FORENSIC MEDICINE.

CLOSURE OF THE DUCTUS ARTERIOSUS.

The subjoined conclusions, by Professor Brennt, are quoted from a recent number of the *Medical Gazette* :—

1. If the child has lived only a *few seconds*, the aortal end of the duct appears contracted, and the vessel instead of being cylindrical throughout, acquires the form of a truncated cone.

2. If the child has lived for *several hours*, or a *whole day*, the duct becomes again cylindrical, although shortened and contracted in diameter. The size is about that of a goose-quill; it is therefore smaller than its root, and about as large as either of the two branches of the pulmonary artery, which have, in the meantime, become increased in size.

3. If the child has lived for *several days*, or a *whole week*, the duct contracts to a diameter of a few lines, about equal to a crow-quill; while the two branches of the pulmonary artery are equal in size to a goose's quill.

4. The duct is met with perfectly closed and quite impervious, at a much later period—i.e., after the lapse of a very uncertain number of weeks, or even months.

Among the exceptional conditions, Brennt remarks that the contraction may be first observed at the cardiac instead of the aortal end. In one instance of a still-born child which was resuscitated, and breathed freely for a short time, and in which the thymus gland was absent, the duct was found of the size of a crow-quill, as in children which have lived for several days. He also states, on the authority of Joseph Schallgruhu, that the duct is sometimes entirely absent.

NEW METHOD OF DISTINGUISHING ARSENICAL STAINS FROM THOSE OF ANTIMONY.

M. Cottereau proposes a new proceeding for the above purpose, which consists in submitting the stain to the action of the vapour of phosphorus. The phosphorus is divided into small fragments, and placed on a plate, upon which the porcelain containing the stain is reversed. The experiment is conducted at the ordinary temperature. Spots produced by the arsenic disappear after a few hours, while those of antimony remain from twelve to fourteen days. These also disappear at length, but re-appear as the red sulphuret of antimony, by the exposure to vapour from a solution of hydro-sulphuric acid. Arsenical spots thus treated re-appear with the characteristic yellow of the sulphuret of arsenic.—*Gazette Médicale*, No. 37, 1846.

OPERATION FOR SCIRRHUS OF THE LEFT BREAST PERFORMED DURING THE INHALATION OF SULPHURIC ÆTHER.

By W. PHILPOT BROOKES, M.D., M.R.C.S., Surgeon to the General Hospital and Dispensary, Cheltenham.

Having occasion to perform the operation of extirpation of the left breast for a scirrhus tumour, but in which the glands of the axilla had not become diseased, I gladly availed myself of this the first opportunity I have had of trying the effect of the inhalation of

æther, and its being the first time it has been used in this town for any capital surgical operation, (although Mr. Tibbs, the dentist, had succeeded with it for the extraction of stumps of teeth,) I invited the following members of the profession to be present :—Dr. T. Smith, Mr. Eves, (one of the surgeons to the Hospital,) Mr. Dalton, Mr. Ocrell, Mr. Fagan, Mr. Tibbs, surgeon-dentist, Mr. Gregory, and Mr. Peart.

The great importance of this invention as regards operative surgery, renders it necessary that surgeons should make known all the cases that come under their observation, and on that account I have given the full notes of this one.

The inhalation of the sulphuric æther was kindly managed for me by Dr. T. Smith, (one of the physicians to the Hospital and Dispensary here,) who administered it with a simple gum elastic tube, with an ivory-mouth pipe attached to a damp bladder, placing in it about two ounces of æther, and putting the bladder in warm water. The æther used was Howard's sulphuric, which had been washed and re-distilled by Mr. Smith, chemist, of this town. At first we had some trouble to persuade the patient to inhale properly, but after a short time, and becoming herself anxious to have the operation performed, she did so vigorously, and the æthereal effect was produced in about four minutes from that time. She fell back in bed, the arms dropped to her side, the pupils dilated, eyes turned up to the orbit, and sensibility apparently gone.

I commenced my operation, which was performed by two elliptical incisions of about four inches in length, extending fully round the nipple to the border of the axilla, dissecting out the disease; one small artery had to be tied. The operation occupied about two minutes.

After the lapse of six minutes the patient recovered her consciousness, and when asked if she had felt any pain, said, "None whatever,—you have not done the operation, you are only deceiving me," and we had some difficulty to persuade her to the contrary; in fact, she would not credit it until I gave her the breast to look at. Since the operation she has been questioned by several parties how she felt, and her answer is, "It was a pleasant sensation, no pain of any kind, and she could not now even believe it possible the disease was cut out with a knife."

The patient had not any bad symptoms from the æther either during its inhalation or afterwards. The pulse rose from 80 to 125; she complained shortly after of a little pain in the region of the heart, but this left her in a short time; one wine glass-full of brandy and water was given her after the effect of the æther had left, and at night the pulse was soft, 100; patient very tranquil; skin moist; complains of some difficulty in voiding the urine. A sedative draught was given her.

