# DR. JOHN PETER METTAUER: AN EARLY SOUTHERN GYNECOLOGIST

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GYNECOLOGY, as we know it today, is essentially American in origin. Interestingly enough most of the early work in this field was done by Southerners. In an editorial, "Marion Sims and the Southern Gynecologists,"[7] the following are listed: William Baynham, John King, Ephraim McDowell, William Gibson, John Peter Mettauer, Josiah Clark Nott, Thomas Addis Emmet, Theodore Gaillard Thomas, Robert Battey, Nathan Bozeman, Prevost of Donaldson, La., and Joseph Price. To this list might be added Walker Gill Wylie, William Travis Howard, R. M. Huston, William A. Patteson, Thaddeus Asbury Reamy, Thomas Ashby, Richard Beverly Cole, Henry Davidson Fry, W. R. Pryor, George Tucker Harrison, LeRoy Brown, and J. Whitridge Williams.

The life of Dr. Mettauer and his place as a surgeon was the theme of Dr. George Ben Johnston's[16] presidential address before the American Surgical Association. Dr. W. L. Harris[14] discussed him as a country surgeon in his presidential address before the Medical Society of Virginia, and Dr. Wyndham Blanton has written of him for the citizens of Prince Edward County. The importance of Mettauer's work in gynecology has been overlooked. No mention of him is made by Samuel D. Gross,[13] Abrams,[1] Atkinson,[2] Emmet,[10] Packard,[21] Sigerist,[24] Stone,[34] Watson[36] or Ward.[35] Victor Robinson[22] has the following line in his section on vesico-vaginal fistula:

Oddly enough, now and then an American Surgeon achieved success; such cases were reported by John Peter Mettauer of Virginia (1838), George Hayward (1839) of Boston, and Joseph Pancoast (1847) of Philadelphia. These cases were incidental and exercised little influence upon the general calamity.

Garrison[12] goes more fully into the subject.

Many surgeons from Paré onward had attempted to operate for vesico-vaginal fistula, with no better result than to entail an additional amount of suffering and inconvenience upon their unfortunate patients. Roonhuyse (1672) and Fatio (1752) left admirable accounts of their operative methods, but no reports of successful cases. Dieffenbach left a classical account of the wretched plight of the woman upon whom all his wonderful resources were tried in vain (1845). Jobert de Lambelle had written a whole treatise upon female fistulae (1852), but his autoplastic operation *par glissement* had only resulted in repeated failures and the death of many of his patients. Six successful operations for the condition had been reported in America by John Peter Mettauer (1787-1875) of Virginia in 1838-47; others by George Hayward (1791-1863) of Boston in 1839; by Joseph Pancoast of Philadelphia in 1847; and in France, by Maisonneuve in 1848. The whole matter was changed, as Kelly says, "almost with a magic wand" by James Marion Sims (1813-83) of South Carolina.

That Mettauer's work had some influence in this development, I shall show later.

John Peter Mettauer was born in Prince Edward County, Virginia, in 1787. His father, Francis Joseph Mettauer, was an Alsatian surgeon who came over with the French troops during the Revolutionary War. After the battle of Yorktown he was persuaded to remain in this country and located in Prince Edward County, where he married Jemimah Gaulding, née Crump,[9] of Henrico County. In due course of time two sons were born to them. The elder was named John Peter after his uncle, who was also a surgeon, and the younger, Joseph Francis, Jr. Both boys studied medicine and graduated from the University of Pennsylvania; John Peter in 1809 and Joseph Francis, Jr., in 1811. The latter located in Petersburg, Virginia and left no record of his work. Not so with John Peter Mettauer. Raised in an atmosphere of medicine and a cultured rural community, he received his preliminary education at the nearby Hampden-Sydney College, and exposed to the influences of Rush, Shippen, Wistar, and Physick at the University of Pennsylvania, he made the most of his opportunities. After he received his M.D. degree, he worked in the Philadelphia Dispensary, returning home to assist his father only a short time before the latter's death in 1811. With the exception of the two years he served in the war of 1812 and the two years (1835-36) during which he was in Baltimore as professor of Surgery and Surgical Anatomy in Washington College, he spent the rest of his long life in his beloved Prince Edward County. Even in Baltimore he considered himself a resident of Virginia. On the manuscript notes of his introductory address in 1836,[19] now in possession of the College of Physicians in Philadelphia, he styles himself a resident of Prince Edward County, Virginia. The manuscript[19] of his "Essay on Lithotomy," also in the College of Physicians' library,

