

features of the method, while originally the declaration was just the opposite. It is not vaccination but the Leicester method in most of its features, which has been abandoned in Leicester. At the same time small-pox has become less fatal, less infectious, and less prevalent, and under these conditions Leicester had only 355 cases in the epidemic of 1892-93 and 715 in 1903-04, showing that with the mild type of small-pox which prevailed in the provinces in these two epidemics the modern method, which has taken the place of the Leicester method, can achieve some measure of success even where there is a large unvaccinated population, and where pressure towards recent vaccination is applied only to contacts.

The Leicester medical officer of health had in 1904 prudently made the reservation that perhaps Leicester had been lucky in having so mild a type of small-pox in its two epidemics. More recently he had scouted his own reservation as to luck. But in fact Leicester, just like the provinces in general, had been visited by mild small-pox of the American type. Leicester, however, had really been fortunate in respect of the skill, activity, and vigilance which had distinguished the work of Dr. Joseph Priestley in the earlier epidemic and Dr. Killick Millard in the later. That had constituted Leicester's luck.

#### *What of the Future?*

More than a quarter of a century ago the lecturer had speculated as to whether small-pox might not die out in the future as leprosy had done, but he had argued then that epidemics had been too recent and too severe to justify any assumption to that effect. During the quarter of a century that had elapsed since that speculation had been indulged in the position had vastly improved, but even yet one did not dare to assume that the danger had become negligible or had disappeared. No epidemic, such as had followed the Franco-Prussian War, had up till now been a sequel to the European War, and the return of the revaccinated armies to this country would really improve the general position as regards national protection. There is, however, a substantial risk of importation by persons from countries like Russia or Poland, with which communication is again opened up.

Wars have been followed by various pestilences amongst the civil population. As recorded by Dr. Prinzing, bubonic plague, typhus fever, dysentery, typhoid fever, and small-pox have been concomitants of great world struggles. The virulent pandemic of influenza has so far been the only outstanding accompaniment of the greatest of all wars, though in Germany, as already noted, the enormous number of Russian prisoners introduced the infection of small-pox, which obtained more hold than that country has ever experienced since it adopted its great system of vaccinal protection. It is too soon yet to prophesy that we have seen the last consequences of the European War in respect of epidemic disease. If, however, small-pox were to invade this country the measures at our disposal and our preventive equipment generally should enable us to deal with it, despite the fact that on the whole we are going back on, rather than developing, our position in regard to general protection obtained beforehand. If the disease is of the mild or American type with low infectivity it is all the less to be feared. If, on the other hand, the old European type of the "seventies" should begin to develop the means for meeting it are at hand. If vaccination and observation of contacts, supplemented by isolation, disinfection, and other measures for checking epidemics, were to prove insufficient, then he had no doubt that the spread of infection would result in the general adoption of the one solitary measure capable of controlling an extensive epidemic. That measure is vaccination, but it will be all the greater triumph of vaccination if even a limited resort to it under the modern method suffices to prevent any outbreak from assuming epidemic or pandemic proportions. Just as Lister's antiseptic system finds its greatest triumph in the aseptic system which evolved from it, in the same way success of the modern method of small-pox control will be the greatest triumph of the Jennerian prophylaxis.

BRISTOL CHILDREN'S HOSPITAL.—Mr. H. H. Wills has recently presented over an acre of land immediately adjacent to the Children's Hospital for the benefit of that institution. It is proposed to erect a nurses' home for the staff of the hospital.

## THE FUTURE OF THE TUBERCULOSIS PROBLEM.\*

By P. C. VARRIER-JONES, M.A. CAMB., M.R.C.S.,  
L.R.C.P.,

HON. RESIDENT MEDICAL OFFICER, CAMBRIDGESHIRE TUBERCULOSIS COLONY, PAPWORTH.

