simultaneous observations should be made in different localities.

Mesmerism also is a subject which needs dispassionate scientific investigation, and a modified assent to its less improbable doctrines is gaining ground in the profession; but it appears extremely desirable that authentic observations should be collected in relation to it, since there is no subject in which there is so much reason to doubt the genuineness of alleged facts, inasmuch as there is none which is so much in the hands of ignorant pretenders to science, but none also in reference to which the educated public so urgently demand enquiry at the hands of the profession. Here also the facility of concurrent action presented by the Association would be peculiarly advantageous.

Since writing this paper, my attention has been directed to an able and interesting paper on the deleterious influence of tobacco-smoking, by Dr. Allnatt, in the *Medical Gazette* for June 6th.

After making some general remarks on the toxicological properties of tobacco, the writer introduces the following passage, which I quote, as strongly corroborative of the views which I had expressed as above, previously to meeting with this paper:—

"In the present luxurious and artificial state of society, more especially in large towns, medical men are frequently at a loss to ascribe the maladies they are called to treat, to a specific origin; but I firmly believe the habit of smoking has engendered in this generation many evils which have been imputed to other sources."

Dr. Allnatt goes on to observe, that he has known frequent instances of hypochondriasis in young, active, and temperate men, which he was unable to account for until he found that they were habitual smokers. After some further remarks on the injurious influence of this habit, Dr. Allnatt concludes by an invitation to medical men to direct their attention to this much neglected subject.

RESEARCHES ON THE COMPOSITION OF THE BLOOD IN HEALTH AND IN DISEASE: A MEMOIR PRESENTED TO THE ACADEMIE DES SCIENCES, PARIS, Nov. 18, 1844.

By A. BECQUEREL, M.D., and A. RODIER, M.D.

(Translated from the *Gazette Médicale de Paris*, by EDGAR SHEPPARD, Esq., M.R.C.S.)

(Continued from page 603.)

OF THE BLOOD IN EPHEMERAL FEVER.

Simple continued fever, (prolonged ephemeral fever, synochus,) is a disease, the cause of which has not yet been discovered either in a modification of the solids or the fluids, although opinion has attributed it to an exaggeration of the plethoric state, which state was made to consist in an increase of the proportion of globules in the blood. We have endeavoured to profit by the opportunity which has occurred to us of collecting and analyzing the blood in some cases of simple ephemeral or continued fever; and the following is a summary of the results derived from an analysis of the blood in five individuals, three men and two women.

Men.—The three men were aged 24, 26, and 27 years; one of them was of robust nature, the two

others a little less so. All were in good health before the present attack, which had commenced a few days previously, and presented no signs of plethora. All three were affected with simple continued fever, specially characterized by cephalalgia, lassitude, more or less intense febrile disturbance, loss of appetite, constipation, &c. The following is the mean composition of the blood:—

MEAN COMPOSITION OF THE BLOOD IN EPHEMERAL FEVER. (MEN.)

Density of the blood deprived of its fibrin	1056.8
— serum	1025.5
Water	781.6
Globules	142.4
Albumen	65.7
Fibrin	2.8
Extractive matters and free salts	5.8
Fatty matters	1.700
Seroline	Variable.
Phosphorated matter	0.563
Cholesterine	0.112
Soap	1.005

IN 1000 GRAMMES OF CALCINED BLOOD.

Chloride of sodium	2.7
Soluble salts	2.8
Phosphates	0.321
Iron	0.569

In examining the analysis of the blood in each individual, case we find, that the globules, instead of diminishing, as under the influence of disease in general, have rather a tendency to increase, or, at least, to remain in the normal state (146, 142, 138); the albumen, on the contrary, diminishes a little; the fibrin remains normal; the fatty matters are abundant; the seroline is variable; the phosphorated fatty matter is normal, or, perhaps, slightly augmented; the cholesterine is elevated, and almost reaches the same that it attains when the patient is dieted, or when there exists an acute disease. The saponaceous matter is abundant, but within the normal limits; nevertheless, the salts present nothing abnormal.

