

dical practitioners have, since the publication of the resolution, become subscribers, and acknowledge with pleasure the propriety of the regulation. They allow, that if an institution supplies them with that which they could not obtain by their own exertions, but at a very great trouble and expense, they are bound in return to give support to that institution. And these medical men, who object to "a forced contribution" in behalf of such an institution, may be reminded that the support of the National is obtained by a forced contribution from medical men, as well as from the other classes of society, the sum of 2500*l.* a year being voted out of the treasury.

In conclusion, Sir, it may be remarked, that "the public," "the public," is a very common and unmeaning cry. Are not medical men *individuals* in this great whole? Are not their children benefitted by vaccination, and are not they themselves paid directly or indirectly for benefitting others by the distribution of this boon? Surely they are, and on this account should give their support.

If "*Medicus*" should favour your readers with a reply to this communication, it is hoped he will not imagine that I am indignant with him, as he states in his letter that "Dr. Epps seems very indignant with the report of the National, &c. &c." Indignation is a state of mind which can be becoming only when moral turpitude is manifested. This I never attached to those who framed the report referred to. Because men differ from me in *opinion*,—that will, I trust never form in my mind a sufficient reason to justify indignation. Thanking you, Sir, for the insertion of the preceding communication, and of that of "*Medicus*," believe me yours in well wishing.

JOHN EPPS, M.D.

Director of the Royal Jennerian and
London Vaccine Institutions.

11, Berners Street, June 28, 1831.

ON MR. CLARK'S FORMULA FOR PREPARING MEDICINAL PRUSSIC ACID.

To the Editor of THE LANCET.

SIR,—I have just seen, in *THE LANCET* of last Saturday, a paper by Mr. Laming on a recently-published process for preparing medicinal prussic acid. Mr. Laming, although he joins with you in approving of that process, professes to point out some arithmetical blunders in the formula, and offers corrections of those errors.

In the formula in question, the quantities prescribed are—

Cyanide of potassium.... 32 grains.

Tartaric acid 72 grains.

Water, a fluid ounce,

The water being assumed as fixed, it remains to advert to the alleged inaccuracies, first in the cyanide of potassium, and next in the tartaric acid.

The object professed in adopting 32 grains of cyanide of potassium was, to substitute 60 grains of cyanide of mercury, as prescribed in the formula of Vauquelin, recently adopted in the *Pharmacopœia* of Dublin. Now, according to the authorities adopted by Mr. Laming, $3\frac{3}{4}$ of cyanogen, by weight, combine with $12\frac{1}{2}$ of mercury, to form $15\frac{3}{4}$ cyanide of mercury, and with 5 of potassium, to form $8\frac{1}{4}$ of cyanide of potassium. Therefore, as $15\frac{3}{4} : 8\frac{1}{4} :: 60$ cyanide of mercury : $31\frac{3}{4}$ cyanide of potassium. $31\frac{3}{4}$ are indeed less, by one in 56, than 32, the number given in the formula; but, even if this difference were not insignificant in changing a pharmaceutical formula, every person accustomed to chemical researches is aware that a salt like cyanide of potassium contains in the state wherein it is most likely to be used by the apothecary, water, mechanically adherent, amounting to not less than one in every 56.

That Mr. Laming has obtained a very different result is owing to his inadvertence, whereby he has reckoned cyanide of mercury as a compound of $3\frac{3}{4}$ cyanogen, not with $12\frac{1}{2}$ mercury, but with $13\frac{1}{2}$ of the *red oxide* of mercury, which contains, besides $12\frac{1}{2}$ of mercury, one of oxygen. His proportion, accordingly (instead of being as $15\frac{3}{4} : 8\frac{1}{4}$), is as $16\frac{3}{4} : 8\frac{1}{4} :: 60$ cyanide of mercury : 29.55 cyanide of potassium.

With respect to the 72 grains of tartaric acid, little need be said. $31\frac{3}{4}$ grains of cyanide of potassium would require, according to Mr. Laming's authorities, $71\frac{3}{4}$ grains of tartaric acid; and 32 grains would require $72\frac{1}{4}$ grains. In the formula, inconvenient fractions have been avoided by adopting 72 grains.

Indeed, to the practical pharmacien I think it will be evident that a principal object of the author, in constructing the formula under consideration, has been the convenience of the apothecary. Hence it is, that the weights to a fluid drachm of water may be expressed in grains free from fractions, and hence an ounce bottle is prescribed, and not one of 18 fluid drachms, as proposed by Mr. Laming.

