

Fig. 1.

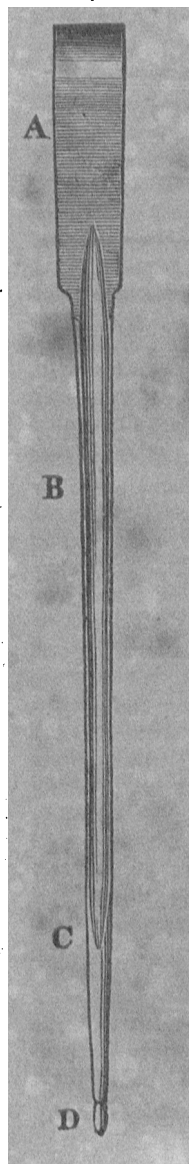
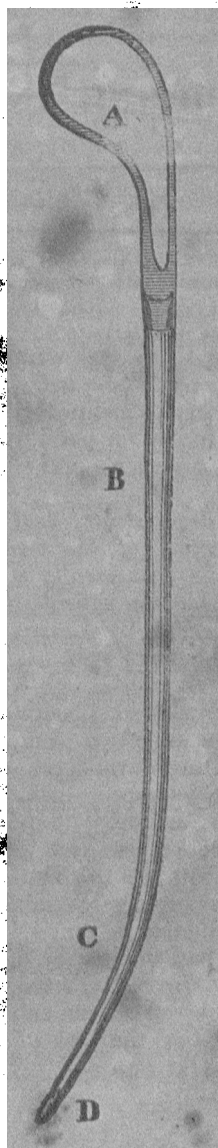


Fig. 2.



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[To the Conductors of the New England Journal of Medicine and Surgery.]

GENTLEMEN,

The following Essay was written at the time it bears date, with the exception of some trifling alterations. But owing to a cause not necessary to mention, I have hitherto been prevented from sending it to you for publication. E. NORTH.

New London, (Conn.) 17th Dec. 1821.

An attempt to demonstrate, that the Bladder may be opened for the extraction of the stone, by a posterior method of operating, more conveniently to the surgeon, and with much greater safety to the patient, than by any other method hitherto discovered. By ELISHA NORTH, M.D. Author of a Treatise on Spotted Fever.

THIS subject may be illustrated by first showing, in detail, the manner in which the operation is to be performed, and exhibiting the advantages which may result; and then obviating such objections as may arise.

The reader is supposed to be well acquainted with the anatomical structure of the parts concerned in the operation of lithotomy, and with all the methods which have hitherto been contrived for performing the same; otherwise what is written may not be intelligible to him.

If the writer had the benefit of suitable plates, it would render both his and the reader's task more easy.

A suitable table of convenient height and breadth is to be provided, and from the legs of the same let there be projections of wood at one end. These projections should form

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a right angle with the legs of the table, and may be about the length of the patient's legs—the distance from the uppermost surface of the table, at which these projections of wood should be attached to the legs of the same, may be ascertained by measuring the length of the patient's thigh.

The table and every thing else being ready, and the previous operation of introducing the long grooved staff being finished, and the staff being secured in its proper situation by the hand of an assistant or other means, the patient may now be put on the table upon his belly, in the kneeling posture, his knees and legs resting upon the projections of wood above mentioned—his thighs should come in contact with the legs of the table—his thighs and legs may now be properly secured in this situation—the penis and staff should hang downwards, near to, and over the edge of the table. The patient's arms may be brought downwards in contact with the fore-legs of the table, and there secured. The fore-legs of the table should be shorter than the hind ones, so that the patient's body may be thrown into the position of the *inclined plane*. His head and face may rest upon a pillow.

If we have expressed ourselves so as to be understood, the reader will perceive, that this position is essentially the same as the one in common use for performing the operation of cutting the *fistula in ano*. And a moment's reflection will, we think, show, that the same position may be proper either for cutting into the bladder through the prostate gland, or for cutting into the rectum, as these parts lie in contact.

A suitable low seat will enable the assistant surgeon to manage the long staff. The operator will be conveniently seated posterior to the patient between his legs. He will now have all the parts on which he has to operate in a proper position for that purpose. He may then make the first or external incision precisely as it is now done, by the best surgeons; and also slit up the membranous part of the urethra in the usual manner, cutting into the groove of the long staff. The common female grooved staff may now easily be introduced into the bladder, taking the groove of the long staff for a guide. This last instrument may now be withdrawn, as the surgeon can have no further use for it.* Or if the surgeon dislikes the female

