by 7.5 per cent, mainly through contraction in the cotton industry. Wales suffered severely with a fall of 5.4 per cent, mainly in the iron and steel and tin-plate industries. In the Midlands there was a fall of 3.4 per cent and in the south-eastern division no change.

REFERENCE is made in the report to the policy of the Ministry in regard to the admission of foreign workers. Of the 22,347 permits granted during the year, 61.7 per cent were for employment in private domestic service. The figures do not include persons