FRENCH RAILWAY (NORTHERN REGION) X-RAY TRAIN

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In 1932 two railway coaches, one fitted with radioscopic and radiographic apparatus and the other as living quarters, were put into service on the Northern Region of the French Railways for use in the prevention of disease among members of the staff and their families. Railway rolling stock was chosen for this purpose, as offering reasonable comfort at a minimum operational cost.

In 1933 a "waiting-room" coach was added, and the three coaches were in constant use until the exodus of 1940. After a short interval the service was resumed in September, 1940, and continued until April 21, 1944, when the train was badly damaged during an Allied air raid on the sidings of La Chapelle, in Paris. Until new coaches could be provided the medical examination of staff and families, which in the circumstances then obtaining had become more essential than ever, was carried on by means of a portable radioscopic unit lent by the French Health Ministry and conveyed by road.

A new train has recently been completed at the French Railway workshops of Le Landy, just outside Paris. It is made up of two sections: (1) a radiological coach, a coach fitted up

FIG. 1.—The waiting-room.

as living-quarters, and a coach fitted up as a waiting-room; and (2) a radiological coach which can function independently.

The radiological coach included in the first section comprises a small waiting-room with accommodation for twelve persons, two dressing cubicles which communicate on one side with the waiting-room and on the other with the doctor's consulting-room (equipped with a couch for examination purposes), a radiological room fitted with radioscopic and radiographic apparatus, a laboratory for developing x-ray photographs, and finally an attendant's compartment with a collapsible bunk. The living coach provides quarters for the doctors and nurses, and includes a kitchen, a dining compartment accommodating 6 persons, 2 bedrooms for the doctors and 2 for the nurses, and 3 dressing-rooms with lavatory. The waiting-room coach has seating accommodation for 54. The interior fittings are very simple, and include hinged benches with collapsible backs which can be turned up against the sides of the coach to facilitate cleaning, two lavatories, and an alcove containing a boiler for central heating. It may be mentioned that special fluorescent lighting has been fitted into this coach.

The Medical Service plans to use this coach also for meetings, to give lectures on welfare, etc., to the families of the staff, and to serve teas to the children. For this purpose alternate benches can be replaced by tables.

Equipment of the Train

Section 1.—The system of heating is the same for each coach, with a self-contained unit feeding the radiators, the

FIG. 2.—The dressing cubicles.

size and number of which have been fixed to give the requisite temperature for each room, according to its use. Current for electric lighting can be obtained in each coach alternatively from a self-contained 24-volt unit or from a 110-volt main supply when the coaches are stationary. Otherwise the equipment follows standard practice, although it may be mentioned that red, blue, and white concealed lighting has also been installed. The radiographic apparatus is supplied with current obtained from a hook-up with the 110-volt main supply circuit. The apparatus, with which examinations can be made in both vertical and horizontal positions, is the one which was in use until 1944, and is of an old but reliable design. It has, however, been improved upon, and appropriate precautions have been taken to protect the doctor and assistants against the danger of high-tension current. Special precautions have also been taken in order to avoid the risk of damage to the radiological apparatus while the train is in motion.

Section 2.—This section consists of one coach, which can function independently or simultaneously with the first. It is equipped so that examinations can be effected with considerable rapidity. It comprises a waiting-room (Fig. 1), 14 dressing cubicles arranged in two groups of seven on each side of a central corridor (Fig. 2), a consulting-room for the doctor (Fig. 3) equipped with a desk and a couch for more thorough examinations, and a radioscopic room from which the nurse can communicate with the doctor by telephone. In this way the doctor can transmit his diagnosis to the nurse, who can in turn give to the doctor the case-history of the patient from the health-card.

The medical staff are protected against the action of rays by a leaden screen fitted between the apparatus and the nurses' office (Fig. 4). The radioscopic apparatus, which is very up-to-date, has been designed for systematic mass examination, and includes: (1) A vertical radioscope, fitted with a leaden partition screen to protect the operator against direct radiation. This machine is of particular interest inasmuch as the patient can be examined in the light and can move about freely, the

FIG. 3.—Doctor's consulting-room, showing x-ray screen.

operator alone being in darkness. This is a very desirable feature, as it considerably reduces the time taken for each examination. (2) An x-ray generator specially adapted for this type of examination and giving a very clear and detailed picture. It is designed for use off the main supply or from the rotary convertor. Its capacity is such that examinations can be carried on for hours at a stretch. (3) Finally, there is a switch-gear control for the generator. The whole of the electrical equipment can be worked off the main supply or a generator.

Its Value in Preventive Work

By means of this radiological train it is possible to carry out examinations of both the railway staff and their families, particularly with a view to the prevention of tuberculosis. By travelling from station to station the benefit of these examinations is extended to employees living in small localities where there is no qualified lung specialist. In this way it completes the work being done continuously in the eight tuberculosis centres of the Northern Region of the French Railways by means of existing installations. As 600 people a day can be dealt with in this train it will be possible to examine every member of the staff of the Northern Region of the French Railways and their families at least once a year.

