

SILVER SUTURES IN SURGERY.



THE

ANNIVERSARY DISCOURSE,

BEFORE THE

NEW YORK ACADEMY OF MEDICINE.

DELIVERED IN THE NEW BUILDING OF THE HISTORICAL
SOCIETY, ON THE 18TH NOVEMBER, 1857.

BY

J. MARION SIMS, M.D.,

SURGEON TO THE WOMAN'S HOSPITAL.

(PUBLISHED BY ORDER OF THE ACADEMY.)

NEW YORK:

SAMUEL S. & WILLIAM WOOD,

389 BROADWAY.

1858.

JOHN F. TROW,
PRINTER AND STEREOTYPER,
377 & 379 Broadway, N. Y.

NEW YORK ACADEMY OF MEDICINE.



A SPECIAL MEETING of the Academy was held at the new building of the Historical Society, corner of Second Avenue and Eleventh Street, on the 18th of November, 1857—Dr. MOTT, President, in the chair.

The reading of the minutes of the previous meeting was dispensed with, when Dr. J. MARION SIMS delivered the Anniversary Oration, being a paper on SILVER SUTURES IN SURGERY.

At its conclusion, on motion of Dr. JOHN W. FRANCIS, seconded by Dr. BEADLE, the thanks of the Academy were presented to the Orator.

Dr. SMITH then offered the following resolution :

Resolved, That a committee of three be appointed to wait upon Dr. SIMS, and request a copy for publication.

Whereupon Drs. JOHN W. FRANCIS, JOSEPH M. SMITH, and JOHN WATSON were appointed said Committee.

C. F. HEYWOOD, M.D.,

Recording Secretary.

In consequence of the length of this Discourse, parts of it were omitted at the Anniversary Meeting. Most of the illustrations accompanying it are from original drawings, by Dr. THOMAS ADDIS EMMET, the accomplished Assistant Surgeon to the Woman's Hospital.

J. M. S.

ANNIVERSARY DISCOURSE.

MR. PRESIDENT, AND FELLOWS OF THE ACADEMY OF MEDICINE.

ON this happy return of another Anniversary, it must be a source of congratulation with every well-wisher of this Academy, to see here on the platform with our distinguished President, (Dr. Mott,) so many of the eminent men, who, like him, have at various times ably filled the same high position.

The presence of our honored ex-presidents, John W. Francis, Alexander H. Stevens, Thomas Cock, Isaac Wood, Joseph Mather Smith, and Willard Parker, lends additional grace, dignity, and interest to the occasion, well worthy of permanent historic remembrance. Long may they live to rejoice at the prosperity of this Academy, and to shed the lustre of their great names upon its labors.

This PRESIDENTIAL GALAXY, too, is naturally suggestive of the names of those who have filled the less important post of Orator. Ten years ago that venerable Nestor of the profession, the devoted and eloquent Francis, inaugurated your anniversaries by a characteristic oration, replete with learning, anecdote, and historic incident, before an unprecedented audience of more than four thousand spell-bound hearers, while thousands left unable to gain admittance. This mighty effort of the great and good man gave the community a just estimate of the value and importance of this learned body, which, it is to be hoped, we shall ever maintain. He was followed by the late lamented Manly. Then came the truthful and lucid Post; and next, the learned and critical Joseph M. Smith. After him, the elegant and accomplished F. Campbell Stewart; then the eminent, exact, and public spirited Griscom; and last, though not least, your own classic Watson.

Is it then a matter of surprise that I have manifested so much diffidence in following the footsteps of these distinguished men? Apologies on such occasions, are too frequently affected, but were I to proceed without some explanation, I should do injustice to you, and great violence to my own sense of propriety. When a member of this Academy but little more than one year, you conferred upon

me this distinguished honor; electing me in my absence, and without my knowledge or consent,—a compliment that I appreciate with all my heart; but a consciousness of my unfitness for the place prompted me at once to resign; when such men as Mott, Francis, Stevens, Smith, Green, Griscom, White, and others opposed my withdrawal, agreeing, (unofficially,) that my subject should be purely a professional one.

SILVER SUTURES IN SURGERY, is a subject that necessarily involves frequent and constant reference to my own labors, and their results; indeed, it has been the theme of my life for the last twelve years. In selecting it I am not ignorant of the delicacy of my position, and of my liability to be misinterpreted, and to be criticised by some who do not know me as you do. Nevertheless I shall speak as an American, plainly, frankly and fearlessly, feeling that you and the great mass of the profession will understand, and fully sustain me. So far as it concerns my experience, personal narrative, claims as a discoverer, or defence against aggression, I have a right to declare them openly "from the house-tops;" and for this in the abstract I hold myself responsible. But, whether the subject matter will be considered quite appropriate for the occasion, is a question only for the fastidiously censorious; and I shall dismiss that very summarily, by shifting its responsibility to the

broad shoulders of the gentlemen just named, at whose solicitation I stand here to-night.

You, who are familiar with the experience of that noble charity, the Woman's Hospital, will not be surprised, when I declare it as my honest and heart-felt conviction, that the use of SILVER AS A SUTURE IS THE GREAT SURGICAL ACHIEVEMENT OF THE NINETEENTH CENTURY.

For my country I claim the honor of this imperishable discovery, and seize this auspicious occasion to place permanently upon record a history of its origin and progress.

Many of you already know that it was not the result of mere accident, but of long, laborious and persevering effort, based upon the immutable principles of science, and forming one of the most beautiful examples of inductive philosophy.

Wishing to impress upon the profession its importance and value in general surgery, as well as in injuries from protracted parturition, I shall necessarily be compelled to draw largely and somewhat minutely upon my past experience. But this will be readily tolerated by a liberal profession; for, while I labor to establish principles, it will be legitimate to refer to dates, and times, and places, and persons, and circumstances, all of which are necessary to place for ever beyond cavil my claims and agency in this discovery.

In 1845 I conceived the idea of curing vesico-vaginal fistula, and entered upon the broad field of experiment with all the ardor and enthusiasm of a devotee. After nearly four years of fruitless labor, silver wire was fortunately substituted for silk as a suture, and lo! a new era dawns upon surgery.

This was on the 21st of June, 1849, since which time I have used no other suture in any department of surgery.

The American Journal of Medical Sciences for January, 1852, contains my article on "The Treatment of Vesico-vaginal Fistula," with full and specific directions for every stage of the operation. The silver suture, as then used, I called the "clamp suture," on account of its method of action in forcing, or "clamping" firmly together the surfaces to be united. Merely for its historical value, and to show the progress of improvement, it is here introduced.

Fig. 1, represents the anterior wall of the vagina, the posterior being cut up and laid open, thus exposing the fistula closed by the clamp suture.

By perforated shot compressed upon the silver wires, they are secured to leaden cross-bars or "clamps," which burrow in the vaginal tissue; the whole remaining till union by the first intention becomes firm, when, by clipping off the shots the sutures are removed.

In my own hands this method of using



Fig. 1.

the silver wire in vesico-vaginal fistula was uniformly successful, because I always took good care to make a broad and free scarification of the edges of the fistula, and to pass the sutures so far from them that the cross-bars or clamps would burrow in the vagi-

nal tissue, there to remain till the case was permanently cured. But my followers were not so successful, simply because these two important points were not fully appreciated. They complained that the sutures would cut out; a thing that never happened with me in but three or four cases, and they were amongst my first experiments, before learning thoroughly the art of applying them.

The city of Montgomery, Alabama, was the theatre of my early operations. Bad health compelled me to leave there in 1853. I then gave Dr. Bozeman of that place a partnership in business, and indoctrinated him in my peculiar method of operating for vesico-vaginal fistula, instructing him in my various modes of using silver wire as a suture, not

only in this class of affections, but in general surgery. Not understanding its principle of action, and therefore failing in its practical application, he 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 or inexperienced hands it became easier of application. Instead of passing the wires through the leaden bars on each side of the fistula, he passed them through a concave disk or "button" which rests upon the surface of the parts to be united, as shown by fig. 2.

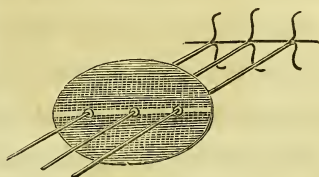


Fig. 2.

Notwithstanding the fact that the doctor lived in Montgomery for years, without any professional position till I gave it to him, that he is indebted to me for what he could never have obtained without my aid, he appropriates to himself every step of the operation that resulted from my own individual and unaided efforts,—even my silver wire and perforated shot, the only things of any real value whatever, and publishes it as his operation by a "new mode of suture," making strenuous efforts to place my labors entirely in the background.

I do not complain of modifications, but I do

complain of a disingenuousness that would be dishonorable even under widely different circumstances.

While I know that posterity will do me full justice, I do not even fear the verdict of my contemporaries, when the whole of the facts and their philosophy are laid plainly before a just and discriminating profession. But, Sir, if you wish to offer a premium for the encouragement of secret remedies, rob me of my well earned claims, as the discoverer and propagator of a great principle that shall live as long as surgery is cultivated as a science, or practised as an art;—and, if you are particularly desirous to drive your young men ambitious of honorable distinction, from their high resolves to elevate and ennoble our calling, show them that you are ever ready to thus endorse any attempt to detract from the meed of their self-sacrificing efforts.

An honorable sensitiveness on the score of professional claims and personal rights is natural, and comes home to every man, whether his reputation be already established, or merely prospective.—And no one, Mr. President, is more capable of fully appreciating this than your honored self, whose brilliant surgical achievements have so often been the object of envy and detraction.

But to the facts and their analysis:—Dr. B.'s paper "on vesico-vaginal fistula, by a new mode of suture," was published in the first No. of the Louis-

ville Review, for May, 1856. He there labors to show that nothing comparatively had been done for this injury till the use of his button, while with it, there could be no such thing as a failure. Although I knew very well why he failed with the clamp, still I was determined to see what advantage the button possessed over it, if any.

Having at the Woman's Hospital an ample field for experimental observation, I lost no time in testing his modification of my suture; and as my experiments were valuable in establishing a principle, I shall give a brief detail of them.

CASE I. — The fistula was transverse, in the median line, about an inch above the neck of the bladder, with abundant tissue, and every thing favorable for an easy and successful operation. The wires were passed *as usual with me*, brought through the "button," and fastened with the perforated

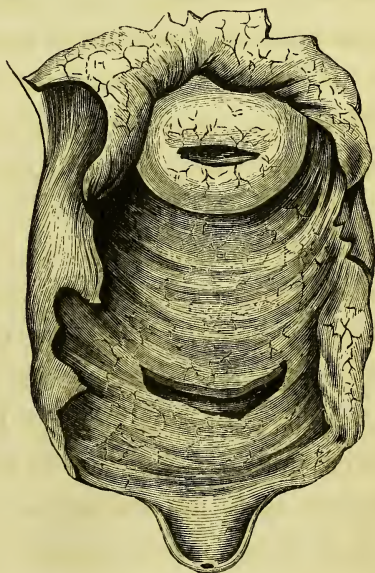


Fig. 3.

shot. They were removed on the ninth day, leaving two small fistulous openings in the line of union, thus showing a failure of the "button," greatly to my surprise, for I could not imagine a better case for

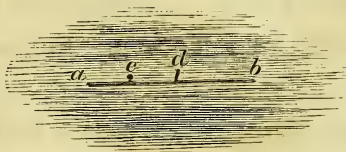


Fig. 4.

success. Fig. 4, *a b*, the line of cicatrized union, *c d*, the two little fistulas left in its track.

