A SANITARY SOPORIFIC.

BEING THE OUTLINES OF A LECTURE DELIVERED TO OFFICERS.

"... General officers will, therefore, arrange for the instruction of all ranks in these subjects by means of four lectures and demonstrations annually, during the winter months, by medical officers..." (The King's Regulations for the Army).

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When I was told that I would have to deliver this, and other lectures, to you, I was asked to try to produce something new, something a little different from the usual and now almost stereotyped lecture on sanitation; something that might stir a little interest in more than the dry bones of the subject itself. That, as any of you who have had to lecture will realize, is a severe demand, and I appreciate, before I start, that in breaking away from the established, practically regulated, course and type of these lectures I am undertaking a task which I am ill fitted to attempt. I want to try, however, in a way which I expect will be new to many of you, to show you the real inner significance of these lectures as I see it. True, these may not have been the thoughts in the minds of the men who wrote the Regulations—still—

I have no knowledge of the medical science of the really old civilizations of the world, of the Cretans, of the Assyrians, of the ancient Chinese, and many others. We have the authority of Herodotus that the Egyptians of his day, some four and a half centuries before Christ, and probably of many generations before, suffered under an even more acute development of the specialist system, probably, than we enjoy to-day. "The practice of medicine," he writes, in his second book, "is so divided among them that each physician is a healer of one disease and of no more. The whole country is full of physicians." This much we know of all primitive peoples, both of the past and of the present day, that, like many civilized persons, they must have an explanation for, not necessarily of, every phenomenon of life and death. Disease, to primitive man, is the omission of a god or the act of a devil, either of whom must be appeased by suitable rite, penance, or sacrifice.

"I ate my fill of a whale that died
And stranded after a week at sea,
I have a pain in my inside—
Now why have the gods afflicted me?"

I am not going to mention Moses in this rapid survey of one aspect of medical history, both because he was not, as far as I know, a physician, and because, though we have a clear statement of his sanitary precepts—with which you are all acquainted—we have not his reasonings for them as we
have for the tenets and achievements of the men whose work I am going to bring briefly before your attention.

During the latter half of the fifth century before Christ the civilization which centred itself around Athens grew to the age, and flourished in the spirit of inquiry, as any organization is bound to flourish which is not content with such an answer to its doubts and queries as is scarcely better than the question which provoked it. So, as some of you know, the acute mind of the child gains little satisfaction, but enormous stimulus, from those answers to its questions which fall back on the omnipotence of the Deity or the urgency of the occupations of its parents. Out of this spirit, and in it, from his birthplace in the island of Cos, 460 years before the Christian era, arose the physician Hippocrates. His writings remain to us to this day, and his standard of medical ethics is still the highest towards which practitioners of the true art strive. He stands, still, supreme in his day as being, probably, the first who realized—at any rate whose teachings remain for such as me to study—that natural, external conditions could, and did influence, and even cause, disease. He emphasized the great natural recuperative powers of the human body: he saw that the Deity who must be invoked and the devil who must be exorcised resided, very often, in the patient himself; and he based his treatments on simple methods of restoring the diseased body as nearly as possible to its natural healthy state, and then allowing nature to do the rest. He, too, impressed for all time on the medical world the importance of close, scientific observation, not only of disease, but also of health, as a basis from which to judge these two states. You may find in his writings observations on malarial fevers which have only been re-made within the past few years.

So great was this man that none followed him, of whom we have either record or evidence, who was fit to assume his mantle. Because he was so much ahead of his contemporaries, who could not raise their minds to make the continuance of his science a necessity by their personal or stimulated interest therein, his teachings declined into quackery—practised in his name, but without his skill and without observations of his doctrines—till even the essentials of his gospel became lost in the incantations of charlatans.

Even the veriest terror of a woman may be of infinite value, not perhaps to her husband or her relatives, but, through them, to the world at large. So was Socrates driven from his home by his wife, Xantippe, to teach in the market place and the gymnasium.

To his mother, in the same way, we probably owe much of the spirit of inquiring unrest which produced the greatness of our next physician. Born in the year A.D. 131 at Pergamos, in Asia Minor, of a kindly father and a mother whose outrageous temper appears to have been the potent factor in disturbing him from his home, Claudius Galenus, widely travelled for his day and as deeply cultured by study in this unrestful spirit
of inquiry, resurrected and magnified the teachings of Hippocrates. Celebrated as a court physician of unparalleled efficiency until the jealous exponents of the quackery then rampant allowed him no longer to remain in Rome, his writings place Galen as far above his surroundings as did those of Hippocrates elevate him above his fellows. He, too, was a student, and for his day, no mean one, of cause and effect.

Followed a period when medicine, as a science, passed slowly to the then rising force of the world—Mahomedanism; and among the succeeding practitioners of the art, the outstanding name in medical annals is, perhaps, that of Ebn Sina, or Avicenna, who lived at the end of the tenth and beginning of the eleventh century of our times.

Here again is an enormous gap; but, in part of the civilized world at least, by reason of the advancing knowledge or interest of the general populace, or of parts thereof, and the consequent demand for more scientific and more effective treatment, medicine, though it did not greatly advance, did not entirely slip back.