IN his opening remarks the speaker said:—I will attempt to deal with a part of the problem only—a part in my eyes perhaps assuming undue proportions and importance, but a stone which, if built into the building we are all striving to erect, may assist in strengthening the structure and help to make the work of others easier and its completion somewhat nearer of attainment. A broad view of the whole of our problem is essential, but at bottom the problem is one of the individual. One consumptive may resemble another in the extent of the lesion in the lung, but differences of temperament, character, social position, not to mention varying degrees of resistance to the disease, exist and have always to be considered. Of course, the problem has its financial side, and a very important side it is, but it cannot be insisted too strongly that the question at issue is of far greater complexity, and unless this is recognised all our calculation is work in vain. All of us are aware of the extent of the problem. The question is, can we prevent the spread of infection without which there can be no further extension of the disease?

#### *Inadequacy of Present Measures.*

It is unfortunately necessary at this stage to clear the ground somewhat, for there still exists at the back of the minds of some a doubt as to the infectiousness of the disease. We here, no doubt, are firm believers in the infectivity of tuberculosis—that it is contagious, that the spread of human tuberculosis (i.e., infection with the human bacillus)<sup>1</sup> is by direct, or in some cases indirect, means from one human being to the other. We give this hypothesis our lip service. Our words do not come up to our faith. We have certainly honoured the statement, but in the breach rather than in the observance. How often do we hear that the chief rôle of sanatoriums is that of education; that the patients who are discharged after a short stay have been instructed in the way of life and know how to live a life perfect in hygiene and adapted for the prolongation of working days. But what opportunity have they to put the precept into practice? Are not veritable sources of infection everyday, sent broadcast over the land? What steps are taken to prevent the spread of infection when we allow these unfortunates to wander at will? No doubt we keep the spark of life alight by small doles of money or food, we find underpaid jobs for them, we allow them to be exploited in the labour market, and we give all these endeavours a name of high-sounding quality and call it "After-care."

We all know how rapidly a consumptive who has had treatment at a sanatorium descends the social scale. The interval between treatment in an institution and the case becoming "advanced" is often very considerable, and it is throughout this time that nothing, absolutely nothing, adequate is done to prevent infection. Of course, I shall be told that I have forgotten our important service of health visitors and sanitary officials, who are daily making strenuous efforts to prevent the spread of infection and with much labour are paying daily visits to the homes of these people and instructing them in the way they should go. I agree, but they are engaged on a superhuman task; the patient's life is so varied, the circumstances so changeable, that it is impossible to secure an amount of supervision that can have any appreciable effect upon the spread of infection.

The middle case, coughing often—whether at work or in the home, or in places of amusement,—is an ever present source of danger and, unless sufficiently isolated, must be a centre from which dissemination of the disease takes place. The treatment—a term as elastic as it is vague, for in its true sense it can have no meaning when it refers to a consumptive patient in bad surroundings—is of no avail in preventing the spread of infection.

\* A paper read before the Royal Institute of Public Health.

<sup>1</sup> The bovine bacillus being responsible for a very small proportion of pulmonary tuberculosis, probably not more than 1 per cent. (Cobbett).

*The Difficulty of the Problem.*

If it were our object to perpetuate the disease, there could surely be no more certain method than the one we now adopt. We have, indeed, adopted a faith blindly, or we do not accept a faith we profess. To say that it is difficult to convert our faith into works is to beg the question. That it is difficult should not make us shut our eyes and go gaily on in the opposite direction.

It may, of course, be the fear that after all we are not quite sure that the disease *is* infectious, for what is the evidence? Or, again, it may be the knowledge that the task to which we have put our hand is, indeed, impossible of attainment. In other words, we accept it as quite impossible to control the sources of infection, and that these sources are so numerous and unknown that no method of segregation could be devised to include not all, but even a small proportion, of them.