CASE II.—Aged 57. A sister to the above, with a similar fistula, but a little nearer to the neck of the bladder. Sexual organs normally atrophied, as usual with women at her time of life. Operation on the same day, and in the same manner as CASE I, and with a like unfortunate result; for when the sutures were removed on the ninth day, there was a small fistulous opening at the extreme end of the new cicatrix on the right side.

CASE III.—Aged 37. A fistula extended from the meatus urinarius through the urethra and neck of the bladder, laying the septum open, to within $\frac{3}{4}$ of an inch of the cervix uteri. I had closed the whole of this fistulous track by a previous operation, except a small point in the *bas fond* of the bladder, which had been purposely left open for a catheter during the time the sutures were applied to the injured part below;

and now it only remained to close up this small fistula thus so favorably situated. The wires, (two,) were passed transversely and secured by the button.

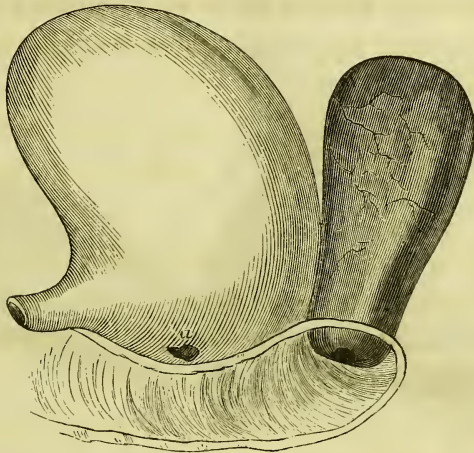


Fig. 5.

Fig. 5 shows the little fistula *a*, above described. The operation was similar to the two preceding, and had a like unfavorable result; an opening half the size of the former was left. Thus three very favorable cases for the clamp, had failed by the "button" of Dr. B.

Before this result was known I had applied it in four other cases, three of them unfavorable, and where I had not succeeded with the silver suture after my usual method by the "clamp."

CASE IV. is one in which I had united the anterior and posterior walls of the vagina about an

inch above the urethra, leaving a small fistula not larger than the point of a common probe.

Fig. 6, shows the cervix uteri and the vesico-vaginal septum destroyed by the sloughing process. To convert the upper part of the vagina and the

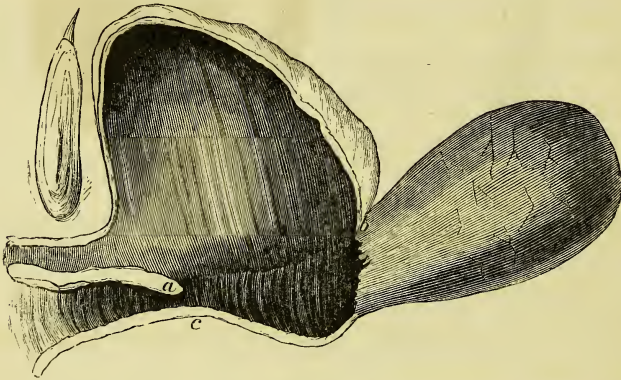


Fig. 6.

bladder into one common receptacle, the posterior wall of the vagina, at *c*, had been united by the wire and clamps to the anterior at *a*, leaving a small opening not larger than a No. 7, sewing needle. To this the button was applied, and failed.

CASE V. was similar, with a greater loss of substance. There was but a small part of the neck of the bladder attached to the urethra.

The mouth of the vagina had been closed by uniting its posterior wall to the urethra just as they lay naturally in contact, leaving two little fistulæ not larger than a common-sized probe, one at each extremity of the line of union. I had failed to

close these by the silver wires, secured by the clamps or leaden bars, and now applied them with the button. The operation in both instances failed.

CASE VI.—A small fistula *a*, fig. 7, at the neck of the bladder; tissue scanty and indurated; button failed. [*a*, *b*, line of union effected by a distinguished surgeon before her admission to the Woman's Hospital.]

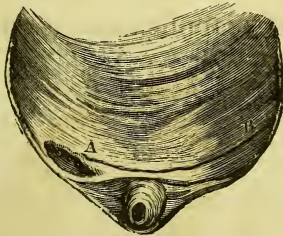


Fig. 7.

CASE VII.—Here the injury was at the neck of the bladder, (see fig. 9,);—The button was used, and union took place.

Six successive failures* out of seven operations with the silver suture, secured by Dr. B.'s method, was a most astonishing result; and it was but natural to inquire into the cause. I had supposed that his success was due to the button, which was not the case, as the sequel will show.

Anxious to test fairly the advantages of this plan of securing the silver wires, I had performed these seven operations in as many days, and the last one was executed before the result in any preceding case was known.

* Subsequently cured by the silver wire, as a simple interrupted suture.

Since the above was written, Dr. B. has published cases in which his button failed repeatedly in his own hands.

In the first six operations the wires were passed precisely as I do when they are to be fastened by leaden bars and perforated shot, and they all failed; thus establishing the fact, that the principle in their application essential to success with the



Fig. 8.

clamps, was the one to produce a failure by the button; and vice versa, the principle of success by the button was that of failure by the clamp.

Let me explain—

If the clamps or leaden bars are to be used to secure the wires, the sutures must be passed as shown at *b*, fig. 8, so far from the edges of the fistula as to allow the bars to sink down into the

vaginal structure, making it utterly impossible for them to cut out. But if the disk or button is to be used, then the sutures are to be passed very near, it matters not how near, the edge of the fistula, as at *a*.

Now if the clamps are used with the sutures passed as at *a*, they will invariably cut out, because there is not space enough for them to burrow; whereas, if the button is used with the wires passed as at *b*, the effort necessary to draw the parts up into its concavity will inevitably roll over, and force together the undenuded surfaces between the edges of the scarification and the entrance of the wires, which will to some extent invert the fistulous edges proper, while the traction by the button will cause the sutures to cut through, as at *c* and *d*, fig. 4.

Thus it is clearly seen why my followers failed with the clamp, and why I failed so signally with the button.

Fig. 9, is intended to show the relations of the fistula in the seventh case, which was the only successful one of the series. It was just at the neck of the bladder, the tissue was deficient, and the edges inverted, or turned towards the pubic arch. Here the sutures were passed close to the edges of the fistula, as shown in the figure; but when the button was to be applied, I found that it had to be *convex* instead of *concave*, as so particularly recom-

mended by Dr. B. Notwithstanding this, union took place. If the button had been made with a

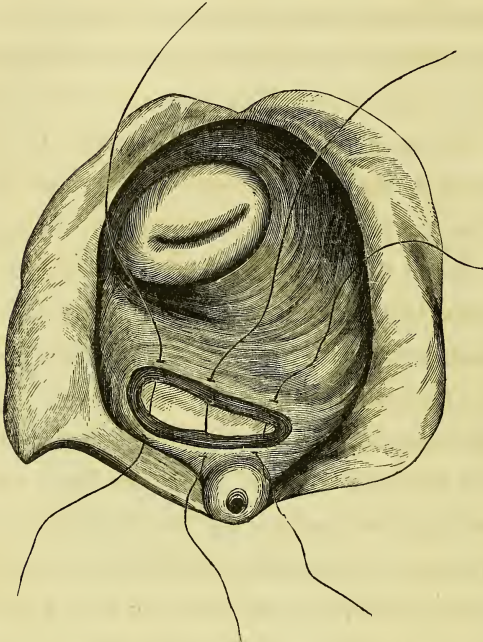


Fig. 9.

concavity, and thus applied, forcing the edges of the fistula up into it whether or not, the wires would have cut out before union could have been effected.

These cases demonstrated very clearly to my own mind that Dr. B. had mistaken the philosophy of the suture. He attributed its success in his hands to the button or disk, whereas this is wholly an unnecessary addendum. The truth is, that the great success of these operations is due entirely to

the silver wire. I had long ago demonstrated, over and over again, that the clamps or leaden bars and perforated shot were totally worthless, if used with silk as a suture; in other words, that the silver wire was the essential part, the *sine quâ non* of success; and I had now seen that the button, to which so much importance was attached, had failed in six successive cases, while it succeeded in the seventh when it no longer possessed the peculiar characteristic thought to be essential to success. Seeing thus that the much vaunted button was obnoxious in some cases, and nugatory in others, I now began a series of experiments with the wire as an interrupted suture, without "clamps" or "buttons" so called.

Past experience had shown me, that as an interrupted suture, it was alone sufficient in general surgery: and there was no good reason why it should not prove equally as effective in the injuries resulting from tedious labor. It was accordingly applied in the following case on the 24th of June, 1856.

Ellen, aged 30, had been the subject of repeated operations in various hospitals, when at last she fell into the hands of Dr. B. Fordyce Barker, the able Professor of Obstetrics in the New York Medical College, who sent her to the Woman's Hospital.

The fistula was very large, extending from the cervix uteri down to the neck of the bladder, and

involving the loss of nearly half of the vesical septum. A large mass of inflamed and hypertrophied mucous

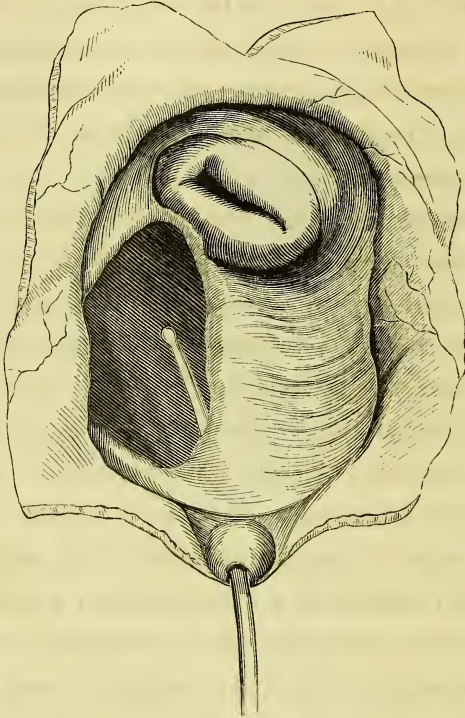


Fig. 10.

membrane from the cavity of the bladder protruded through it into the vagina, often becoming strangulated, and producing the most intense suffering.

Fig. 10 shows its relations. After proper scarification, seven interrupted silver sutures were passed transversely and fastened, each separately, by a perforated shot. On the 8th day they were removed. The cure was perfect.

This case with all its difficulties satisfied me that the silver wire was all sufficient here, as I had long known it to be in other departments of surgery; and I applied it with the same unvarying success in other cases, dispensing with all unnecessary addenda, even the perforated shot; simply tying or twisting the wire.

The wire must be made of virgin silver, annealed, and small enough for a suture.* In some cases the needle may be armed with it, and so used; but in the majority of operations about the vagina, I prefer to pass silk ligatures first, and with these to draw the wires after. The sutures should be passed in, near the edge of the fistula, as at fig. 9, page 20, taking care to embrace the whole denuded surface, but not to penetrate the mucous lining of the bladder. They should, as a general rule, be about $\frac{3}{16}$ of an inch apart, and each tied separately, by twisting the two ends of the wire together, then cutting them off, and leaving the twisted ends at least half an inch long, to facilitate their removal. (See figs. 11, and 12.)

Fig. 11, shows the method of twisting the wire. Two sutures are represented as secured and cut off, with the twisted ends bent flatly down on the sur-

* Mr. Berenbroick, No. 83 Duane street, makes two sizes for me, No. 28 and 29, the last being the finest and most used.