But in the calculated products, as well as in the ingredients used, Mr. Laming conceives that he has detected arithmetical errors. Thus he computes, quite accurately, that the prussic acid produced is $13\frac{1}{4}$ grains instead of 13 grains, as it was purposely stated, without any fraction. But (not to speak of the chance of more than this fraction, equal to one in 144 of the whole, being compensated for by moisture, by impurity, or by loss) I beg leave to sub-

mit that if, in a practical paper, laying aside all affectation of intricacy, and anxious only to be intelligible to all practical men, I choose to omit insignificant fractions, I ought not, in common candour, to be assumed ignorant of the fractions thus seasonably omitted. In calculating the cream of tartar also, Mr. Laming would bring out four grains more than the quantity originally given; but the authority upon which he relies, and for which perhaps he is not responsible, is erroneous, in as far as it assigns to cream of tartar twice the quantity of water it actually contains.

Thus I hope to have shown that the formula as originally given is, both in its ingredients and in its products, arithmetically correct; always making allowance for insignificant fractions, which, I conceive, would have been ill placed in a pharmaceutical formula, or in any explanation of it addressed to practical men, all of whom might not be conversant with fractional calculations. I am, Sir, your most obedient servant,

THOMAS CLARK.

10, Portland-st., Laurieston, Glasgow,

June 28, 1831.

SPINA BIFIDA.

To the Editor of THE LANCET.

SIR,—I send you the following account of a case of spina bifida, which you will observe is similar to the cases reported by Sir Astley Cooper in the *Medico-Chirurgical Transactions*, and treated according to his recommendation, with a few accompanying remarks. If you deem it worthy a small portion of your space, be so good as to insert it when you have opportunity for so doing. I have the honour to be, Sir,

Your obedient servant,

JOHN WALKER.

Princess Street, Manchester,

July 1, 1831.

CASE.

Spina bifida presents itself to our notice under two different forms or varieties. In the most common, which is very frequently met with, the tumour is quite transparent, the membrane covering it being extremely thin, and consequently very ready to ulcerate and discharge its contents. In the other form, and which is very rarely met with, the tumour is opaque, being covered by the natural integuments. In this form, however, the fluid may be seen by placing it between the eye and a lighted candle, as in hydrocele. I have thought it necessary to allude to this diversity, as I be-

lieve it is not generally pointed out very distinctly in surgical works. I believe it occasionally happens, that there is an intermediate form, where the skin is only partially deficient.

Sir A. Cooper has recommended two methods of treating this congenital disease; the first by pressure properly applied and continued; the second by puncturing the tumour to evacuate the fluid, and afterwards applying pressure. The latter he considers likely to produce a radical cure, the former rather as palliative treatment. Either of the above modes of treatment appears applicable only to those cases where the integuments covering the tumour are sound.

The following case was considered proper for the treatment by puncture:—It occurred in a female infant born on the 21st of January 1830. The tumour occupied the usual position over the lowest lumbar vertebra, and was covered by the natural skin and integuments. Upon pressure, a fluid was evident to the touch, and also by the aid of a lighted candle to the sight. Upon the upper portion was a small projection, something like a nipple, but more pointed at the extremity. A hard cartilaginous body was felt in the interior of the tumour, which was moveable. A small distance below the tumour was an aperture in the skin, which had been observed on the first day after birth to discharge a little fluid. The tumour was of the size usually seen in such cases, but more prominent from the integuments allowing distension. The child was healthy in all respects. At five months old the tumour had considerably increased, and the parents wishing something might be done for it, on the 20th of June the fluid was evacuated, or, at least, a considerable part of it, amounting to rather more than an ounce, through an aperture made by an iris knife, a cataract needle having been previously found too small. By this operation the tumour was much diminished, and had a flabby feel, but was not entirely emptied. For three days the child was quite well. On the fourth day the tumour had regained its original size, felt hot, and was slightly red. The pulse was quickened; general heat of skin; the eyes suffused and wandering; there were vomiting and diarrhoea; and the child died in the evening. After death the tumour was opened, and found to consist of a double cyst, each communicating with the spinal sheath. The inner surface of the cysts was found to be a continuation of the coverings of the spinal chord. There was not much fluid. No appearance of inflammation was observed either in the cyst itself, or in the membrane of the spinal chord, which was laid open to a considerable extent. The chord appeared at first to terminate in the cyst, but it was afterwards found to bifur-