have attained amongst the institutions of the country, that our aid should be sought in a work of such great national and human interest. The Council have resolved to undertake this investigation; and communications will no doubt be sent to every Fellow, inviting the cooperation of all.

One of those points which are peculiarly fitted for investigation by the machinery of a large Society, is the influence of epidemics upon parturition. Since our foundation, two opportunities have occurred of making observations in illustration of this question upon a large scale. In 1863, we had an epidemic of small-pox; and, during the year that has just run its course, we have had an epidemic of cholera. Now there are several interesting questions arising out of the reciprocal influence of pregnancy and epidemic diseases, which are as yet far from being solved. What is the influence of small-pox, cholera, scarlatina, typhoid, typhus, and relapsing fevers, upon the course of pregnancy, as in causing abortion, premature labour, the death of the embryo? What is the influence of these diseases upon the course of labour, upon women in the puerperal state? What is the susceptibility of pregnant or puerperal women to be attacked? What is the influence upon newborn children? In what manner—that is, by what agency upon the blood or the nervous system—do these zymotic diseases act? What is the resultant mortality? These and other cognate questions might receive important elucidation, if we could collect from all our Fellows the histories of any cases of pregnancy and labour complicated with zymotic disease which have come under their observation.

There is one question touching the scope of the functions of a learned society, upon which I desire to offer a few words. It has often been suggested that a scientific society might usefully guide professional and public opinion by expressing a collective judgment upon controverted points in theory or practice. The temptation to put forth decisions of this kind is sometimes great. But it is certain that such decisions can rarely be pronounced without danger of lending authority to error. It is, in the first place, extremely difficult to isolate a scientific question in medicine from its natural or artificial complications, to reduce it to the terms of a definite proposition that can be submitted to the suffrages of a body of men. In the next place, we have to remember that medicine is a progressive science. The doctrine of to-day is not the doctrine of yesterday; and to-morrow it is still less likely to be dominant. Yet we are all of us, more or less, under the thralldom of present doctrines. To commit ourselves to an absolute decision, must lead to one of two evils—possibly to more. We either subject ourselves to the contumely of seeing our judgment reversed when appeal is made to a more advanced tribunal; or, to the extent of our authority, we discourage and retard the re-examination of the question; and by so doing, of course, we discourage the spirit of original research.

Recognising, therefore, the imperative law that medical knowledge can never be perfect, howsoever closely it may on any given point approach perfection, it is wiser to abandon the attempt than to pronounce absolute and definitive judgments. The last word upon any medical topic will not be uttered in our time. But wise and just as this reasoning may be with regard to questions of medical doctrine and even of medical fact—for abundant experience shows that it is scarcely less difficult to determine a medical fact than a medical doctrine—it does not apply with equal force to the exercise of the function of deciding upon questions of ethics bearing upon the relations of medical practitioners to each other and to the public. Medical ethics form but a branch, or rather

an application, of those immutable laws of justice which have held wholesome sway over mankind in all ages. It is to maintain respect for these laws that all associations of men designed for good purposes have been made. A medical society would but ill fulfil its duty if it shrank from upholding in their integrity those rules of honourable conduct, by the scrupulous observance of which we can alone deserve and acquire the confidence of the world. I would therefore not venture to dictate limits to any man's researches, if conducted in an honest spirit; but I should not hesitate to denounce any flagrant departure from the rules of professional morality.

But I feel that I must not trespass with further reflections upon that indulgence which I fear I have sometimes abused. I now resign the chair to my successor and friend, Dr. Hall Davis. In his hands our commonwealth will receive no detriment. In retiring, a deep feeling of gratitude impels me to acknowledge, that whatever success may have attended my presidency is largely due to the generous confidence and ungrudging cooperation of the Council, and especially of our admirable Secretaries, and to the kindly support or forbearance of every member of the Society.

SPONTANEOUS ORIGIN OF ENTERIC FEVER IN THE MILITARY PRISON, LIMERICK,

FROM AN OBSTRUCTED DRAIN UNCONNECTED WITH SEWAGE.

By G. K. HARDIE, M.D. Edin.,

Surgeon to H.M. 73rd Regiment.

CASE I. Private J. H., aged 23, of five years' service, went into the military prison, at Limerick, May 15th, and was discharged June 25th.