FIG. 1. SILHOUETTE OF DR. JOHN PETER METTAUER, THOUGHT TO HAVE BEEN CUT BY WILLIAM H. BROWN OF CHARLESTON, S. C. IT WAS GIVEN BY DR. METTAUER TO DR. JOHN AUGUSTINE SMITH OF NEW YORK. FROM THE MILLER COLLECTION. COURTESY OF THE RICHMOND ACADEMY OF MEDICINE.

bears on the title page: "by John P. Mettauer, M.D. of Virginia, Honorary Member of the Philadelphia, Baltimore and Transylvania Medical Societies, 1835." He married four times and had ten children. Three of his sons became physicians. He died of pneumonia, November 22, 1875, at the age of eighty-

eight years. In an editorial the next day the *Richmond Dispatch* said:

In all Southside Virginia no man surviving him is more generally known in the counties adjoining Prince Edward; and his fame has extended over a great part of the union . . . though nearly ninety years old he was in full practice, having at his home a private hospital, which was no doubt well supplied with patients. He was a man of scrupulous integrity, high tone, much culture, and great gravity and dignity of manner.

FIG. 2. INSTRUMENTS AND LEADEN SUTURE MATERIAL THAT BELONGED TO DR. METTAUER, NOW IN THE MÜTTER MUSEUM. COURTESY OF THE COMMITTEE OF THE MÜTTER MUSEUM, COLLEGE OF PHYSICIANS OF PHILADELPHIA.

In the sixty-five years of professional life he worked hard. He did not make his rounds on horseback as was customary in that day, but was driven about in a carriage, and he used this time in reading. Much has been made of his other eccentricity—that of wearing a top hat on all occasions. He wore it even when testifying in court. The only time that a judge objected, brought from Mettauer the suggestion that if his evidence were essential to the case he would be pleased to give it with his hat on, and if it were not so, he would be quite as well pleased to leave the court room, meanwhile of course wearing his hat. One of his children told Dr. Johnston that she never saw her father without his hat on. Yet in spite of his eccentricities, Dr. Mettauer was a grave, dignified, and extremely busy man—too busy to make close friends. He practiced all branches of medicine. He was one of the first to recognize typhoid fever as an entity. His special bent however was surgery with a predilection for genito-urinary surgery. No man in this country did more lithotomies than he. Yet he cut for cataract and operated successfully for cleft palate, devising a special instrument for his operation.

A hundred years ago every doctor who had any sort of a reputation had one or two apprentices. Dr. Mettauer had dozens of them. In 1837 he organized his students into a medical school, which he called the Prince Edward Medical Institute. Dr. Mettauer was the entire faculty. Single handed he taught medicine, surgery, clinical medicine and clinical surgery, obstetrics and pathology, to say nothing of materia medica and therapeutics, and medical jurisprudence. Ten years later the Institute formed a connection with Randolph-Macon College, becoming its medical department and having the power of conferring degrees. The medical Faculty of Randolph-Macon College consisted of John Peter Mettauer, A.M., M.D., LL.D., Professor of the Principles and Practice of Medicine and Surgery, and of Clinical Medicine; Francis Joseph Mettauer, A.M., M.D., Professor of Anatomy, Physiology, and Chemistry; and Henry Archer Mettauer, M.D., Professor of Therapeutics, Materia Medica, Midwifery, and Medical Jurisprudence. The manuscript[19]

of Dr. John P. Mettauer's address to the students at the opening of the second session under this new arrangement can

