Barbadoes Naphtha, and a spicy stimulant ball, daily, for a week, with a generous diet and good grooming.

Since the preceding essay was penned, nearly three months ago, we have never been entirely free from this singular epizootic, but it has appeared here and there, attacking single horses, and sometimes whole stables, in the most capricious and unaccountable manner. The symptoms are, however, far milder, and fewer cases have proved fatal.

As usual, when a pestilential scourge passes away, and patients recover easily, we hear of much successful treatment, and some accounts of it have been published, the discrepancies in which are not a little remarkable. A notable discussion has, besides, taken place on the subject, at a Veterinary Association at the St. Pancras College, which left the matter very much in *statu quo*, furnishing, however, ample corroboration of the symptomatic facts which I have here advanced, but proceeding to no definite conclusion, either as to pathology or treatment. I have purposely withheld the publication of this paper, written when the complaint was at its height, lest the course of experience should condemn my conclusions, but I am now emboldened to lay it before the public eye. It is true that my subsequent cases have afforded no further pathological proofs of their correctness, but then this uniformity of success would scarcely have been attained, had not previous severe instruction established a feeling of certainty respecting the nature of the attack. I still am satisfied that this epizootic has been essentially an idiopathic fever in the horse, or a primary inflammation of the brain, with metastasis, usually to the mucous membrane of the intestines, and I could bring forward a variety of cases, carefully noted at the time, on which this opinion is founded. But I am aware of the impropriety of extending this already long paper.

Veterinary Infirmary, Giltspur-street,
Dec. 15th, 1836.

REVIEW

OF SOME OF THE PROMINENT NOVELTIES
OF THE
NEW EDITION OF THE LONDON
PHARMACOPŒIA ;

With Specimens of the "great care, pains, and industry" with which the old Edition has been "revised, corrected, and reformed."

By THOMAS EVERITT, Esq., Lecturer on Chemistry at the Middlesex Hospital Medical School.

In the first place,—The measures have all new values ; for in the old edition the wine

gallon of 231 cubic inches of pure water was taken as a standard. This was divided into eight pints, the pint into sixteen fluid ounces, the ounce into eight drachms, and the drachm into sixty minims. In the present edition, the imperial gallon of 70,000 grains of distilled water, at 62°, is assumed as a standard: this is divided into eight pints; but the pint is now divided into *twenty ounces*, the further division as before. Hence,

	Value in grains of pure water, at 62 degrees.	
	OLD.	NEW.
Gallon (231 by 252.45)	58316	70000
f. Pint.....	7289.5	8750
f. Ounce	455.6	437.5
f. Drachm	56.95	54.7
Minim	$\frac{56.95}{60}$	$\frac{54.7}{60}$

The present gallon and pint are, therefore, about one-fifth larger than the old ones ; and the present ounce, drachm, and minim about one-twenty-fifth smaller. I shall not attempt to argue for or against the necessity of this change, nor dilate on the possible results ; the difference in the value of the ounce and drachm is so small, that it may, in most cases, be neglected, and the old measures used for the new.

One of the principal objects of the editors of a pharmacopœia ought certainly to be, to relieve the medical man from as much as possible of the mental drudgery of recollecting and calculating proportions. Might it not, therefore, have been well, when they felt compelled to alter the value of their measures, in order to make them agree with the imperial gallon, to have thrown overboard all arbitrary divisions of pint, ounce, drachm, &c., and have taken the grain, ten grain, 100 grain, 1000 grain measures of distilled water, at 62° ? There still would have been aliquot parts of the imperial gallon. Then, by making all the fluid solutions contain a certain round per centage (a great number might have contained exactly the same) of the active principle, no calculation on the part of the medical man would have been necessary. But, by the present regulations, we have no unity of design ; for some solutions are defined as containing so much for the fluid ounce or drachm ; as, for instance, the arsenical solution half grain to the drachm ; some as containing so much per cent., as the dilute hydrocyanic acid, which is to contain two per 100 of real acid, and the same of the other dilute acids, &c. Thus, when a medical man has to prescribe hydrocyanic acid, and wishes to come at the quantity of real acid he is exhibiting by measure, he must call to mind,

First, That the dilute acid contains 2/100.

Secondly, That the fluid drachm contains 54.7 grs.

Lastly, Make the mental calculation, as 100 : 2 :: 54.7 : x

Had they defined the fluid drachm to contain one grain of real acid, all this drudgery would be spared.