On the night of June 26th, in barracks, he sweated profusely, and had rigors from 5 to 10 A.M. of the 27th; but did not come to hospital till 5 P.M. of the 28th. He had had headache and febrile pains since the rigors, with thirst, and bad taste in the mouth. He had not felt himself ill before the night of the 26th. Pulse 100; temperature 102°. On admission, he got a purgative of colocynth and rhubarb, which moved him once.

The next morning he had an emetic, and vomited a large quantity of bilious fluid. On the 30th, he was heavy and disposed to sleep. The orderly reported that this morning he noticed a red rash over the body, which disappeared on exposure to the air. The tongue was cleaner; the mouth tasted better; thirst was less; the appetite better; the bowels had not been moved; gurgling was felt in the right iliac fossa. He had a recurrence of rigors after the visit, and sweated continuously till next day. He had sweated every night up to the 30th; the skin perspired greatly all through his illness.

On July 2nd, two rose-coloured lenticular spots were seen on the left lower side of the chest and on the left hypochondrium; successive spots were noticed from this date to the 12th, after which no fresh ones appeared. The eruption was virtually gone on the 15th; the bowels were confined for ten days, from June 30th to July 9th, when he passed a copious, soft, but natural, stool. Gurgling in the right iliac fossa was several times noted during this period; the skin perspired copiously; he slept much, though frequently complaining of being disturbed by noise.

He ate well, and was making satisfactory progress, until the 16th, when the pulse and temperature rose,

and signs of congestion of the base of the right lung appeared, with return of thirst. Delirium set in on the 20th, with subsultus of the hands and lower jaw.

On the 22nd he passed his urine in bed; the jaw dropped; the breathing was loud, with irregular rhythm; he was restless, picking the clothes; the tongue was slightly parched; no sordes; he had subsultus of the muscles of the face; the pupils were dilated in the last few hours of life; the bowels were not moved during the last five days; he sweated profusely on the 23rd, wetting his clothes and all the bedding. He died at 1 A.M., on July 24th, the twenty-seventh day of the disease. His temperature rose progressively from 102° on the 16th, to 108° just before death.

On *post mortem* examination, ulceration of Peyer's patches and of the solitary glands of the last twenty inches of the ileum, with two small circular ulcers of the solitary glands in the ascending colon, formed the main points of pathological interest. The edges of the ulcers were very generally raised and thickened, even where the sloughs had separated. The base of the right lung was slightly condensed, non-crepitant, but floated in water; this lung weighed twenty ounces, the left sixteen and a half ounces.

CASE II. Private J. H., aged 29, having been in the service seven years, went into the military prison on June 13th, and was discharged on July 10th. He came to the hospital on the 11th. He had had headache, pains in the back, and diarrhoea, from July 6th, and had been allowed rest in his cell for three days before discharge.

On admission, he complained merely of the diarrhoea and lumbar pain, with lassitude and thirst; he had had pinching pain in the lower belly from the 8th; he had lost twelve pounds in weight since April, when he was last in hospital; the motions were loose, and like pea-soup. On the 13th, some elevated rose-coloured spots were noticed on the flanks and abdomen in front; the tongue was slightly parched, and, at the evening visit, the skin was first noticed to be hot; temperature 103°. The pulse throughout was almost natural; 72 on the 14th, 75 on the 15th, 72 on the 16th, when some fresh spots were noted, 64 on the 18th, when he had still fluid yellow stools, two in the twenty-four hours.

On the 19th, the pulse was 72; the tongue was clean and moist; in the evening he had a soft, natural stool. On the 20th, the pulse was 72 at the morning visit; at 10 P.M., 64; the skin was hot and dry. On the 21st, he had a soft natural stool; three fresh spots on the belly were noticed. On the 22nd, the pulse was 64; there still was gurgling in the right iliac fossa; fresh spots, the last noted, appeared on the left hypochondrium on this the sixteenth day of the disease. On the 23rd, the tongue was rather tremulous; he had had no stool for two days; appetite good; no thirst. On the 25th, the pulse was 60; he shaved himself. From the 28th to the 31st, he had a febrile accession of heat in the afternoons; the evening temperature being on the 27th, 100.6°; on the 28th, 103.4°; on the 29th, 108°; on the 30th, 103.4°. He had a natural formed stool on the 30th. From this date there was nothing noteworthy. The morning temperature was 98.6 on August 1st; the evening was natural; on the 5th, 98.4; the 30th day of the disease. He remained in hospital until August 29th, when he weighed five pounds more than on admission.

