

The average duration under treatment of the 50 cases was 18 days, the maximum being 62 days and the minimum two days. Nearly all took place in the patients' first year of service and for the most part during the autumn manoeuvres. In 15 cases only was it possible to determine the exact time when the accident occurred, the patient having been made aware of it by a sensation of acute pain. Three times the fracture followed stepping on a stone, twice stepping into a hollow, once leaping into tilled ground, twice hill-climbing, once leaping across a ditch, once leaping from a wagon, once impact against a fallen tree, once a false step, and twice the exertion of rising from a long-continued kneeling position.

GUNSHOT WOUNDS BY MINIATURE PROJECTILES.

The wounds caused by firearms of reduced calibre have recently occupied the attention of Staff-Surgeon Seydel of the German army medical department, who has treated his subject from two points of view—the surgical and the medico-legal. During the 14 years ending 1899 the number of men wounded by miniature projectiles in the Bavarian army was 54, but only two of the cases proved fatal. During the eight years ending 1896 there were 39 accidents of a similar description in the Prussian army, followed by eight deaths. What are called toy or saloon pistols are capable of inflicting deadly injuries when fired at a point-blank range. Staff-Surgeon Seydel instances the case of an infant, four years old, in the centre of whose brain a bullet was shown by the Roentgen rays to have lodged from a weapon which was supposed to be a harmless plaything. When discharged with the muzzle touching, or quite close to, the victim, a toy pistol may give rise to extensive local damage, but no missile surpasses the destructive power of a charge of small shot before it has had time to spread, not even the famous Dum-dum bullet. In all wounds that are due to miniature projectiles, save those of the abdomen, the treatment should be strictly conservative and expectant. When the abdomen has been penetrated laparotomy, with suture of intestine if necessary, is, he alleges, indicated. In these injuries the prognosis depends to a great extent upon the degree of remoteness of the weapon and also on the penetration of clothing or other foreign matter into the wound.

RIFLE SHOOTING AS A WINTER PURSUIT FOR WORKING MEN AND LADS.

Lieutenant-General F. Lance, C.B., the acting chairman of the Society of Working Men's Rifle Clubs, has sent us a letter in which he asks us to call attention to the objects of that society. The society, of which Field Marshal Earl Roberts is president, was inaugurated at a meeting held at the Mansion House in the spring of last year. It was formed for the purpose of affording facilities for the working-classes to become skilled in the handling of the rifle and its aim is to induce large numbers of wage-earning people to utilise their evenings occasionally in a manner interesting to themselves and profitable to the State. To establish a rifle club fully equipped with the apparatus recommended, a hall or room of 40 feet or more in length is required, and a sum of £15 will more than meet the initial cost, whilst, without the apparatus, a small club could be started for £5. The profit on the sale of ammunition and a small subscription from members will cover the cost of maintenance. Accompanying Lieutenant-General Lance's letter is a little book showing the best means of forming and conducting a miniature rifle club. A copy of this book will be sent free to any person interested in the subject. Application should be made at the society's offices, 17, Victoria-street, Westminster, London, S.W. A miniature "Bisley" meeting will be held in March next when some valuable prizes will be offered for competition.

"WIND SHOTS."

As indicative of how prevalent was the notion among soldiers about the grave effects arising from currents of air caused by the passage of missiles through the atmosphere (so-called "wind shots") we may refer to the extremely interesting "Autobiography of Lieutenant-General Sir Harry Smith," recently published by Mr. Murray. At p. 99 of the first volume we came across the following in connexion with a description of the battle of Vittoria. "A rather curious circumstance occurred to me after the first heights and the key of the enemy's central position was carried. I was standing with Ross's brigade of guns sharply engaged when my horse fell as if stone-dead. I jumped off and began to look for the wound.

I could see none and gave the poor animal a kick on the nose. He immediately shook his head and as instantly jumped on his legs and I on his back. The artillerymen all said it was a current of air, or, as they call it, the wind of one of the enemy's cannon-shot. On the attack on the village previously described Lieutenant Northey (52nd Regiment) was not knocked off as I was, but he was knocked down by the wind of a shot and his face as black as if he had been two hours in a pugilistic ring."

ARMY MEDICAL MATTERS.

Mr. Brodrick, in speaking at the annual conference of the Northern Union of the Conservative Associations at Whitehaven on Oct. 10th, mainly dealt with the progress of army reform. In the course of his remarks he referred to the Army Medical Department, about which they had, he said, heard a great deal of criticism in the late war. After disclaiming all intention of talking about that war or of encroaching upon the functions of the Royal Commission of Inquiry Mr. Brodrick added: "But we have reorganised the medical department with this result, that whereas up to the time of the late war we were getting one candidate for two vacancies we are now getting between two and three candidates for one vacancy. That is the best guarantee I can give you that you will get efficient medical officers." With regard to the Royal Commission and its proceedings we may say that the King has appointed two additional members to that body and that Lord Kitchener has recently been under examination previously to his departure for India. His lordship traversed, of course, a wide area in his evidence and the medical department formed part of it.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on Oct. 14th, Sir J. N. Dick, K.C.B., being in the chair, the sum of £45 was distributed among the several applicants.