Is it a fact, for example, that just as there are carriers of the germ of diphtheria, so there are carriers of the tubercle bacillus, who go through life without any symptoms which might at any time attract attention, and yet are the means of handing on the disease to several, nay many, persons. I might illustrate the point by a concrete example. A Cambridge undergraduate, a fine athletic man, developed what was diagnosed as an attack of influenza. Its course was prolonged and there was cough and expectoration. The sputum was repeatedly examined, with negative results. The patient recovered completely. Some months afterwards he suddenly coughed up a mass of sputum, and being of a curious turn of mind brought it to the pathological laboratory with a request that it should be examined. Under the microscope the specimen was almost a pure culture of tubercle bacilli, so numerous were the rod-shaped organisms. The patient was apparently in the best of health.

It may be argued that such a case would be very difficult to discern, very difficult to isolate, and it may well be that amongst the well-to-do, those who live under the best conditions, the disease is spread by such an individual as I have just described.

*Tuberculosis Does Not Weed Out the Unfit.*

That insanitary houses, want of food, lack of the necessities of life are not the only predisposing causes of tuberculosis seems clear, for tuberculosis takes its toll from the rich as well as from the poor, from the athletic as well as from the poorly developed. This leads me to another point. It is often argued that tuberculosis is the great means adopted by nature to weed out the unfit. Such a statement is grossly inaccurate; it has done incalculable harm in preventing our legislators and the public at large from seeking the adoption of right methods of dealing with the problem. Tuberculosis never has been, and never will be, the means of improving the race—no disease has ever helped to such an end, and no disease ever will. It is the victim of tuberculosis, when that disease has worked its will, and not until then, who is the unfit. He has been made unfit by the disease, he was not unfit before he was attacked.

Recently, making a careful examination of the histories of all the patients admitted to the Cambridgeshire Tuberculosis Colony, it came as a surprise to me to find how high was the percentage of men who had led an athletic life before they were attacked by the disease. Many were conspicuous for the skill they had once displayed either on the football field or in some other strenuous pursuit. Looking back at one's own undergraduate days one is struck by the news of the illness, or even in some cases of the death from tuberculosis, of those whose physique was universally admired and whose prowess in athletics was specially commented upon.

Again, amongst soldiers discharged from the Army suffering from pulmonary tuberculosis it is the exception to find that those who are admitted for treatment are those who were placed by the Recruiting Medical Boards in Grade 3. Upon investigation it is clear that the men who are now invalided out of the Army on account of tuberculosis are those whose physique was particularly good and whose general condition gave no easy or obvious clue to the presence of a lesion of a tuberculous nature in the lung. Would it not be well that this investigation should be prosecuted in other localities? Were this done I have little doubt that my Cambridgeshire results would be confirmed.

We know that those who have an exceptionally well-developed brain, those endowed with mental capacity far

above the average, fall a prey to the disease in no fewer numbers than do those not so endowed. We have merely to call to mind such names as John Adington Symonds, John Richard Green, Shelley, Keats, Chopin, Mozart, Robert Louis Stevenson, Jane Austen, Charlotte Brontë, and Washington Irving, amongst a host of others, to convince ourselves that if the brainless ones are often attacked by the tubercle bacillus, those to whom genius has been attributed are attacked in equal, if not in greater, proportion.

Look at the question how we will, we are forced to the conclusion that the tubercle bacillus is no respecter of persons, the strong and the weak alike are attacked; there is no question of any special susceptibility of the feeble and the weeding out of such in order that the race may be improved. The error so widely promulgated has done incalculable harm.

*The Method of Attack.*

The crux of the question is the problem of the "middle case." First the spread of infection must be limited. Our energies should be concentrated not so completely on the symptoms of the diseased—those who have well-defined symptoms and signs, in whom the lung tissue has broken down and by whom the bacilli are freely expectorated—in futile attempts to "cure" individuals. Rather must we devise and press forward a comprehensive scheme whereby the individual for whom we are arranging to care shall be placed in a position in which he may have the advantages of treatment which may bring about the arrest of the disease whilst at the same time he shall be rendered inert as an infective centre to the community. When we as a community realise that the segregation of consumptives during treatment can be made a practical proposition we shall have advanced a long way towards the elimination of infection. The advice to treat early cases is excellent, but until the mass of medical knowledge accumulated is sufficient to ensure this advance little progress along these lines can be made, though all efforts to attain it should be encouraged.