The next novelty is the "Notæ breves, ad res chemicas præcipuè spectantes, quibus quidque, sincerum sit, necne, quantum fieri potest, deprehendatur." These we conceive to be highly valuable, and had they been more extended and precise, and the formulæ in the body of the work entirely omitted, this part would have assumed a form which the present state of things demands. At a period when every druggist was presumed to *make his ounce and pound* of those chemicals, such formulæ were useful; but now that they are *manufactured by cuts, and tons*, it is quite useless giving processes which few will find either economical or convenient to follow. Here, again, we observe a want of unity of design; for why have we not a formula for preparing sulphuric acid? "Because (I suppose they would answer) any arrangement for making a small quantity would furnish it at a price ten or twenty fold dearer than as at present made." This sort of reasoning applies to all the formulæ, in kind,—to many, even in degree. Now, as all these matters (it is of course not intended to include mixtures, such as tinctures, plasters, &c., but only definite chemical products) can be so precisely defined, chemically and physically, as to enable any one to distinguish the body named from every other, and to detect the minutest trace of adventitious matter, and as by being manufactured on the large scale they are furnished at a minimum cost, why take the trouble of giving a formula when, perhaps, half a dozen others may be equally good, and it will depend entirely on the other objects of the manufacturer which is the most economical? Thus, A is a maker of carbonate of soda from salt; he gets hydrochloric acid at the same time. B is a maker of sulphate of magnesia from bitters; he also gets hydrochloric acid at the same time; and this acid, procured from distilling sulphuric acid with muriate of magnesia, is just as good as that obtained from salt by sulphuric acid, provided care be taken to have it pure.

The third novelty is the change of names; although this may be a source of slight annoyance to old practitioners, every teacher of chemistry and pharmacy will hail with joy this alteration, as he was constantly confusing his pupils by a confounding of the scientific chemical names with those used in pharmacy. This, therefore, will scarcely be a change to all those who have been educated within the last ten years; but will be relieving them from the necessity of recollecting the distinction between the two nomenclatures.

We will now give a few instances illustrative of the great care with which the work has been executed.

Amongst the *Notæ breves* we have the strength of the

Ammonie liquor, refined, 0.960, and of the *Ammonie liquor fortior*, 0.882, "liquor hic ad normam liquoris ammoniæ redigi potest, cuique fluid uncia adjestis fluid unciis tribus aquæ distillatæ."

In the body of the work we have no formula for making the fortior but for the liquor ammoniæ:—

"R *Ammonie hydrochloratis*, uncias decem

Calcis, uncias octo

Aquæ, octavios duos

"Calcem aquâ resolutam in retortam mitte, dein ammoniæ hydrochloratam in frustula contritam et reliquam aquam adijce. Distillent liquoris ammoniæ fluid uncia quin decim."

Now, *liq. amonæ*. of .960 contain about 10 per 100 of amonæ., and *liq. amonæ*. of .882, 30 per 100 of amonæ. Hence a fluid ounce of .882 weighs (437.5 by .882) = 386 grains, and 100 : 30 :: 386 : 115.8 amonæ. 270.2 water; hence to reduce this to 10 per 100, or to .960, it will require 774 grains of water, or, in round number, 1 f̄ 3 6 f̄ 3; at any rate, only 2 f̄ 3 of water to 1 f̄ 3 of the stronger, to reduce it to the weaker, and not *three*, as prescribed.

Touching the formula. Perhaps the worst of those in the old edition was that for preparing liquor ammoniæ; and in the present the alterations are merely to suit the new measures. Every 54 grains of hydrochlorate of ammonia contain 17 grs. of real ammonia. Hence 54 : 17 :: (10 oz. by 480) 4800 : 1511 grs. ama. in 10 ounces; 15 f̄ 3s at .960 weigh (15 by 437.5 by .96) = 6300 grains, which at 10 per 100 gives 630 grs. ama. obtained and, consequently, wasted, 881, by the badness of the process. Total present in 10 oz., 1511.

