of light on the bacillus in the prevention of consumption. The now known power of the sun offers us a ready and practicable means for commencing at once the reduction of the sum of phthisis—by cure as well as by prevention. There is no occasion to wait for further research.

In his address to the Congress in Berlin in August last year Koch said: "The numerous researches as to the effect which heat, cold, drying, chemical substances, light, &c., have on the pathogenic bacteria which have no spores have yielded many results which may be used for prophylactic purposes. Among these factors light appears to me to be one of the most important." He then referred to his experiments with sunlight and daylight, but he omitted to indicate the precise way in which chemical light is to be "used for prophylactic purposes." He was about to disclose the discovery of tuberculin, and could not, it may be, delay over a side issue. In the last chapters of my book I entered into the somewhat complex question of the employment of sunlight in prevention. It is a wide and almost unworked field; but I will only observe here that, as I had reached the inference that the locality in which man is generally infected by the bacillus is the bedroom, and the further inference that chemical light, by killing the bacillus, is the main cause of the differentiation through which certain bedrooms in a house shall be infested with the vegetation, while other bedrooms in the house shall be free from it, it followed from these two premisses that the introduction of an amount of light into the infested bedrooms equal in chemical power to that let into the wholesome bedrooms would preclude the growth of the bacillus in them and make them consumption proof. It was a forced conclusion, too, from the premisses that man had inadvertently brought consumption on himself by unwittingly excluding a sufficiency of light from his bedroom, and that, consequently, the limitation of phthisis is or has been dependent on, or the sum of phthisis is or has been determined by, the number of under-sunned bedrooms in a community. As, however, the premisses were merely inferences from known data, and were unsupported by new facts, I was not unprepared to find that the speculative element in them had seemingly appeared to the critics to supersede the necessity for looking to their soundness or unsoundness. But now that the saprophytic life of the bacillus and the sun's inimical influence on its growth have been determined, it may not be held to be so wildly speculative to submit that the bedroom is the site of efficient infection, and that the sun has in all countries, in all ages, governed the incidence of consumption. Still, the view is too strong meat at present, perhaps, for easy assimilation. Fortunately the value of the application of light for prophylactic purposes does not turn on the question whether the bacillus grows or merely exists in bedrooms. The coming school of saprophytists may therefore meet the reigning school of parasitists on common ground without any sacrifice of principle. Koch has plainly indicated that the places in which the largest amount of sputum is presumably present are the places occupied by the phthisical. This simple inference, indeed, wants but little authoritative support. Therefore, passing over the somewhat vague reference to "pathogenic bacteria which have no spores," Koch's object and intent in suggesting the use of light prophylactically were, apparently, to kill the spores of the bacillus in sputum by flooding bedrooms and other places with sunlight and daylight. If this interpretation of his few words is the true one—and I see no other—his mode of prophylaxis is, in effect, my scheme of prevention. And as the difference in the principle upon which it is proposed to use sunlight is no bar to its use, preventive medicine has now a most potent means ready to hand for precluding a part, and not a small part, of the whole sum of phthisis.

Of course, light is only one means to the end; and where its use cannot well be had there are numerous agencies that will destroy the parasite (or keep down the saprophyte) in the bedroom, though none, perhaps, are so cheap, handy, and agreeable as the sun's chemical rays. Nothing thorough will be done, however, I suppose, in the way of stamping out phthisis until it shall be demonstrated that the dormitory is the great source of tuberculosis. The would-be curers of consumption will then see that their remedies should have been applied, not to the patient, but to the patient's bedroom—even though the procedure might have been open to the sarcasm that it was akin to anointing the weapon, instead of the wound, with the salve made with Sir Kenelm Digby's

"sympathetic powder." It will further be seen how it is that the phthisical who have been cured or patched up away from home—at consumption hospitals, in the Engadine, during a sea voyage, by tuberculin, &c.—are almost invariably reinfected after a time on their return home. Nay, even now, if Koch were to seek for the explanation of the greater refractoriness to his cure and to the larger mortality from its employment in some institutions than in others, he might possibly find it in unsunned wards. To begin with, in Berlin there is La Charité, where, as Professor Virchow observes, the deaths after inoculation with tuberculin are relatively so numerous.⁵ Are the wards for the inoculated so airy, light, and sunny there as to ensure that the sleepers in them do not inhale relays of living tubercle bacilli, to find lodgment on denuded surfaces and to start tuberculosis anew?

I am, Sirs, yours truly,

Melbourne, Victoria.

THE LUNACY LAW AMENDMENT ACT AND THE RECENT ACTION AT GUILDFORD.

To the Editors of THE LANCET.