The greatest difficulty met with in carrying out after-care of the majority of these "middle" cases is the provision of suitable employment and occupation for them. Any frequently recurring breakdown, any lack of sustained energy, any want of power and physical force must unfit the worker to "carry on" under the ordinary workaday conditions in which the normal person works. No one realises this more fully than does the consumptive. Why, then, does he try to exist under such conditions? Simply because there are no others under which at present he can exist. No practical proposition has been placed before him. To maintain these cases in moderate health the equivalent of a living wage they must have, although they cannot be employed when a profit-and-loss sheet has to be drawn up and balanced. We cannot expect them to be a paying proposition. I have always maintained, and I believe that I have been justified in maintaining, that the labour of a middle case of consumption must be subsidised and that many of our failures in the past have been due to the fact that, consciously or unconsciously, we have always taken the consumptive at his face value. We have been too much influenced by appearances and feel that he ought to do more work than can really be expected of him.

We have only to glance at a group of consumptives to feel almost convinced unless we are "on guard" that they are a group of slackers. They appear so fit. Yet on applying the stethoscope our opinion is, or ought to be, instantly modified. Patients suffering from epilepsy are utterly incapable of earning a living under present economic conditions; a consumptive with moderate disease is in exactly the same position. We must bring our minds to realise this. When we have also educated the consumptive to realise this, we shall soon recognise that both from the individual point of view and from that of the community *we must call into existence a set of conditions suitable to the patient's needs.*

Such conditions are to be found in a colony. We must realise, difficult though that may be, that the medicine of yesterday has been satisfied with the treatment of symptoms, with the relief of individual suffering. In tuberculosis, at any rate, is it not time we started at the right end, to give up trying to heal symptoms, to catch up in a losing race?

*Provisions Required at Colonies.*

Colonies to be successful, to meet present needs, must include the sanatorium or rest house, and must extend the activities of sanatoriums both downwards and upwards. They

\* must receive advanced cases that will not consent to enter a home for the dying, but will grasp at the last straw of hope such as can be held out at a sanatorium. Opportunity for healthful work and healthful surroundings must be offered to those unfortunates who can no longer compete with the fit men in the world at large.

The early cases receive treatment and training, and with the added inducement of remunerative work may be kept under prolonged treatment and fitted to return to the world with the disease arrested. But the whole system must be linked together into a concrete whole. The usual conception of a colony is a place where tuberculous cases can be sent, there to work for a wage which is little more than pocket money, but where there is no room for cases that present any physical signs of disease. Indeed, so limited becomes the selection, due to the rigid medical examination, that few cases can be submitted to this special building-up process; and when to this is added the enormous difficulty of persuading a man to undergo training while a wife and family live on the bare necessities at home, we see that if this conception be accepted the scheme must be of very limited scope, more limited even than that of the sanatorium. When, further, we consider that no practical man believes that he can be trained as a practical farmer or small-holder in a few months, and that even 12 months is not sufficient, we begin to appreciate the reason that so few men will consent to undergo the ordeal.

We know and they know that a poorly trained man stands no possible chance of earning a living wage in the open labour market, and a poorly trained consumptive even less. It is obviously far better for such an early case (I am speaking of the tubercle-free patient, devoid of physical signs—the usual candidates for such a colony) to be so financed by an after-care association on the Cambridge principle that he may continue to work at his own or some allied trade. As yet he is not a danger to the community; when he does become so, if under dispensary supervision, he can be persuaded again to enter an institution.

#### *The Case with Active Disease.*

When we come to deal with cases of the next category the story is very different. The man has active disease, albeit somewhat retarded by treatment at a sanatorium. He is refused admission to a colony such as that just described, he cannot without a serious relapse return to his original trade, he cannot be suitably helped from outside by an after-care association as his relapse is certain, and because of the extreme difficulty of finding suitable employment for him. These are the cases which, unfortunately, are now assisted with small doles of money and food and an underpaid job. Better far that such assistance should cease and the patient become an inmate of an institution. The man receives but palliative treatment, and the community no real protection against infection.

