In this way the force of atmospheric pressure contributes very powerfully to the ascent of the fluid. Mr. Kyan has recently proposed a method much employed in England. The timber is cut up into planks of various sizes, placed in a large reservoir containing a solution of corrosive sublimate, where they remain for seven or eight days; after this they may be used for various purposes. The Duke of Devonshire employed wood prepared in this way in the construction of some hot-houses, and the timber is said to have resisted perfectly the attacks of insects and the effects of the weather.

As a general proposition we may lay down that all chemical substances which preserve animal matter are likewise suited for the preservation of vegetable matter. Corrosive sublimate, which is used for the preservation of anatomical preparations, coagulates animal albumen and forms with it an insoluble compound. Tannin, also, which combines with animal tissues, may be employed in the preservation of timber. Still the price of corrosive sublimate, which costs from five to six shillings the pound, must render the use of Mr. Kyan's process extremely limited.

M. Moll has proposed the use of creasote, and we know that the preservation of smoked meats depends on the presence of a small quantity of this substance. M. Moll proposed to expose the planks to the action of tar vapor; but, we repeat, the price of creasote and of corrosive sublimate must, except in a few limited cases, render their use impracticable.

M. Breant invented an apparatus much employed in some places for the preservation of wood. His apparatus enables him to compress the air contained in the ligneous cells, and the vacua thus formed contribute in no small degree to assist the imbibition or aspiration of the antiseptic fluid. This process is peculiarly suited to small pieces of timber, and is more complete than any other one. In Mr. Boucherie's method the whole tree is very seldom impregnated; the superficial layers imbibe the fluid, but the central parts and such as have ceased to live for some time are rarely, if ever, touched. By M. Breant's process, on the contrary, almost every particle of the timber is impregnated; the knots and the densest portions of the heart of the tree may resist, but these are generally so solid that they escape every kind of decay.

From M. Breant's idea has originated the plan of submitting wood to the action of heated fluids. The heat expands the air contained in the ligneous cells, expels it, and thus favors the ascent of the antiseptic fluid. In this way solutions of white resin, tar, &c., have been introduced into various kinds of wood. A particular preparation of linseed oil has likewise been employed, according to this process, with the most perfect success; wood prepared with it has remained free from rot under circumstances most favorable to the development of decay.

The sulphate of iron has been frequently employed, but M. Breant justly remarks that it should never be used by itself; a small quantity of the oxide of iron often combines with the various organic matters contained in the ligneous cells, while the sulphuric acid is set free and corrodes the timber on all sides. Wood preserved with a solution of sulphate of iron frequently crumbles into dust.

Long before any attempts were made to preserve

timber artificially it had been remarked that the wood employed in salt-mines remained perfectly free from decay, and that the beams and planks, &c., were occasionally covered by a species of efflorescence. The latter depends on the different degrees of temperature to which the wood is exposed, and to the presence of a small quantity of sulphate of soda in the common salt. The preservation of the timber evidently depends on its being impregnated with chloride of sodium, the preservative *par excellence* of all organic substance.

The observations now mentioned were first made in the salt-mines of Saltzbourg, and were afterwards repeated in those of Dieuze; the result of the experiments made leaves no doubt but that wood impregnated with a solution of salt is perfectly free from every species of alteration. Still the application of this method is comparatively limited, from the tendency of salt to attract moisture, and from its being always mixed with a small quantity of deliquescent salts, as the chloride of magnesium, of calcium, &c.

The various processes now described have been applied to the preparation of timber used for fancy articles, &c. Thus, when the wood of the plane-tree is impregnated with a solution of pyrolignite of iron, and then polished, it presents a very elegant tint, and is marbled in a curious manner.

Again, by employing a solution of tannin in the first instance, and then the pyrolignite of iron, a species of ink is formed in the ligneous cells, which gives a beautiful marbled appearance to the wood when polished. By varying the coloring matter there is little doubt but that we could obtain wood which would rival any foreign timber in brilliancy of color and durability.

CASE OF STONE,

IN WHICH THE OPERATION OF LITHOTRITY WAS ONCE,
AND THAT OF LITHOTOMY TWICE, PERFORMED.

WITH REMARKS.

By ROBERT ELLIOTT, Esq., M.R.C.S., Surgeon,
Chichester.

Mr. C. H., aged sixty-three, a highly respectable farmer, living in my immediate neighbourhood, a man of temperate habits, and the father of a large family, first consulted me in the month of Nov., 1837. Up to within a year of that time he had enjoyed excellent health with the exception of occasional attacks of dyspeptic headache, but then first began to suffer from symptoms of stone. In January, 1838, the symptoms had become so urgent that he consented to an examination, and, on sounding, a stone of considerable magnitude was found presenting itself at the fundus of the bladder. It was fixed immovably in that position, the instrument coming in contact only with its upper surface, and the irregular contractions of the bladder causing the contents of that viscus to assume the appearance of septa. Many unsuccessful attempts were made to dislodge the stone, but, after persevering patiently for about three weeks, I ultimately succeeded in tilting it from its position.

The spasms which followed the introduction of the instrument were subdued by morphia.

