£348. The small 8 h.p. Peugeot will be fitted with electric lighting and sold at £346 for the chassis and £461 for a touring body in France.

NOTABLE MASS ASSEMBLY PROPOSITION.

Undoubtedly the most notable novelty yet announced on the part of French makers, however, is the Citroën four-cylinder post-war vehicle, with a bore measurement of 65 mm. and a piston travel of 100 mm., giving an engine of 1327 c.cm. capacity, to sell, with standard bodies, at from £290 to £350. The scale of output is planned at 36,500 vehicles a year, which is the record for any European programme yet conceived. The proposition originates with the André Citroën Company, makers of the well known Citroën double helical, or herring-bone, type of bevel and crown wheel-drive gear. The car is expected to scale about 11 cwt. complete, while it is claimed that the petrol consumption will be about forty miles to the gallon. Accessibility has been had in mind, in that part of the low cost of production is to be achieved by the quickness with which the parts may be dismantled and assembled, so that the user is no less the gainer than the producer. Obviously, interchangeability is aimed at, since that is the only possible way of achieving what is styled mass production. The gearbox provides three speeds forward and a reverse, the maximum speed of the vehicle being estimated at forty miles an hour. Five detachable wheels, equipped with Michelin tyres, are being supplied as standard, the track of the car being about 8 in. narrower than the average British one. Perhaps the most novel mechanical feature is the suspension, details of which, however, are not yet released for publication. The body has pleasing outlines, and the chassis is intended to take a town coupé and touring types of coachwork. For the French market the American style of steering on the left side is to be furnished, while the vehicles for England will have the steering on the right. It does not follow that the price suggested is that at which the vehicles will be marketed in England; rather are the figures taken from retail sums aimed at in France. In this connexion it must be had in mind that foreign cars cannot yet be imported to this country, and doubtless a tariff of at least 33½ per cent. will be imposed when they are released, else there will be trouble with British labour.

It is to be regretted that the smallest four-cylinder car yet schemed by a big motor engineering house, the "Baby" Fiat, with a bore measurement of 55 mm. and a piston travel of 80 mm., giving 760 c.cm. engine volume, tested for two years past, will not be manufactured this year on account of factory conditions, and of the scale of the demand for the nominal 10 h.p. four-cylinder Fiat, with a bore measurement of 65 mm. and a piston travel of 110 mm., giving 1460 c.cm. engine volume, or approximately double the size of the "Baby" model. The 10 h.p. vehicle will be introduced at the Lyons Fair.

SOME PRACTICAL POINTS IN MEDICAL RECONSTRUCTION.*

BY N. BISHOP HARMAN, M.A., M.B., F.R.C.S.

THE idea of reconstruction implies that we are not content with things as they are, and I think there are few doctors who are content, or wholly content, with medical conditions of to-day. The ideals of medicine compel us to strive to attain such conditions as will ensure the best possible health for the community; and also such modes of work for us doctors as will call into play all our best energies, and satisfy our instinct for good.

For the purpose of this discussion let us consider clinical work only under four divisions: (1) The treatment of the poor; (2) of the employed; (3) of the middle classes; and (4) of the well-to-do. It will be obvious these divisions are arbitrary and not watertight compartments. The work of the doctor is but rarely confined to one of these divisions, but they will help us to arrive at practical conclusions.

CLINICAL SERVICES.

1. At the present time the medical provision for the poor is in the hands of the Poor Law authorities, and, so far as my experience goes, the work is well provided for and well

done. The parish doctor is one of ourselves, engaged in the full work of his profession; the work he does under his appointment is the same as that which he does for his well-to-do patient. The Poor Law infirmaries, at any rate those I know in London, are first-rate institutions—well built, well equipped, and often with a first-rate staff, save only their numbers are so small that they are always engaged in a desperate endeavour to overtake their work.

But for all that, this work in the eyes of the people, and perhaps also in those of our profession, is the least esteemed of any work done by our profession. A stranger to our history might be amazed at this, especially when he learnt that all this good work was done under the aegis of bodies bearing the poetic title "the guardians of the poor." But the poor know history, or, rather, they bear in their memories a long tradition of injustice and of cruel tyranny; so the Poor Law and all that pertains to it is hated. The Poor Law will never live down its past. It is for this reason we doctors insist that medical relief must be completely divorced from all connexion with the Poor Law and married to the proper health services of the country. If the projected Ministry of Health be realized, and succeed only in this one thing, it will have done well.

