

ELECTRIC IONIZATION. Second Edition. By A. R. Friel, M.A., M.D. (Dub.), F.R.C.S.I. Bristol: John Wright and Sons, Ltd.; London: Simpkin, Marshall, Hamilton, Kent and Co., Ltd. 1922. Pp. 132. Price 8s. net.

This small book now in its second edition, is an admirable treatise on Electric Ionization. It is of special interest in that it describes the newer electrical theories especially in relation to the nature of electricity and the direction of the flow of electrons. Some of the results claimed are a little optimistic; but in the hands of the experienced author the methods no doubt give brilliant results.

The new chapters on pyorrhœa and endometritis by the distinguished colleagues of the author are a very great help in the treatment of these diseases.

The author's references to Professor Leduc of Nantes are a pleasant and grateful tribute to the pioneer of ionic therapy.

DIRECT PATHS TO HEALTH. By Major R. E. E. Austen. London: C. W. Daniel, Ltd. 1922. Pp. xxxv and 95. Price 5s.

On account of the essentially personal views expressed on almost every page, this book will not appeal to the large majority of medical officers. It appears, however, to have been written exclusively for the layman, who is presumably less exacting as to the validity of the arguments brought forward.

Our choice of diet, frequency of meals, and methods of breathing are called severely to account; but we are assured that, inasmuch as there is no cause of disease other than acidosis, if we mend our ways we cannot get ill. These are amongst the least startling of the facts placed before an unsuspecting public. The evidence adduced to prove the contentions is even more remarkable than the contentions themselves, and might well turn the most trusting to unbelief, unless he should be in the fortunate position of having escaped all study of medicine or logic.

The author's unique personality and his singlemindedness of purpose have undoubtedly enabled him to effect wonderful cures in certain cases chiefly, we think, by helping his clients to a measure of self control. His voice, we fear, must continue to cry in the wilderness.

Correspondence.

THE FILTER-PASSER OF INFLUENZA.

TO THE EDITOR OF THE "JOURNAL OF THE ROYAL ARMY MEDICAL CORPS."

SIR,—As Dr. Woodcock's letter in your last issue is little more than a repetition of views to which I have already replied, I do not see that much is to be gained by continuing the present discussion. Dr. Woodcock seems to have made up his mind that the filter-passing organism which I described

in the paper that appeared in the Journal of July, 1922, has not been differentiated from granules of inert protein, while I maintain that though very minute, it is a definite micro-organism distinct from granules of protein deposit, and similar in its morphology and staining properties to filter-passers previously described. I maintain further that the organism in question can be demonstrated in situ in films of the clear nasal secretion taken at the onset of influenza, and occasionally in the bronchial secretion obtained post-mortem. It grows in Noguchi medium in the manner described first by Graeme Gibson, and afterwards with more precision by Olitsky and Gates, and can be grown in subculture in the same medium.

The ætiology of influenza is far too large and important a subject to be settled by disputes on mere matters of microscopical technique: it will be solved by further evidence only to be obtained by study of the actual and experimental disease with all the methods of modern pathology. It may be of interest to mention that since the outbreak of influenza in the early months of 1922, in which I was able to confirm the work of Gibson and of Olitsky and Gates, I have examined several sporadic cases of acute catarrh that came my way within two days of the onset during the autumn and winter months of the same year, but failed in all to obtain the filter-passer either in films or in culture. These persons were suffering from ordinary mild catarrh; and their malady did not have the incapacitating effect of true influenza.

Now it is one of the blessings of bacteriology to-day, that a new point, if true, however much it may be minimized, attacked, or contradicted, is pretty sure of confirmation before very long; and such has already proved to be the case in the present instance. Thus, while influenza *vera* seems to have been in abeyance in this country recently, the disease has made its appearance in South Africa and afforded to Sir Spencer Lister (whose earlier observations Dr. Woodcock cites with approval) the opportunity of studying its bacteriology anew. As a result, Lister has succeeded in confirming the work of previous observers both with regard to the presence of this minute filter-passing organism in the acute stage of influenza, and also with regard to its morphological and cultural characters. Lister, moreover, has taken the matter a stage further by spraying seven volunteers with a culture of the organism in question, with a result that two of them developed slight pyrexia without other symptoms, while a third, nineteen hours after receiving the culture, developed an attack of typical influenza. In this last case the filter-passer was demonstrated in situ in films of the nasal secretion, and was also recovered in culture.