REMARKS. The interest of these two cases lies less in their clinical history (after the accuracy of the diagnosis is clearly made out) than in the cause to which they were due.

They seem to have originated spontaneously in the prison; no antecedent cases having occurred, either

there, or in the barracks adjacent; and no cases have since occurred.

Enteric fever is very rare in the town of Limerick. I visited both the fever wards of the poor-house, and those of St. John's Hospital, at the time; and in neither were there any cases of this form of fever. The medical officers of both informed me that typhus was the customary fever of the town. Dr. O'Sullivan, the house-surgeon of the poor-house, has since informed me, that, though he has watched attentively for cases of typhoid, he has only met with two or three cases since 1863, when the new fever-wards were opened. During this period, 2364 cases had been admitted up to the beginning of October, of which, at a rough guess, he estimated one third as typhus.

The military prison is within the *enceinte* of the new barracks, having as its boundaries the barrack-yard and forage-yard on two sides, and, on the remaining two, a narrow slip of grass-land, between the barracks and the adjoining fields, called the "Reserve Ground."

The general sanitary state of the prison is admirable; cleanliness to the highest point is carried out, both in the interior of the prison and in the yards; the ventilation of the cells is very good.

The latrine of the prisoners is detached from the building, and is close to the wall of the reserve-ground, without any defect, and giving rise to no smell; it is one of Jennings's patent, the best form I have seen; the faeces drop into water, and the whole range is emptied and flushed twice in the twenty-four hours.

On the opposite side of the prison, where the warders and their families live, (on the side of the barracks) there is a cesspool in connection with their latrine; it is covered with a wooden trapdoor, and is in a court, locked up, and not entered by the prisoners.

The water-supply is from the Corporation Water-Works, and is derived from the Shannon; it is the same as is used in the barracks.

The health of the prisoners generally was good, and there was total exemption from epidemic disease. The most common complaint was diarrhoea, which was always attributed by the prisoners, and I think correctly, to the use of Indian corn meal, which often passes off undigested. I have seen this in other military prisons. All who required hospital treatment were sent across to the hospital of the 73rd Regiment, the only one in the barracks.

There is an ablution-room, and a washing-house; but the space in the latter is inadequate, therefore the prisoners' bedclothes used to be washed in one of the back yards, and the refuse water thrown out into an open gutter which passed into the main square of the prison, where the drill-ground and labour-sheds are, passing in front of one of the latter, to enter a closed drain, which ran under this shed, for twenty-six feet, and ended at its outer grating in an open drain in the reserve-ground. These drains are merely for surface rain-water, and can in no way be contaminated by sewage or fecal matters.

As soon as the first case came in, I made an investigation of the state of the latrines and drains; and, in the reserve-ground, discovered the outlet of the drain just mentioned choked up with mud so completely, that water could only filter through it very slowly. Gases in bubbles were seen in the onward course of the open drain which led off the water. The weather was at the time, and previously had been, unusually hot and dry for Limerick, which is a notoriously wet place.

The attention of the proper authorities was at once called to this, and the open drain in the reserve-ground was cleaned out; but, on visiting it

again, after the admission of the second case, I found that the covered drain behind the outer grating was still blocked up with mud.

This I again represented; and, in consequence, the covered drain, twenty-six feet long, was opened throughout, and found completely filled with mud, so that fluid could only percolate slowly through it.

The barrack contractor told me that this drain had not been opened for the last fifteen years.

I went in while they were preparing the new drain, and noticed that the back water in the open gutter contained soap, which first led me to the knowledge of the practice of washing the bedclothes in the open yard. These washings were the only source of organic matters in the drain, which, as I before said, was only intended for the surface rain water. The drain was remodeled on July 21st.

An artillery-stable had recently been made in the forage-yard, and this was separated from the light labour shed, by a wooden partition, through which the smell of stables was very perceptible. I mention this that no circumstance may be omitted; but without attributing any value to it as determining the fever, which seems to me most probably due to the obstruction of the drain, and to gaseous emanations through the grating which was at the angle of junction of the hard labour and light labour sheds, the former being on the side of the reserve-ground, the latter on the side of the forage-yard.

An instance such as this tends strongly to confirm the view, that enteric fever may originate from putrid emanations unconnected with faecal contamination or sewage.