The pity of it is that we do not realise that under favourable and well-defined conditions the patient is capable of doing more work. Such a case should, indeed, excite our sympathy. Here a man obtrudes himself on our notice six days out of seven—a man who cannot find his place in the world, but who, left to his own devices, disseminates the disease to his family or neighbours and fellow members of the community. He is the central factor in the problem of tuberculosis, a far more important factor than the advanced case—the bedridden case—where, although the danger of direct and concentrated infection is greater, it is so circumscribed that it is limited to a small—family—circle.

In the past we have been content to limit our endeavours to the favourable case and to leave untouched—untouched as far as effective treatment and the prevention of infection are concerned—the middle case. The reason for this is not far to seek, we have been blinded by the transitory results of sanatorium treatment and have shut our eyes to the wreckage which such treatment has left in its trail. Very naturally we have no liking for disappointing results. The individual case which goes steadily downhill is, it must be confessed, a disheartening proposition if we are content to focus our attention on the treatment of the individual.

It is obvious that our attention should not be so focussed, but that we should survey the whole field in order that we may make up our minds, for if we do not so make up our minds somebody else will soon do it for us, that it is necessary, in the name of humanity and to protect ourselves, to care for these cases. Once we view the problem from this

standpoint and grasp the essential fact that the disease is spread by the middle case, we cannot escape the logical conclusion that such cases demand our care and attention, and at once.

Admitting all this, the fear still possesses us that, so gigantic a problem requires almost superhuman effort for its solution. Sir Arthur Newsholme holds that by the admission of advanced cases from amongst the poorer classes into the wards of certain infirmaries the spread of the disease has to a certain extent been lessened. Surely this points the way to the next step—the segregation of these middle cases in colonies, where, with the best chance possible of recovery, they also cease to be a source of infection to others. If by the voluntary segregation of advanced cases a perceptible improvement has been made, is it not logical to assume that we may expect still greater improvement when some method of segregation is found for the middle cases, those who find themselves stranded and unfitted for the struggle of existence in the world as at present constituted.

#### *The Method Adopted at Papworth Colony.*

Objections and reasons that such a proposal as that of the Cambridgeshire Tuberculosis Colony must be difficult of realisation are, of course, put forward. Allow me to take, as a concrete example, Papworth Colony, where experiments are in progress to test the conditions under which men will remain in the country although used to town life, and not town life only, but London life.

My experience is that the first great question to be considered is that of a wage, or payment for work done. The difficulties surrounding this question are many and complex. To begin with, we are confronted by certain provisions of the National Insurance Act in which it is expressly stated that any man working for a wage forfeits his sickness benefit. Latterly, however, since it has been the practice in some institutions to allow patients to work, the dividing line between remunerative and non-remunerative occupation becomes difficult of definition. No objection can be raised to the institution paying to an after-care association a subscription equivalent to the value of the work done, nor can there be any objection to that association paying over to the patient a sum of money to supplement the sickness benefit and thus enable his dependents to live in decent circumstances while the man is under treatment.

This plan has been adopted at Papworth with success. This method of procedure opens out very considerable possibilities, especially for the ordinary insured person. The usual plea put forward by an insured person, especially a married man with dependents, is that it is impossible for him to live in luxury at a sanatorium while his wife and children at home are asked to exist on 10s. a week, a sum sometimes supplemented by a dole from the Charity Organisation Society, but an extremely unsatisfactory method. In the method adopted at Papworth, the sickness benefit can be augmented within limits by *the man's own earnings*, and he has the satisfaction of feeling that even whilst undergoing treatment he is making a definite contribution towards the upkeep of his family. This method is new, but I hope and believe it will be found to be thoroughly sound.

