

there have not yet been any controlled therapeutic observations of the use of such a diet.

The period of low acidity after food tends to last longer after meals containing a high concentration of protein than after meals with little protein but much carbohydrate. A controlled therapeutic trial at the unit, however, has not confirmed the suggestion that a high protein, low carbohydrate diet might be useful in the treatment of ulcers. These studies, as well as making treatment less irksome for patients, are relevant to investigations of dietary factors which may be responsible for the varying incidence of peptic ulcer in different parts of the world.

Other work of the unit aimed at making the life of patients and doctors easier is the development of quicker ways of making a diagnosis. Using available information about the mechanism of production of symptoms it has been possible to build up an algorithmic (flow chart) system of analysis of the causes of difficulty with swallowing. The patient answers "yes" or "no" to various questions and a diagnosis can be made without the use of X-ray or any other form of examination. The algorithm is in two forms; one for the doctor who questions the patient and one for the patient who answers questions from a book or on a film strip in a modified teaching machine. This version with the machine forms the basis for a system of automated patient interrogation which is being developed by the unit in collaboration with the University of Essex.

COUNTRYSIDE

Unspoilt Coastline

ALTHOUGH too much of the coastline of England and Wales has been spoilt by bad siting of caravans, bungalows, industry and defence structures, there remains about three-quarters of the coast that is still completely free from development of any kind. This surprising fact is contained in a recently published compendium of statistics compiled by the Countryside Commission from data supplied from local planning authorities (*The Coasts of England and Wales: Measurements of Use, Protection and Development*; HMSO, 5s 6d). The coastline is shown to total 2,742 miles, of which a little over a quarter lies in Wales. Out of this mileage, camping and caravan sites exist or are planned for just under 105 miles of coast, industrial and commercial users occupy 157.1 miles, and some 134 miles are occupied by defence and other government land. On the other hand, there are 414 miles of coast that is in protective ownership of some kind—National Trust, Forestry Commission, National Nature Reserves, and the like.

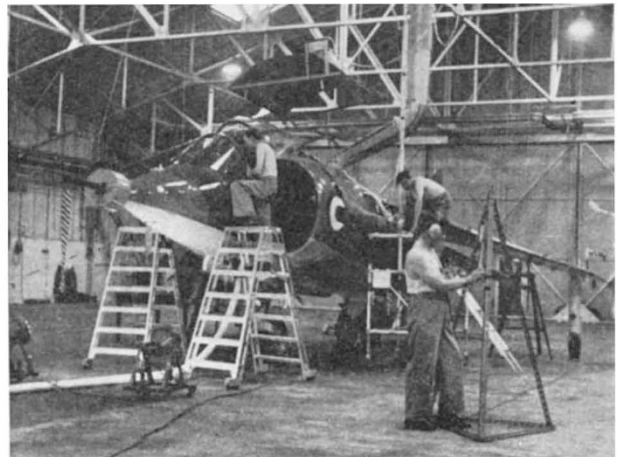
There are wide local variations in the extent of coastal development. The coasts of several counties are hardly developed at all—there are no buildings along any part of the Holland region of Lincolnshire, and only 6.3 per cent and 13.2 per cent of the coasts of Monmouthshire and Gloucestershire are built up. Conversely, the most developed county coastlines in England are those of West Sussex (68 per cent), Durham (53.6 per cent) and East Sussex (50.3 per cent). In Wales, however, the coast of Denbighshire (72.3 per cent) is more substantially developed than that of any English county.

There are wide variations, too, in the extent to which the coasts of county boroughs are developed or are committed for development. The most heavily developed coasts of county boroughs are those of Bootle, Grimsby, Tynemouth, Liverpool, and Great Yarmouth, all of which are completely built up. In contrast, the coasts of the county boroughs of Southport (15.4 per cent), South Shields (18.9 per cent) and Portsmouth (22.9 per cent) have far fewer buildings.

AVIATION

Aircraft on Trial

DESPITE the rapid advance in instrumentation in aviation, some comparatively old techniques survive. At the Ministry of Technology's Aeroplane and Armament Experimental Establishment at Boscombe Down, good use is still made of a large blower, first used in testing flame damping exhaust systems on the British night bomber force of 1942. Four large fans, each ten feet in diameter and with ten blades, are driven by Merlin aero engines to produce airstreams with velocities of up to 400 mph. Whatever is being tested remains outside in the open, so that the blower itself cannot be damaged by breakage or jettisoning of equipment. Last week a quiet murmur of engineering French was to be heard around the blower as tests on the jettisoning of the canopy of the Anglo-French Jaguar went on. Right on cue the canopy flew off to be held by a cat's-cradle of wires and ropes, while a camera in the background recorded what went on. Because the canopy is undamaged and can be used again, costs are greatly reduced and the whole procedure, according to the staff at Boscombe, is fifteen times cheaper than testing in flight.



One of the newer facilities at Boscombe is a hangar which has a good claim to be the biggest Turkish bath in the world. Entire aircraft can be exposed to high temperatures and humidities to test the performance of their systems under extreme tropical conditions. Last week the RAF's latest aircraft, the Harrier, was undergoing a test. Temperatures of up to 75° C can be reached, and maintained to within $\pm 2^\circ$ C, and humidity can also be closely controlled. Cloud formation can be maintained up to temperatures of 34° C, and the effects of solar radiation can also be simulated. In theory the hangar is at the disposal of industria]