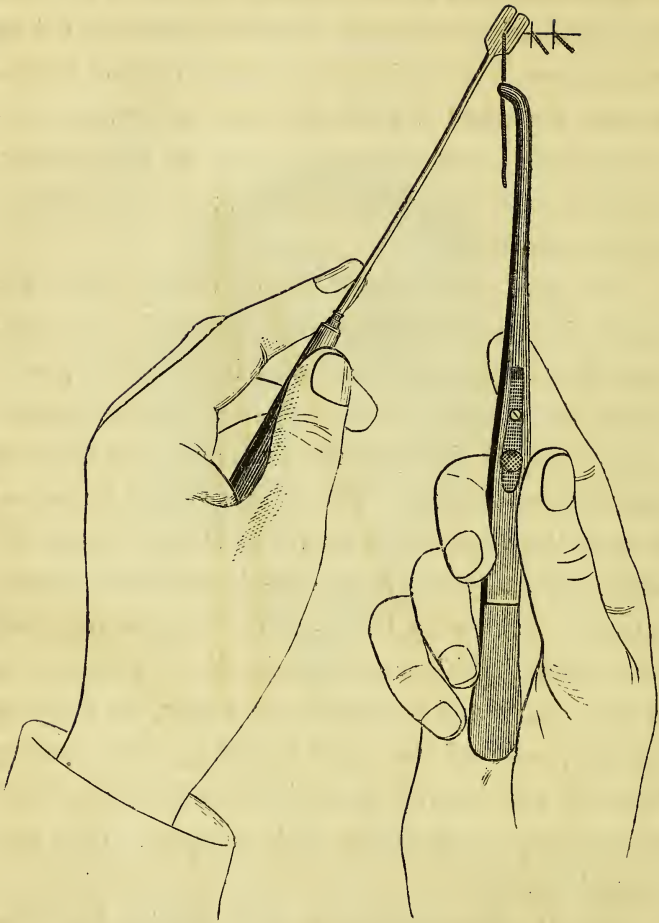


Fig. 11.

face, while the third is undergoing the process of torsion.

The fulcrum of support is held firmly in the left hand, while a pair of forceps in the right makes

steady traction on the wire doubled on itself, when by a rotary movement of the forceps the wire is quickly and evenly twisted, thus looping firmly together the edges already nicely co-apted.

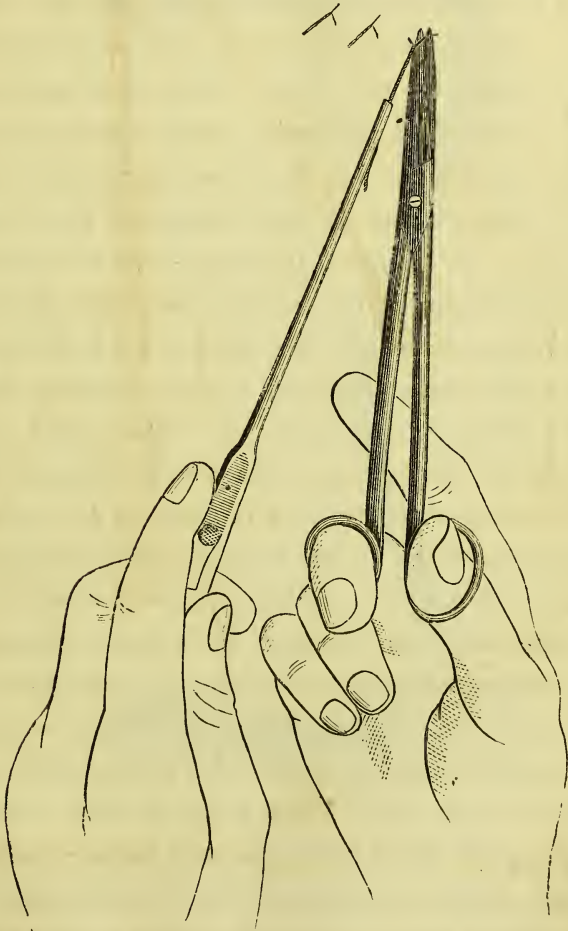


Fig. 12.

It is unnecessary to allow the wires to remain longer than the 8th day. To remove them, take hold of the twisted end with a long delicate pair of forceps, fig. 12, pull it gently out, till the loop which was buried in the tissue becomes visible; slip the blade



Fig. 13.

of a sharp-pointed pair of scissors within it, and clip the wire. Then it is easily removed, straightening out and assuming the form of fig. 13. Some care is needed to cut the wire in the loop instead of the twist.

It may not be amiss here to say, that beside this simplification of the suture, my position at the Woman's Hospital has afforded me facilities for making other improvements in this operation since my first publication in 1852; for instance, the speculum, fig. 14, is altered to give a greater leverage: the handle curves back at about an angle of 30° instead of being at right angles with the blade, having a counter curve in the middle, while another blade of a different size mounts the other extremity. This arrangement gives the assistant great power in drawing the perineum back towards the os coccygis.

I formerly used a needle with a long shaft, but a visit to New York some three or four months after the publication of my paper; (January, 1852,) enabled me to have some short needles and a needle-holder made by Tieman, which among other things have been appropriated by the writer in

the Louisville Medical Review before alluded to; but I now prefer a simple pair of forceps with

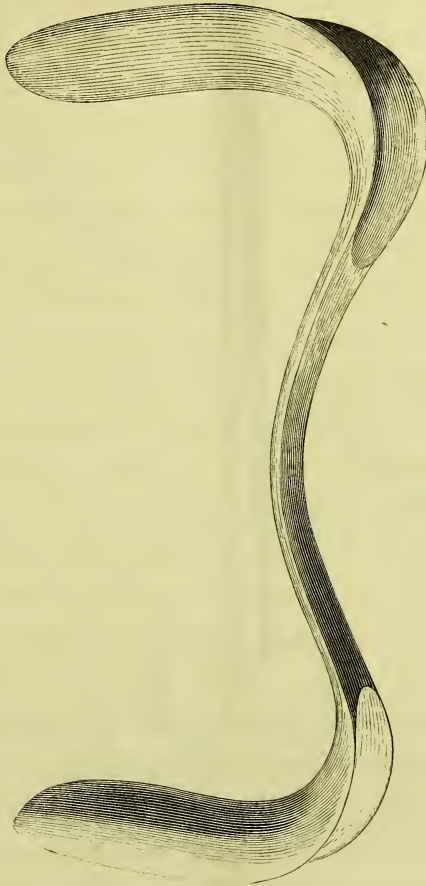


Fig. 14.

serrated jaws, properly adapted to the needle as seen in fig. 15.

The catheter is also improved so as to project

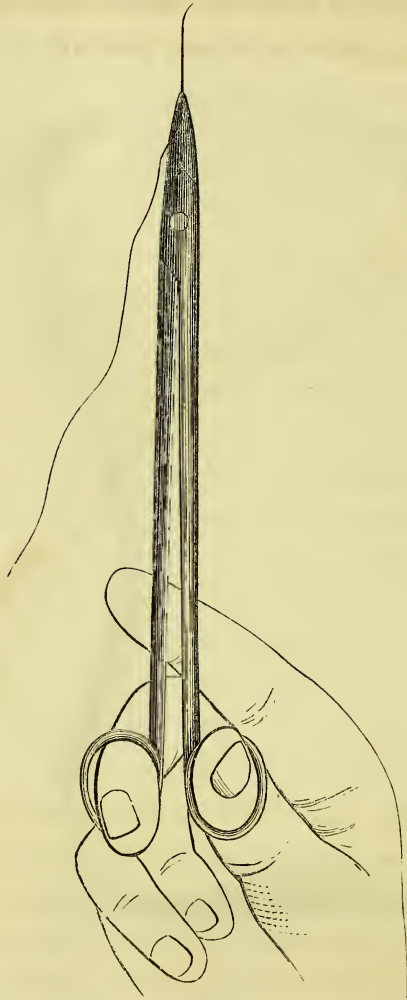


Fig. 15.

beyond the vulva, and drop the urine in a cup, thus protecting the person and bedding.

Another improvement is in allowing a more

liberal diet than formerly, but still constipating by anodynes and the recumbent posture.

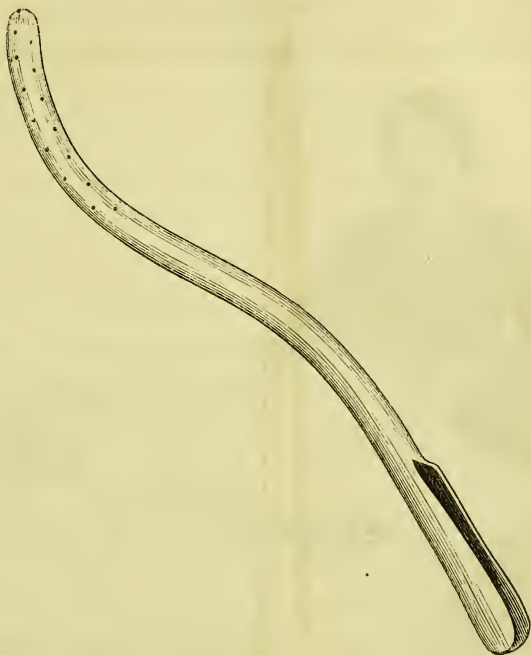


Fig. 16.

But the most useful of all these improvements is in the position of the patient during the operation. A few require to be placed on the knees with the head and thorax depressed, as I formerly did, and as my followers do still; but in the great majority of cases, the patient may lie on the left side, while the operation will be executed with equal facility to the surgeon, and, of course, with more ease to the patient.

In this position the thighs are to be flexed at about right angles with the pelvis, the right a little more than the left. The left arm is thrown behind, and the chest rotated forwards, bringing the ster-



Fig. 17.

num quite closely in contact with the table, while

the spine is fully extended, with the head resting on the parietal bone.

The patient being thus rolled over as much as possible on the front, the assistant standing at her back, elevates with the left hand the right side of the nates, while the right holds the speculum which draws up the perineum, allowing the pressure of the atmosphere to dilate the vagina so as to bring every part of it into view. This position permits the use of anæsthetics if desired, but I never resort to them in these operations, because they are not painful enough to justify the trouble, and risk attending their administration.

Having thus digressed for a few moments to speak of these improvements, for which we are indebted to that prolific field of observation, the Woman's Hospital, I recur again to the proper theme.

Previously to the experiments already detailed, I had used silver sutures with the leaden bars or clamps in all operations about the vagina, and perineum, and had every reason to be perfectly satisfied with the results; but seeing now that the simple interrupted silver suture was sufficient in the most difficult cases of vesico-vaginal fistula, I lost no time in extending its use to lacerations of the perineum, and found it here quite as effec-

tual; hence I adopted it in all such cases, not because it is more efficacious, but because it is simpler in its application, and quite as certain in its results. And in no instance of lacerated perineum, it matters not how extensive, have I ever resorted to a division of the sphincter ani, which, (with the silver suture,) is a horrible and wholly unnecessary complication.

It is strange that the Profession have been so slow in adopting this suture. From the day its wonderful effects were witnessed in vesico-vaginal fistula in 1849, I have never used any other suture in any department of surgery.

Wishing to impress upon the Profession its great value in general surgery, and at the same time, to render permanently historic my claims to priority, I propose to show what it has already done, as contrasted with the usual methods. Hence some little detail of facts, and dates.

In *plastic surgery* it is the great desideratum. In May, 1850, a gentleman had the misfortune to lose a good part of the left ala nasi. In the operation eight interrupted silver sutures were used—they were removed on the 7th day: union was perfect, and he soon went home with some slight tumefaction of the parts, which gradually subsided.

In the course of a fortnight he returned, saying that in wiping the perspiration from his face, he discovered some pricking substance at the seat of the operation, which he supposed to be a bit of wire. He was right; the wire was there, but easier felt than seen. It was removed, and found to be half an inch long: it had remained there four weeks, producing no sense of soreness, and no inflammation or suppuration as a silk ligature would have done; thus establishing the great and important principle that silver was as innocuous as lead, and, like it, might become sacculated, producing no irritant or poisonous effect whatever.

