

rated, vital action ceases in the fruit, and chemical changes supervene. The thick layer of mucilage lining the husk breaks down, and softens into a loose pulp,—the husk becomes thin and permeable, absorbs oxygen, and rapidly decomposes. It requires only a slight alteration in the constituents of the alcohol, and vinegar is formed directly. Thus, 1 eq. of the former, consisting of 4 c. + 6 h. + 20, if added to 4 eq. of oxygen, produces 1 eq. of acetic acid = 4 c. + 3 h. + 30 and 3 eq. of water. This is a change which may be explained by theory, but which is equally substantiated by experiment, for when the alcohol disappears vinegar and water invariably supply its place.

The presence of alcohol in ripe fruit is rather a remarkable circumstance, and I am not aware of its having been described before. But in the mode of investigation which I have adopted (precisely as described in this paper), I do not think that any mistake could arise, or the spirit have been a *product* instead of an *educt*. Had I employed ordinary distillation the alcohol, as long since shown by Gay-Lussac, would have been much more abundant, the greater part of it being formed *during* and not *prior* to the distillation. But by distilling *in vacuo* that inaccuracy is obviated; and by separating the alcohol without any distillation whatever, an additional proof of its existence is furnished.

I think it not improbable that future investigators will detect spirits in most fruits, and I am far from thinking that their flavour does not in some degree depend upon it; at least this idea applies to gooseberries, for when they are sweetest to the taste, the quantity of sugar which they contain is greatly less than when their flavour is not nearly so saccharine. They, however, very readily part with their spirit. Thus, when berries are first collected their flavour is exceedingly full and generous, but if allowed to stand for some time they acquire a dead and insipid taste; there is a sweetness, but the full rich flavour is gone,—the spirit has evaporated, for analysis conducted 48 hours after they have been gathered discovers none. If, again, ripe gooseberries be subjected to heat, they have a strong tendency to become acid, apparently without being previously converted into alcohol; thus, however sweet such fruit may be upon the tree, it becomes insupportably sour by baking. But if a little sugar be first added it prevents acidification, and disposes the formation of a considerable proportion of alcohol. Hence the superiority of fruit pies which are sweetened before cooking, the flavour being dependent not so much upon the sugar as the spirit to which its presence gives rise. The addition of even a trifling quantity of alcohol before baking still fur-

ther improves their flavour, for it encourages the formation of such a quantity of spirit as will sometimes indicate its presence by its effects.

CÆSAREAN SECTION AND EMBRYOTOMY.

To the Editor of THE LANCET.

SIR:—Your Journal of August 11 contains an article by Mr. Hare, recommending Dr. D. Davis's osteotomist as a substitute for the Cæsarean operation. To Mr. Hare's letter you have appended some observations tending to correct misconceptions existing in his mind, relative to the fatality of the operation, and the comparative safety with which Dr. Davis's instrument may be used.

It has never been my lot to witness the Cæsarean section, nor to be able to form an opinion of the proposed substitute, but I have seen an instrument which, judging from the result of the cases in which it has been used, would seem to offer the best prospect of superseding a severe and dangerous operation. The instrument to which I refer is one invented by M. Baudelocque, of Paris, and called by him the cephalotribe. The instrument is a forceps, with a powerful screw, by means of which the blades, after having been securely locked, are brought together with a force which crushes anything resisting their approximation. The blades are introduced in exactly the same manner as those of the forceps, and when they are fixed the handle of the screw is turned, and the child's head crushed. M. Baudelocque proposes his instrument as a substitute for the crochet and perforator, as being free from any chance of injuring the maternal structures, by splintering the bones, or by losing their hold. In his opinion the Cæsarean operation is now no longer necessary, except when the child is alive, in which case, like the other French accoucheurs, he would not sacrifice the child, but would operate for its extraction. The distance between the blades, when closed, is but twenty lines, so that the instrument can be introduced even in cases of extreme pelvic distortion. I have seen children's heads, even after they have lived a month, crushed with the utmost facility, and thus there can be no doubt as to the power of the instrument to effect what it proposes. I have never seen any splintering whatever of the bones, or laceration of the scalp, and thus we have some guarantee for its safety. M. Baudelocque has used the cephalotribe in seven cases, and MM. Paul Dubois, Barbelle, Aîné, and Rivallié, have employed it in four others. In all these cases the Cæsarean operation had been declared absolutely necessary by men of the highest rank in obstetrics, and in all the use of the instrument saved the life of the

mother. The weight of the instrument is five pounds and a half, and its length is rather more than the common long forceps. By giving insertion to this notice, you will oblige, Sir, your very obedient servant,

J^N. C. COOKE, M.D.