* We wish to observe that we are aware, that one who was much in the habit of performing the operation of lithotomy might prefer to carry in the common gorget *inverted* upon the groove in the long staff, without the introduction of the straight director. This such an operator might easily do. *All we mean strenuously to contend for is, that our position of the patient ought to have the preference, and that our directions are suitable for the inexperienced operator.*

staff he may furnish himself with a director made like the common grooved director in every surgeon's pocket-case, only a little longer and having a suitable beak at one end, to facilitate its introduction upon the groove in the long staff. All we insist upon is, that the groove in this director should be straight, as every one knows, who knows any thing on the subject, that it is much more convenient for the surgeon, and, we believe, much safer for the patient to carry forward any cutting instrument in a straight direction than in a curved one. It can hardly be necessary to mention that this almost straight director, (the beak part being a little curved,) should be introduced with an alternate kind of motion by which the urethra will be gently stretched from side to side, greatly facilitating the introduction of such an instrument. By turning the groove of this director to one side, the operator is enabled to make, with almost any kind of knife, the true lateral incision in the prostate gland and neck of the bladder. It may be done very well with the common gorget, the beak being ground off, provided he can use that instrument with his left hand.

The advantages obtained by introducing the straight director, are these—it brings the hands of the operator nearer to each other when he makes his incision into the bladder. This gives him more steadiness—he also gains the power of pressing down the bladder at a greater and safer distance from the rectum—it enables him to introduce a common scalpel, if he prefers that instrument to the gorget. The knife, however, should be of sufficient size to make the opening in the prostate gland and neck of the bladder, large enough to admit the finger, as the operator may want to carry in a smaller knife, turned flatwise upon his finger, with which he is to enlarge the wound by *lateralizing* the instrument. It may be proper to mention that it is contended of late that the wound in the prostate gland and neck of the bladder ought not to be too large, lest the *prostate fascia* might be injured.

The reader will now perceive that the parts proposed to be cut are the same, as the best operators have determined should be cut.

Our next object is to show that this mode of operating is preferable to any other. With this view we wish to suggest to the reader the following considerations:—It is well known, that the

We also think proper to remark that a dexterous lithotomist might, without the aid of our table, make a very simple business of this operation upon a resolute patient, simply by putting him upon his hands, elbows and knees upon a couch or some such piece of furniture, placing himself behind.

dread of inflicting pain and the want of suitable habits, owing to the infrequency of performing important operations, are the difficulties with which the surgeon has to contend.

The operations of the mechanic are so often repeated, that he easily acquires the necessary associations, constituting habit. This renders it easy for him to accomplish what he frequently has occasion to do. It is also well understood, that our hands and the association of the muscles connected with them, are such, that we can perform any motion downwards, with more facility, than the contrary way. We can also do a nice mechanical act better with our hands close to us, and near to each other and directly before our eyes, than at arm's length:—we also gain a mechanical advantage by sitting at our ease.

Now it appears to us that many of the foregoing principles in human nature are unnecessarily violated by performing the operation of lithotomy in the manner it has hitherto been done. The surgeon is required to make an orifice into a hollow vessel, for the bladder is nothing more, into or near its under side, and this vessel is so far posterior to the os pubis and os ischium, that these project in his way.* To make this orifice, he has to move his hands upwards, and at times they are at a great and inconvenient distance from himself and from each other. He has also to shift his position in the midst of the operation, his hands, at the same instant, being confined by holding in contact two slippery instruments—and what is still worse, he has to carry in by the sense of feeling principally, that uncouth instrument, the gorget, upon the under side of a curved director; which movement is an inconvenient and unnatural one, besides being a critical one—yet this critical movement is to be performed with his hands at a great and inconvenient distance from himself and from each other. It is not so strange that the surgeon, who is called on to perform such a variety of motions, all of which are so contrary to his natural and usual associations and habits, and that too at *distant intervals*, should consider this the most important and difficult operation in surgery.

* For the scientific reader will recollect that when a perpendicular is erected from the lower extremity of the os coxæ, the bones of the pelvis laying upon a horizontal plane on the back or spine, that the portion of the tuberosity of the os ischium on which we sit, projects about three inches from this perpendicular. Now the opening in the bladder is made in the region of the perineum,—not in the region of the lower or inferior portion of the tuberosity of the os ischium. If the scientific surgeon will place the bones of the pelvis before his eye in the position which we contend is the proper one for the patient, who is to undergo the operation of lithotomy, and carefully attend to what we have written, we believe he will comprehend our meaning without the aid of plates.

Notwithstanding philosophers and surgeons have chosen to perform the operation of cutting into the bladder upon its under side, (except in what is called the high operation,) for, say 2000 years, yet it is perfectly obvious, that were a common mechanic called on to make a similar opening into a hollow spherical body of wood or other substance, he would go to work with his tools upon its upper surface. Were he asked the reason why, he would say because he could do it more handily. He could not give the philosophical one, although he would perfectly well understand the fact.