I have used this simple suture with unvarying success in other plastic operations, a detail of which is here unnecessary.

In 1852 a little boy some 8 years old received a blow on the upper lip, near the left commissure, cutting it through for $\frac{3}{4}$ of an inch.



Fig. 18.

Three interrupted silver sutures were applied, and no other dressing. I saw no more of him till the ninth day: union was perfect, the wires remaining precisely as I had placed them. Their removal was like that of a delicate ear-ring from the ear long used to wearing it.

In 1853 a gentleman called on me with a very bad cancrioid warty excrescence, involving a large part of the lower lip, which had resisted all remedial efforts. Its removal was advised. He said he could not possibly spare the time necessary for a cure; I told him that twenty minutes would suffice for the operation and dressing, and that he could then go home, (some 80 or 100 miles,) and return in a week. He consented. The usual operation

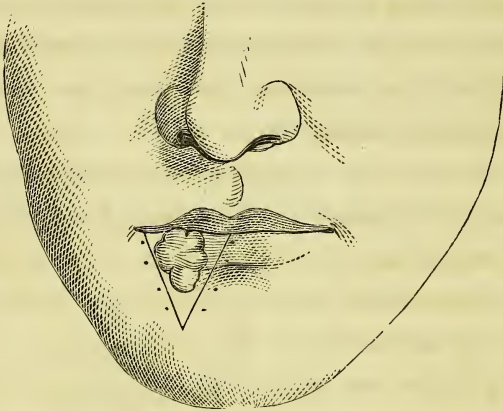


Fig. 19.

by a V incision was performed, and the cut surfaces united by four interrupted silver sutures, sustained by a single strip of isinglass plaster, with no other dressing. At the appointed time he returned with the parts perfectly united throughout, the wires producing no inflammatory effect whatever.

Would any surgeon have been justifiable in sending such a case as this away for so long a time with

the old-fashioned method by silk ligatures or the twisted suture? Certainly not. And yet I felt no anxiety about the result, so great was my confidence in the safety and security of the silver wire, as then demonstrated by daily experience.

In *Hare-lip* the results of this suture are beautiful. They should not be further apart than $\frac{3}{16}$ of an inch, or even less; thus affording good support and perfect co-aptation. It is necessary for them to remain till union is firm enough to prevent any widening of the cicatrice by muscular traction, which requires usually from five to eight days. As it is important to prevent any mark from their unequal pressure, a thin plate of some transparent material may be placed, like a delicate splint, on the co-apted edges, over which the wires may be tied, thus protecting the tender cuticle of the child's lip from their cutting pressure; while at the same time it allows an inspection of the united parts, which, if necessary, can be more accurately fitted by gently insinuating a small probe under the translucent medium: a thin bit of glass in the absence of any thing else answers the purpose admirably well.

For this purpose I have had prepared some little plates of ivory, made transparent by dissolving its earthy constituents. This prepared ivory is

thin, light, and capable of being cut or moulded into any form, but it is objectionable, as it softens at the temperature of the body.

However, nature has given us a better material for this purpose, one to be found everywhere and at any time. A clarified goose-quill split into sections, softened in boiling water, and then flattened out by heavy pressure, fulfils every indication in this "hare-lip suture." So far as absolute success in the operation is concerned, nothing can be added to the silver wire to make it more certain, and these translucent media are recommended merely for the purpose of preventing scars that may result from the pressure of the wire.

In *Wounds of the Scalp*, I have often applied silver sutures, and here they possess a peculiar fitness. They do away with the necessity for sticking plasters, and there is no need of a razor. Besides, of all regions of the human body this is most liable to traumatic erysipelas, hence the importance of dispensing with silk as a suture.

Dr. Emmet, the accomplished Assistant Surgeon to the Woman's Hospital, removed in December, 1856, an encysted tumor from the scalp of a lady aged 62. It had existed some forty years, giving her no inconvenience until a few months before, when it increased rapidly in size and became tender

on pressure. Six silver sutures and a water dressing were applied. On the eighth day they were examined for the first time. Found union by the first intention—the wires had produced no irritation whatever, and from appearances they might have remained there without it for an indefinite period, although she was below the average state of health.

Having applied this simple suture with the same unvarying success in all the minor operations, which it is here needless to detail, would it not have been strange had I failed to try it in the bloody or heroic ones? Indulge me a moment to enumerate a few of them.

In 1849, 1852, and 1853, I removed the *Mamma*, applying this suture, the number in each case varying from eight to seventeen. The wires were allowed to remain from seven to fifteen days. It is almost needless to say that in every case the result was the same as in the smaller operations,—complete cohesive union.

In 1852, (February,) I removed the principal part of the *lower jaw* bone for osteo-sarcoma, in a negro woman some 50 years old. It was divided at the angles, thus necessitating an incision of about ten inches after Mott's plan. The wound was

united by eighteen silver sutures, and a simple sustaining bandage applied. The whole length of it healed by the first intention, except an isolated point at the middle of the chin, through which the retaining ligature of the frænum linguæ had been passed for security. The wires were not removed for ten days. Had silk been used as a suture there would have been an absolute necessity for their removal in three days at the farthest, and even then it is almost certain that the bed of each suture would have been a suppurating sore.

In 1849, 1850, and 1852, I used silver sutures *in Amputations* of the thigh and leg, and in every case produced union by the first intention throughout the whole extent of the wounds with the exception of the point left for the passage of the ligatures.

In all amputations, surgeons knowing the bad effects of ordinary silken sutures, have been in the habit of applying as few as possible, and trusting to adhesive plasters and bandages to retain the edges of the flaps in contact. The poisonous properties of silk render its early removal imperative; hence the wound must be disturbed before adhesion is firm, and thus mischief results from the surgeon's necessary interference. But when the silver wires are applied, there is no necessity whatever, under

ordinary circumstances, for any interference till the parts are firmly united.

They must be placed near enough together to bring closely and accurately into contact every portion of the edges of the flaps, which may now be sustained by a few long narrow strips of Liston's Isinglass plaster. It takes a little longer, and it is therefore a little more trouble, to apply nicely twelve or fifteen silver wire sutures, than to stick clumsily four or five great silk ligatures; but when the stump is dressed there is no more trouble with it, and the wires may not be removed for eight or ten days, or even longer. Moreover, there is not so much excuse for compresses, bandages, Maltese crosses, and all the bungling contrivances often resorted to after amputations, while there is every facility for applying a light water dressing, which is the only thing usually needed in such cases.

In 1855, at the request of Dr. Willard Parker, the distinguished Professor of Surgery in the College of Physicians and Surgeons, I applied silver sutures to a large *abdominal section* in the case of a young lady, the subject of Ovariectomy. They were passed deeply through the parietes of the abdomen, but not perforating the peritoneal coat. Union by the first intention was complete—the sutures remaining a week.

Other surgeons, members of this Academy, have

been using this suture, amongst whom may be mentioned Mott, Post, Parker, Buck, Watson, Sayre, Van Buren, James R. Wood, Markoe, Henry Weeks Brown, and many others. Professors Mott, Post and Parker, have each for the last four years taken great pains to instruct their several classes in the use of this American discovery.

But amongst the earliest to appreciate its importance in connection with medical education stands pre-eminent, Dr. Gilman, the learned Professor of Obstetrics, etc., in the College of Physicians and Surgeons.

Sufficient detail in the way of facts and dates has now been given to place beyond controversy my claims, not only to priority in the discovery and promulgation of a great principle, but in its universal application in general surgery.

But all the special departments of surgery have not been indicated in which this simple and wonderfully beautiful suture may be successfully used. As soon as I became aware of its value, I was very anxious to apply it in *Wounds of the Intestines*, and particularly after the occurrence already alluded to, where a wire remained four weeks in the nose without producing the slightest disturbance; but no opportunity presented till April, 1853.

A young negro man was stabbed in the left side

between the sixth and seventh ribs; and in the abdomen there were two cuts, through which protruded large masses of wounded intestines. These intestinal wounds (some of them transverse, and others diagonal) were closed with simple interrupted silver sutures, which were cut off close to the intestine, and the whole returned to the abdominal cavity. He lived twenty-four hours.

The post-mortem examination, made by Dr. B. C. Jones of Montgomery, Alabama, and Dr. Cummings, now of New Orleans, showed that the thoracic wound had passed downwards through the diaphragm into the stomach. The perforation in the diaphragm was completely plugged by omentum, but not till the contents of the stomach had passed through it into the pleural cavity.

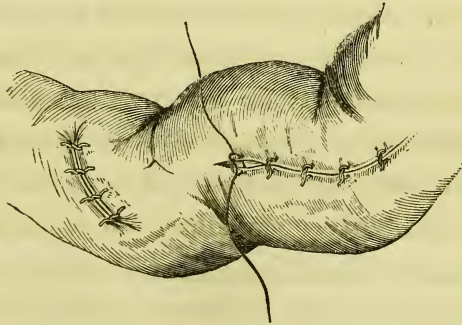


Fig. 20.

There was no effusion or evidence of active inflammation in the peritoneal cavity; the silver wires had neatly closed the wounds in the bowel,

(duodenum cut, ileum and jejunum transfixed in three places,) and for an inch around them there was a delicate little effusion of plastic lymph nicely gluing the wounded parts to the adjacent peritoneal coat, while every thing else was in a perfectly normal state.

Fortunately he lived long enough to indicate pretty clearly the propriety of using silver sutures in wounds of the intestines. I expected them to become sacculated like lead, and to remain there innocuously, to be taken care of in nature's own way.

I have long felt satisfied that the great danger from *Wounds of the Peritoneum* was due not so much to the mere admission of atmospheric air as to the universal use of ligatures and sutures, left like setons to irritate and inflame this delicate serous membrane. Operations for Hernia are of frequent occurrence, and if performed before strangulation results in sphacelus, are amongst the safest of all grave operations. They show very plainly that the peritoneum may be opened and handled with comparative immunity.* For the truth of this assertion

* Dr. WARREN STONE, the distinguished Prof. of Surgery in the Medical Department of the University of Louisiana, who, as a great practical teacher, ranks with the most eminent in this country, or any other, says of hernia, "That no disease is so dangerous to life, and yet so entirely remediable"—that "the bowel is in danger from the moment it is strangulated, and should be relieved as soon as possible"—that "the hernial sac can be exposed without the slightest risk"—and that "if it should be necessary to open the hernial sac, it can be done with as much safety as venesection can be performed at the bend of the arm." [*New Orleans Medical Journal*, Jan. 1858, page 79.]

I appeal here to Mott and Stevens, to Watson and James R. Wood, and to every other surgeon in this Hall. Why then such dread of peritoneal wounds? Why such fear of peritonitis in Ovariectomy?

But is there any wonder that Ovariectomy is so fatal, when a great silken cord strangulates the pedicle and hangs from the abdomen, its whole track a suppurating sinus? And, when six, or eight, or ten silken sutures close the external wound, each one answering most admirably the purpose of a seton?

