

the chloroform which evaporates from any inhaler, whether a percentage one or not, is no more in the patient, within his respiratory endothelium than it is, than if it were still in its bottle on the dispensary shelf, and if the use of an inhaler gives to the anaesthetist a false sense of security and tempts him to any relaxation of vigilance, a real danger among the less experienced, it will do an immense amount of harm. Passing in review all the uncertainties which must surround the administration of chloroform through a percentage inhaler, one is prepared for the statement made during the discussion that these instruments give no immunity from an overdose, but that such has actually occurred, and that in the hands of an experienced anaesthetist, artificial respiration having to be resorted to in order to save the patient's life. These regulators, then, are not safe. The use of one does not, any more than does the use of a hypodermic syringe in the case of morphia, introduce the element of safety into the administration of chloroform, and the administrator in determining whether or no more of the drug is required has to be guided by the effect produced as entirely as is the case when he administers any other drug by any other route. It has been shown that these regulators do not introduce into chloroform anaesthesia the element of safety. It is evident that it is as easy to kill a man with one of them as it is without. This being so, their sole possible advantage is lost, while by their use there is introduced the enormous disadvantage that the attention of the anaesthetist is divided between the patient and the apparatus. There is a real danger here that the general use of such apparatus will increase the death-rate, for there can be no question that chloroform cannot be given safely unless the whole attention of the administrator is concentrated on the patient and in particular upon the respiration. It is possible that it is not altogether easy for some specialists in anaesthetics to realise this, for by long practice the noting of the various points which make up normal anaesthesia becomes sub-conscious and automatic, while at the same time any variation from the normal thrusts itself immediately upon their attention. But in the case of the less experienced—those, that is, in whose practice deaths from chloroform poisoning are most likely to occur unless the whole attention is concentrated on the patient—the first signs of danger may easily be missed and the patient be beyond recovery before it is realised that he is in danger. It is admissible to repeat that chloroform cannot be given with safety, at least by any but the most experienced, unless the whole conscious attention of the administrator is concentrated on the patient and especially on his respiration, and the use of a machine, which divides his attention introduces at once into the administration the danger of fatal poisoning.

I am, Sirs, yours faithfully,

CLAYTON LANE, M.D. Lond.,
Captain, I.M.S.

Calcutta, Jan. 18th, 1905.

FRACTURED HUMERUS IN AN ARM AFFECTED BY INFANTILE PARALYSIS.

To the Editors of THE LANCET.

SIRS,—I have met with a case recently which is quite new to my experience nor can I find any local *confrère* who has ever met with a similar case—viz., a young lady, aged 21 years, who has one arm quite paralysed—all the muscles have been wasted since early childhood—recently fell and fractured the humerus of the paralysed arm. What are the chances of good osseous union? The fractured arm is thoroughly fixed with four narrow Cline's splints and there is no movement of the arm, which has also a retaining bandage over the injured member across the thorax, permitting the sound arm, of course, freedom. She is taking hypophosphites and generous diet of fish, wholemeal bread, &c. Her constitution seems fairly good generally. Is there any work treating of such a case? Your valued opinion as to the probable ultimate result would be much appreciated.

I am, Sirs, yours faithfully,

RAPIER.

* * As a rule mere paralysis of the muscles of a limb does not hinder in any way the firm and speedy union of a fractured bone. In the case mentioned by our correspondent, however, there is not only paralysis of the muscles of the

limb but also more or less atrophy of the bones, so that there may be little compact bone in the shaft of the humerus. In such a case some delay in union may occur but ultimately the fragments should unite firmly. In the treatment of such a fracture it is well to remember that the tissues of the paralysed limb are not of a very high degree of vitality and therefore especial care should be taken to prevent pressure sores from the splints.—ED. L.

NITROUS OXIDE GAS, CHLOROFORM, AND AIR INTIMATELY MIXED.

To the Editors of THE LANCET.

SIRS,—Since you kindly inserted a short communication¹ from me on the merits of nitrous oxide gas, chloroform, and air intimately mixed either for short operations or as an introduction to prolonged insensibility by chloroform, I have had so many letters from different and far-away correspondents asking for a description of the apparatus that I have shown my own adaptation of the ordinary gas apparatus to Messrs. Down of St. Thomas's-street, who are now able to supply the necessary parts. My former communication was rather to draw attention to the principle as I thought almost anyone could adapt the Woulfe's bottle. I may add two things: I commence to use the Woulfe's bottle as soon as I turn on the gas, and I find some 50 per cent. of the patients give a slight moan after a few seconds' inhalation though as yet on inquiry after recovery I have not found one patient cognisant of it.

