Pharmacopœia. The exhibit included *Johannis lithia* and potash waters. A very fine exhibit of mineral waters was that of the Chemists' Aerated Mineral Waters Association, Limited (Camwal), of Camwal Works, Bristol. One excellent non-alcoholic drink prepared by this firm is a very palatable pale dry ginger ale which contains a minimum of sugar. The exhibit included also a novelty in the shape of a "splitlet," a bottle smaller than the "split" size and containing a small quantity of soda-water representing the quantity usually consumed with spirits. Messrs. Ingram and Royle, Limited, of East Paul's Wharf, 26, Upper Thames-street, London, E.C., exhibited a large selection of natural mineral waters. There were also specimens of Carlsbad and Vichy salts. The Friedrichshall Company, of 10 and 12, Milton-street, London, E.C., exhibited the well-known natural aperient mineral water of Friedrichshall. It contains the sulphates of magnesium and sodium in nearly equal quantities, the usual dose being from one to two tumblerfuls. It also contains the chlorides of magnesium and sodium which are said to modify advantageously the action of the sulphates. Lastly should be mentioned the excellent samples of Devonshire cyder exhibited by Messrs. H. Whiteway and Co., of the Orchards, Whimpe, Devon. Samples were submitted for tasting purposes and the verdict was obviously a favourable one.

VI.—PUBLICATIONS.

Amongst the publishers exhibiting books on modern medicine and surgery were W. B. Saunders Company, of 9, Henrietta-street, Covent Garden, London, W.C.; Mr. Sidney Appleton, of 25, Bedford-street, Covent Garden, London, W.C.; Mr. H. K. Lewis, of 136, Gower-street, London, W.C.; and Messrs. Rebman, Limited, of 129, Shaftesbury-avenue, London, W.C.

On previous occasions we have included in our notice of the annual exhibition a miscellaneous section, but this year there were no exhibits coming under this head.

ERRATUM.—In the report which appeared in our issue of August 10th of the Section of State Medicine at the British Medical Association held on Thursday, August 1st, Dr. J. H. Drysdale of London was erroneously reported as speaking in the discussion on the home contamination of milk. The speaker was really Dr. C. R. Drysdale of London.

Looking Back.

FROM

THE LANCET, SATURDAY, August 15th, 1829.

DR. AMUSSAT'S METHOD OF ARRESTING HÆMORRHAGE.*

To the Editor of THE LANCET.

SIR,—M. Amussat, doctor of medicine, and lecturer on anatomy in Paris, having lately been employed in very interesting experiments, on the "*tortion of blood vessels*," as a means of stopping hæmorrhage, has requested me; through Mr. John King Dingle, his pupil, who witnessed those experiments, to insert, in your extensively read Journal, a short account of his discovery. It appears that this gentleman was led to devise his new means of stopping hæmorrhage, by reflecting on the well-known canon in surgery, that "torn wounds do not bleed." His first essays were made on dogs and horses; having divided arteries in these animals, he bruised and lacerated the vessels in a variety of ways, but always without producing a durable suspension of the bleeding. After many attempts, he found that twisting the artery a sufficient number of turns was an effectual styptic, and, in his opinion, a more simple and expeditious, and less painful method than the ligature. Dr. Amussat's experiments were made in the presence of some of the most distinguished surgeons in Paris, and repeated before the Royal Academy of Surgery, and the general opinion entertained is, that his mode of operation will be one of the greatest utility, especially in the army and navy, as it enables the surgeon himself to secure the largest artery without the aid of an assistant.

The following is his mode of proceeding: Each orifice of the bleeding vessel, whether artery or vein, is to be seized

with a pair of small forceps, so constructed as to be kept close with a spring; the vessel is then to be drawn out and separated from the different tissues which surround it, and a certain portion is to be insulated with another forceps, probe-pointed, and to be held in the left hand, for the purpose of limiting the effect of the torsion, which would otherwise affect too great a length of the vascular tube. The torsion is to be made with the right hand on the elastic forceps; ten half turns of the forceps will suffice to repress the flow of blood, and twenty will tear through the tissue of the vessel. It is necessary, after every three or four turns, to relax the hold a little, to allow the retraction of the artery or vein.

The rupture of the middle and inner tunics takes place, most frequently, after ten half turns, and these are forced back into the area of the artery, so as to form a valve, which is closely involved by the cellular coat; it is recommended, however, to twist the end of the artery off, as it presents a greater degree of security, and has been attended with more satisfactory results. The doctor's plan is supported by numerous proofs derived from instances of complete success. To render the torsion more easy, it is necessary to draw the artery well out from its connexions, and the twisting ought to be confined either with the thumb and index of the left hand, or with the blunt pointed forceps before mentioned.

M. Amussat, after having successively and comparatively tried all the different means hitherto adopted in the suppression of hæmorrhage from arteries and veins,—having used every kind of ligature that has ever been recommended,—having plunged the extremities of arteries into the most powerful and concentrated acids,—and after pressing, crushing, bruising, turning up, and pushing back the bleeding extremities,—has found no process so certain, or so often successful, as that of torsion. The twist, if properly executed, is not only sufficient to withstand the *vis à tergo* of the column of blood, but will bear, without detriment, the friction of a sponge in cleaning the surrounding parts. After having assured himself of these facts on the lower animals, M. Amussat tried whether this process were applicable to the human body. He put in practice his tortive experiments on the tubes of every calibre, from the narrow channel of a ramus cuniculus to the main canal of the aorta. To ascertain the quantity of resistance which the torsion would offer to the column of blood, he injected, with a powerful syringe, into the twisted arteries of a dead body, a fluid of equal density with the blood, but in no instance did the bulwark of the twisted extremity give way, although, in several instances, the coats of the arteries were ruptured by the force of the pressure employed. M. Amussat has not communicated to me any examples of its application on the living subject.

To illustrate more cogently the principles which this justly-celebrated physiologist wishes to establish, I shall suppose a case of divided radial artery. Each of the bleeding extremities is to be laid hold of by the self-shutting forceps already described; the flow of blood being thus arrested, the operator seizes hold of the forceps, already fixed on the artery, and gently extends the vessel from its sheath, whilst, with the probe-pointed forceps in the left hand, he grasps the artery about three or four lines from its extremity, and presses the sides together, thus limiting the extent of the torsion, which is next to be affected. The insulated piece of artery is now to be twisted to ten or twenty half turns, and the conical end of the vessel remains perfectly secure. By the traction first applied, the elastic external coat is drawn over the two inner and less versatile tunics, the ends of which are rolled back, so as to plug up the mouth of the tube, and afford a safe basis for a coagulum. The consequent effusion of lymph guarantees the success of the process.

Of the practicability of M. Amussat's plan I have had no personal experience, and I therefore do not presume to offer an opinion.

I am, Sir,

Your obedient servant,

D. O. EDWARDS.

Westminster Hospital,
6th August, 1829.

P.S. M. Amussat has also invented an improved lithotritic apparatus, and an instrument for dilating the urethra.

* This letter was not received until after the account of Dr. Amussat's method of arresting hæmorrhage, given at page 580, had been sent to the press.—ED. L.

(Vide "Looking Back" in THE LANCET of August 10th, 1907, p. 407.)