2. Let us next pass to the second division, the medical treatment of employed persons. Within this are grouped all who come under the provisions of the National Insurance Act and their dependants. These persons are very numerous, their numbers rise as high as 80 per cent. of the community in some areas, and 75 per cent. of general practitioners take part in insurance practice. Yet there is no part of our work which doctors regard with more opposite feelings. Forgetting all the conflict of the initiation of this work, I will take into account only such expressions of opinion as I have gathered during work with the Central Medical War Committee. The divergence of statement has amazed me. In one large industrial city I found almost all the doctors on this service, and one of them said to me, "You could not dynamite us off it"; in another large township, mainly residential, I found only a small minority on the service, and the majority could not be persuaded to help in it even when high patriotism and war service were involved.

There must be some good reason for this divergence—something altogether beside prejudice. There undoubtedly is such a reason. Compare the pre-insurance practice of these typical regions. In the industrial city work was done through a system of clubs. The system, the arrangements, and the remuneration, were reflected in the character of the medical work, and this was such that no man with a proper pride in his profession could take pleasure in it. The insurance service as compared with the club system is a transfiguration, and is appreciated accordingly. In rural and residential areas, and towns not wholly industrial, the insurance service has brought no such improvement in the character of the medical work, nothing that could be appreciated as an advance on former practice; but it has changed the relations between doctor and patient, and introduced a third and somewhat bureaucratic party, and both these innovations are disliked. This divergence in view is bound to be reduced in time, but which way will it go? I think it will inevitably tend to the general view that the practice of the insurance service, as it now is, does not fulfil our medical standards. It certainly does not. I as a hospital surgeon can affirm that. In my out-patient clinic 60 per cent. of the patients are insured persons who attend for treatment that is essential to their industrial efficiency. Yet these persons pay for a medical benefit which makes no provision for these essential needs; they must still apply to a charity. A scheme of medical benefit which does not provide for specialist services and for institutional treatment is no scheme, it is poorer in status than the Poor Law provision which does all these things. Consider the thoughts of the insured person: his child attends the public elementary school, and as of right receives such specialist treatment as may be needed, whether for eyes, ears, throat, or teeth. But the man himself cannot get his eyes examined when they fail at his work; his sore throat will be treated, but he cannot get his Eustachian tubes catheterized; for these, and a host of other necessary services, he must pay himself or apply to a charity. From the doctor's point of view the case is worse. He loses his patient just when his interest in the case is developing. Unlike the parish doctor, or the doctor of the middle classes or of the well-to-do, he cannot follow up his patient, and gain that advance in medical knowledge which comes to both general practitioner and consultant when they meet to consider a difficult case. Hence, if the insurance service is to be appreciated by us doctors, it must give such facilities for practice as will make the work good in our

* An address delivered to the medical profession of Maidstone, by invitation of the Maidstone Division of the British Medical Association, January 13th, 1919, at the West Kent Hospital.

eyes. These improvements become the more necessary if, as is contemplated by some, medical benefit is to be extended to the dependants of insured persons. If the service as it now exists be extended, criticism and hostility will increase; if a real service be provided, the reality of it will disarm criticism.

3. The medical provision for the middle classes is good, save in one respect. The relations of doctor and patient are all that could be desired; the complete freedom of both ensures that the best possible service shall be maintained. But there is one weak spot that seems likely to bulk more largely in the near future. Consider the average £500 a year household. In ordinary sickness treatment can be carried on in the home; but in serious illness, particularly when operation is involved, the difficulty of home treatment is great. It will be greater with the increasing cost of domestic service. Recourse must be had to the nursing home or private hospital. But the establishments which those of moderate means can enter are few, and the few are scarcely on a level in service, cleanliness, and comfort with the home of the patient. The truth is they cannot be. A clean comfortable nursing home with a good nursing service cannot be made to pay as an independent unit, let alone provide a living for the proprietor, within the charges the patient of moderate means can pay. How, then, is the need to be met? In my view it should be met by the voluntary hospitals. To each of these there should be an annexe for paying patients. The experienced managers of the greater hospital would, through a joint administration, nursing service, and house staff, secure economy and efficiency. Further, such hospital homes would secure greater safety for the patient. Under present conditions the doctor has to be his own house-physician, dresser, clinical clerk, clinical investigator, and operator whilst, for twenty-three out of the twenty-four hours he must leave his patient alone, with no trained deputy at hand who can act in an emergency; and the more sought after the doctor the greater is this difficulty. The anxiety on this score vanishes when the patient is in a home which can provide a full staff. The hospital annexe could do this. The idea is no novelty; it is in working order in many parts of the country, both in great and small hospitals. I would urge you to bring these facts to the notice of hospital boards.