All the gentlemen present, whose names I have deemed it advisable to give, felt perfectly satisfied that the operation was performed without the slightest sensation of pain or uneasiness, and expressed themselves highly gratified with the result.

On reviewing the cases of operations already performed under the influence of æther, we cannot regard

the invention in any other light than as one of the greatest boons ever offered to operative surgery, in alleviating the greatest distress of mind and body which patients always suffer when they are told they must undergo a surgical operation, and it must now become the duty of every surgeon to watch well the progress of this remedy, and judge for himself whether or not it is not capable of being brought into very general use. I am only sorry the talented inventor should have clogged it with a patent, which I trust will never be allowed to stand; he deserves a far higher reward than that of turning it to a mere mercantile production.

I cannot close this article without publicly thanking Dr. Smith, for the trouble he has taken in trying the effect of æther on healthy subjects, preparatory to giving it this patient, and the judicious manner in which he administered it for me.

Albion House, Cheltenham,
January 28, 1847.

INHALATION OF THE VAPOUR OF ÆTHER.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND
SURGICAL JOURNAL.

SIR,

I can imagine your readers to be almost saturated with "*Æthereal vapour*," in consequence of so much public attention having been directed towards this powerful agent; nevertheless, should you consider the accompanying comments, emanating from one of the oldest members of the Provincial Medical and Surgical Association, in any manner worthy of notice, they are at your service.

I understand it is generally admitted, that the chief difficulty that has attended the process of inhalation, has been the violent spasms and cough that accompanied it; and in some cases the operation has been brought into disrepute by the cerebral disturbance produced. I witnessed two cases last week at the Royal Berkshire Hospital of tooth-extraction in young females, and in each case there were considerable paroxysms of coughing when under ætherization; indeed, so much so, as to render them almost unsuccessful. I had a tooth removed afterwards by the house-surgeon of the Institution, being entirely unconscious of the operation when under the influence of the vapour, administered by Hooper's apparatus. From what I have read and witnessed in reference to this subject, and more particularly from what I have experienced by inhalation, the effect of which was charming after the first stage of coughing and suffocation had disappeared, by no means to be considered trifling, and only to be explained by persons who have experienced it, I cannot but imagine the chief difficulty would be remedied, provided the operator has the means of administering the æther in the *smallest* proportion at the *onset*, either by regulating the stop-cock or valve, as may be most convenient, or in a diluted state, as has been recommended, to direct the patient to inhale for the first minute or so, as softly and gradually as possible,

and above all, not to hurry the operation by the introduction of the vapour too rapidly; for, with regard to the success of it, quite as much depends upon the manner of inhaling, as it does upon the operator who administers it.

I remain, Sir,

Your obedient servant,

S. W. KIDGELL.

Pangbourn, Reading,

February 9, 1847.

AMPUTATION PERFORMED UNDER THE INFLUENCE OF ÆTHER.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND
SURGICAL JOURNAL.

SIR,

The cases in which the inhalation of the vapour of sulphuric æther has been successfully employed in the provinces, for the purpose of rendering patients insensible to the pain of surgical operations, are now so numerous that it seems almost superfluous to record another, especially as the instances in which this powerful agent fails to produce the desired effect, or is attended with unfavourable or dangerous symptoms, are more instructive to the profession, and therefore better entitled to a place in your columns. I am, however, induced to send you the following case, which you can either insert at length or shortly announce in your usual summary:—

Mr. Neate, master of the British School, at Corsham, a few years ago, met with a severe accident by machinery, and was obliged to have his left arm amputated, about the middle of the humerus. As the bone protruded an inch and a half, and was merely covered by very thin skin, the patient was desirous of having a less painful and a more slighty stump. He suffered a great deal of pain during and subsequent to the first amputation, and therefore was very anxious to try the effects of æther. Mr. Washbourne, of this place requested me to assist him in the administration of the vapour and the operation. A common inhaler was employed, some pieces of sponge being placed in the æther, and a small piece so as to prevent any of the fluid entering the breathing tube. Three minutes perfect inhalation were sufficient to produce intoxication; another minute (as the flap operation was performed) was of course only required to effect the removal of the parts necessary for the formation of a new stump.

There were several small arteries to be secured by ligature, and the veins bled more freely than usual, and consequently delayed the dressing of the stump, a circumstance which I mention because I see in a report of some experiments upon animals under æthereal influence, just presented to the Academy of Sciences at Paris, that æther produces congestion in the veins and capillary vessels; and this state we might naturally expect to follow a great and sudden diminution of arterial action, as indicated by the state of the pulse, &c.

The inhalation was repeated two or three times; the patient was quite ravenous for its continuance, and in