Women.—The two women were of the ages of 27 and 32 years. One was of a strong constitution, with a brown skin; the other, on the contrary, had been enfeebled by previous privations. Both presented a simple continued fever, which venesection assisted in dispersing in a few days.

The globules were increased in the first case (135.5); in the normal state in the second (125.5); the fibrin was normal in the strongest (1.9); double in quantity in the weakest (3.6); the albumen quite normal (73 and 70); the fatty matter normal; the seroline unappreciable; the cholesterine slight in the strongest woman; increased in the debilitated (0.120); the saponaceous matter and salts normal.

The serum was very abundant in one case; but little in the other; turbid in both; the clot resistant, and of a brown colour marbled with red in the one where the globules were 125; but, on the contrary, soft, diffuent, and of the colour of wine-lees where the globules stood at 135.

These results shew that, according to our analysis of the above five cases, the condition of the blood may be

quite normal in simple continued fever.

In other cases the globules are slightly augmented, as also the cholesterine.

OF THE BLOOD IN THE PHLEGMASIÆ.

It has been shewn that the development of a phlegmasia gives rise to three important modifications in the blood; the principal one, in which we have been fortunate enough to verify to the conclusions of MM. Andral and Gavarret, is the increase of the fibrin; the two others, of scarcely, perhaps, equal importance, are the augmentation of the cholesterine, and the diminution of the albumen.

It has been seen also, that, besides this influence, that of the disease itself, which diminishes in a notable manner the proportion of the globules and of the albumen, is constantly combined with it.

The examination of individual phlegmasiæ, especially tends to prove the constant application of these two laws. Thirty-six blood-lettings have been made in twenty-nine persons affected with various phlegmasiæ; of these, five were cases of pleurisy, seven of pleuropneumonia, eight of bronchitis, five of acute rheumatism, and four of other phlegmasiæ. Twenty-two of the patients had been bled once; five twice; and one three times. We proceed to examine these diseases in succession.

(To be continued.)

NEW FORM OF URINOMETER.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND SURGICAL JOURNAL.

SIR,

I have contrived a form of Dr. Prout's urinometer, which I find so convenient, that I fancy others who feel the value of such simple expedients may be glad to possess the instrument similarly constructed; and with this view only I send you a drawing and description of the same, for insertion in the *Journal*, as you think fit.

It consists of a cylindrical paste-board case, *Fig. 1*, which, when closed, measures seven inches long and one inch and a quarter in breadth. The upper part, *A*, takes off, as represented in *Fig. 2*, and the lower part, *B*, includes a glass tube, *b b*, open at one end and closed at the other, which is made round and thin, to enable it to bear heat. This tube is of such a size as to receive within it the urinometer, *c c*. To prevent the fracture of the latter, I have a small velvet case, like the finger of a glove, in which the urinometer is packed. The part *c* takes off, and encloses a small spirit-lamp, as seen in the drawing.

The mode of using this instrument is sufficiently obvious. The specific gravity of the urine to be examined is first taken by the urinometer; a portion of the liquid being then poured out, heat is applied by the spirit-lamp to the tube itself, and thus we learn whether the urine be coagulable or not, and if there be any turbidity or any sediment, whether they be removed by heat or not, an experiment which gives us valuable information as to the cause of these appearances.

One advantage of this instrument is, that we can obtain at once, without any additional apparatus, the results of two of the most important tests applied to the examination of the urine. In a thing so easily broken, the cheapness of this form of the urinometer is

no small advantage. Instead of one or two guineas, (the price of other cases of this kind,) the instrument in question has been made, and is now sold, by Mr. Edward Davis, optician, of this town, for half a guinea.

I think that every invention that brings to bear on *diagnosis*, the principles of the exact physical sciences, is deserving of attention, and even every expedient which facilitates such methods of investigation, is worthy of being made known; and therefore have I drawn up the foregoing account.

I am, Sir,

Yours, truly,

HENRY JOHNSON, M.D.

Shrewsbury, August 23, 1845.

URINOMETER.