This Arabian school added little to medical knowledge save in the sphere of pharmacy. To the purists of this school Galen was the law; all else was heresy of the rankest. But no genius appeared to raise the burden of the toiling sick any further from their twisted frames. Men were content that knowledge had been achieved: there could be little more to learn, or there was but sacrilege in attempting it.

In so rapid and, I will admit, biased a pursuit as this of an idea in medical history, I must necessarily omit much that is fact and more that is theory, and to those of you who are even now lying in my track with an ambush of queries, I must plead that I am aware of these omissions, and that the time is due when I should arrive at, or near, the end of this tale.

Let us note, now, that these outstanding men's merits were that they sought for causes, and so far as their powers and understandings went, sought too, for the reasons of those causes. Note further, that a large part of their failure permanently to raise the standard of knowledge in and after their own days, was due to the lack of interest in these new teachings which permeated the general population. The supply was there—potentially; the demand was absent.

Constantinople fell in 1453.

It has been said that the determining factor in the evolution of the British Empire was the building, under the Emperor Shih Hwang Ti about the latter half of the third century before Christ, of the great wall of China. By this, in later years, the hordes of Tartary were turned from the spoils of the East towards the ravaging of the then effete Roman Empire, and so was determined the move of the centres of culture towards the island sanctuary in the West.

No less certain is it that the fall of Constantinople scattered on to a field that was, for some reason, ripe for the sowing, the seeds of a learning
which rediscovered the ancient learnings, and revived not only the text, but also the spirit of the old seekers after the truth. The Renascence of the sixteenth century—note again the gap in the progress of knowledge—re-learned the lessons of Hippocrates, re-taught the doctrines of Galen, and more important still, brought to life again the searching and critical spirit of Socrates. The habit of learning began to become more of a fashion than a fad, and slowly the patronage of the arts was extended to the sciences.

In 1523 the Englishman Linacre gave to the then cultured world a translation of the works of Galen. He found himself between two great schools: the "Arabian" school held staunchly to conservativism, the "Greek" both preached and practised investigation. Paracelsus, at this time in the University of Basle, publicly burned the books of Galen and Avicenma before his first lecture in token that the time had come to advance beyond their entrenchments in the lowlands of knowledge. A few years later, in 1553, Servetus was himself burned at the stake for daring to dispute the written word of Galen.

And so the struggle was continued, stimulated by increasing interest and public demand, till we may take as our next landmark the passage of knowledge still further to the west. Though educated in Padua, it is to the English brain of William Harvey that we owe the discovery, and proof at the beginning of the seventeenth century, of the circulation of the blood.

Antonius von Leeuwenhoek was born in Delft in 1632, and the product of his life was the compound microscope which revealed to Pollender nearly two hundred years later—in 1849—the causative germ of the disease anthrax.

Here, again, note the period of lapse when the possibility of advance existed but the fashion of this particular science declined. Culture and knowledge advanced, it is true, but along other lines. Without the stimulus of popular interest such work as we are considering progresses not steadily but by spurts as individual geniuses happen to be born.

The fight is now carried rapidly into the enemy's country.

In 1796, Edward Jenner, a native practitioner of the village of Berkeley in Gloucestershire, and a pupil of John Hunter, the surgeon, laid the foundation of one of the largest branches of preventive medicine by the introduction of vaccination against smallpox. That he had been forestalled in the actual discovery by Benjamin Jesty, a cattle dealer of Dorsetshire, who in 1774 vaccinated his wife and children, and protected them against the disease, is an academic point which is of particular interest to us here in that it shows that at this time the demand for improved knowledge and increased attainments existed strongly even amongst the common folk, and was, we may take it, the stimulus to that extraordinary advance which commenced early in the nineteenth century and is continuing to-day. Names crowd on top of one another, Pasteur, Lister, Koch, Manson, and innumerable followers too recently dead or too lately born for me to attempt to single out the few for mention, even had I the time.
The whole of these works, from the days of Hippocrates onwards, have been governed by the belief, so strong in the mind of the worker as to be a creed, worthy even of martyrdom—that man and his relationship to his environment are ordered by natural rules and not by demons; that to say that diseases and disabilities are the punishments of a god unreasonably divorced from man, not only amounts to a frank confession of ignorance that does not desire to be enlightened, but is also no great credit to the god so accused; that god is rational and his works regulated, not the being of passionate impulse which is generated in the minds of primitive peoples. An effect must have a cause, a cause must have a reason; if we can find the reason, can we not so modify the cause as to remove its noxious effect?

I have put before you, hurriedly and very crudely, a survey of medical history to try to emphasize that science is not sufficient to itself; it depends very largely for its stimulus to advance on the intelligent demand for that advance from the people whom it is trying, however indirectly, to benefit. Where the demand is absent, or is not truly intelligent, the weeds of quackery grow rapidly in from the edges and dam back the stream.

I want you to remember that, as knowledge sank, after Hippocrates, after Galen, back into the mud of blinding witchcraft and maiming charlatanism, and at other times halted in its progress because the stimulus to continue was not there, so, too, may it happen in our day again, if ignorance and indifference surround our steps. Realizing this, we ask that you should give us your interest, your further demands, and in these lectures we try to show you how far we have got towards helping you, how far you can help us, and for our own well-being, we strive to create from you the stimulus which will prevent our hard-won knowledge from sinking again into the limbo of forgotten things.