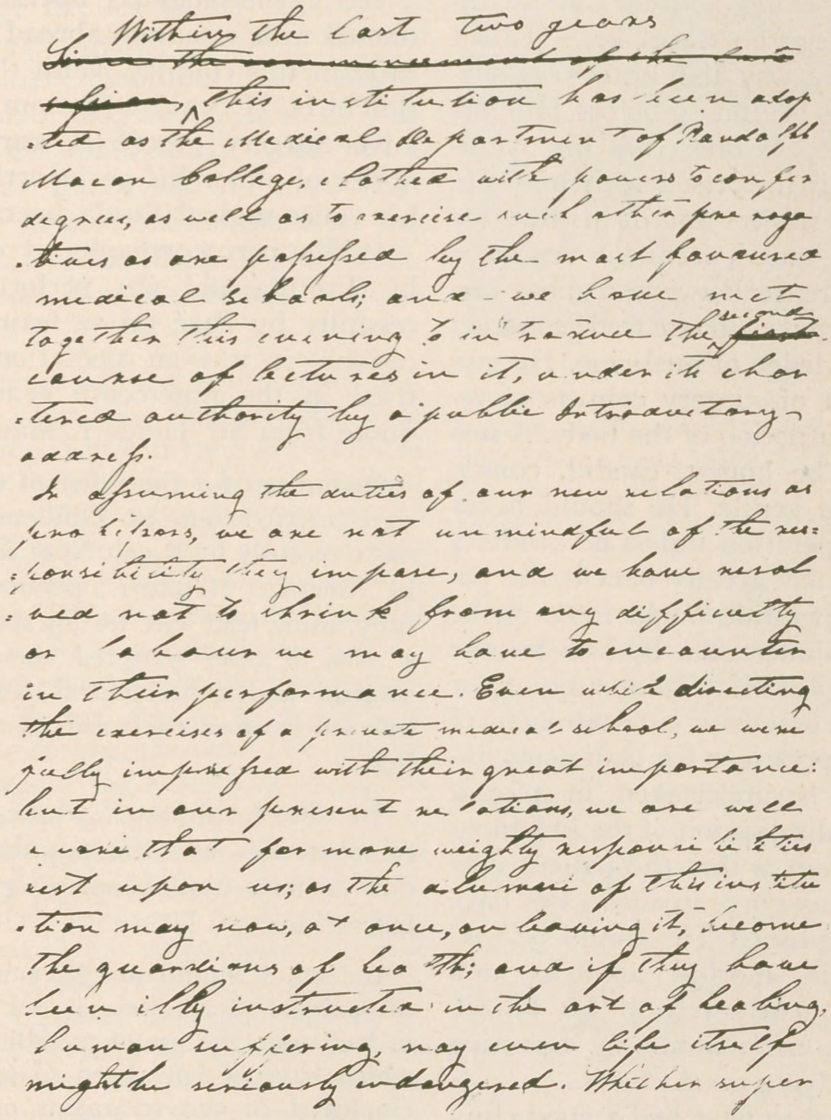

FIG. 3. PHOTOSTAT OF THE FIRST PAGE OF DR. METTAUER'S INTRODUCTORY ADDRESS TO THE STUDENTS OF THE MEDICAL DEPARTMENT OF RANDOLPH-MACON COLLEGE. COURTESY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

be seen at the College of Physicians in Philadelphia. It is replete with good, sound advice to one just beginning his medical studies. He stresses the dignity and worth of the profession and cites some French statistics to show that of 41,679 male prisoners above the age of twenty-five who were tried in the various criminal courts of France between 1829 and 1833, there were thirty-three priests, thirty-three lawyers, seventy-five notaries, sixty-six tipsters or constables, but not a single physician. He traces the career of Baron Dupuytren from a boy picked up in the streets and educated by a gendarme, to the very pinnacle of the French medical profession, to show that there is no bar to advancement if one will only work. Truth he says is a coy divinity and must be wooed with diligence, perseverance,

and honesty. It is much easier to conjecture and theorize than to experiment.