SIRS,—It may appear somewhat out of place for me to agree to the suggestion of Dr. Sutherland, as contained in THE LANCET of Saturday last. Let me explain my reason for giving assent. Proposals were made that that action should be compromised by the payment of a comparatively small sum. I should have agreed to this in preference to suffering the annoyance which such an action as the one lately tried at Guildford (not Croydon) must entail. But in the mean time further assistance was obtained by the other side, and the compromise was refused, except at a much increased cost. The action therefore went on. If medical men as a body show that they will not allow a professional brother to be assailed as Dr. Dukes and I have been, lawyers will be more chary of taking up such cases, feeling sure that no compromise will be agreed to. I plead for Dr. Dukes, who has been much distressed by the whole circumstances of the case. Believe me to be, with thanks for your advocacy,

Yours truly,

ALFRED CARPENTER.

P.S.—If I had not been out of health I should have been delighted to have fought out the question in the interests of justice and of the profession.

Croydon, Sept. 15th, 1891.

ALPINE CLIMBING.

To the Editors of THE LANCET.

SIRS,—All of us who love the Alps ought to give thanks to your correspondent for his delightful article "Among the Higher Alps," which appeared in last Saturday's LANCET. The caution he imposes on would-be mountaineers is quite needed in view of the great opening out of mountaineering resorts in Switzerland within late years by rack-and-pinion railways. When at Zermatt this summer the opinion was frequently expressed that the newly opened railway to that place would, by bringing up numbers of raw novices, lead to many accidents. Your correspondent possibly fails to impress upon us that mere courage and endurance will not prevent accidents. Prudence is always essential, for most accidents have been due to want of this important quality, and many accidents have occurred from sheer thoughtlessness. Although, as mentioned, Alp climbing is a pursuit essentially for vigorous youth or early middle age, I have known men far on in life excellent mountaineers, and I recall particularly a Manchester merchant who never climbed a mountain until in his sixty-second year, and ascended the Matterhorn in his sixty-fifth, and is yet, when nearing seventy, still a climber. I would scarcely, as your correspondent does, place Monte Rosa among the mountains for experts only; it is a fatiguing mountain to climb, but until near the summit no danger can occur, and even then, unless the weather be unfavourable, the danger is not great. Your correspondent's remarks on clothing are very wise, and from my own experience I can fully endorse them; if too heavy or warm, part of the clothing can easily be carried until required. Guides generally have a knitted helmet, such as fishermen wear, to pull over their heads and necks in wind and snow, and excellent articles of clothing they are, and readily stowed away until wanted. The food question mentioned by your correspondent may be left to individual choice. When the

summit is gained I think one feels inclined for some solid food, and sandwiches, cold chicken, &c., are very grateful. Alcohol, I think, he rightly condemns, either before or during the ascent, for, although many climbers have told me they find it very beneficial, I have always considered that, while it numbed the sense of fatigue, it diminished muscle and brain power. Guides certainly are very fond of both wine and brandy on the expeditions, and usually, I believe, prefer white wines; but such fluids as cold tea seem to me preferable. Cold tea occasionally freezes when one is caught in a snowstorm, but one always would carry a little brandy as a reserve. Finally, your correspondent condemns drinking any fluid freely during a severe ascent. This is open to question. Many mountaineers take small quantities of water very frequently when climbing; at all events, so long as water is found.—I am, Sirs, your obedient servant,

G. ARMSTRONG ATKINSON.

Newcastle-on-Tyne, Sept. 14th, 1891.

THE LUNACY LAW AMENDMENT ACT AND THE RECENT ACTION AT CROYDON.

To the Editors of THE LANCET.

SIRS,—As a neighbour of Drs. Carpenter and Dukes, I addressed a letter to the *Norwood Review* on the above subject, on seeing a report of the case in that paper. My object in writing to the lay press had been to enlist the sympathy of the public in behalf of the two well-known senior practitioners who were the unfortunate medical defendants in the action, and avert, if possible, any public prejudice which the case might have created in the neighbourhood against them. I am glad to find now that the strong hand of Dr. Sutherland has taken up the matter, and trust that his suggestion to open a subscription list will be carried out. I may also add that my suggestion to transfer the responsibility of signing lunacy certificates to specially appointed experts was not intended as a low bow of deference to the specialist, or in any way to question the qualifications of the general practitioner, but as a protection simply from annoyances of this sort, which are exceedingly harassing to the hard-worked practitioner, but inevitable in the present unsatisfactory state of the lunacy laws. Had Dr. Sutherland quoted my words a little more fully this explanation from me would have been unnecessary.

I am, Sirs, your obedient servant,

J. A. AUSTIN, M.D.

West Norwood, S.E., Sept. 14th, 1891.

THE VENTILATION OF THE FRENCH AND ENGLISH HOUSES OF PARLIAMENT.

(FROM A CORRESPONDENT.)