I am, Sirs, yours faithfully,

TOM BIRD,

Feb. 2nd, 1905.

Consulting Anaesthetist, Guy's Hospital.

THE SERUM THERAPEUTICS OF CASES OF SNAKE-BITE.

To the Editors of THE LANCET.

SIRS,—Captain G. Lamb, I.M.S., in his interesting paper in THE LANCET of Nov. 5th, 1904, p. 1273, on the above subject refers once more to the experiments (published in my lecture in your columns on Feb. 6th, 1904, p. 349) in which I obtained complete recoveries of animals from eight and more lethal doses of the venoms of the cobra, king cobra, enhydrina, and bungarus cœruleus respectively previously mixed with relatively large doses of Calmette's antivenin and he repeats his criticisms of these results on the ground that as Calmette's serum is made from a mixture of venoms it is by no means suitable for the settlement of the specificity of the venoms. As, however, I have recently been informed by M. Calmette that the antivenin he supplied me for the experiments referred to was made purely by the use of cobra venom Captain Lamb's criticism falls to the ground, while he has himself pointed out that those who have failed to neutralise any of these venoms have used smaller doses of antivenin in proportion to the strength of the venoms tested than I did, so that their results agree with mine, for with the smaller doses of serum used by me the animals also died.

My excuse for returning to the subject is that my results have a practical as well as a theoretical value, for although by itself the strongest antivenins have to be used in practically impossible doses, even against cobra venom, if a full dose of the poison has been received, although it may save life if only a slightly supra-minimal lethal dose is injected (as in a case reported in the December number of the *Indian Medical Gazette*), yet if most of the venom is destroyed locally by the use of permanganate of potash, as recently re-advocated by Sir Lauder Brunton, Sir Joseph Fayrer, and myself (five successful cases of which treatment will shortly be published in India), then even a comparatively small amount of antivenin may suffice to reduce the amount of any of the colubrine venoms mentioned, which may have already entered the circulation before the local treatment is completed, to below a fatal dose and so save life. The cobra antivenin should therefore be used, if available, in every case which may possibly be due to a colubrine snake but it should be always injected intravenously, as both

¹ THE LANCET, Nov. 8th, 1902, p. 1257.

C. J. Martin and myself have shown that it acts many times as efficiently by this mode of use than when injected subcutaneously.—I am, Sirs, yours faithfully,
Calcutta, Jan. 18th, 1905. LEONARD ROGERS, I.M.S.

MULTIPLE GESTATION.

To the Editors of THE LANCET.

SIRS,—In your notice of Dr. Pinard's work on the phenomenon of multiple gestation you cite many remarkable cases of extreme fertility amongst women, and draw attention to the probability of this being an inherited character. In support of this view the case of three sisters¹ in America who had between them 111 children deserves notice. The eldest, Dr. Mary Austin, who was well known for her work during the War of Independence, gave birth to triplets six times and to twins 13 times, making 44 in all. The second sister had 41 children and the third 26. A point of interest in this case is that it is hardly in accord with the supposition that extreme fecundity may be due to the influence of the father, otherwise the long arm of coincidence would have to be unduly stretched. Those of your readers who are interested in this question will find an able discussion of this and similar phenomena in the monograph by Dr. M. von Lenhossek, "Das Problem der geschlechts-bestimmenden Ursachen."

I am, Sirs, yours faithfully,

Windsor, Feb. 2nd, 1905.

M. DAVENPORT HILL.

INDIAN UNIVERSITY DEGREES AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—In relation to the degree of the University of Bombay I think it may be interesting to some to know that the F.R.C.S. and M.R.C.S. and L.R.C.S. are recognised in the Dental Act as degrees. "Licentiate" in the Spanish universities is a very old degree and in our old universities Oxford and Cambridge "Licentiate" was a grade higher than M.B.

I am, Sirs, yours faithfully,

J. G. PARSONS, F.R.C.S. Eng.

Cotham, Bristol, Feb. 4th, 1905.