Nor have matters been at a standstill with regard to Pfeiffer's bacillus. Since this discussion started a monograph has been published that describes the most complete study yet made of this bacillus and of other organisms of the same hæmoglobinophilic group. The author is Dr. Martin Kristensen of Professor Madsen's Institute at Copenhagen: the work is written in English, and it should be in the hands of all who are interested

in the bacteriology of influenza. Kristensen investigated no less than 800 strains of Pfeiffer's bacillus and after examining its cultural, biochemical, and serological characters compared the organism thus defined with others of the same group. It may interest Dr. Woodcock to hear that the true Pfeiffer bacillus is not hæmolytic at all; the organism which he cites as a conceivable cause of influenza is one of the "pseudos" met with in the normal throat and dealt with by Kristensen. Having differentiated Pfeiffer's bacillus in a very thorough manner, Kristensen proceeded to determine its incidence not only in cases of influenza, but also in the general population before, during, and after influenza outbreaks. He was materially helped in this by the medical authorities of the Danish Army and Navy who allowed him to examine their recruits from all parts of the country. Nor did he confine his observations to influenza; Kristensen also examined cases of measles, whooping-cough, and tuberculosis in order to obtain a wide perspective of its incidence. He found that Pfeiffer's bacillus is as common in cases of measles as in influenza, and that in whooping cough it is even more common than in influenza. On the other hand, the Pfeiffer carrier rate in the general population rises during an outbreak of influenza, and falls when the epidemic subsides. In the light of the whole of the available evidence Kristensen does not regard Pfeiffer's bacillus as the primary infective agent in influenza. His view of its activities is briefly as follows:—

"Pfeiffer's bacillus is mainly adapted to living in the mucous membranes of the respiratory tract in man. In healthy mucous membranes it is able to exist for a time, but only with difficulty. Its ideal conditions are in mucous membranes already in a catarrhal state . . . the infection producing the catarrh is a matter of indifference—it may be influenza taken in its widest sense, whooping-cough, measles, or tuberculosis, or even catarrh due to non-bacterial cause . . . The reason why Pfeiffer's bacillus occurs most constantly in measles and whooping cough is on account of the wide distribution and endemic character of these diseases preparing the soil. The conditions are otherwise in such a pronounced epidemic disease as influenza. Consider such an epidemic in its very early stages. It spreads over a population the large majority of whom do not harbour Pfeiffer's bacillus. In the early cases Pfeiffer's bacillus is only exceptionally met with, but in those patients in whom it is present it will multiply rapidly and spread to others and also to healthy persons who may become infected with influenza as well as with Pfeiffer's bacillus, or with Pfeiffer's bacillus without developing influenza; for under the new conditions the bacillus is likely to acquire an improved capacity of developing in normal persons. . . . in this manner the bacillus spreads until it is present in almost every influenza patient and in a number of healthy individuals as well . . . When the influenza dies out Pfeiffer's bacillus may exist in normal persons for some months, but as it is incapable of living for prolonged periods as a true saprophyte it will, as before the influenza appeared, gradually be limited to occurring in endemic diseases."

This conception has the great merit that it accounts for the whole of the observed facts, and for that reason it will receive wide acceptance. While the prophylactic use of a vaccine containing Pfeiffer's bacillus finds substantial support from these comprehensive observations of Kristensen, they also offer an explanation of the uncertainty of the present procedure as a preventive of influenza. When it becomes possible to include the filter passer in the vaccine it is possible and even probable that the results may be far more satisfactory.

I am, etc.

M. H. GORDON.

REFERENCES.

LISTER: *South African Medical Record*, November, 1922.

KRISTENSEN: "Hæmoglobinophilic Bacteria." Copenhagen, 1922.

Notices.

EDITORIAL NOTICES.

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