Many of the foregoing difficulties will unquestionably be obviated by the method we propose. Besides other benefits are expected to result. The surgeon sits at his ease during the whole of the operation—he operates upon the upper surface of a spherical body—the parts on which he operates are near him—his motions are downwards—he sees distinctly all he does—he conveys in his knife upon a straight director—his hands are near himself and near each other—his work is posterior to the os pubis and ischium; hence the danger of cutting the pudic artery is lessened—the rectum is also safe. All the motions of the surgeon are natural and easy—hence self-confidence and consequent steadiness must be the result.

The patient, as well as the surgeon, is more comfortably situated; for he has the power of closely embracing a solid substance during the moments of pain. The common position, as the celebrated John Bell has said, “is a horrid one in the extreme.” The patient is put in the unnatural situation of a half circle upon his back—his hands and feet tied together, and the movements of one who is to inflict pain directly before his eyes.

We now proceed to obviate such objections as may arise. It may be said, and with truth, that none but an anatomist ought to attempt to perform this operation; and that the anatomist is in the habit of dissecting and contemplating the relative situation of the parts in the perineum, and within the pelvis, anteriorly; and that it would be difficult for him to break in upon his association of ideas on this subject. The answer is, teach the young anatomist to dissect these parts posteriorly, i. e. by turning the subject over on the belly, for this is the most convenient way for this dissection, as well as for cutting for the stone, and then his ideas will be correctly associated.

It may be said, that he who manages the long staff may not be so well accommodated. Admit this to be so, the part he has to act is a very unimportant one, compared with that which the operator has to perform, and whose convenience should have the preference in a case of this sort?

The introduction of the long staff in one position and opening the bladder in a different one, may displease the prejudices of some. As, however, the distress of the patient is not thereby increased, we think the objection of little importance.

It may be said that the stone could not be extracted in this way so easily. Now this, we think, cannot be true. If the operator wanted to tap a hollow vessel, which he could not turn over, to draw out a fluid, he would make his orifice near its lower surface. But that is not this case. In this case he wishes to retain the urine to keep the bladder distended, until he can hunt up and fish out with his forceps the stone or stones. If there are other objections they do not occur to us.

We are sensible that we shall at first shock the prejudices and previous associations of able and experienced lithotomists. We wish to be permitted to inform such, that what we have written is not a mere closet speculation; but that we have dissected, and seen dissected by others, the parts concerned in this operation repeatedly, and that we have performed the operation of opening the bladder on the dead subject, both by the posterior and by the anterior method, with a view of determining which ought to have the preference. The result of these comparative trials has been to us highly satisfactory. Indeed we cannot now perceive why this hitherto most difficult and dangerous operation is not rendered as safe for the male patient, (although it may take a little more time to perform it,) as for the female, which last operation is not thought much of by surgeons.

It may not be uninteresting to take into consideration some of the causes which may have contributed to prevent a discovery of this sort, especially when it is considered what a variety of plans have been contrived to get into the bladder.

Surgeons have been in the habit of considering the introduction of the grooved staff and cutting into the bladder, as one operation. They should have been regarded as two. This has led to the mistake; for the position which is proper for one of these operations, can never be convenient for the other.

Another circumstance may be mentioned; the anatomist is in the habit of first dissecting the abdominal and other viscera, his subject very properly lying on the back. Previous to dissecting the perineum he introduces the staff; to do this he has no occasion to alter the position of his subject. To obviate the inconvenience arising from the anterior part of the pelvis projecting in his way, he places or puts under it some hard substance, in order to raise it up so as to enable him to get at his work. It never occurs to him, that if he would turn over his subject, all

his difficulties would vanish. Besides he is taught that it should be done in this manner with a view to the operation of lithotomy. Thus one error begets another and is propagated from age to age.

New London, Con. A. D. 1818.

EXPLANATION OF THE CUT.

The cut at the beginning of this number is a representation of the instrument which was sent with the preceding article.

FIG. I.

Front view of the instrument with its groove.

- A. Handle.
- B. Shank, with groove on convex side.
- C. End of the groove.
- D. Beak.

* FIG. II.

Side view of the Instrument.

- A. Handle.
- B. Shank.
- C. End of the groove.
- D. Beak.

'I am aware, (says Dr. North,) that there is no novelty in the attempt to induce surgeons to use such an instrument, as that represented in the cut, for the use of the female staff in the manner we propose, was long since advocated by Mr. Dease of Dublin, and others, and even by Le Dran, but then the patient was laid on his back.'

Dr. LYMAN's Case of *Midwifery*.

[To the Editors of the New-England Journal of Medicine and Surgery.]

GENTLEMEN,

IF you think the following statement deserves a place in your Journal, you are at liberty to insert it.

On the 7th of August 1821 at noon, I was called to visit Mrs. H— of Chatham, in labour, with her seventh child. During forty-eight hours she had been subject to slight and irregular pains. The evening before I visited her, apprehending herself in need of immediate assistance, she had called in a woman in the neighbourhood, who had before attended her as a midwife. During that night and the next forenoon her pains had been frequent, and for a few hours very strong. A little before my ar-