It will thus be seen that a very definite link is forged between the colony and the after-care association. The inducement to earn a wage is so great, however, that it is difficult to restrain the men from doing more hours of work than are prescribed. So contrary is this experience to that of sanatoriums that I fear I may not be believed, but it is a fact. In our boot-repairing department during the first two months, while the patients were apprentices, it was a matter of surprise that the men could earn 12s. per week of 32 hours, at the rate of pay current for boot repairing in Cambridge, and this rate the men receive. Further, the two apprentices, one a Limehouse labourer, the other a college cook, have been taught by a practical boot repairer—a London patient. This man has not only taught these men, but has *earned* his money as an instructor at the same time.

#### *The Solution of the Question.*

This makes clear four points: (1) That to change a man's trade is a practical proposition; (2) that the work can be carried on under proper hygienic conditions; (3) that the public have no objection to having their boots repaired by consumptives; and (4) that the labour must be subsidised to

make it a practical proposition for the working man. The moral to be drawn from this is, that once a practical proposition is placed before these men—a sound commercial proposition, not one from which they think the institution is making a profit out of their labour—they will seize the opportunity, for they know they are benefiting both from a health point of view and financially; but unless you can make the latter clear you can expect no success. I must again insist that these men are “middle” cases; that they have tubercle bacilli in their sputum, and are cases which, left in their ordinary surroundings, would soon fall to the bottom of the scale.

When we take into consideration the fact that these men, being ex-soldiers, have a full pension of 27s. 6d. per week, it cannot be a matter of surprise that they consent to remain. We have stated that the colony can and does offer better conditions of work and that these involve no impairment of a man's self-respect. Applicants, of course, are not wanting, but the State has the assurance that in return it is getting a good bargain in the elimination of infection.

Similar results are being obtained in other departments, and from them it is possible to draw only the same deductions. The difficulty is that of demand and supply, and it is here that great effort is needed and a very good business brain required, but at present inquiries for goods and orders placed with us keep the departments busy. It will be said that this is the greatest difficulty of all, but it has been repeatedly stated that the greatest difficulty was to get the men to work. Having demonstrated that this is not the case, I have confidence that the other difficulty will also be got over.

The real solution of the question is a State subsidy for tuberculous labour and the introduction of labour-saving appliances to lessen the disadvantage under which a consumptive suffers. If that labour can be turned to account, not in the way of reducing the cost of running an institution—who ever thought of reducing the cost of a hospital by employing chronic invalids on the staff?—but in making it contribute to the wage of such labour, the other part being forthcoming from the State as its share of payment in return for the prevention of infection, it seems to me that the problem is well on the way to solution.

In any case, let us get rid of the fallacy that tuberculous labour can be made to pay; of the idea that all the money paid by the State is for the alleviation of symptoms. Further, let us concentrate on humane and voluntary segregation by making it so attractive that few consumptives will face the difficulties and dangers of open competition if they can take advantage of the facilities now provided. Public opinion, educated on these lines, will soon insist on being rid of a source of infection so dangerous to its well-being. Once the facilities are offered, if offered in no miserly spirit, we may see the dawn of a new era in the treatment (using the term in the widest sense) of the disease.

#### *Work in Other Departments.*

The results of the carpentry and joinery departments are of considerable interest. At the head of the carpentry department is a trained carpenter and joiner, who directs the work and instructs the patients. We are now convinced that useless work put forward merely as training is waste of time and energy, but we find that immediately a patient comes to the shop he is ready for light work on a definite job. We have, however, to reverse the usual process of training, for in the colony workshop he is instructed in the fitting together of parts which have already been prepared by those who have been longer at the work and have been passed on to the heavier grades of labour. In other words, the process is reversed, but by means of a method whereby a patient is set to make one particular part—in fact, is placed on repetition work—no time is lost and his labour is at once remunerative. His interest is also immediately aroused, as his skill develops so his strength increases, and the two factors combined place him on a higher scale of productive work.