In his opening address[19] at Washington College he traces in a critical and masterly way the history of surgery from its beginning before Hippocrates to date. As one reads his manuscripts one is impressed with his wide grasp of his subject and of his love for his art. He makes frequent reference to the difference between a mere mechanical surgeon and one well grounded in the knowledge of medicine. He says a large part of surgery consists of repair, not mutilation of the body. A surgeon must be honest, candid, conscientious, and gentle. He should never advise an operation unless he candidly believes it may greatly benefit the patient. An operation ought never to be advised or undertaken by him for the sake of surgical éclat, compensation, or for the instruction or entertainment of students. Operations for malignant disease should be undertaken, in spite of adverse public opinion, if the judgment of the surgeon is that the patient may benefit. Many cures in such cases have been accomplished. He should be well grounded in morbid anatomy and should frequently refresh his knowledge of regional anatomy by dissecting and by studying good charts.

He seemed to have had a good clinical insight into shock, which he called "traumatic irritation." Although a pupil of Rush and Physick, he says that in this condition blood letting or any operation entailing the slightest loss of blood would be fatal. The feeble vitality should be carefully sustained and supported. The difference between a mechanical surgeon and a scientific one is shown by the care of selecting the time for operation and the after care. However, in the presence of inflammation he was a strong believer in the antiphlogistic treatment—bleeding, purging, blistering.

His gynecological operations attracted wide attention abroad but very little in this country. With the exception of H. H. Smith's "System of Operative Surgery" there is scarcely any notice of either his perineorrhaphy or his vesico-vaginal fistula operation.

While perineorrhaphy is described by Trotula and was performed successfully by Paré on at least two occasions, it was an operation seldom tried in the nineteenth century. To quote from Sir James Y. Simpson:[27]

> Operations for the relief of such cases were carried out by Guillemeau, and more recently by Roux, Noel and others. In America, Mettauer operated successfully, using lead wire for his sutures; and a mass of cases scattered about in our surgical and gynecological records . . . sufficiently attest the value of the operation.

In 1860 Leishman,[17] whose textbook on obstetrics was the popular one of our fathers, wrote concering perineal lacerations:

> Indeed, I should not have mentioned the subject at all, were it not to advise in bad cases, the use of metallic ligatures which have of late, been so successfully employed in the treatment of another of the accidents of midwifery, til then deemed almost uncurable. It is to the surgeons of America that we owe this, undoubtedly one of the greatest triumphs of modern surgery, and in that country the metallic suture has been in use for a number of years: More than ten years ago, Dr. Mettauer of Virginia succeeded in a case in which he employed this means of cure, but I am not aware that it has been adopted more extensively in the treatment of such cases since these ligatures have been regularly classed with

the other surgical armentaria. Should I meet with a suitable case I intend to attempt this method.

In 1833 Dr. Mettauer[20] reported a case of parturient laceration of the recto-vaginal septum, successfully treated with metallic ligatures. The patient, *aet.* about thirty years, was a primipara. Labor lasted three days (October, 1831). Six months after the laceration she consulted Dr. Mettauer. She was torn into the rectum for three inches.

With the patient in the lithotomy position, the edges were denuded and were brought together with twelve sutures of lead wire. Dr. Physick's forceps were used for the introduction of the very curved needles. The needles were threaded with silk loops into which the lead wire was hooked. From time to time the ligatures were tightened by twisting them and the vaginal margins of the laceration cauterized with nit. argent. to favour the formation of granulations. The patient was confined to the recumbent posture in bed, with the knees tied together to prevent as far as possible any disturbance of the wound. A diet of liquids was directed, as least likely to distend the lower bowel, or to elicit alvine evacuations. For four days the bowels reposed, and as proof that the ligatures held the surfaces securely and perfectly in contact, the evacuations which now took place did not derange the parts or inflict much pain; and it was now for the first time since the accident occurred, that the propensity to deject could be resisted. In six weeks the ligatures were cut away, the parts having united perfectly. Leaden ligatures were preferred in the management of the foregoing case, as experience had proven them, not only less irritating and liable to cut out when tightly drawn than any other material with which I am acquainted, but infinitely more convenient and effective in maintaining a uniform and perfect apposition by the ready facility of simply twisting them and a proof that the leaden ligature may act forcibly for a long time without cutting