4. I shall say nothing on the medical provision for the well-to-do. Their demands will always be met with the best supply that can be obtained within our knowledge. But in the conclusion of my address I want to say something to the doctors who are mainly occupied in this work.

SPECIAL PROBLEMS.

We may now consider some special problems that arise out of the unique conditions of to-day. First let me deal with a certain noisy demand for a State medical service—that is, a State clinical service manned by whole-time salaried officers.

A "State Service."

The advocacy of such a service is nothing new; as students we wrangled over its pros and cons in the hospital common room. Such a service can be produced in a few minutes on paper, and it will look as attractive and logical as any paper constitution. But would these airy creations work? From my judgement of human nature I am convinced they would not. I propose to give two reasons only: Consider the present distribution of medical personnel. There are with the forces some 6 million men, and in the home population some 33 million infants, women, old persons, Grade 3 men, and some other. The need for medical attendance must surely be far greater for the 33 million unassorted persons than for the 6 million picked men; no war risks could possibly be as great as for the multitude five times greater. Yet the medical personnel of the 6 million is nearly as numerous as for the 33! Indeed, I believe if we could count effectives only, and put all the military work done by home civilian doctors into the right side of the balance, the military medical personnel would outweigh the civilian. Why is this? The answer can be given in one word—*Fear*. Fear on the part of the responsible authorities, and a very natural fear; it would possess you and me if we were in their position. For fear of accident they are bound to maintain at all points of the military system such an equipment as will meet every possible contingency. Now if there were a whole-time salaried clinical service, just the same condition of fear would be operative. Indeed, I have seen this fear operating to-day. The department of State responsible for the rationing of medical personnel would be obsessed with the fear of making short provision. Some trivial incident, a queue outside a State doctor's surgery, or a long wait at a central State surgery, would fill the post-bag of the M.P., with the sequelae of questions

in Parliament and a profusion of promises from a distraught Minister. The medical personnel of these islands would be doubled in ten years—and the cost—!

The people will not have State doctors, and if for any reason they are obliged to submit to their services they do not like them, and do not believe in them, just because they are officials. It may seem a foolish reason, but there it is; we do not like officials, whether they be flunkys, overseers, or doctors. As a part-time official I have had not a few amusing experiences, and found myself viewed as an oracle to be obeyed and an official to be combated by one and the same person in the space of a few weeks. At hospital a mother has received with gratitude a warning on the state of her child's eyes and of the necessity for special educational treatment; and a few weeks later bridled with maternal fury at the same warning given by an official—the same, but unrecognized, hospital doctor. How illogical! Not at all. She chose the hospital doctor herself, and so she believed in him. If a whole-time State clinical service ever came it would mean a division of medicine into "established" and "free," and the advantages of status and credit would not be with the "established."

But, it may be objected, arguments, however good, will not prevent a State service coming when the politician drives. As to that I would bid you observe the straws of the recent election. Did the State service men make any show? If there be a party which might be debited with this heresy it is that of Labour, yet two Labour candidates making their appeal to constituents, amongst whom were many doctors, plainly gave their reasons against such a service. I refer to Dr. Peter Macdonald for the Scottish Universities and Mr. Sidney Webb for London University. These men are among the thinkers of their party, and it is thinking that will tell in reconstruction, and not prejudice.

There will undoubtedly be an increase in the provision of State services in this or that direction of medical treatment; but these special services will almost certainly be modelled upon the lines which are proving successful in the treatment of venereal diseases, and these developments will occur when gaps are found in existing medical provision which cannot otherwise be filled.

Demobilization.