What manufacturer will follow a process where the loss is more than one half? I always consider my operation bungled if the loss amounts to five per cent; and I proceed thus:—Hydrochlorate of ammonia, in coarse powder, 10 parts; lime, 8 parts. Put 4 parts of water on the lime, cover it over and allow it to slake and cool; put both into a flask having a long neck, pour on 6 parts of water; through a cork which fit the mouth of the flask tightly, put a safety tube, and a gas-conducting tube bent twice at right angles, the first to be secured by lime and white-of-egg lute. Place the flask in a sand-bath, insert the free end of the bent tube to the bottom of a narrow-mouthed bottle, surrounded by cold water, or ice, if at hand. Put into the bottle, water, according to the strength of liquor amæ. required for that of .960 about 30 parts; gradually increase the heat of the sand-bath so as to drive off the ammonia and some water; by the time that the 30 parts of water in the receiver bottle have increased to 35 parts nearly all the ammonia will have passed over. By operating in this way the liquor

has no empyreumatic odour, and I have frequently, on noting the quantity and exact strength of the product, not lost more than 2 per cent., which has happened to me in two careful repetitions of this process, made since the new pharmacopœia came into my hands. If the liquid be required much stronger, it is better to have two receiving bottles, so arranged, that as that which escapes absorption in the first goes on to the second. By having the flask of such capacity that it could contain about three times the quantity operated on, and by its having a long neck, kept vertical, all risk of any of the lime salts spiriting over is avoided, (much of the commercial liq. amonæ. contains chloride of calchicum, from this cause), and the product is quite pure. For very delicate chemical purposes an intermediate small bottle is useful, but for pharmaceutical use quite unnecessary.

Hence the 10 ounces of hydrochlorate of ammonia could, at any rate, make 30 fluid ounces at .960, in the room of 15. The great loss is occasioned, *first*, by not putting part of the water into the receiver at the commencement, as sufficient does not pass over when the mixture is first heated to condense the gas; and, *secondly*, by leaving so much water in the retort at the end.

I must confess that this is the worst specimen which a hasty glance has discovered, and that I have experienced great satisfaction at seeing many of the improvements; for having had to lecture for the last six years expressly on the pharmacopœia, at Mr. Grainger's Medical School, it has always been a disagreeable task to comment on many of the old formulæ, which were below all criticism, whereas in its present form it will be comparatively a pleasure to go over the same course.

I cannot refrain from stating, that it is a source of some disappointment to me, not being allowed by the College to make a translation, with comments, for my pupils, as four months of last summer, independently of previous investigations, have been closely devoted to experiments on these subjects. I have, however, the consolation to know that the announced work of Mr. Phillips will, so far as my pupils are concerned, render this circumstance unimportant.

There is a mis-print in the second formula for dilute hydrocyanic acid, which is not among the errata of the duodecimo edition, and as it is from a suggestion of my own I wish to point it out here:—The proportion of cyanide of silver, 9 grs., and dilute hydrochloric acid, 9 minims, for an ounce of water, ought to be 48.5 grs. of the cyanide, and 39.5 grs. of the strong hydrochloric acid, to produce an acid of the defined strength, 2 per 100.

Laboratory, Middlesex Hospital,
27th Dec., 1836.

THE LANCET.

London, Saturday, January 7th, 1837.

WHENEVER a public writer undertakes to remove, by his labours, any flagrant, pernicious abuse, he ought, at the same time, to be firmly resolved to maintain an uniform, straight-forward course of conduct, even though he should thereby risk giving offence to some of his best friends. The chance of incurring such an evil has often deterred pseudo-reformers from fighting the battle of sound policy and justice. The thorough-going philanthropist, that is, the reformer who looks to general and not to partial good,—who would prefer the happiness and welfare of a nation to the prosperity of a single society, or a clan in that nation, encounters the chance of danger without apprehension, and even perceives, in the vituperation or personal annoyance he receives, proofs of the honesty of his purpose, and the success of his exertions. If the metal of the well-bred hunter were subjected to no severer trial than an occasional canter over the smooth green sward, the most cowardly and dronish hacks might soon be disposed to claim an equality of power and merit with steeds of the highest pedigree and value. Thus is it with reformers. All pretend to possess equal merit, until they have been called upon, or have actually endured, the trying and searching ordeal to which every sincere reformer is doomed to be subjected. If he survive his trials his reward is commensurate with all the anxieties, toils, and perplexities which he has undergone. The mock philanthropist may strut his hour upon the stage of life, receive, for a moment, the flitting smile of the unthinking, and then sink into the grave, to become rotten not before he is forgotten. Even the pleasure which such a creature experiences he feels to be insecure, and he is sensible that it has no solid foundation. His cowardice, or his dishonesty, or his