FIG. 4. CUPOLA THAT WAS ON DR. METTAUER'S HOUSE. THIS IS ALL THAT REMAINS OF THE HOUSE OR THE MEDICAL BUILDING. THE OPEN SPACES HAVE BEEN CLOSED WITH WEATHER BOARDING, AND A WINDOW AND A DOOR PUT IN SO AS TO MAKE IT INTO A CHILDREN'S PLAYHOUSE.

out, when they were removed in the present instance, it could not be perceived that any material encroachment had been made upon the margin of the cleft.

This, so far as I can find, is the first description of the use of metallic sutures in America, a technique which was to play such an important role in the development of gynecology. Mettauer's training under Physick may have played a part in his selecting this new suture material. It is well known that the Father of American Surgery was not entirely satisfied with the sutures then in use. He suggested absorbable sutures of animal origin, and his nephew, Phillip Syng Dorsey, carried out many experiments along that line. Levert[18] of Mobile, who experimented upon dogs, using lead, silver, platinum, and silk ligatures, says that Physick suggested leaden ligatures, but so far as he knew no one had actually used this material.

Mettauer may have inherited this unrest in regard to sutures from his

Philadelphia teachers. He was a resourceful man and made many of his instruments with his own hands. His students also assisted in his work. As Dr. Johnston[16] says,

> The doctor found these young men ardent and tireless aids in his work. Under his direction they constructed many of the necessary instruments; he himself was a mechanic of rare ingenuity, and old Peter Porter's shop in Farmville was the scene of many an important conclave from which was born no inconsiderable number of devices that today form part and parcel of the instrument and implement maker's stock. In my possession are not a few of these old tools of the early days of our craft—some of iron and some of silver, some made by the doctor himself, and others constructed according to his drawings by an old negro, now living in Prince Edward County, who, before the war, was a cunning artificer in gold and silver.

Is it any wonder then that in such an environment a satisfactory suture material should have been found? Or it may be that he got the idea from Dieffenbach. In his article "On the Use of Metallic Sutures and Metallic Ligatures in Surgical Wounds and Operations" Simpson says:

> The first surgeon in our own times who appears to have actually used metallic threads in practice, was the late Professor Dieffenbach of Berlin. In a paper on staphylorrhaphy published in 1826 he detailed several cases in which he used leaden thread to unite and keep united the sides of the divided palate.

The lead was preferred to silk because in the depth of the cavity it was easier to twist the former than to tie the latter. Staphylorrhaphy was an operation in which Mettauer excelled and he devised some instruments for its better performances. It is likely therefore that he knew of Dieffenbach's work.

In the first edition of Smith's[32] "System of Operative Surgery" there is this note: Dr. Mettauer of Virginia in 1827 operated for staphylorrhaphy, and in 1837 published an excellent essay. Dr. M. employed the leaden sutures recommended by Dieffenbach.

In 1833 when he reported his perineorrhaphy he made no claim to originality in reference to the sutures and wrote as though he had been using them for some time. In 1847 he reported that he had treated six cases of perineal lacerations with complete success and a seventh with partial relief, the patient not being willing to submit to a repetition of operative agencies. All were complete tears with loss of bowel control.