Correspondence.

"Audi alteram partem"

THE METRIC SYSTEM IN PHARMACY.

To the Editors of THE LANCET.

SIRS,—Progress continues to be made towards the adoption throughout the empire, at an early date, of the metric system of weights and measures, one of the last acts of the conference of Colonial Premiers having been the passing of a resolution in favour of the proposed reform, and there are now 292 Members of Parliament pledged to support a Bill in the House of Commons. In the United States there appears to be every prospect of a Bill being passed at the next session of Congress, by which the use of metric weights and measures will be rendered compulsory in all the State Departments of Washington (other than those which deal with the survey of land), to be followed later by the general adoption of the system throughout the country.

On the initiative of the Lord Mayor of Sheffield the town council of that city recently passed a resolution in favour of the adoption of the metric weights and measures throughout the British Empire. Copies of this resolution were forwarded from Sheffield to over 400 town and county councils and many of them have acted on the suggestion and after passing the resolution have notified the Board of Trade and the Members of Parliament representing their division.

The following is a copy of the resolution referred to:—

In the opinion of this meeting it is most desirable in the interests of education and commerce that the metric system of weights and measures should be made compulsory throughout the British Empire after the lapse of such time as may be necessary for preparing for the change from the present system. That a copy of this resolution be forwarded to the President of the Board of Trade and to local Members of Parliament.

It will be seen that a considerable amount of pressure is now being brought to bear upon the Government and that the present is a most favourable time for strong action; the Decimal Association is therefore anxious to enlarge its membership and thus increase its financial and general strength, and subscriptions (of 10s. and upwards) will be

thankfully received by the secretary, Mr. E. Johnson, at Botolph House, Eastcheap, London, E.C.

I am, Sirs, yours faithfully,

WALTER LATTEY, M.D. Durh.,

Member of the General Committee of the Decimal Association.
Oct. 8th, 1902.

To the Editors of THE LANCET.

SIRS,—There is a very simple way of using the rough rule mentioned by Sir W. R. Gowers¹ for converting British pharmaceutical weights and measures into their equivalents in the metric system. The plan is to order 16 or 15 doses or multiples or submultiples of these numbers. The gramme may be taken as either 16 or 15 grains and the cubic centimetre as either 16 or 15 minims. If, then, we order a mixture containing 16 or 15 doses, every gramme or cubic centimetre of medicine in the mixture represents one grain or one minim in each dose. Thus a 240 cubic centimetre or eight ounce mixture (30 cubic centimetres being taken as equal to one ounce) contains 16 tablespoonfuls of 15 grammes each. If we wish to give eight grain doses of a drug we order eight grammes in the 240 cubic centimetres with tablespoonful doses. In a 60 cubic centimetre or two ounce mixture there will be 15 teaspoonfuls of four cubic centimetres each, each of which will contain one grain or fraction of a grain for each gramme or fraction of a gramme of medicine in the mixture. If one orders only four doses or three doses, each quarter or fifth of a gramme (written 0.25 and 0.2) represents still one grain in each dose. With fractions of a grain the matter is equally simple: one-sixth of a gramme (0.16) in 16 pills gives one-sixth of a grain in each pill; half a gramme (0.5) in 16 pills is one-half a grain in each pill; one-twentieth of a gramme (0.05, or five centigrammes) in the 16 pills is one-twentieth of a grain in the single pill.

"The use of the cubic centimetre with the fluid ounce," as suggested by Sir William Gowers, would indeed "save dispensers the serious inconvenience occasioned by the new sizes of metric medicine bottles," but would, I am afraid, lead in practice to still more serious confusion. The inconvenience spoken of might in England for a time no doubt be real. But 240 cubic centimetres exceed eight ounces by only 12.6 cubic centimetres or three and a half drachms. If, therefore, we wrote 230 cubic centimetres instead of 240 cubic centimetres for eight ounces and 115 cubic centimetres instead of 120 cubic centimetres for four ounces the difficulty would vanish. Should the ordinary two-ounce bottle not take 60 cubic centimetres one might write 58 cubic centimetres, but this would probably be unnecessary.

The continental system of ordering medicines by weight and directing them to be taken by measure can hardly be regarded as very rational. Even if one knew the specific gravity of the various contents of a mixture one could hardly say what the measure would be when made up to, say, 250 grammes. The mixture thus made up to an unknown bulk is directed to be taken by measure—teaspoonfuls or tablespoonfuls as the case may be. Personally I always prescribe liquids by measure.