The stone, once removed from the sac, never returned to its old position, and, finding that it remained loose in the bladder, I determined on its destruction by the lithotrite. The operation was performed in March

following, when the stone was found by that instrument to measure two inches and a-half by two inches.

The operation was repeated five times, an injection of morphia being introduced into the bladder prior to each operation. The table which I used was somewhat after the plan of Baron Heurteloup's, and the only instruments employed were the lithotrite of Weiss, the stop-cock catheter, and the common hammer.

No difficulty occurred during the operation save the spasm, which was subdued, as before stated, by morphine. The detritus passed easily, and a quantity, which filled an ounce pill-box, was collected; but much, of course, escaped. No symptoms of stone remained, and on many subsequent soundings no vestige of a calculus could be discovered. He remained in perfect health, could take active exercise, and attend to his various duties of life with uninterrupted comfort for about a year, after which he was seized with repeated attacks and escapes of renal calculi.

As but little inconvenience was felt after the calculi had reached the bladder, my patient would not consent to anything approaching an operation, not even to the use of the sound. By degrees the calculi enlarged, the irritation increased, and at length, in Dec., 1839, when in his sixty-fifth year, he was compelled to submit to an examination. At this time there was enlargement of the prostate, much thickening of the coats of the bladder, muco-purulent deposit, and all the usual symptoms of stone.

The enlargement of the prostate, the existing irritation of the bladder, and the fact of there being more than one stone, induced me to propose the operation of lithotomy. The patient consenting, the lateral operation was performed on the 22nd Dec., 1839, and four calculi of triple phosphate formation, weighing about two drachms, were removed.

The operation lasted but a short time, no difficulty presented itself, and but little blood was lost. The first flow of urine through the wound was attended with agonizing pain, but this was subdued by morphine. The urine continued to flow for three weeks, and nothing more unsatisfactory occurred. At the end of a month he was perfectly cured and dined at his own table; but on the evening of that day he was attacked by a severe renal paroxysm, followed by the passage of another calculus from the kidney.

Nearly two years rolled on without inconvenience, and in March, 1842, then sixty-seven years old, he again consulted me, fresh symptoms having occurred. There was incontinence of urine, muco-purulent deposit to an extraordinary extent, with great pain and constant distress. Cupping, leeches, and warm baths were had recourse to, with a substitution of alkalis for other medicines, as the urine indicated. On sounding, a stone was distinctly discovered. A consultation was accordingly held with Mr. Heulstone, my late partner, and Dr. McCarrogher, and it was again determined to repeat the operation of lithotomy as offering the best chance of success. On the 19th of July last, in the presence of the above-mentioned gentlemen, I proceeded to the operation precisely in the same manner as before, but avoiding the old cicatrix, and removed a kidney-shaped calculus of the triple phosphate formation, weighing five drachms. Nothing particular occurred during the operation, which lasted

about five minutes; but the parts were extremely sensitive, much more pain being experienced by the patient than on the former occasion. The same excruciating pain was felt on the first flow of water as on the first occasion, and subdued by morphia; the quantity of blood lost was estimated at about two ounces. On the second morning from the operation one quart of water came away by the natural passage, and twenty-five napkins were saturated on that day; on the following (the third) morning I was surprised to find the opening permanently healed, and from that time not one drop of urine ever passed by the wound. In a fortnight he was comparatively well, and now, after the lapse of nearly three months, states that he was never better in his life.

REMARKS.

The foregoing case appeared to me to present features of sufficient interest to deserve record. The large size of the original calculus, the sacculated state of the bladder, the time required for the removal of the calculus from its position, with the complete success of the operation of lithotripsy, give an interest to the early history of the case. It is worthy of remark, too, that the prostate, in consequence probably of the calculus being enclosed in a sac, did not suffer previously to the first operation, but was considerably enlarged by the time that the first operation of lithotomy became necessary. There was satisfactory proof of the original stone having been entirely removed. The quantity of detritus, the continued absence of symptoms until after the renal paroxysms, and the stones subsequently removed having the appearance of original formations with distinct nuclei, are circumstances which establish this point.

The second operation presented some points of interest. The unusually small quantity of blood lost, the number of napkins removed on the second day, the sudden closing of the wound on the third day, and the rapid recovery of the patient, are points worthy of notice. Of course, it is quite impossible to say that the patient will have no return of his complaint, as the calculi are of renal formation. There is, however, no pain or tenderness in the lumbar region. It is also well worthy of remark that the dyspeptic headaches, to which the patient was originally subject, left him after the appearance of symptoms of stone. This fact tends to strengthen the general opinion, which my own experience confirms, that calculous disorders are closely connected with, and indeed dependent upon, derangements in the digestive organs.

Chichester, October 7, 1842.

PAINFUL AFFECTION OF THE CERVIX UTERI.—EXCISION.

TO THE EDITORS OF THE PROVINCIAL MEDICAL JOURNAL.

GENTLEMEN,—I send you what I think you will suppose may be about a third part of a uterus, including the neck, which I removed under the following circumstances:—

Ann Sprental, a pauper of Retford parish, aged seventeen, during the last two years had been attended, each year by a different surgeon, and each surgeon had requested a different physician to see her occasionally. I do not know how she had been