In 1838 Dr. Mettauer cured a case of vesico-vaginal fistula, using his lead sutures. He reported it in the *Boston Medical and Surgical Journal* for 1840. In 1847 he reported six cases, two in detail, and was convinced that "every case of vesico-vaginal fistula can be cured and my success justifies the statement." In 1855 he reported that he had cured twenty-seven cases and that two cases out of thirty-two were inoperable. He stressed the preparation of the patient by putting her on a liquid diet for two days. At the time of operation she was put in the lithotomy position and the fistula was exposed by lateral retractors in the hands of assistants on either side. The edges of the fistula were pared with small curved scissors such as Emmet afterwards used. The denuded edges were brought accurately in apposition with interrupted sutures of pure lead thread. A short straight silver tube was introduced into the urethra and held in place permanently by a tape fastened front and back to an abdominal band. The pa-

tient was kept on her side during the after care.

In 1852 Marion Sims[28] published his classic report "On the Treatment of Vesico-Vaginal Fistula." He reviews the history of the affliction and its hopelessness.

Two names stand out in bold relief amongst those who have devoted time and attention to this subject. I allude to our own countryman, Mettauer who uses leaden sutures; and to the indefatigable Jobert, who is the author of the operation of *auto-plastie par glissement*. The first by his plan has cured several cases; while the latter has achieved a greater degree of success than any other surgeon.

Dr. Sims then devotes half a page to a description of Hayward's operation and three-quarters of a page to Pancoast's account. He dismisses Mettauer with a reference. Why damn Mettauer with such faint praise? In the "Story of My Life" Sims[30] tells in a dramatic and fascinating manner his struggles and failures for nearly four years. A dramatic discovery of the advantage of the knee chest position led him to attempt the cure of vesico-vaginal fistula.

The first patient I operated on was Lucy. . . . I succeeded in closing the fistula in about an hour's time, which was considered to be very good work. . . . But I must have something to turn the urine from the bladder, and I thought that if I could make a catheter stay in the bladder I could succeed. But I knew that the books said the doctors had tried to do it for ages past and had never succeeded. The great Würtzer, of Germany, attempted to cure fistula, many years ago, and, failing to retain the catheter in the bladder, he adopted the plan of fastening the patient face downward, for a week at a time, to prevent the urine from dropping through into the vagina. I said, "I will put a little piece of sponge into the neck of the bladder, running a silk string through it. This will act as a capillary tube; the urine will be turned, and the fistula cured." It was a very stupid thing for me to do, as the sequel will show. At the end of five days my patient was very ill. . . . Then I attempted to remove the little piece of sponge from the neck of the bladder. It was about two inches long. One inch occupied the urethra, half an inch projected into the bladder, and half an inch into the meatus. As soon as it was applied, the urine came dripping through, just as fast as it was secreted in the bladder, and so it continued all the time it was worn. It performed its duties most wonderfully; but when I came to remove it I found what I ought to have known, that the sponge could not rest there simply as a sponge, but was perfectly infiltrated with sabulous matter, and was really stone. The whole urethra and the neck of the bladder were in a high state of inflammation, which came from the foreign substance. It had to come away, and there was nothing to do but to pull it away by main force. Lucy's agony was extreme. She was much prostrated, and I thought that she was going to die; . . . This operation was performed on the —— day of December, 1845. It inaugurated a series of experiments that were continued for a long time . . . As soon as I had arranged a substitute for the sponge, I operated on Betsy. The fistula was favorable, and would be considered a favorable one at the present day. Of course, I considered it very unfavorable. The fistula occupied the base of the bladder, and was very large, being quite two inches in diameter. I repeated the operation, in the same way and manner as performed on Lucy, with the exception of placing in the bladder a self-retaining catheter, instead of a sponge.

This makes interesting reading, but it would be more interesting if he told us something about the catheter. It seems likely that it was at this time that he read some of Mettauer's articles.

