at which they are audible after the setting in of bad symptoms, the more conclusive is the evidence that rupture has not taken place; whilst on the other hand, the sudden cessation of the fætal pulsations, where they had been distinctly audible a short time previously, would strongly corroborate other existing symptoms of laceration of the uterus.

8. After an attack of puerperal convulsions in the seventh or eighth month of pregnancy, where labor has not immediately supervened, the prognosis should be very much regulated by the state of the fætus; for if it be proved by the stethoscope that the child is alive, we may venture to hope that gestation will go on undisturbed (unless the convulsions recur); whereas, if the child has been destroyed, its expulsion will take place, probably, in ten or fourteen days from the date of the convulsive attack.

9. No certain conclusion regarding the state of the fœtus can be drawn from the characters of the placental soufflet.

10. In cases of flooding before delivery, observation of the placental bruit may supply useful diagnostic information, by pointing out the part of the utcrus to which the after-birth is attached, and hereby showing whether the hemorrhage be accidental or unavoidable.

11. Auscultation of the heart in still-born children more accurately acquaints us with the state of the child's vital powers, than any other source of information, and is, therefore, well deserving of employment in all such cases.

MATERIA MEDICA AND CHEMISTRY.

PROFESSOR BRANDE on the Physiological Properties and Uses of the Vapours of Ether and Chloroform.—At the evening meeting of the members of the Royal Institution on Friday the 28th January, Mr. Brande gave a lecture on the physiological properties and uses of the vapours of ether and chloroform. The theatre was completely filled before the hour of lecture, the novelty of the subject having proved a great source of attraction. The object of the lecturer was evidently that of suiting his remarks to a popular audience; hence, any detailed report of the lecture would be unsuited to our pages.

M. Brande commenced by calling attention to the production of alcohol from sugar by fermentation. Ether and chloroform were derived from the decomposition of alcohol, but by widely different processes; and, although the vapours of the two products resemble each other in the power of producing insensibility, they were entirely different in chemical properties. The process of making other on Mitscherlich's plan was then demonstrated. A mixture of sulphuric acid and water was kept at a temperature from 282° to 302° , and alcohol was allowed to drop on it. The product obtained was called Ether, or, in common language, Sulphuric Ether. Unlike chloroform it had been long known to scientific men. It was first described by Valerius Cordus, in 1540, under the name of Oleum vitrioli dulce. The term Ether was applied to it 190 years afterwards by Erobenius, who described its properties in a paper published in the Philosophical Transactions.

It is a light volatile liquid, having, when highly rectified, a specific gravity of 0.716 at 65° . It is very inflammable, burning with a bright yellow flame, and producing, by combustion, water and carbonic acid. The liquid gives off a very heavy vapour, which may be easily poured from one vessel to another like a heavy invisible gas. This was shown by placing a few drops in a test glass, and, after a few minutes, pouring the vapour into another vessel containing air. On applying a candle the vapour into was k'ndled in the second vessel, and it was proved that it had entirely left the test-glass.

Chloroform was first made known to chemists, by Soubeiran, in 1831, and Liebig in 1832. It is obtained by the distillation of alcohol with a solution of chloride of lime. When rectified and redistilled, it forms a very heavy colourless transparent luquid. Its boiling point is considerably higher than that of ether: its vapour is much, more dense and in not inflammable. If the yapour be concentrated it extinguishes a lighted candide: if mixed

with air it causes the wick to burn with a smoky flame (carbon being separated by the chlorine); and at the same time muriatic acid is produced, a fact proved by suspending above the vessel a sheet of litmus paper, which becomes reddened during the combustion.

The lecturer then passed to a description of the narcotizing properties of these vapours—that of ether introduced by Mr Morton in 1846, and that of chloroform in 1847, by Dr. Simpson. The effects of ether-vapour were described according to the different stages laid down in the work of Dr. Snow. Our readers are well acquainted with them, and it is unnecessary to describe them. Chloroform vapour had an action analogous to that of ether: it was said to be more agreeable and less irritating to respire than ether vapour; but the lecturer ascribed the irritant properties occasionally observed in ether vapour to its admixture with alcohol. The coma might be carried to a most profound degree in the two cases; but in the use of chloroform, the insensibility is more suddenly and rapidly induced; and it more speedily disappears after the removal of the apparatus. It has been also observed that less fatigue and exhaustion have been produced.

A question had been raised whether sensibility was really annihilated under the influence of these vapours, or whether the patient did not suffer at the time, but had no recollection of the pain on his recovery. This was rather a metaphysical than a physiological part of the inquiry; and there were no facts by which the question could be solved. Some patients had undoubtedly a consciousness of the operation during its performance.

At this point of the lecture, a healthy Guinea-pig, which had been frequently chloroformized, was introduced, and placed under a large glass shade into which sixty drops of chloroform were poured. The animal continued active for several minutes, feeling probably only uncomfortable from his confinement and the want of fresh air. Suddenly he became apparently drowsy, and fell over in an insensible state. When the shade was removed, he was breathing slowly, and the body was laid in front of the table, under the expectation that in a few minutes he would recover himself, and resume his locomotive powers. After a short interval, there were convulsions of one of the hind legs; but no sign of life manifested itself, and on making inquiry after the lecture, it was stated that the patient was dead.

We may remark incidentally, that the death of the animal was probably to be ascribed to his having had an over-dose of the vapour. His body was, in fact, immersed in a dense atmosphere of the vapour, in which there was an insufficient mixture of air to sustain life.

The lecturer [concluded by remarking that under proper precautions, these vapours might be used with safety in surgical operations. Of the two, chloroform was the more perpectly adapted to the object of allaying insensibility; but at the same time it required greater care in its administration, for it was more dangerous than ether.

Numerous inhalers of various kinds were on the table : these it is unnecessary to describe.—London Medical Gazette.

On the Effect of Coffee in Diminishing the Bitter Taste of Sulphate of Quinine. By M. QUEVENNE.—Sulphate of quinine is less soluble in any infusion of coffee than in water : this is evidently the cause to which the property possessed by the former liquid, of masking the bitterness of the quinine, must be referred. Besides this the part remaining undissolved at the bottom of the vessel absorbs certain elements of the coffee (amongst others tannin and colouring matter), and becomes still less soluble, not only in an infusion of coffee, bat also in pure water. With respect to the practical inferences to be drawn from these observations in a pharmaceutical point of view, it may be remarked that, besides the necessity already pointed out by M. Dorvault (Répertoire de Pharmacie, t. 3, Juin 1547), of not dissolving the salt of quinine proviously in acidulated water, but of putting it in powder in the infusion of coffee, should not be very warm when the sulphate of quinino is added, the solvent power of the liquid, and, consequently, the development of the bitter taste, increasing with the temperature. The coffee should not be employed too strong, as that would increase the tendency to the formation of tannate of quinine—n salt less sollable, and, consequently, less active than the sulphate. Nine grains of subhate of quinine, added to an in-

18