ON

THE NEW FRENCH CODEX.

By PETER SQUIRE, F.L.S.

AFTER the lapse of twenty-nine years, the revision of the French Pharmacopœia has been undertaken by a Commission appointed by Imperial decree. Ample reasons are adduced in the very long and exhaustive preface for this revision. The progress of chemistry and other sciences bearing upon medicine and pharmacy has been so rapid and so revolutionary in its nature, that a Pharmacopœia compiled in 1837 must be somewhat antiquated at the present day.

The preface defines a Pharmacopœia to be a collection of formulæ compiled from the writings of eminent men—formulæ which have been found useful in practice, and which are in general use. By collecting and selecting these formulæ, and modifying them as occasion may require, under the direction of the most eminent men in the country, and issuing the compilation with the stamp of Imperial authority, a complete dispensatory is obtained, the authority of which is recognised both by prescribers and dispensers. It is obvious that, if this authority is to be maintained, the Pharmacopœia must advance *pari passu* with the discoveries of science—an object only to be obtained by frequent and careful revision. The principle is excellent, but rarely carried out. How many new editions of Pharmacopœias are simply the old editions furnished up so as to reflect the crotchets of the editors!

The present book is one of very great pretensions. Whilst liberty is given to the scientific physician to experiment and prescribe other formulæ and substances than those mentioned in the Codex, the extent of the materia medica and the number of the

formulæ are so great, that there would seem to be ample work for scientific men to determine the value of those already recognised. The division of the work is the usual one, into *materia medica* and preparations. The *materia medica*, again, is classified into organic (animal and vegetable) and inorganic (mineral) substances: altogether, about 600 articles. (The *British Pharmacopœia* contains only 310.) Many of these are but little known to us; and it is implied that their use is by no means general in France, as an asterisk is placed against 215 articles, and these only are required to be kept in the shops, the rest being obtained from the wholesale dealer or otherwise, when required for some special occasion. The preparations are divided into chapters, and the division appears to be very arbitrary. It may be said that, in the presence of a good index, with which the book concludes, the arrangement is of little importance. Still there is a choice between a good and a bad one; and, short of pure haphazard, the French Pharmacopœia has certainly chosen the worst.

The inorganic substances are classed, not according to the bases, but according to the acids with which these happen to be combined—sulphates, chlorides, oxides, carbonates, and the like.

In this way, mercurials and the preparations of iron, for example, are scattered all over the book. The alkaloids, again, are in one place; their salts in another. So quinine is divorced from its sulphate, and morphia from its hydrochlorate.

The tinctures, the wines, the lozenges, etc., enjoy each a chapter to themselves; but there is a refinement of distinction in many cases, which rather tends to confusion. For example, cerates, *pommades*, and *onguents*, are treated each as a distinct class of compounds, which is not correct.

The *British Pharmacopœia* classed all the greasy substances intended to be smeared over the skin together, and I think with right.

Tinctures, again, are divided into spirituous tinctures, ethereal tinctures, and *alcoholatures* in which the fresh plant is employed.

Altogether, there are seventy-five chapters, each containing some special class of formulæ.

Although the Commission includes the names of some of the most eminent men in France, Dumas, Wurtz, Guibourt, and others, the new Codex exhibits the strange but almost universal fault of Pharmacopœias. In an excess of zeal for the distribution of information, a number of manufacturing processes are given for the production of substances which are, in practice, invariably obtained from chemical works. It is, of course, idle to suppose that the dispensing pharmacist can manufacture for himself such things as sulphate of quinine or calomel. Even if such a proceeding did not involve direct pecuniary loss, or were at all economical, it is obvious that he can have neither time nor opportunity for the purpose. These processes can only be intended for the manufacturer, or to make known, for instructive purposes, the processes which the manufacturer employs. On these grounds, the practice might be defensible, were it not for the fact that the processes given are generally the wrong ones, and are, in the majority of cases, ludicrously absurd.

The new French Codex is no exception to this rule. The process for sulphate of quinine is an example. Then, the old process by which valerianic acid was prepared was by distilling the valerian root with water. The modern process, by which precisely the same result is more economically obtained, is by distilling fusel oil with sulphuric acid and bichromate of potash. Between these two the Commission appears to have halted; and eventually a compromise has been adopted, for the valerian root is ordered to