In this connexion there is the problem of the settlement of the doctor now on military service. It is said that many of these favour a State service. I do not pretend to know their mind; I do not think any one knows it. If demobilization came *en masse* there would be unemployment, and therefore trouble, but it will be a gradual process. I cannot do better than refer you to the scheme for priority in demobilization¹ which has been evolved by the Central Medical War Committee and approved by the authorities. I believe that we shall find that with a regulated return home of men there will be a satisfactory resettlement in civilian work. Even those who have been away four years, whose practices have suffered most, will, as amongst the earliest to return, find a rapid re-establishment of their work. This belief is based upon our experience of the rapidity with which men already demobilized have regained their work. The reason lies in the present shortage of doctors, and the consequence that much work is left undone that is waiting to be done, and the people's idea of medical treatment is growing greater not smaller. Nevertheless it is our part to help the home-comers by giving up such war-time posts as we may hold. The settlement of men who have never been in practice is a separate problem.

Co-operation.

In all problems of reconstruction we individual doctors have our part to play; we must not wait and see what the State will do, but act for ourselves. One lesson has been forced on me in the work of the Central Medical War Committee: That the work of men in partnership is far safer than that of the single-handed man. I know the stock objection of the difficulty of two men hitting it off; but the partnerships that are desired should be multiple—three, four, five, or six men, either united by a working arrangement or through a closer financial agreement. In multiple partnerships the personal difficulty disappears; whilst the advantages of selection of work according to aptitude, area of working, and provision for leisure, study, holiday, or illness, make each partner a free man such as he can never be when single-handed. The strength that would come through such combination is manifest. There is yet another advantage to the general practitioner. Amongst laymen there is a growing feeling of hostility to the sale of practices, something like the hatred of the sale

¹ BRITISH MEDICAL JOURNAL SUPPLEMENT, JANUARY 11th, 1919.

of "livings"; men do not like to be bought or sold either in cures of souls or in medical practices. With a partnership the difficulty can never arise; men may come and men may go, but the firm goes on for ever! Partnerships, too, will solve the problem of the settlement of the unattached doctor on military service. There are some thousands of these young men who will come home some day; they have been receiving good pay, and should have saved money. Take them into partnership. It will be better to bring them in as colleagues than to find them as competitors on the other side of the road.

Post-Graduate Study.

This is a pressing problem. Thousands of doctors have gone into the army straight from graduation. Their general medical knowledge has been subservient in the army to their special work. How, then, will they be fit for general practice? Again, thousands of doctors from all parts of the world journeyed yearly to Berlin and Vienna for post-graduate study, but they will not go there now. Our own men and those men will all be wanting post-graduate study. Where will they get it? London is the obvious centre; nowhere else is there such wealth of clinical material. But at present there is no sufficient arrangement for the work. It is true special hospitals have done first-rate work in their specialities in the past; and a few general hospitals, notably the West London Hospital, have succeeded admirably in organizing post-graduate colleges even in the face of official cold-shouldering. But this work is as nothing to what is now waiting to be done, if only we have imagination enough to grasp the situation. Some would exploit the graduation medical schools for this work; but undergraduates and post-graduates will not mix in the same field. We ought to secure for post-graduate study the use of half a dozen of the splendid Poor Law infirmaries. These are filled with first-rate clinical material, both acute and chronic, and no use is made of this great field for study. Some may object that patients do not like students. My experience belies the objection. A patient does not object to a long and critical examination of his case in the presence of others, provided it be done with that consideration which is the characteristic of British doctors; rather he resents a look-and-carry-on attitude bred of overwork or indifference. Those who do clinical work in the presence of students know that the critical observation of the student is the best guarantee of continuous work of high quality. Medical post-graduate study is a national key industry, just as much as the making of magnetos or dyes. We have lost it in the past, now is the time to regain it.

CONCLUSION.

I have urged co-operation, the formation of local combines or partnerships, for the private security of doctors. Now I want to urge another form of co-operation for the security of the profession generally in dealing with these great problems. This can be done by each individual doctor joining the British Medical Association and bringing his weight to bear in the forces which that Association concentrates. The influence and weight of the Association amongst those who know and count in national affairs is unquestionable. I could cite a string of war-time responsibilities and conflicts which the Association has borne. The Central Medical War Committee is an example. A committee of the Association was made a statutory body by the insertion of a special clause in an Act of Parliament, and finally became the model for other professional committees.