It is my experience that very few patients fall below the 25 per cent. standard even at the beginning of their instructional career, and the percentage increases monthly. On repetition work they may ultimately attain an average of 50 per cent. and even rise to 75 per cent. I suspect that our method has, perhaps unconsciously, been based on the experience of munition works, but from whatever source it has come it undoubtedly meets with very considerable success.

Up to the present time disposing of our produce—shelters—at the price quoted in the open market, we could during the major portion of the time have paid a wage not much below the trade-union rate. As an example, I would take the accounts of the last year to illustrate the financial side of our industry. The total receipts of the carpentry department allowed of a profit of 20 per cent. to be paid in wages. There were working in the shops during this period 12 unskilled patients, and after paying instructors' wages there was a considerable sum available for division, as a wage, amongst the 12 patients. In order to safeguard ourselves when we come to undertake other work—we have brought the shelter-making repetition methods almost to a fine art—we stipulate that if we must turn out work at a competitive price we must have a subsidy of 10 per cent. to 15 per cent. in order that we may pay our patients the wage desirable and necessary. We have not needed this subsidy so far, but our success must not blind us to the fundamental fact that tuberculous labour must be subsidised, and even considerably subsidised.

#### *The Question of a Subsidy.*

The working day is but six hours, and even if the labour could be paid for at a rate equal to that of a trained healthy person, the total at the end of the week would be insufficient to support a man, his wife, and family in the way in which they should live. It will thus be seen that the question of a subsidy is a very necessary and urgent factor in the problem. We must not look upon this subsidy as a dole for the relief of the patient, for on this the amount would, according to our past ideas, be too great; rather must we look upon it as money expended for the protection from infection enjoyed by the community. Far better to have this assurance, than to have the depressing picture of a family in poverty and distress, vainly endeavouring to struggle on with a varying amount of poor relief and charity without any such protection. In a colony such as we are trying to build up at Papworth it is probable that the families of our colonists, being easily accessible, may be so trained and educated that they may be made stronger and safer for the struggle of life than if they were allowed to remain under undesirable surroundings of poverty and want. However that may be, there is hope of a brighter future even though time may unveil some of our errors.

May I close by quoting the words of a consumptive—Washington Irving.

“What after all is the mite of wisdom that I could throw into the mass of knowledge? Or how am I sure that my sagest deductions may be safe guides for the opinion of others? But in writing ... if I fail, the only evil is my disappointment. If, however, I can by any lucky chance, in these days of evil, rub out one wrinkle from the brow of care or beguile the heavy heart of one moment of sorrow. If I can now and then penetrate through the gathering film of misanthropy, prompt a benevolent view of human nature and make my reader more in good humour with his fellow beings and himself, surely, surely, then, I shall not have written in vain.”

## THE Y.M.C.A. AGRICULTURAL TRAINING COLONY, KINSON, DORSET.

BY NOEL D. BARDSWELL, M.V.O., M.D. EDIN.,

F.R.C.P. LOND.,

MAJOR, R.A.M.C.(T.); MEDICAL ADVISER, LONDON INSURANCE COMMITTEE.

DURING the summer of 1917 the Council of the Y.M.C.A. established a farm colony at Kinson in Dorset for recently discharged Army men with early or arrested tuberculosis. The Council secured a small property which had served as a private sanatorium, situated some five miles from Bournemouth and Poole, upon sand and gravel soil and enjoying a good record of sunshine and rainfall. The land consists of a farm of 33 acres, made up of 20 acres arable land, 9 of grass, 2 of woodland, and 2 devoted to poultry. The farm buildings include a small house, granary, hay and corn barn, stabling for three horses, cart shed, chaff-cutting and root-pulping shed, cow-house with standing for ten cows, three calf booseys, piggeries, and other buildings.

The colony buildings consist of a central block constructed of brick and tile comprising dining-room to seat 50 persons, recreation-room, lecture-room, kitchen, scullery, stores, linen-room, and other offices. Sleeping accommodation for 22 patients is provided in wooden chalets, each in two sections, containing two beds. The quarters for the resident