Simpson, the great European luminary of Obstetric Surgery, plainly saw the source of danger, and says, "If betimes it come to be recognized as a surgical operation fit and proper in such cases of ovarian disease as he adverted to, he had no doubt *the steps of the operation itself would meet with improvements,*" and that "probably it might be possible to devise some other measures of securing the large vessels, principally *veins* be it remarked, of the pedicle, and thus save the several dangers arising from the ligature."*

EUROPE, through this great man, thus calls for improved measures of safety, which AMERICA now proudly lays at her feet. For silver sutures and silver ligatures are to do more to rob this dread operation of its dangers than all else that has yet

* Obstetrical Works, 1st Series, page 256.

been suggested. Let the pedicle of the tumor be firmly tied with a silver, or leaden wire—let the external wound be united by silver sutures—let the vaginal *cul de sac* be punctured, (as has already been done by our distinguished Fellow, Prof. Peaslee,)* for a canula to drain off, through the most dependent point of the peritoneal cavity, any exudation, whether of blood, serum, or pus, and a degree of security will be given to this operation that may yet rank it with hernia under its most favorable circumstances.

But enough has been said to fix attention upon the importance of this suture, and *its universal applicability in general surgery*.

It is to revolutionize surgical dressings, and to ensure more beautiful and prompt cures. With it, properly applied, there can be no gaping wounds to heal by the suppurating process, where there is skin enough to cover a stump; and in many cases erysipelatous inflammation, and even hospital gangrene, may be averted by substituting it for silk as a suture.

After all amputations we must use sutures of some sort; and how often do we see silk ulcerating out, and creating such tendency to suppuration, that we are compelled to remove them before there is sufficient union to resist the retraction of the tu-

* American Journal of Medical Science, Jan. 1857.

mefied flaps. But with silver there is no inflammation, no suppuration, no cutting out of sutures, no gaping or retraction of flaps, and therefore no necessity for disturbing the dressing till all is firmly united and permanently well.

This is no vain imagining: though enthusiastic, I am not wildly so, for all this has been familiar to me for the last eight years, and I but speak what I know. The next eight years will not find an educated physician anywhere who will dare to use silk sutures, for the silver thread will now become as essential to the dressing case as the needle itself; and if I may be allowed to venture a prediction, I will say that fifty years hence the statistics of our hospitals will show a vast improvement in their bills of mortality after great operations, and this improvement will be due mainly to the use of silver as a suture.

Look at its results in injuries of the vagina. Before this discovery, operations for vesico-vaginal fistula, and its congeneric affections, were often attended with risk to life, while a cure was a mere accident. But how is it now? Why, every case is easily and perfectly curable that has tissue enough to render any operation whatever practicable; while a failure is the exception to the rule. Besides, there is not the least risk to life, as there is never any fever, or the slightest constitutional disturbance.

I am not claiming too much for this suture when I say, that the same relative results must be attained in all other surgical operations requiring sutures, if the same method be adopted.

My language is in nowise extravagant; and I shall yet live to see the day, when the whole profession of the civilized world will accord to this simple discovery the high position of being the most important contribution as yet made to the surgery of the present century.

The only thing at all comparable to it is Etherization; and in practical results of permanent benefit it is absolutely contemptible, when compared with those from the universal use of silver sutures in the broad domain of general surgery.

Having now briefly shown that I have used silver sutures with uniform success in almost every imaginable injury requiring sutures, these practical remarks might very properly be here closed; but, as concentrated efforts have been made in various quarters to rob me of full credit for my labors, I have thought it due to truth, to justice, to posterity, and to myself, to place permanently upon record a history of the circumstances attending this discovery.

Some of my contemporaries will not approve the measure, but when this generation passes there

will be no difference of opinion amongst critics on this point; besides, it will not be unprofitable should it stimulate but one young aspirant for fame and fortune to redoubled efforts, under unpromising circumstances and opposing obstacles, to the accomplishment of still more glorious triumphs for our noble profession.

Although fully fortified by the necessity of self-vindication, still I hesitate and tremble; but why should I be afraid to write, and speak, and publish to the world, what I am not ashamed to acknowledge to any individual, viz.—that it was all the result of a Providential train of circumstances over which I had no control, and that it pleased God to lead me in this direction in spite of my predilections.

As the field of my labors thus partakes somewhat of a missionary character, a labor of love under Divine guidance for the furtherance of a truly benevolent purpose, you will pardon a personal narrative, which under other circumstances would be inexcusable.

For the first ten years of my professional life the treatment of any disease peculiar to woman was ignored as far as possible. Surgery was my ambition, and it was gratified, for my head, and heart, and hands were full. This was due, not to any particular merit on my part, but, to a fortunate position amongst a liberal and enlightened profession in the

noble state of Alabama, a profession, which, for intelligence and a chivalric *esprit de corps*, is not behind that of any other state in this great confederacy.

Thus situated, a case of vesico-vaginal fistula was sent to me in July, 1845, which was investigated more because I had a surgical reputation to sustain than from any particular interest in the subject. It was, of course, dismissed as incurable. Two months after this another presented, which received a like verdict. Two cases in such quick succession in a country town, at that time, formed an era in one's life; imagine my surprise, when, a few weeks after this, a gentleman called to consult me about a third case. I told him promptly that it was useless to send her to me, as the injury was wholly incurable. He suggested that there was a possibility of my being mistaken in my ready diagnosis; when I replied, that a leakage of urine following a protracted labor was an infallible sign of a vesical fistula. But my remonstrances were unavailing, for he sent her to town in spite of me.

I investigated the case thoroughly, reading every author I could find on the subject, but to no purpose, for all was darkness and confusion; and thus I was on the eve of sending her home, when a little incident occurred that formed the turning point of my professional career, and without which the

discovery that has engaged our attention to-night would not have been made.

A lady was riding in the suburbs of the city of Montgomery, Alabama, and her pony taking fright, jumped suddenly, when she fell to the ground, striking on the sacrum. I saw her soon afterwards; her sufferings were extreme, as she had rectal and vesical tenesmus from a sudden retroversion of the uterus. To replace the dislocated organ was the indication of relief. Following the teachings of learned professors, the patient (covered with a sheet) was placed on the knees with the pelvis elevated, and the thorax depressed, when by manipulation through the vagina and rectum, I hoped to replace it. Introducing the right forefinger into the vagina, but remembering how a nervous gentleman had suffered a few days before from a rectal examination, I concluded not to subject this lady to the same disagreeable operation, particularly as it seemed possible to overcome the difficulty if my finger was only a little longer. My middle finger is more than half an inch longer than the index, but it could not be used without its fellow; and thus the two were passed, and in a few seconds I could not touch the uterus, or even the walls of the vagina, and the fingers were swept around as it were "in empty nothingness," which was to me at the moment

a most puzzling mystery, and while I was endeavoring to unravel it, my patient exclaims, "Oh doctor, I am relieved!" My office was ended, for my mission was to relieve her, but how it was done I could not understand. While I stood doubting and wondering, my patient, now easy, threw herself down on her side, producing thereby a sudden escapement of air from the vagina; and thus the whole mystery of the accidental reduction of the dislocated uterus was explained on the principle of atmospheric pressure.

And what was its rationale? When the patient was in the position described, there being a natural tendency of the pelvic viscera to gravitate towards the epigastric region, it would require no great *vis a tergo* to produce the desired result in a recent case of this kind. One finger, however, was not long enough to throw the organ up, nor were the two; but when they were both introduced, in my varying manipulations and strenuous efforts, the hand was accidentally turned with its palm downwards, which thus brought the broad dorsal surface of the two parallel fingers in contact with the vulvar commissure, thereby elevating the perineum and expanding the sphincter muscle, which allowed the air to rush into the vagina under the palmar surface of the fingers, where, by its mechanical pressure of fifteen pounds to the square inch, this canal was

dilated like a balloon, and the uterus replaced by its pressure alone. This accident—THERE ARE NO ACCIDENTS IN THE PROVIDENCE OF GOD!—this incident, then, occurred just at the right time. Had it happened six months sooner, its importance would not have been duly appreciated. Had it been six days later, the golden opportunity for its practical application would have been lost forever; for my mind had been sorely perplexed by the obscurity surrounding the investigation of the cases before alluded to, and I said to myself, “If by this position the atmospheric air can be made to dilate the vagina to such an extent, even with a force strong enough to reduce a dislocated uterus, why will not the same principle allow me to explore this region, and examine accurately any injury, or disease to which it may be liable?” Full of the thought I hurried home—and the patient, (with vesico-vaginal fistula,) who was to have left on the next day, was placed in the position described, with an assistant on each side to elevate and retract the nates. I cannot, nor is it needful to describe my emotions, when the air rushed in and dilated the vagina to its greatest capacity, whereby its whole surface was seen at one view, for the first time by any mortal man. With this sudden flash of light, with the fistulous opening seen in its proper relations, seemingly without any appreciable process of ratiocination, all the principles of the operation

were presented to my mind as clearly as at this time. And thus in a moment, in the twinkling of an eye, new hopes and new aspirations filled my soul, for a flood of dazzling light had suddenly burst upon my enraptured vision, and I saw in the distance the great and glorious triumph that awaited determined and persevering effort. From this moment my high resolve was taken; nor did I think, or care for the personal sacrifices I should have to make. I thought only of relieving the loveliest of all God's creation of one of the most loathsome maladies that can possibly befall poor human nature; and in this, I honestly confess that I was stimulated by feelings of national pride, as well as by a desire to advance our glorious profession. Full of sympathy and enthusiasm, thus all at once I found myself running headlong after the very class of sufferers that I had all my professional life most studiously avoided. Ransacking the country around, my medical brethren soon discovered and placed at my disposal, some seven or eight cases of vesico-vaginal fistula that had been quietly laid up as incurable. Building a little hospital as a special field of experiment, I readily got control of these cases, all of them healthy young negro women; promising to perform no operation that would endanger life, or render their condition any worse. Having no proper instruments, and no instrument maker, dentists, jewellers and black-

smiths were laid under contribution, and soon such rude instruments were made as were suggested by the peculiar wants of individual cases. This occupied a period from the 9th of December, 1845, to the 10th of January, 1846, when the first operation was performed.

Several medical friends, amongst whom were Drs. Boling, Holt, Ames, Baldwin, Jones, McWhorter and Henry, were invited to the inauguration of the experimental series. When the mechanical contrivances were exhibited, the peculiarities of each case pointed out, and the principles of the operation explained, they thought my plan of procedure promised well, while some were but little less enthusiastic than myself in hopes for the future.

The first was a very simple case, and one that any tyro in surgery could now cure in a week's time. The fistula was an



Fig. 21.

inch and a quarter long, transverse, in the base of the bladder, with an abundance of tissue. Its edges were accurately adjusted, and I expected to effect at once a magical cure; but greatly to my surprise and mortification it was a failure. However, the size of the opening was reduced from that seen in the diagram to one not larger than a No. 4 bougie: this encouraged me considerably, and the same operation was tried on

another case with a like unfortunate result, and after this, with various, and constantly varied modifications on others, till each one had suffered numerous operations, but all to no purpose. And thus I worked on, not for weeks and months, but for long weary years, before a single case was cured. My repeated failures brought a degree of anguish that I cannot now depict, even were it desirable. All my spare time was given to the development of a single idea, the seemingly visionary one of curing this sad affliction, which not unfrequently follows the fulfilment of the law pronounced by an offended God when he said to the woman, "In sorrow and suffering shalt thou bring forth children."

Soon my friends began to despair of my efforts, and one by one became tired of such profitless work. At last Dr. B. R. Jones, my partner, an accomplished physician, who had stood firmly by, giving his valuable advice and assistance, importuned me to cease my efforts; thus opposed at home, and deserted by the professional brethren who once cheered me on by their personal presence, I now stood alone—alone! did I say? no, I was not alone, for I felt that I had a mission, if not of a Divine character, at least but little short of it, of Divine origin. I felt that the God who had called me to this good work, and inspired me with new views for its accomplishment, was with me, and would not desert me. I could

not have ceased my labors if I had tried, for something told me that the fulness of time had arrived, that the work had to be done, and that if I should fall, God in his wisdom would raise up some one as an instrument to carry it forward to a glorious consummation. I was not alone then;—nor was I alone in another sense, for I had succeeded in infusing my own courage and enthusiasm into the hearts of the half dozen sufferers who looked to me for help, and implored me to repeat operations so tedious, and at that time often so painful, that none but a woman could have borne them.

