

the convection currents. Further, the panel system does not interfere with any structural peculiarity in the building, nor with any of its characteristically decorative or aesthetic features.

Australia House in the Strand and the operating theatres of King's College Hospital may be mentioned as heated by the panel system.

D. FRASER HARRIS.

SOME MORE VOSGES SPAS.

THE correspondent from whom we have already had two notes has supplied us with some further information about the spas which he has recently visited in the north-east of France. It appears, for practical purposes, that they may be classified according either to the principal use to which their waters are put, or to the degree to which in their present state of development they are most likely to meet the needs of patients from the British Isles.

At all the spas the waters are both given internally and administered in the shape of baths and douches, but at some the natural temperature of the water has resulted in their external use predominating. This is the case at Luxeuil, Bains-les-Bains, and Plombières, at all of which the waters are hot. The first named of these three prides itself more particularly on the treatment of gynaecological disorders, considering itself entitled to do so because its waters can be, and are, utilized for prolonged vaginal irrigation without any previous exposure to the air and exactly as they issue from the rock. Hence they retain all such remedial virtue as hot natural water containing various mineral constituents and of radio-active power, and issuing straight from the bowels of the earth, may be esteemed to possess. Bains-les-Bains, the second of the group, claims to be particularly successful in the treatment of unduly high blood pressure and arterial diseases in general, while Plombières, among several claims for its waters, includes more particularly a sedative effect on the nervous system.

The other group consists of Contrexéville, Martigny, and Vittel, at which the waters are cold. At all three of these the waters contain a certain amount of lithium and calcium sulphate, as well as other minerals, and cases of gravel, gout, sciatica, and arthritis probably predominate among their patients.

All the six spas mentioned lie within about thirty miles of one another, at an elevation of from 1,200 to 1,400 feet, and all have hilly, picturesque, well watered and well wooded surroundings. All, too, must overlie very porous subsoil, since rain, however heavy, leaves no trace after a very short time. But they differ considerably in the matter of the environment in which the patients live, in the extent of their development and frequentation, and in the length of time for which they have been used. In respect of relatively modern hydrology Contrexéville appears to be the oldest, since it was officially inaugurated as a health resort by the Government of the time in the year 1760. But Luxeuil runs it close in this respect, since it received similar recognition only some six years later. In addition, it may possibly be the case that this spa is the oldest still in existence anywhere, for there is direct evidence that a bath house on the site of one of those now in use was repaired (not newly built) by order of Julius Caesar at a date shortly after his first subduction of the Gauls of this area. As they stand at present, all the places from which these various spas derive their names contain, out of the season, not more than 1,000 or 1,500 inhabitants. The exception is Luxeuil, which has an existence independent of its mineral water possessions, since, like Bath, it is a county town as well as a health resort.

Plombières, too, differs somewhat from the rest in respect of its precise situation. This is half-way down a gorge so steep, deep, and narrow that the little town fills it from side to side, and might easily be overlooked altogether from a short distance. It consists almost entirely of hotels and lodging houses, and recalls some of the older parts of residential Brighton.

In respect of their therapeutic development, the arrangements at Martigny, Bains-les-Bains, and Luxeuil, though adequate, are comparatively simple in character. Their places of amusement are also unassuming, but at all three there is good accommodation in the matter of hotels. At Plombières the general and specific arrangements are more elaborate, for there are three types of balneological establishments which cater for invalids of varying means.

Vittel and Contrexéville are in a somewhat different class. Both have earthy or calcareous waters, and at both the mineralization of the springs is low. Both, but especially Contrexéville, have a considerable reputation for the treatment of affections of the urinary organs, including uric acid, gravel, and gouty oxaluria. The medical arrangements at Vittel are good. It has well designed and well managed facilities for modern spa treatment, and provides electro-therapy of all kinds, including light baths. Its situation is beautiful, and since its origination some twenty-five years ago the company owning the springs has developed it on double lines. The principal hotels are built in palatial style and the amusements provided, including polo and racing, attract many fashionable visitors.

Contrexéville, on the other hand, despite the fact that it lies only three or four miles away, has not allowed itself to be disturbed by the achievements in the latter respect of its youthful compeer. Though it provides first-class hotels and a great many agreeable pastimes for its visitors, including golf, tennis, and theatrical performances, it has steadily adhered to its original purpose, and subordinates all its aims to those of effective treatment. Its establishment was entirely rebuilt a year or two before the war, and in its present form it is as elaborately conceived and constructed a medical hydrological undertaking as can well be imagined. Among other structural features it has a broad portico some 200 yards in length, up and down which patients saunter while drinking their allotted dose of water; in addition to rooms for the application of every sort of bath and douche that has ever been invented, there is a complete electro-therapeutic department in charge of an expert. There is a well appointed clinical laboratory working in two departments: the one is chiefly concerned with the analysis of urines; in the other blood examinations and the like are done for the doctors of the spa. Indeed, Contrexéville as it now stands may be regarded as the present last word in the branch of therapy to which it belongs, and a pleasant, cheery resort even for the thoroughly healthy.

All the spas mentioned report that they have completely recovered from the war, in respect of the number of their visitors. These are cosmopolitan at the three more elaborately developed spas, but at the others visitors from the British Isles seem comparatively rare. This is a circumstance which in the case of some invalids would be considered an added attraction. They are all in varying degree very accessible—that is to say, they can all be reached within ten hours from Paris, while in the case of Vittel and Contrexéville the time occupied is less than six hours.

The expenditure of a visitor varies naturally according to the character of the hotel chosen, but so long as the exchange rate of the franc remains anywhere near as low as at present, the expense of reaching a Vosges spa and remaining there for the usual period of three weeks must be relatively small. A common kind of figure for board and lodging at good hotels appears to be 45 francs a day, and this at present works out at less than four guineas a week.

In conclusion it may be noted that details in regard to the mineral contents of the springs of these various spas, and a great deal of practical information in regard to the treatment they provide, the pathological conditions which they are considered best able to combat, and their general arrangements, can be found in a book issued under the aegis of Professor Robin of the University of Paris, under the title of *The Spas of France*. It is published in France at the price of 20 francs, and a new English edition will shortly, we understand, be obtainable gratis by duly qualified medical men, on application to the Office Français de Tourisme, 56, Haymarket, London, S.W.1.