SINCE the building of the Houses of Parliament considerable experience has been acquired and knowledge gained concerning the ventilation of public buildings. Doubtless if this legislative palace had to be constructed again better measures would be taken to secure good ventilation. Nevertheless, and considering that the science of ventilation was not so fully developed when the Houses of Parliament were constructed, English legislators may be congratulated on the good sanitary conditions they enjoy while attending to their duties in the House of Commons or in the House of Lords. The ventilation is not perfect, and there have been good reasons for improving the drainage; still, in both these respects, and in spite of the defects that still exist, the English Houses of Parliament have served as a model to other nations. Engineers from all parts of the world have been to Westminster, and, under the courteous guidance of Mr. Pim or the late Dr. John Percy, have visited and admired the means taken to ensure the ventilation of the Houses of Parliament. But, as the knowledge of sanitary science has increased, we have become more difficult to please, and now a demand for greater improvements has gone forth. A Select Committee has been appointed to report on the ventilation of the House of Commons. It has issued a report and suggested alterations, which it is estimated will cost £4725. The principal feature of these alterations will be to increase the size of the intake

for fresh air by condemning eight rooms on the basement floor, now used for the storage of parliamentary papers. A more powerful air propeller is to be provided, and additional facilities for the admission of air into the House itself are to be obtained by making openings beneath the Members' and the Ladies' Galleries, so that the air may enter through fretwork at a higher level than at present. The ventilation of committee rooms is also to be rendered more effective.

By such measures additional comfort and health, it is confidently expected, will be secured; and even if the advantage of these proposed alterations does not prove as great as anticipated, members of Parliament will still work under, comparatively speaking, favourable conditions. If, however, we proceed from Westminster to the Quai d'Orsay we shall find a very different state of affairs. The members of the French National Assembly have indeed good cause of complaint, and they have not the same prospect of realising any very effective improvement. Simultaneously with the inquiry of the Select Committee on the Ventilation of the English House of Commons a Parliamentary Commission was appointed to examine the present arrangements of the French Chamber of Deputies. M. Emile Trélat was instructed to study technically the ventilation of the Parliament house. It would be difficult to find a more competent authority, and, most fortunately for this purpose, M. Trélat has been recently elected a member of the National Assembly by the fifth arrondissement or Latin quarter of Paris. He is one of the most active sanitary reformers of France. Needless to say, he was one of the most prominent among the French delegates who attended the International Congress of Hygiene recently held in London.

The report drawn up by M. Trélat on the ventilation of the French Chamber of Deputies is now before us, and constitutes a most interesting document, in which scientific facts are related in so easy and graceful a style that what would otherwise become dry reading is quite interesting even to the untechnical mind. The French Chamber of Deputies, which, as most visitors to Paris know, stands facing the bridge and Place de la Concorde, and is exactly *vis-à-vis* to the Madeleine Church,—was built towards the end of the Restoration, and so planned as to provide seats for 300 members of Parliament. But when Charles X. was driven from the throne, the number of deputies under Louis Philippe's constitutional régime was increased, and was nearly doubled under the Republic of 1848. Under the present Republic place has to be found for 578 seats, where formerly there had been but 300 comfortable arm-chairs. The surface of the House measures 467 square metres; thus there is but 80 centimetres square of space for each deputy. In the primary schools of France the minimum allowance of space per pupil is 1.25 metre, and this, whenever possible, is increased to 1.50 metre. The back of the deputy's seat is 51 centimetres wide; the little desk in front of him 46 centimetres wide, and only 25 centimetres deep. The desk is not big enough to hold the official documents &c. which a deputy generally has to carry about with him. Between the back of the seat and the front against which the deputies' knees rest the distance is only 85 centimetres. The effect of this limited space is graphically described by M. Trélat: "At the beginning of a sitting a deputy of average stoutness takes his place, and is at first fairly comfortable. The torso is to the right, the legs rest at right angles with the floor, and he is well balanced in his place. But as the sitting is prolonged, the deputy becomes ill at ease, his limbs begin to feel symptoms of numbness. The legs seek relief by alternately crossing one over the other. The body begins to sink and slide down into the seat; the knees project forwards. The centre of gravity has to be altered; the body has to discover a new equilibrium. It is necessary to change position, but this is not possible for want of space both in respect of length and width." This bodily suffering is intensified by the bad ventilation, and may account to some extent for the impatience and irritability which result in the outbreak of "scenes" that tend to degrade the dignity of Parliamentary institutions. A House of Parliament, M. Trélat insists, should be so constructed that every member can see and hear the speaker, and see the effect produced by a speech on his fellow members. Also, every member should be able to rise from his seat and go to any part of the House without disturbing other members or causing any noise. In the French Chambers additional seats have been placed to the extreme right and left, and here the speaker cannot be heard unless he turns especially round either to the right or