Useful and profitable as this work is, the Medical Service has decided that the prevention of tuberculosis should not be its sole object. It is intended to carry out on each subject a thorough and complete annual examination covering the whole

FIG. 4.—Nurses' office, showing examinees' side of x-ray screen.

body. To this end it is planning the addition of a further coach to the radiological train, completely equipped for a rapid examination of the different organs of the body. Thanks to the facilities offered by this new coach, the person examined will undergo measuring, weighing, blood-pressure test, analysis of urine, examination of the heart, and reflexes of the eyes and ears, as well as a blood test and cardio-pulmonary radioscopy. The results of these examinations will be recorded on case-history cards, which can be mechanically sorted and classified.

COLONIAL MEDICAL RESEARCH STUDENTSHIPS

In the *Journal* of June 21 (p. 897) we announced the institution by the Secretary of State for the Colonies of ten research studentships for graduates in medicine and cognate sciences. We have received an amendment from the Colonial Office to the second sentence of the announcement, which stated the allowance to be made to holders of the studentships, as follows: A graduate awarded a studentship will be eligible for a maintenance allowance assessed according to personal circumstances. The maximum rates of allowance which may be paid are: £260 per annum at the Universities of Oxford and Cambridge; £250 per annum at the University of London; and £220 per annum at other universities in the United Kingdom. The allowance will be free of income tax. A studentship will normally be awarded for a period of two years, subject to satisfactory report at the end of the first year's work from the supervisor, who will be nominated by the Colonial Medical Research Committee.

WORLD FEDERATION OF PATHOLOGISTS

The European Association of Clinical Pathologists, under the Presidency of Dr. S. C. Dyke, met at Cambridge on June 27 and reconstituted itself as a World Federation of Societies devoted to Clinical Pathology. The Federation defines its aims as (1) to develop clinical pathology—the application of pathology and allied sciences to medicine; (2) to have regard to the scientific and professional status of those engaged in its study and practice; and (3) to foster international amity. A committee was appointed to call a meeting of delegates from as many interested associations as possible in Paris next November, during the meeting of the French Société de Biologie Clinique, in order to formulate a constitution and elect officers. Dr. Dyke was appointed chairman of the committee, Drs. W. H. McMenemey and J. Ungar joint secretaries, and Dr. R. Cruickshank (London), Prof. Raoul Kourilski (Paris), and Dr. F. Pick (Prague) advisory members.

The Federation hopes to gain a world-wide membership, and invites societies devoted to clinical pathology to communicate with the secretaries—either Dr. W. H. McMenemey, the Pathological Department, The Royal Infirmary, Worcester, or Dr. J. Ungar, Glaxo Laboratories, Greenford, Middlesex. The Czechoslovak Association of Clinical Pathologists, the French Société de Biologie Clinique, and the Association of Clinical Pathologists of Great Britain have already signified that they wish to join the Federation. Medical practitioners or university graduates practising clinical pathology who are members of the constituent bodies will thereby become members of the Federation. Membership is also available to those who are eligible but do not belong to a constituent body. The Federation proposes to hold a conference at least once in every three years at the same time and place as the summer meeting of one of its constituent bodies. It hopes that the first will be in the summer of 1948.

THE MEDICAL PROTECTION SOCIETY

The London and Counties Medical Protection Society, at an extraordinary general meeting on July 16, agreed to simplify its title by omitting the prefix "London and Counties." Sir Ernest Rock Carling, who took the chair at the annual meeting which followed, said that the Society had had a very successful year. New members joining in 1946 numbered 1,894, bringing the total membership to over 22,000. The work of the Society had also increased. Applications for advice and assistance were received during the year in 1,410 cases. The Society had had to meet heavy legal expenses, and it had been again brought home to it that even the most expert and careful doctor sustained misfortunes or committed errors which might result in heavy damages. Moreover, the general costs of litigation tended to increase.

The Society was constantly hampered in its work by the failure of practitioners to keep records. He commented on what seemed to be the tendency of judges to attribute the blame for the effects of a disease or injury to the unfortunate doctor who had had the case in his care—not merely the portion of blame which might be put at his door owing to some lack of skill or error in treatment but the blame for the entire disability—and this was often reflected in the costs. Perhaps the most important activity of the year was the part taken by the representatives of the Society in making representations to the Ministry of Health concerning the Bill now being promoted by the General Medical Council for the reform of its constitution and procedure.

The treasurer, Mr. W. M. Mollison, submitted the accounts, which were in a thoroughly healthy condition, the investments amounting at cost to over £100,000. Sir Ernest Rock Carling was re-elected president, and to fill vacancies among the vice-presidents caused by certain retirements Dr. Thomas Beaton, Mr. F. A. Juler, and Dr. G. M. Stoker were elected. The new members elected to the Council were Dr. Annis Gillie and Dr. F. H. Stevenson.

The offices of the *American Journal of Ophthalmology* have been moved from Cincinnati to 700, North Michigan Avenue, Chicago, 11, Illinois.