To the indomitable courage of these long-suffering women, more than to any one other single circumstance, is the world indebted for the results of these persevering efforts. Had they faltered, then would woman have continued to suffer from the dreadful injuries produced by protracted parturition, and then should the broad domain of surgery not have known one of the most useful improvements that shall forever hereafter grace its annals.

In my first experiments the quilled suture was used, securing the ligatures by passing them through little canulæ that projected from the vulva.

Fig. 22, shows the rude contrivance, which was made of silver. The canulæ were firmly soldered to the proximal quill, and when the ligatures were tightened and wrapped round the end

that projected from the vagina, the fistulous edges

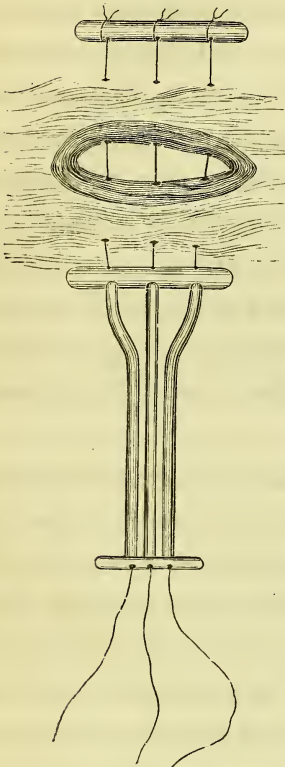


Fig. 22.

were neatly co-apted by the quills. This is introduced merely to show the slow degrees by which practical truths are sometimes developed. After using this machine variously modified for nearly three years, giving attention mostly to the perfection of the self-retaining catheter, I at last concluded that the projecting canulæ were a chief cause of failure, and consequently determined to dispense with them: but how to secure the ligatures was the question. A detail of the num-

berless expedients resorted to is useless; suffice it to say, that I was at last driven completely to the wall. I had resolved never to repeat another operation till I had devised some plan of fastening the quill suture without the canulæ—of tying a knot where I could not reach it with the fingers. Thus my brain was sorely puzzled; I had not performed an operation for nearly six weeks, and my devoted patients

were begging me from day to day, to "try only one more time." Notwithstanding their importunities, I had determined first to invent a knot for my sutures; but it seemed that my usual readiness of expedient had now deserted me. My brain was oppressed; my heart was heavy; but never for one moment did I despair of eventual success. At last I happened to remember that, when a boy, I used to make sinkers to my fishing lines by cutting a shot half in two, laying the line in the cut, and then compressing the shot on it with my teeth. I cannot express the delight that filled my heart at this simple suggestion. The idea occurred to me on the night of the 14th November, 1848. The contemplation of its beauty, simplicity, and perfect adaptation to the purpose, gave me a sleepless night; for there I lay with etherealized brain, performing in imagination a magical cure on each of my devoted patients. This was, as I thought, the consummation of all my plans. After a struggle for three years, victory was about to crown my efforts. How I longed for the morning, that I might put to the test of experiment what seemed so beautiful in theory. But I was doomed to wait another twenty-four hours before proving my principle; for just as I was preparing for the operation, a call to the country appropriated the day, and thus the longest day of my life was lengthened out by hope deferred. But bright and early on the

succeeding morning, I applied the quill suture secured by the perforated shot. It was all I could desire—I was never so well satisfied with any operation in all my life. How anxiously I waited for its results. I had at last gotten rid of the canulæ that had so long been such a serious obstacle to success, and every thing was propitious; but these bright hopes were of short duration, for I soon had unmistakable evidence that the operation was a total failure. What was the cause of it? why, said I, it must be because the silver quills are too large; so I began to lessen their size till they were not more than a line in diameter, and on account of the expense of silver, lead was substituted: but notwithstanding these modifications, there was no more success than at the beginning. What now was to be done? The principles of the operation were clear, and its mechanism seemed to be perfect. At first I had supposed my failures were due to the imperfection of the catheter; that was perfected, and then I laid the blame on the method of securing the sutures by means of the canulæ; they were replaced by the perforated shot, and then I looked to the size of the quills, and reduced them, so that they burrowed nicely in the tissues: it then seemed that success was inevitable, but still disappointment awaited me at every turn.

Thus far all my experiments were conducted on

the principles of a rational inductive philosophy. The operation was mechanically perfect, but with no better results than when it was rude and clumsy. There must be a reason for all this—what was it? Why, said I, perhaps it is in the nature of the material more than in its principle of action; what a happy thought!—Of course it was, for a silk thread introduced under the skin, and allowed to remain a week, becomes a seton, giving rise to the suppurative process, and certainly the same thing must occur with it in the vagina; and how then could there be cohesive union? Here then was the difficulty at last; how strange it now seemed to me that this fact had not long ago forced itself upon my mind. Now the question arose, was there a substitute for silk that would answer the same purpose, and yet not poison the animal tissue? Why, lead remains indefinitely in the body, becomes sacculated, and produces no poisonous, or suppurative effect. Dr. Levert * of Mobile, had demonstrated the innocuousness and efficiency of leaden ligatures on the arteries in the lower animals, and Mettaûer and Diefenbach had actually used leaden sutures in these very cases; and I had in my various experiments tried them in two cases of vesical, and one of rectal fistula, but fortunately for science, the clumsy leaden wire was unsuccessful in my hands. Was there any

* American Journal of Medical Sciences, No. VII., May, 1829.

other metal that could be substituted for lead, possessing its valuable property of harmlessness?

In this train of inquiry what would be more readily suggested to the reasoning mind than silver, gold, and platinum? Just at this stage of affairs I happened to pick up a piece of brass wire, that had been used in a pair of old-fashioned suspenders made before the days of India rubber; it was as fine as ordinary sewing thread. I took it to a jeweller, who imitated it in silver. I was now quite as anxious to see the result of an experiment with this, as I was seven months before to see the perforated shot applied. On the 21st June, 1849, it was done. A young colored woman, who had never murmured at the preceding failures, was placed on the operating table for the thirtieth time, and the silver sutures were applied, with the leaden bars and the perforated shot. In all previous operations the urethra, in a day or two, would become red and tender, and the urine loaded with thick tenacious mucus, thus showing the inflammatory process, which was adverse to union; but after this operation, the urine remained perfectly limpid all the time, and on the eighth day the parts were perfectly healed; the suture apparatus remaining just

* All these I have used, but adopt the silver, because it is as good as gold, and cheaper.

as it was placed, with the crossbars somewhat burrowed in the vaginal tissue.

I shall not dwell upon my feelings at this time. At last I had attained what I had worked for nearly four years; and it was but a few weeks before all the cases were cured that had been the subject of experiment for so long a time. I was anxious to get a few more cases to settle some doubtful points, before publishing to the world my discovery; but unfortunately with the realization of my dreams, and in the full fruition of my most sanguine hopes, came a sad reverse. An exacting practice and the extreme mental tension of the past four years had produced a collapse, long foreseen by friends, without my consciousness of its approach. Having contracted the chronic disease of a warm climate, which is almost universally fatal, and struggled hard for more than two years, and as it seemed, hopelessly against my fate, thus seeing that death was inevitable, and fearing that I might die without the world's reaping the benefit of my labors, I determined to give my experience, crude as it was, to the profession that I loved so much. And accordingly, in Oct. 1851, my paper "On Vesico-Vaginal Fistula" was dictated, and sent to Dr. Isaac Hays, of Philadelphia, who published it in the *Am. Jour. of Med. Sciences* for Jan. 1852, as my last free-will offering on the altar of science. I little thought of living to see it

in print, but it has pleased an All-wise God to restore me again to health, and by a mysterious Providence to place me in your midst, where I have found nought but friends and kindness.

Mr. President, I have thus hastily sketched a truthful, unexaggerated statement of the train of circumstances, which led to results that must ever be remembered as an achievement of AMERICAN SURGERY. But, Sir, I feel that an apology is due this Academy, for a personal narrative, although necessary for the vindication of right and the establishment of truth.

FELLOW ASSOCIATES :

I have said much of Silver Sutures, showing what they have already done, and pointing out the great revolution they are to effect in all surgery; but my task would be unfinished were I not to lay before you in this connection every good work they have achieved,—indulge me then a moment longer.

In justice to the Medical Profession of this mighty Metropolis, which is truly represented by this Academy, I beg leave here to state a few facts that must necessarily become historic; and, if historic, could the occasion be more propitious than now, in this beautiful new edifice of the New York Historical Society, which was but last night dedicated

by an eloquent address from the venerable and learned Dr. Francis.

But for Silver Sutures, that noble Charity, the Woman's Hospital, would not have been called into existence.—Do you ask how this is so? Let me glance briefly at its origin.

As before remarked, driven by a seemingly inexorable fate from my Southern home and friends in search of health, repeated observations made during the summers of 1850, 1851, and 1852, showed that I could regain it in this great city—*and nowhere else*—for whether I crossed over to Brooklyn, sailed up the Sound to the “land of steady habits,” roamed over the Highlands of the noble Hudson, quaffed the waters of the far-famed Saratoga, loitered by the seaside, or scaled New England's lofty mountains, it was all the same with me—but, whenever I tarried in New York, its pure soft Croton water and bracing air, would invariably banish my dread disease. Thus the law of self-preservation drove me here in spite of sectional prejudice and an innate horror of a large city. Soon after my arrival, on the 15th of October, 1853, Dr. Mott called, and gave me the first patient I ever had in New York. It was a very bad case of utero-vesico-vaginal fistula, which had been sent to him from Canajoharie.

Having read an account of Silver Sutures, he

honored me with a request to apply them in this case, which, so far as the records show, was the first of the kind ever remedied in the State of New York. This brought me frequently in contact with Dr. Mott, who encouraged and sympathized with my views on the necessity of establishing a great hospital in this city to be devoted to the treatment of the diseases peculiar to woman. He sent me to Dr. Francis, whose broad and comprehensive views greatly contributed to shaping its destiny. Dr. Francis saw at once its bearings upon the interests of humanity, the advancement of science, and the cause of Medical Education. He was its earliest advocate, its unwavering friend. To his personal influence and overpowering eloquence is due in a great measure the hold it has upon the sympathies of the community, and the confidence of the Profession—well may he be styled God-Father to the Woman's Hospital.

Dr. Horace Green, the founder of the New York Medical College, was too much interested in the cause of medical education not to see its importance, and he aided it with wise counsel and earnest effort.

Dr. Griscom, Dr. Barker, Dr. Gardner, and Dr. Reese, were amongst its earliest friends. But the first man to suggest a proper method of co-operative action was Dr. Alexander H. Stevens, who, though

little given to enthusiasm on ordinary occasions, seemed to be fired with this idea of a Woman's Hospital, and wrote a letter to Bishop Wainwright, (which is now in the possession of the Rev. Dr. Muhlenberg,) and taking a broad view of the subject, he at once said: "You are right in thinking this movement should emanate from the Medical Profession; a meeting must be called, and you must address it." But I declined, because I was unused to public speaking, and feared to endanger a good cause by a possible failure.

However, I soon discovered that I could do nothing otherwise, and was forced to adopt the suggestion of Dr. Stevens, inviting the Profession to a lecture on the subject at the Stuyvesant Institute, No. 659 Broadway, on the 18th of May, 1854.