In the *Lancet* for November, 1834, Gossett published the details of a successful case in which he used a reten-

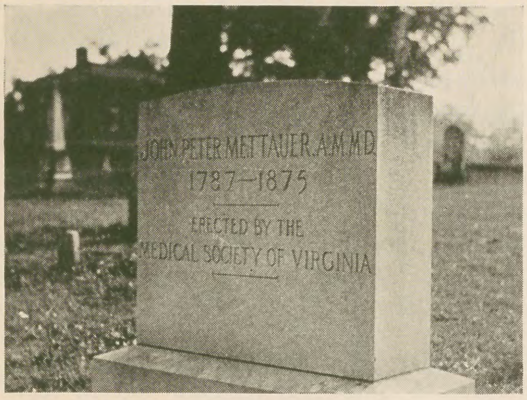


FIG. 5. DR. METTAUER'S GRAVESTONE IN THE COLLEGE CHURCH CEMETERY AT HAMPDEN-SIDNEY.

tion catheter of gum elastic. Mettauer (1840) used one of silver. Sims may not have known of Gossett's case, but he did know of Mettauer's work. In his "Silver Sutures in Surgery" Sims[30] says that fortunately for science the clumsy leaden sutures of Mettauer were unsuccessful in his hands and he was led to try silver wire by finding a piece of brass wire out of an old pair of discarded suspenders. The connection is not quite clear.

Bozeman,[5] who worked with Sims both in Montgomery and at the Woman's Hospital of New York, maintained that the clamp suture was far from perfect and failed in a number of cases that Sims did not report, and that Sims abandoned it twelve days after Bozeman published his "button suture." Sims then adopted the simple interrupted suture that Mettauer had been using. This was in 1856. In 1858 Sims[29] wrote of Bozeman:

> Not understanding its principle of action (the clamp suture) and therefore failing in its practical application, he (Bozeman) was quite disheartened with his ill success, when by mere accident he fell upon a plan of fastening the wire, and so modifying my method, that in awkward and inexperienced hands it became easier of application.

In the same article he makes the remark quoted above about the clumsy leaden sutures of Mettauer. This seems a strange statement to make in view of the expressed preference of Spencer Wells[37] and of H. L. Hodge[15] for the lead sutures. Simpson[26] described the change in Sims' technique as follows:

> Dr. Sims at one time used what he called a "clamp-suture." . . . The ulceration produced by the pressure of the clamps had induced him, however, to lay them aside, and to use solely as I have said, the simple metallic sutures as was done several years before by his countryman Dr. Mettauer.

Nothing can dim Marion Sims' fame or lessen the esteem in which he is held by gynecologists all over the world. Nevertheless we must recognize the fact that he was in poor health, peevish, and difficult to get along with. At the beginning of the war the lot of the Southern doctors living in New York was particularly hard. Emmet[11] offered his services to the Confederacy and was told that they had more doctors than they needed. When he returned to New York he kept $2000.00 in gold in his safe so as to be able to leave at a moment's notice. Similarly, Sims was a man without a country, so he invaded Europe and conquered it with his scalpel. He claimed the metallic suture as his own and was justly proud of his achievements. When his old associate, Bozeman, introduced a modification of the suture, he brought upon his head Sims' wrath and undying enmity. One can but wonder at the story of the brass wire

spring of a discarded pair of suspenders giving Sims the idea of using silver wire for his repair of vesico-vaginal fistula. To believe this story one must credit Sims with not reading the leading medical periodicals, even the one that published his own articles, for in the twenty years, 1833-1852, there were at least six articles and abstracts of Mettauer's operations with the lead sutures. Of the three essentials stressed by Sims in his operation for vesico-vaginal fistula, i.e., knee chest position, retention catheter, and metallic sutures, Mettauer had used two, years before Sims began his work on vesico-vaginal fistula. It is true that Sims improved the silver canula by putting a double curve in it and that he devised a number of instruments that made the operation more glamorous, but the principle of using metallic sutures and the retention catheter rightly belongs to Mettauer. That he influenced the great Sims, as I believe he must have done, is sufficient glory for a country surgeon.

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1839; a discussion of chyle, "An Introductory Discourse Delivered at the Commencement of a Course in the Medical Institute near Prince Edward Courthouse (1837); introductory address at the Washington Medical school, "A Memoir on Strictures of the Urethra" (1844); "Memoir on Lithotomy" (1844).

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