Coventry, Sept. 6, 1838.

DISEASES OF THE URINARY ORGANS.

CASE 1.—*Repeated hæmorrhage from the bladder. — Tannin employed in injections. — Cure.*

General G., 65 years of age, originally of good constitution, had suffered considerably from intermittent fever, which frequently resisted the use of quinine. In 1835 he passed for the first time some clots of blood in his urine, and a slight hæmorrhage took place from the urethra. These symptoms reappeared from time to time, and were accompanied with little uneasiness other than that occasioned by the coagula becoming engaged in the neck of the bladder. In January, 1836, M. Devergie passed a catheter into the bladder, and could discover nothing in the viscus; the neck of the bladder, however, and the urethra were extremely sensitive. During the course of 1836 the General passed a few coagula, but without hæmorrhage, on three different occasions.

In the month of November 1837, he was exposed to a cold, moist atmosphere, which produced a discharge of blood amounting to seven or eight ounces in three days. A few emollient and narcotic injections were thrown into the urethra.

In February, 1838, the hæmorrhage again returned in greater quantity, and was accompanied by violent pain in the urethra occasioned by the difficulty of passing the clots through the urethra.

In March, 1838, blood was again discharged in considerable quantities through the urethra, and the patient was very much reduced in strength.

On the 19th of April the patient was imprudent enough to expose himself to a moist cold air, which gave rise to an alarming degree of hæmaturia, accompanied by strangury. The strength of the patient was thus very much reduced; the digestive organs became deranged; nausea and vomiting were frequent; the pulse small, accelerated, syncope, &c.

April 20th, M. Segalas was consulted, and having sounded the bladder without discovering any trace of foreign body, considered the case to be an extremely dangerous one. M. Devergie now proposed frequent injections into the bladder composed of decoctions of Bistort root and bark; by these means the state of the patient was much improved in a couple of days; the discharge

of blood, though less in quantity, still continued.

April 24. Fresh injections were thrown into the bladder with the addition of red wine, containing twenty grains of tannin for every four ounces; these immediately stopped the hæmorrhage. They were therefore continued for several days, until they began to produce pain in the region of the bladder. The coagula, of various sizes, were evacuated by means of a large catheter, and by washing out the bladder.

May 30. The discharge of urine had been perfectly limpid and free from coagula, when the patient passed several lacerated portions of fibrinous matter, which seemed to have formed part of a polypus not larger than a nut. From this moment his strength returned, and he went to the country perfectly cured.

Remarks.—In this case the hæmorrhage was arrested by cold injections containing tannin. It is not easy to determine the cause upon which the loss of blood depended. Was it idiopathic or produced by the presence of a tumour in the bladder, which was detached by the action of the tannin? Were the portions of matter, passed some time after the cessation of the hæmorrhage, nothing but fibrine coagulated by the tannin, or the remnants of a polypus? The great difference in form, size, and consistence in the coagula which were passed a few days before, rendered the existence of a polypus probable.

CASE 2.—*Stricture of the urethra.—Dilatation of the Canal.—Idiopathic hæmaturia.—Injection of iced-water.—Cure.*

M. R., 56 years of age, had been treated for stricture of the urethra, which had commenced two years before, and was the result of neglected inflammation. The stricture was attended with incontinence of urine from over distention of the bladder; the patient made water from ten to fifteen times a day, five or six times during the night; and was troubled with constant dripping of the fluid.

From the 25th of July to the 15th of August he was treated by the introduction of bougies and Mayor's sounds, through which the stricture and incontinence of urine were entirely removed.

On the 15th of August the patient complained of pain in the hypogastric and hypochondriac regions; of general fatigue and lassitude; a few drops of blood were mingled with the urine, which was passed frequently.—Hip-bath; cataplasm to the abdomen; opiate pills.

16. The patient was seized with violent hæmorrhage, and lost no less than twenty to twenty-four ounces of blood mixed with urine in two hours. The surgeon in attendance immediately applied cold acidulated lotions to the hypogastrium and perineum; the discharge of blood was moderated by