The interest felt was manifested by a large attendance, representing every phase of the Profession. After the lecture, Dr. Delafield was called to the chair, and Dr. Beadle requested to act as secretary, when Dr. Griscom moved "That the meeting coincide to the utmost extent with the views of the lecturer of the evening," sustaining his motion ably and eloquently. He was followed successively by Drs. Gardner, Greene, Kissam, Reese, and others, when the meeting unanimously adopted the hospital movement as its own, authorizing the chairman to appoint at his leisure, a committee of ten, five lay-

men and five medical men, to organize plans for future action; Dr. Delafield was added by this meeting to the committee which it authorized him to appoint.

The selection of this committee was a matter of grave importance,—how could it be composed so as to combine all interests in the Profession into one harmonious whole? How else but by representing the cause of Medical Education? Accordingly, Dr. Stevens, from the College of Physicians and Surgeons,—Dr. Mott, from the University Medical College,—Dr. Green, from the New York Medical College,—Dr. Francis, as the Father of Obstetric Medicine in New York,—with Dr. Delafield and your Orator, comprised the medical branch of the Committee—while Mr. Peter Cooper, and Mr. Erastus C. Benedict, were the only laymen ever selected.

This endorsement by the united voice of the Profession was the quickening principle in this hospital movement; without it, there could have been no vitality—no existence.

The kindly sympathy of the Profession was shown, too, by a liberal patronage in placing at my command a large number of surgical cases, fit subjects for Silver Sutures, that were clamorous for aid. Having no place for them, and feeling the urgency of prompt action, then it was that the members of this Committee allowed me to appeal to the mothers

of our city to aid us in this good work for their suffering sisters.

The time has not arrived for a complete historiography of the Woman's Hospital, and it is not my intention here to individualize the noble band of heroic women, who, when we had been working for several months with no practical results, called a meeting of some thirty ladies in the quiet parlor of a private residence, (No. 27 St. Mark's Place,) on Saturday the 10th of February, 1855, when the "WOMAN'S HOSPITAL ASSOCIATION" was formed, which elected a Board of Managers with the following officials, viz. :—

Mrs. David Codwise,	1st Directress,
“ Wm. B. Astor,	2d “
“ Ogden Hoffman,	3d “
“ Jacob Leroy,	Treasurer,
“ T. C. Doremus,	Assist. Treas.
“ Dr. Horace Webster,	Secretary.

This Board raised funds, rented a building, No. 83 Madison Avenue, and opened the hospital on the 4th of May, 1855, electing the gentlemen as its Medical Board who had been previously appointed as a committee of organization.

Nor did they stop here; for as soon as they saw the need of more room, they joined the Medical Profession in an appeal to the Legislature for funds

and a new Charter, merging it into a State Institution, of which the present Board of lady Managers will constitute a Board of Supervisors having charge of its domestic management, while its Board of Governors, composed of New York's choicest sons, will organize it and manage its finances. And what are now its prospects for the future? With fifty-six thousand dollars in hand, with an implied understanding in our Charter to get from the State a large appropriation as soon as her financial condition will allow it, with a sympathy for its success that pervades every intelligent family in the city, and many throughout the State, and with the expectation of obtaining from the city a site valued at a hundred thousand dollars—does not the Woman's Hospital bid fair to take its place as one of the fixed institutions of the country? And who should feel prouder of this than this Academy? Although the Academy had no opportunity, as such, of moving in the matter, still the leading members of this learned body are its prominent friends. The Medical Profession have never before, in any country, shown such unity of purpose as here, in regard to this Woman's Hospital. Look for a moment at their Memorial to the Legislature last year in its behalf. It was signed by every Professor in the College of Physicians and Surgeons; by every Professor in the University Medical College; by every Pro-

fessor in the New York Medical College; by all the leading practitioners of the city to whom it was presented; by every Physician to each of our five Dispensaries; by the Surgeons and Physicians to all our other Hospitals, and when it was sent to Albany, it received the unanimous endorsement of the State Medical Society. Was ever before such union seen in the Medical Profession? Pardon me if I should call it a "Union by the first intention," effected by SILVER SUTURES.



CATALOGUE OF THE
OFFICERS AND CORRESPONDING AND RESIDENT FELLOWS
OF THE
NEW YORK ACADEMY OF MEDICINE.

OFFICERS FOR 1847.

President, JOHN STEARNS, M.D.

Vice-Presidents, { FRANCIS U. JOHNSTON, M.D.
THOMAS COCK, M.D.
JOHN B. BECK, M.D.
JOHN W. FRANCIS, M.D.

Recording Secretary, F. CAMPBELL STEWART, M.D.

Domestic Corresponding Secretary, WILLIAM C. ROBERTS, M.D.

Foreign Corresponding Secretary, BENJAMIN DRAKE, M.D.

Treasurer, ROBERT WATTS, JR., M.D.

Librarian, THOMAS M. MARKOE, M.D.

Orator, JOHN W. FRANCIS, M.D.

OFFICERS FOR 1848.

President, JOHN W. FRANCIS, M.D.

Vice-Presidents, { THOMAS COCK, M.D.
JOHN B. BECK, M.D.
J. K. RODGERS, M.D.
W. W. MINER, M.D.

Recording Secretary, F. CAMPBELL STEWART, M.D.

Assistant Secretary, MARCUS L. TAFT, M.D.

Domestic Corresponding Secretary, WILLIAM C. ROBERTS, M.D.

Foreign Corresponding Secretary, GURDON BUCK, JR., M.D.

Treasurer, JAMES O. POND, M.D.

Librarian, THOMAS F. COCK, M.D.

Orator, JAMES R. MANLEY, M.D.

OFFICERS, ETC., OF THE

OFFICERS FOR 1849.

President, VALENTINE MOTT, M.D.

Vice-Presidents, { ISAAC WOOD, M.D.
JAMES R. MANLEY, M.D.
GALEN CARTER, M.D.
THOMAS COCK, M.D.

Recording Secretary, JOHN L. VANDERVOORT, M.D.

Assistant Secretary, T. M. FRANKLIN, M.D.

Domestic Corresponding Secretary, WM. C. ROBERTS, M.D.

Foreign Corresponding Secretary, JOHN G. ADAMS, M.D.

Treasurer, JAMES O. POND, M.D.

Librarian, THOMAS F. COCK, M.D.

Orator, ALFRED C. POST, M.D.

OFFICERS FOR 1850.

President, ISAAC WOOD, M.D.

Vice-Presidents, { GALEN CARTER, M.D.
JOSEPH M. SMITH, M.D.
J. C. BLISS, M.D.
A. C. POST, M.D.

Recording Secretary, JOHN G. ADAMS, M.D.

Assistant Secretary, JACKSON BOLTON, M.D.

Domestic Corresponding Secretary, WM. C. ROBERTS, M.D.

Foreign Corresponding Secretary, EDWARD L. BEADLE, M.D.

Treasurer, JAMES O. POND, M.D.

Librarian, THOMAS F. COCK, M.D.

Orator, JOSEPH M. SMITH, M.D.

OFFICERS FOR 1851.

President, ALEXANDER H. STEVENS, M.D.

Vice-Presidents, { GALEN CARTER, M.D.
JOSEPH M. SMITH, M.D.
JOHN K. RODGERS, M.D.
JOHN P. BATCHELDER, M.D.

Recording Secretary, JOHN G. ADAMS, M.D.

Assistant Secretary, JACKSON BOLTON, M.D.

Domestic Corresponding Secretary, WM. C. ROBERTS, M.D.

Foreign Corresponding Secretary, EDWARD L. BEADLE, M.D.

Treasurer, JAMES O. POND, M.D.

Librarian, THOMAS F. COCK, M.D.

Orator, F. CAMPBELL STEWART, M.D.

OFFICERS FOR 1852.*President*, THOMAS COCK, M.D.

Vice-Presidents, { JOSEPH M. SMITH, M.D.
 JAMES ANDERSON, M.D.
 J. P. BATCHELDER, M.D.
 GURDON BUCK, JR., M.D.

Recording Secretary, JACKSON BOLTON, M.D.*Assistant Secretary*, GEORGE A. PETERS, M.D.*Domestic Corresponding Secretary*, WM. C. ROBERTS, M.D.*Foreign Corresponding Secretary*, EDWARD L. BEADLE, M.D.*Treasurer*, JAMES O. POND, M.D.*Librarian*, THOMAS F. COCK, M.D.*Orator*, F. CAMPBELL STEWART, M.D.**OFFICERS FOR 1853.***President*, ISAAC WOOD, M.D.

Vice-Presidents, { E. L. BEADLE, M.D.
 F. C. STEWART, M.D.
 WM. DETMOLD, M.D.
 WILLARD PARKER, M.D.

Recording Secretary, SAMUEL A. PURDY, M.D.*Assistant Secretary*, J. FOSTER JENKINS, M.D.*Domestic Corresponding Secretary*, SAMUEL T. HUBBARD, M.D.*Foreign Corresponding Secretary*, S. CONANT FOSTER, M.D.*Treasurer*, JAMES O. POND, M.D.*Librarian*, THOMAS F. COCK, M.D.*Orator*, J. A. SWETT, M.D.**OFFICERS FOR 1854.***President*, JOSEPH M. SMITH, M.D.

Vice-Presidents, { JAMES ANDERSON, M.D.
 E. L. BEADLE, M.D.
 WM. DETMOLD, M.D.
 J. H. GRISCOM, M.D.

Recording Secretary, SAMUEL A. PURDY, M.D.*Assistant Secretary*, EDWIN B. STIMSON, M.D.*Domestic Corresponding Secretary*, SAMUEL T. HUBBARD, M.D.*Foreign Corresponding Secretary*, S. CONANT FOSTER, M.D.*Treasurer*, JAMES O. POND, M.D.*Librarian*, THOMAS F. COCK, M.D.*Orator*, JOHN H. GRISCOM, M.D.

OFFICERS, ETC., OF THE

OFFICERS FOR 1855.

President, JOHN W. FRANCIS, M.D., LL. D.

Vice-Presidents, { E. L. BEADLE, M.D.
F. C. STEWART, M.D.
GURDON BUCK, M.D.
WM. DETMOLD, M.D.

Recording Secretary, S. CONANT FOSTER, M.D.

Assistant Secretary, JOHN W. GREEN, M.D.

Domestic Corresponding Secretary, SAMUEL T. HUBBARD, M.D.

Foreign Corresponding Secretary, JOHN G. ADAMS, M.D.

Treasurer, JAMES O. POND, M.D.

Librarian, THOMAS F. COCK, M.D.

Orator, JOHN WATSON, M.D.

OFFICERS FOR 1856.

President, WILLARD PARKER, M.D.

Vice-Presidents, { JOHN WATSON, M.D.
JACKSON BOLTON, M.D.
GURDON BUCK, M.D.
EDWARD L. BEADLE, M.D.

Recording Secretary, S. CONANT FOSTER, M.D.

Assistant Secretary, W. F. HOLCOMB, M.D.

Domestic Corresponding Secretary, SAMUEL T. HUBBARD, M.D.

Foreign Corresponding Secretary, JOHN W. GREEN, M.D.

Treasurer, JAMES O. POND, M.D.

Librarian, THOMAS F. COCK, M.D.

Orator, WM. DETMOLD, M.D.

OFFICERS FOR 1857.

President, VALENTINE MOTT, M.D.

Vice-Presidents, { JAMES R. WOOD, M.D.
EDWARD L. BEADLE, M.D.
JOHN WATSON, M.D.
B. FORDYCE BARKER, M.D.

Recording Secretary, C. F. HEYWOOD, M.D.

Assistant Secretary, F. U. JOHNSTON, JR., M.D.