It may be worth while to mention that in metric pharmacy the gramme, being the standard, is indicated only by the decimal point or comma following: thus, 5.0 means five grammes, 0.5 means half a gramme or five decigrammes, and so on. In ordering liquids by measure, therefore, one should add c.cm.—thus, 5 c.cm. or 0.5 c.cm.

In tabular form the points to be remembered are that with weak aqueous solutions the terms grammes and cubic centimetres are approximately convertible and that practically

30 c.cm.	=	3i	but 230 c.cm. = 5 viii.
4 "	=	3i.	
1.0 "	=	15 or 16 grains.	as may be most convenient for calculation.
0.1 "	=	1½ grains.	
0.01 "	=	⅙ grain.	

I am, Sirs, yours faithfully,

WILLIAM R. HUGGARD.

Davos-Platz, Switzerland, Oct. 6th, 1902.

THE ENUMERATION OF LEUCOCYTES.

To the Editors of THE LANCET.

SIRS,—Recently attention has been drawn to the method of counting leucocytes in blood which has been diluted with 99 parts of Toisson's fluid. A slight modification of the

commonly described method has been adopted at the clinical laboratory of King's College Hospital, which I believe saves time if a considerable number of observations have to be made. The recognised method, provided one does not possess an Ehrlich eye-piece, consists in arranging the length of the tube of the microscope so that the diameter of the field shall be some simple fraction of a millimetre; it is then easy to calculate the volume of blood seen at one time and hence the number of white corpuscles per cubic millimetre. For instance, if the diameter of the field be eight divisions of the Thoma counting chamber the radius will be 0.2 millimetre and therefore from the formula $\pi r^2 h$ the volume of mixture seen at a time is $\pi \times (0.2)^2 \times \frac{1}{10} = \frac{\pi}{125}$ cubic millimetre. Therefore the average number per field must be multiplied by 7951 in order to ascertain how many leucocytes are in a cubic millimetre of blood.

It is obvious that the number 7951 does not lend itself to rapid multiplication; by diminishing the size of the field this constant may be increased to 10,000. The diameter of the field must be such that $\pi r^2 h = \frac{1}{100}$, that is $r = 0.1785$ millimetre, or the diameter 0.357 millimetre. There is not the slightest difficulty in arranging this. The one-sixth inch objective of my microscope with a No. 4 compensating ocular and 175 millimetre tube has a field the diameter of which is eight divisions of the Thoma counting chamber or 0.4 millimetre; on extending the tube to 200 millimetres the diameter of the field becomes seven divisions or 0.35 millimetre. Since the diameter of the field varies inversely as the length of the tube and an increase of 25 millimetres in the latter causes a diminution of 0.05 millimetre in the former, it follows that an increase of 21.5 millimetres will reduce the diameter of the field from 0.4 millimetre to 0.357 millimetre. Therefore with a tube length of 196.5 millimetres the average number of white cells per field must be multiplied by 10,000.

I trust that this further diminution in the labour of estimating leucocytes may lead to that valuable sign being more frequently investigated.

I am, Sirs, yours faithfully,

Wimpole-street, Oct. 13th, 1902.

OTTO GRÜNBAUM.

"THE UNCONSCIOUS MIND."

To the Editors of THE LANCET.

SIRS,—In a short account of Sir F. Treves's address at Liverpool I observe that the two principal points mentioned both refer to a subject that is coming more to the front every day. I allude to the power of the mind over the body. He speaks with the greatest appreciation of the value of symptoms, pointing out that in diseases generally (specially naming appendicitis) they are nature's effort to cure the disease. In short, he fully recognises the value of the *vis medicatrix nature*, or as "nature" in this connexion is a pure fiction, we may say the unconscious purposive action of the organism or more briefly, and more accurately, "the unconscious mind." The second point alluded to is that in a hospital patients should not know where the operating-theatre is or when they are to be operated on. This is because of the depressing effect the conscious mind, dwelling on these points, has on the body, influencing, indeed, to some extent the operation itself. This address therefore gives two capital illustrations of the effect of the unconscious and conscious mind on the body in disease—a subject I am most anxious to see developed scientifically by the profession and no longer left to be exploited by quacks.

I am, Sirs, yours faithfully,

A. T. SCHOFIELD, M.D. Brux.

Harley-street, W., Oct. 13th, 1902.

"SORE-THROAT ILLNESS AT DITCHAM" AND ISOLATION HOSPITALS.

To the Editors of THE LANCET.

SIRS,—In your comments on my letter dealing with the report of Dr. L. W. Darra Mair in THE LANCET of Oct. 11th (p. 1003) I am represented as speaking of "mild though temporary" attacks of scarlet fever. A reference to my letter (p. 1015) will show that my words were "mild though temporarily protective attacks." That the inmates of houses from which cases of scarlet fever have been removed to hospital are frequently so protected is beyond question and the fact affords an explanation of the smallness of the number of "return cases," as such are usually defined. In the face of the Ditcham

¹ THE LANCET, Oct. 4th, 1902, p. 956.