Doctors in difficulties know the value of the Association: we find membership highest where difficulties are greatest. But I make my appeal to men in varieties of practice little touched by the problems we have discussed, to recognize their responsibility to their profession and particularly to those whose work is surrounded by difficulties—the weaker members of our body. I appeal to consultants, specialists, and doctors whose work lies almost wholly with the well-to-do, to stand in with their brethren now. Do not wait until trouble is at the door—a "scare" membership is an uninstructed membership, a difficulty if not a danger. I appeal also to doctors in the services, especially the home health services, "look unto the rock whence ye are hewn." Your sectional associations are good, but the great association of the profession is a necessity.

THE Census Bureau at Washington reports that the recent epidemic of influenza caused 111,588 deaths in the forty-six largest cities of the United States, and increased the general death-rate of these communities in 1918 to 19.6 per 1,000, the highest rate recorded since 1880, when the death-rate was 19.8 per 1,000.

MEDICAL RESEARCH IN INDIA.

THE Secretary of State for India in his speech on February 10th to the deputation of the British Medical Association, which, in addition to the representations it made with reference to pay, urged the need of further facilities for medical research in India, referred to the steps already taken, and mentioned in particular a conference of sanitary and bacteriological experts, held at Delhi last December, to consider the extension of such activities. Accounts of what the Government of India has done during the last ten years have been published from time to time in the JOURNAL, but in his opening speech to the conference at Delhi the Director-General told a story of the various schemes already on foot to improve health conditions in India, which when thus consecutively stated, shows how considerable are the efforts already made, and encourages belief in his expectation that the Government of India will be willing to find the funds for any sound schemes of development. A summary of what Surgeon-General Edwards had to say will be of general interest.

He pointed out that there were three main agencies—the Sanitary Department, the Bacteriological Department, and the Imperial Research Fund Association.

Sanitary Department.

The sanitary organization was on a purely provincial basis, and the Government of India exercised no direct control over provincial health matters. The Sanitary Commissioner with the Government of India was an advisory officer whose advice was at the disposal of provincial governments when they asked for it. The sanitary organization consisted of provincial sanitary cadres, with, at the head of each, a provincial Sanitary Commissioner assisted by two, three, four, or five Deputy Sanitary Commissioners in charge of the districts or circles into which the provinces are divided. Civil surgeons of districts were, in addition to their ordinary duties, advisers in sanitary matters. The large towns and municipalities had their own health officers locally employed and controlled. A scheme of health administration in the rural areas did not, strictly speaking, exist, but the provision of such an administration was under consideration.

The Sanitary Department was staffed by I.M.S. and non-I.M.S. officers. Of the latter some were recruited from England and some from India. All the Sanitary Commissionerships were reserved to the Indian Medical Service except the Sanitary Commissionership with the Government of India, which was ordinarily held by an officer of the Indian Medical Service. All the Deputy Sanitary Commissionerships—five in Bengal, five in Behar and Orissa, three in the United Provinces, four in the Punjab, two in Madras, three in Burma, and two in Bombay—were open to independent practitioners. In the North-West Frontier Province the administrative medical officer was the Sanitary Commissioner and the Deputy Sanitary Commissionership was reserved for an Indian Medical Service officer. Before the outbreak of war in 1914 the Deputy Sanitary Commissionerships were held by fifteen I.M.S. officers and ten non-I.M.S. officers. At the present time only one I.M.S. officer was a Deputy Sanitary Commissioner, the remaining fourteen being on military duty. There were, also, three health officers employed in Simla and Delhi; these posts are reserved for the Indian Medical Service, as are also the posts of Port Health Officer, Bombay and Aden. In addition, there were twenty specially recruited plague officers of the Indian Medical Service who were employed on plague duty or in travelling dispensaries. Health officers of the first and second class, of which there were some forty-five and ninety-four respectively in the provincial organizations, were not I.M.S. officers.

The Bacteriological Department.

The Bacteriological Department, a central organization directly under the Government of India in the Department of Education, consisted of thirty officers utilized to staff the Central Research Institute, the Pasteur Institute of India, the provincial laboratories, the provincial Pasteur Institutes, and for pure research work. The work done in these places fell into certain well-defined categories: