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 *alcoolatures* 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

be distilled with sulphuric acid and the bichromate. The preparation of medical vinegar by the destructive distillation of acetate of copper is surely somewhat out of date, particularly as it follows immediately on the usual process with acetate of soda and sulphuric acid. It almost appears as if two Commissions, ancient and modern, had put their labours together. Had the Codex contented itself with giving the tests by which impurities and adulterations might be recognised, and had defined the degree of purity essential for medicinal purposes, it would have been in accordance with the actual state of commerce, have greatly diminished the size and cost of the book, and deprived the critics of the opportunity of cracking their never-failing jokes at the expense of the editors. The mistakes are not entirely confined to the preparations always made on the large scale: for example, caustic potash is recommended to be employed in the manufacture of atropine. Can the editors have been ignorant of the fact that atropine is so modified by the action of caustic alkalis as to be totally changed in its properties?

I have only space, in the limits of the present paper, to dip here and there into the seventy-five chapters into which the preparations are divided.

The tisanes may, on the whole, be considered to represent our infusions; but they take a wider range, and include decoctions and certain mixtures sweetened up with honey, liquorice, etc. They are very numerous. Under *Bouillons*, we find such things as beef-tea, turtle-soup, etc. One curious preparation is unknown, as far as I am aware, in England—Snail-broth, which is directed to be made by boiling the flesh of the vine-snail with water and maiden-hair. Such a broth is suggestive of the oleum catellorum, or oil of puppy dogs, as it existed in our own Pharmacopœia about a hundred years since. These broths and soups are, in England, left pretty much to the cook; but there is a strong culinary element in the French nature, which crops out very frequently in the new Codex. The medicinal substances are flavoured and disguised by the resources of art. Here we find *pâtes* consisting of sugar and gum, and perhaps white of egg, medicated in various ways, and covered with crystallised sugar. Another class of preparations is the medicated beer, flavoured with horse-radish and fir-tops, probably more efficient as a remedy than palatable as a beverage. Formulæ are also given for jellies, such as that of Iceland moss and quinine, and similar preparations. The idea of using chocolate as the basis of a distinct class of preparations would hardly have occurred to our Medical Council; but it is no slight gain if medicines can be made palatable for children, and we should not be too proud to take a hint from the confectionary aspect of French pharmacy. A formula is given for making effervescent citrate of magnesia; not, however, granulated, like the favourite preparation so well known by that name here.

The powders are very numerous, and are both simple and compound. Among them we recognise an old acquaintance, Dover's powder, which originated with Dr. Dover. For some unknown reason, French writers claim the privilege to murder the names of foreigners in a way quite incomprehensible. Our old friend Dover is written "Dower"; no one knows why, since "v" is in the French alphabet and "w" is not. If it is necessary to Gallicise the name, *Poudre de Douvres* might be appropriate. The French formula is made twice the strength of the English, because extract is now put in the place of the opium itself.

Some of the preparations retained in the Codex are exceedingly complex; for example, the much

abused Theriaca, which, although finally discarded here, still covers the pages of French pharmacy with its voluminous formulæ. Another is the *Baume Tranquille*, which may be looked upon as a kind of correlation of the British chlorodyne. Here we mix all the sedatives together, such as chloroform, prussic acid, morphia, etc., one of the constituents being sure to act, and it is called chlorodyne; in France, they mix together belladonna, hyoscyamus, tobacco, solanum, poppy, stramonium, and call it *Baume Tranquille*. If chlorodyne fail, try *Baume Tranquille*, and vice versâ.

Baths, medicated in various ways, have a chapter to themselves; and, to judge from their number, seem to be a favourite mode of external application. One class of external preparations, the value of which has been much discussed here, has been adopted by the Codex—the *Glycérés*, which consist for the most part of the so-called plasma (a starch-paste made with glycerine) employed for ointment in the place of fats. For my own part, I have not found the preparations satisfactory; glycerine attracts a considerable quantity of water from the air, and these compounds are not very stable.

The last chapter consists of selections made from various foreign Pharmacopœias, some thirty-five or forty being taken from the British. (I may mention an error that is committed in all the formulæ containing cardamoms—the seeds should be used, not the fruit.) The formulæ are those most generally employed in prescriptions, so that the French *pharmacien* may be in a position to make up the prescriptions of the travelling Englishman.

I have great satisfaction in seeing that the course I took of comparing the three British Pharmacopœias in 1851, and more latterly those of the continent, has been adopted to a certain extent in the French Codex.

The means of communication are now so easy and rapid, that a prescription dispensed to-day in London may be to-morrow made up in some remote town in France; and, without some such arrangement as this, the French *pharmacien* would be feeling his way in the dark, and serious results might happen.

The last division of the Pharmacopœia consists of a recapitulation of the French laws relating to pharmacy; with this we (who have scarcely any laws relating to pharmacy) can have little to do. I may remark, that the principle of free trade in physic and poison is not recognised on the other side of the Channel. On the contrary, those only are allowed to vend drugs, and to dispense medicines, who have passed a stringent examination, and possess the recognised certificate. The shops are visited at certain intervals, and the quality of drugs inspected; no secret preparation is allowed to be sold; and, in all cases, nostrums must be examined and approved by the Academy of Medicine. Lastly, a precaution which I have adopted for many years past in my own establishment, is in France required by law; viz., that when a preparation is intended for external use, this fact must be notified by means of a coloured label; the colour ordered to be used is an orange red.

Taking the new Codex as a representative of modern French pharmacy, it is difficult to avoid the conclusion, that too many remedies appear to exist for one disease; and the extremely voluminous and comprehensive character of the work must be to some extent confusing. The present tendency of medicine and pharmacy is towards simplicity—the use of fewer medicines and the exact study of their action.

The use of such medicines as Theriaca and *Baume Tranquille* can only rest on empiricism; no analysis can pretend to say what part any of their com-

ponents play in any given case. Similarly, the employment of remedies, so seldom required that professedly the Codex does not expect to find them in the shops, must be to a great extent problematical, as their qualities cannot have been, in the majority of cases, much tested. In the new edition, whenever it is forthcoming, I hope to find rather a reflection of modern science, than a collection of formulæ representing in some cases the relics of empiricism, in others the art of ringing changes on tisanes and syrups.

REPORT OF A CASE OF HYDROPHOBIA.*

By THOMAS COSSAR, M.D.,

Hurworth, Darlington.

Of all the diseases to which human kind is heir, few have, at different epochs, elicited greater attention than hydrophobia. Amongst the ancient writers upon it, we have Celsus, Dioscorides, and Galen; whilst in more modern times, Cullen, Fothergill, and Bardsley have contributed largely to swell our knowledge on the subject.

As at the present time it appears to be more than usually prevalent, and a case happening recently to have come under my observation, I hope it may not be altogether wasting the time of this Northern Branch of the British Medical Association, in simply giving the short history from the period of the patient's coming under medical observation, until the fatal termination, about forty hours.

On April 21st, at six in the morning, a former assistant of mine was hastily summoned to visit Humphrey Lee, residing near the beautiful village of Middleton-one-Row, four miles from Darlington. He was 39 years of age, and a gardener by occupation. In his garden, which was much infested with rabbits, he had traps set to catch those vermin. On the morning of March 4th, on going into his ground, he found a strange dog entrapped, and, like a good Samaritan, he went to release the animal; but, while he was in the act of doing so, the dog bit him on the middle finger of the left hand. From inquiries subsequently made, there was no evidence to show that any symptoms of madness had been exhibited by the animal before; hence the presumption is, that it had been induced by the pain caused by the trap, although the best authorities suppose, that rabies in the dog, and in animals of that class, originates only from contagion. (The end of the dog occurred four days afterwards, when he was found ten or twelve miles off, frothing at his mouth, evidently in a most rabid state, attacking a pony, afterwards snatching at trees, stone-posts, or anything which might be in his way, where he was shot.)

A considerable amount of blood flowed from the bitten finger; no medical advice was resorted to, only poultices applied for a few nights, and at the expiration of a week the wound was healed, a small cicatrix only remaining at the injured spot, with a considerable amount of numbness, which by and bye disappeared. His health seemed quite good until three weeks previously to his being visited professionally, when he was noticed to be apathetic, downcast, and desponding. While in church on Sunday, April 15th, where he held the office of parish clerk, he stopped abruptly in the middle of the response he was reading, and yawned, which symptom continued for several days; he also complained of pain in the finger, passing up the arm, and felt languid, with a sense of exhaustion. On Friday, April 20th, he had

occasion to go to Darlington, where he told me he felt so ill that he thought he would be unable to return home again, on account of languor; he, however, had a glass of beer there, (being a very temperate man) and returned to his abode in the evening, when he went to bed, taking nothing either in the shape of food or drink. Feeling very hot and restless, he took a diaphoretic, which acted so powerfully during the night as to make the bed-clothes completely saturated with perspiration. During the night he asked for tea and water, but only a few drops could be swallowed by him. Whenever any vessel containing liquid was put into his hands, he tried to quaff it off, but he was quite unable to do it, putting it aside with a sigh, saying, "he felt so tired he could take nothing." His wife slept in the same bed with him, whom, he said in the morning, he frequently felt disposed to bite through the night. He never closed his eyes that night, and was exceedingly sensitive to touch, especially about the neck.

When seen by my assistant the following morning (Saturday), nearly seven weeks from the time when he had been bitten, he was labouring under great mental excitement; he complained of pain in the hand, radiating up the arm, but nothing was visible to account for this; also, of a peculiar sinking sensation at the pit of the stomach, with slight constriction of the throat. There was no morbid appearance in the mouth or fauces, excepting the total absence of saliva, rendering these parts dry and clammy. His features had a peculiar wild expression, with dilated pupils, while the white of the eye was exceedingly brilliant, with a glassy appearance; there was a hanging down of the lower lip, especially visible when any fluid was offered him. His circulation was unaffected, but the respiration was peculiar, as it appeared almost to stop at times, then a sigh followed, succeeded by a long expiration. He was now totally unable to drink any liquid; the sight of water excited, he said, "a peculiar sensation all over him." On its being proposed to him to drink, he said he would try; but, so soon as the liquid touched his lips, he gave a convulsive sigh and threw back his head, calling out, "I cannot take it, sir, I cannot." He swallowed some jelly, which, however, caused some slight spasm, with a gurgling noise. An injection of several grains of morphia was administered, and blisters were applied on the spine, neck, and stomach. The patient was left for a few hours, until ten o'clock, when, on being seen, he expressed himself as being relieved by the treatment, which was ordered to be repeated; he swallowed then a few drops of water with the same kind of noise as before.

My first visit was made to him about three o'clock in the afternoon. On entering his apartment, both window and door being open, I shut the window, which immediately produced in the poor sufferer a severe spasm of the muscles of the larynx and pharynx, throwing him into a state of the greatest agitation and alarm. His countenance had the same excited appearance as previously described; the pupils were much dilated; pulse 90. On remaining a short time quietly at his bedside, I entered into conversation with him, (he being a person of considerable intelligence), when he gave me a full detail of his malady; at same time saying, he knew there was no remedy for his disease, of which he had read an account in medical books, (he being an herbalist) but he was wishful to use any means I thought might prove serviceable; on again examining his pulse, I found it had fallen to 60, and intermitted slightly. I offered him liquid in a cup, which he held in his hands, looking wistfully at it, but said he could not

* Read before the Northern Branch, June 22nd, 1866.