* * In Table G. to be found in the Medical Register under the heading "Qualifications Now or Formerly Obtainable," "Licentiate in Medicine" is mentioned as a supplementary qualification to be obtained from the Universities of Oxford, Cambridge, and Durham. As we were unacquainted with this "degree" we communicated with the Registrar of the University of Oxford who informs us that he had never heard of the degree "Licentiate in Medicine." In mediæval times the "Bachelor of Medicine" was conferred at the same time as the "Inceptio ad lecturam" and the "M.D." with the "Inceptio ad licentiam." This latter, we presume, is what Mr. Parsons is referring to in his letter. In 1854 we learn from "The British Medical Directory" that the University of Cambridge conferred a licence *ad practicandum in Medicinâ* which was granted to candidates being previously Bachelors of Physic who could produce certificates of having attended hospital practice for three years and of having attended lectures in medicine, surgery, midwifery, and the collateral subjects. Nothing is said, however, in the same directory about a similar degree at the University of Oxford.—ED. L.

¹ Cited by L. A. Geissler in his work "Zur Kenntniss der Geschlechtsverhältnisse bei Mehrlingsburten," published in the Allgemeines Statistisches Archiv, 1896, Band iv., S. 537 and 544.

THE HIGH DEATH-RATE OF THE COLOURED PEOPLE IN THE UNITED STATES OF AMERICA.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

In America the difficulty of housing the poor is complicated with the negro problem. The latter is a most formidable problem which by some is thought to threaten the very existence of the country. The negroes multiply so rapidly that at least in some parts of the United States they threaten to overwhelm the white population. But to deal with this matter needs special and close study and journeys further south than could be attempted in the limited time at my disposal. It was at Washington and at St. Louis that I came in nearest touch with the negro question and then mainly as an integral part of the housing problem. The population of the District of Columbia, including the capital of Washington, is set down at 295,198 and out of this total 90,353 are negroes. Now the average annual death-rate for the years from 1894 to 1903 was 20·91 per 1000. Few, however, look at the death-rate in this light nor are the official figures given in this simple manner. The average total certainly is set forth but it is always accompanied with other tables giving the death-rate for the white and the coloured races separately. Thus for the ten years in question the average annual death-rate for the white races only amounted to 17·01 per 1000. On the other hand, the death-rate for the coloured people was no less than 29·44 per 1000. A similar difference between the white and the coloured population is recorded in many places. As already mentioned, the death-rate of the coloured population at St. Louis was 30·86 per 1000, while that of the white population was only 16·83 per 1000.¹ The startling discrepancy between these figures has led to a widespread impression that it was a question of race. But a closer examination indicates that the causes are poverty and bad sanitation rather than colour. Indeed, there are some reasons why the negroes should live longer than the white men. They are in any case less addicted to drink and they are less violent and not so likely to die from some accident. Thus, for instance, taking the deaths in the District of Columbia for the year 1903, it will be found that 19 deaths of the white and only four deaths of the coloured population are registered as due to alcoholism, giving a death-rate per 1000 of 0·092 whites and 0·044 coloured, or a ratio of 1 to 0·48. Again, in regard to cirrhosis of the liver the death-rate among the white population was 0·166 and among the coloured 0·089 per 1000, or a ratio of 1 to 0·53. For accidents the death-rate is 0·679 among the whites and 0·597 among the coloured, and for suicides the difference is 0·249 to 0·089, or a ratio of 1 to 0·36 to the advantage of the coloured people. These figures show that the latter are more sober and less violent than the white men. On the other hand, the death-rate from hereditary syphilis was only 0·015 per 1000 among the white and amounted to 0·100 among the coloured people. Yet this may be due not so much to greater immorality but rather to ignorance and poverty which prevented the parents obtaining proper treatment in the early stages of the disease. It is in respect to the more general causes of death that the coloured people especially suffer. Thus the death-rate per 1000 in 1903 was for diarrhoea and enteritis of children under two years, 0·556 among the whites and 1·859 among the coloured; for pneumonia at all ages, 0·917 and 2·690 respectively; and for tuberculosis of the lungs, 1·733 and 4·660 respectively. The report of the health officer of the District of Columbia dealing with the figures for the year 1902 summarises the situation as follows:—

The excessive mortality of the coloured race begins with earliest infancy; the ratio between the death-rates for white and for coloured from premature births is as 1 to 2·26. The corresponding ratio from congenital debility is as 1 to 2·51, from malnutrition and marasmus as 1 to 2·24, and from rickets as 1 to 29. Child-bearing is fraught, too, with peculiar dangers to coloured women. The ratio between the death-rates for white and for coloured from puerperal eclampsia is as

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Guye, professor of otology in the University of Amsterdam.—Dr. Karl Klein, professor of surgery in the University of Moscow.

¹ See "Sanitation at St. Louis" in THE LANCET of Dec. 17th, 1904, p. 1753.