Domestic Corresponding Secretary, SAMUEL T. HUBBARD, M.D.

Foreign Corresponding Secretary, JOHN W. GREEN, M.D.

Treasurer, JAMES O. POND, M.D.

Librarian, THOMAS F. COCK, M.D.

Orator, J. MARION SIMS, M.D.

OFFICERS FOR 1858.

President, J. P. BATCHELDER, M.D.

Vice-Presidents, { C. E. ISAACS, M.D.
W. H. VAN BUREN, M.D.
JOHN WATSON, M.D.
S. CONANT FOSTER, M.D.

Recording Secretary, C. F. HEYWOOD, M.D.

Assistant Secretary, F. U. JOHNSTON, M.D.

Domestic Corresponding Secretary, SAMUEL T. HUBBARD, M.D.

Foreign Corresponding Secretary, JOHN W. GREEN, M.D.

Treasurer, JAMES O. POND, M.D.

Librarian, SAMUEL ROTTON, M.D.

Orator, _____

TRUSTEES.

R. S. KISSAM, M.D.

J. H. GRISCOM, M.D.

JAMES ANDERSON, M.D.

E. L. BEADLE, M.D.

BENJAMIN OGDEN, M.D.

GALEN CARTER, M.D.

W. N. BLAKEMAN, M.D.

CORRESPONDING FELLOWS.

[Those marked with an asterisk are deceased.]

- | | |
|---|--|
| Thomas W. Blatchford, M.D., Troy, N. Y. | *Bureaud de Riofrey, M.D., Paris. |
| Jean Civiales, M.D., Paris. | Samuel D. Gross, M.D., Philadelphia, Penn. |
| *Theodoric Romeyn Beck, M.D., Albany, N. Y. | Philip Ricord, M.D., Paris. |
| Thomas Harris, M.D., Washington. | Alfred L. M. Velpeau, M.D., Paris. |
| Louis Agassiz, Prof. Harvard University. | J. C. Townsend, M.D., Long Isl., N.Y. |
| Sir Henry Holland, M.D., London. | Jean Jacques Joseph Leroy d'Etiolles, M.D., Paris. |
| Martial Dupierris, M.D., Havana. | Prince Krom Luang Wongsatirat Sanit, Siam. |
| Ashbel Smith, M.D., Texas. | Paul Dubois, M.D., Paris. |
| William Fergusson, M.D., London. | G. Andral, M.D., Paris. |
| Samuel H. Dickson, M.D., Charleston, S. C. | F. Rilliet, M.D., Paris. |
| Worthington Hooker, M.D., New Haven, Conn. | E. Barthez, M.D., Paris. |
| E. D. Fenner, M.D., New Orleans. | J. Guggenbuhl, M.D., Paris. |
| P. M. Roget, M.D., London. | Jacob Bigelow, M.D., Boston. |
| P. V. Z. Amussat, M.D., Paris. | James Y. Simpson, M.D., Edinburgh. |
| Edward Reynolds, M.D., Boston, Mass. | John Hughes Bennett, M.D., Edinburgh. |
| *Joel A. Wing, M.D., Albany, N. Y. | Edward K. Peaslee, M.D., N. Hampshire. |

RESIDENT FELLOWS.

- Abbott, Norman
 Acosta, Elisha
 Adams, John G.
 *Andariese, James W.
 Anderson, James
 Andrews, Jarvis M.
 Ashburn, Robert A.
 Aylett, Philip Augustus
 Ayres, Daniel, Jr.
- *Barker, Luke
 Bartles, O. S.
 Barker, B. Fordyce
 Barry, Robert A.
 Batchelder, J. P.
 Bay, John W.
 Baylies, Bradford S. B.
 Baylies, Hersey
 Beadle, E. L.
 Beales, J. C.
 *Beals, Gorham
 *Beck, John B.
 Bedford, G. S.
 Benedict, George
 Berger, Francis E.
 Blakeman, Wm. N.
 *Bliss, James C.
 Bliven, J. P.
 Blois, Samuel
 Blumenthal, Mark
 Bogert, Cornelius R.
 Bogert, S. V. R.
 Bolton, Jackson
 Borrowe, J. H.
 Bowen, William
 *Boyd, Thomas
 Booraem, Augustus C.
 *Brady, Patrick J.
 Brown, Henry Weeks
 Brown, William K.
 Brueninghausen, Charles
 Buck, Gurdon
 Buel, W. P.
 Bulkley, H. D.
 Bumstead, F. J.
 *Bullus, Edward
 Budd, Chas. A.
 Burke, Wm. C.
 Busteed, John
 Burrill, James
 Byrne, John
- *Cameron, James
 Cameron, John S.
 *Campbell, James
 Campbell, N. L.
 Carroll, Daniel J.
 Carter, Galen
 Carter, J. S.
 Catlin, S. H.
 Chalmers, Thomas C.
 Chapin, E. R.
 *Chapin, John R.
 Cheesman, John C.
 Childs, S. Russell
 Church, Allen S.
 Clark, Alonzo
 Clark, Patrick
 Clark, Peter F.
 Clarkson, C. V.
 Clements, J. W. G.
 Clinton, Alexander
 Cock, Thomas
 Cock, Thomas F.
 Collins, C. T.
 Conant, D. S.
 Cooke, John
 Cooper, James S.
 Corson, J. W.
 Covell, John C.
 Cox, Abm. L.
 Crane, James
 Crane, John J.
 *Creveling, Abm.
 Cullen, H. J.
- Dalton, J. C., Jr.
 Davis, E. H.
 Davis, John
 Delafield, Edward
 Detmold, William
 Douglas, J. Hancock
 Douglas, Robert
 Downs, Henry S.
 Drake, Benjamin
 Dudley, Wm. H.
 Dwright, Wm. W.
- Eadie, W. G.
 *Earle, Edward
 Earle, Pliny
 Edgar, David A.
 Edwards, Frank S.
 Eliot, Ellsworth

- Elliot, Augustus G.
 Elliot, Fredk. W.
 Elliot, Geo. T., Jr.
 Elliott, James W.
 Elliott, Thomas W.
 Elder, Alexander
 Ellis, Samuel C.
 Emmet, Thomas Addis
 Enos, Dewitt C.
- Ferguson, John G.
 *Ferris, Floyd T.
 Ferris, Lynde C.
 Fields, Edward
 Finnell, T. C.
 Fisher, George S.
 Fisk, Lyman
 Fitch, James D.
 Forrester, James C.
 Foster, Joel
 Foster, S. Conant
 Foy, Michael E.
 Francis, John W.
 Franklin, Edward C.
 Franklin, Thomas M.
- Gallagher, John
 Gardner, Augustus K.
 Garrish, John P.
 Geer, Seth
 Gescheidt, Anthony
 Gilford, Jacob T.
 Gilman, Chandler R.
 Gibert, James T.
 Goodrich, Charles S. J.
 Glück, Isidor
 Gomez, Horatio
 Gouley, J. W.
 *Graham, John
 Gray, H. M.
 *Green, David
 Green, Horace
 *Greene, Isaac
 Green, John W.
 Gray, F. C.
 Griscom, John H.
 Guernsey, H.
 Guernsey, Peter B.
 Gunn, A. N.
- Hall, Edwards
 Hall, Samuel
 *Halsted, J.
 Halsted, Thad. M.
 Harcourt, James
- Hardenbrook, J. R.
 Harris, Elisha
 Harris, Stephen R.
 Hart, John
 Heard, John S.
 Henriques, A. J.
 Henschel, Charles
 Hepburn, James C.
 Herriot, George
 Herzog, M.
 Heywood, Charles F.
 Hills, Samuel A.
 Hinton, J. H.
 Hirsch, Simon
 *Hobart, W. H.
 *Hogan, Daniel M.
 Hoit, Moore
 Holcomb, Wm. F.
 Horsfield, R. T.
 Horsfield, T. W.
 Hubbard, Samuel T.
 Huntington, G. F.
 *Hunter, Abraham T.
 Husted, N. C.
 Hutchison, J. C.
 *Hutchinson, E. F.
 Hyslop, George L.
- Isaacs, Charles E.
 Ives, George W.
 Ives, John
- Jackson, Wm. H.
 Jackson, Francis H.
 Jacobi, A.
 Janes, E. H.
 Jenkins, J. Foster
 *Johnston, F. U.
 Johnston, F. U., Jr.
 Jones, E. Lee
 Jones, Wm. W.
 Jones, A. S.
 Johnson, Wm. S.
- Kammerer, J.
 *Kearney, Ravaud
 Keene, Stephen S.
 Kennedy, James
 Kilbourne, J. Sage
 Kimbark, Everett H.
 *Kingsbury, G. H.
 Kissam, Richard S.
 Krackowitz, E.
 Kuypers, S. S.

Ladd, John G.
 Leaming, James R.
 Lee, Charles A.
 Lee, J. C.
 Lee, Thomas D.
 Leo-Wolf, George
 Leo-Wolf, Morris
 Leveridge, Benjamin C.
 Levings, N. C.
 Lewis, Geo.
 Lewis, W. C.
 Linsly, Jared
 Livingston, W. C.
 Ludlow, E. G.
 Lyon, James L.

McCaffrey, Charles
 McClelland, John
 McCready, B. W.
 McClaury, J.
 McLeod, S. B. W.
 *Macdonald, James
 Macfarlan, Ebr.
 *MacNeven, W. H.
 Manley, James
 *Manley, James R.
 Markoe, Thomas M.
 Martin, Joseph
 *Marvin, David D.
 Maxwell, W. H.
 *Meikleham, D. S.
 Metcalfe, John T.
 Merritt, J. R.
 Miller, Francis
 Miller, John
 *Miller, W. Ellison
 Millett, Nicholas
 Miner, William
 Miner, William W.
 Minor, James M.
 Mitchell, Chauncey L.
 Monell, J. A.
 Moore, Edward
 *Moore, S. W.
 *Moran, Thomas
 Morris, R. L.
 Moses, Israel
 Mott, Valentine
 McNulty, John
 Mullen, P. A.
 Murray, Alexander

 *Neilson, John
 Nelson, James B.

Newcomb, George
 Nichols, Elias S.
 Nichols, Henry W.
 Ogden, Benjamin
 Ogden, John D.
 Olmsted, Roger S.
 O'Reilly, John
 O'Rorke, James
 Owen, J. Leech

Palmer, L. N.
 Parker, E. H.
 Parker, Willard
 *Parkinson, W. B.
 Paul, James C.
 Peaslee, Edmund R.
 Pennell, Richard
 Pentz, Elias J.
 Perry, Joseph S.
 Peters, George A.
 Phelps, James L.
 *Phillips, S. B.
 *Platt, Wm. F.
 Pond, James O.
 Porter, Mortimer G.
 Post, Alfred C.
 Powers, T. W.
 Power, William
 Pratt, Peter
 Priestley, John
 Proudfoot, L.
 Punnett, John
 Purdy, Alfred S.
 Purdy, S. A.
 Purple, S. S.
 Putnam, F. A.

Quintard, Charles T.

Randolph, Israel
 Ranney, E. W.
 Ranney, M. H.
 Raphael, B.
 Reese, David M.
 Revere, F. B.
 Richards, T. W.
 Rising, J. C.
 Roberts, Wm. C.
 *Robeson, A. B.
 Rockwell, William
 *Rodgers, J. Kearny
 *Rogers, J. Smyth
 Ross, James
 Rotton, Samuel

- Sabine, Gustavus A.
 Sayre, Lewis A.
 Schilling, E.
 Schirmer, William
 Schmidt, J. W., Jr.
 Seaman, Richard S.
 Sewall, John G.
 Shanks, John
 *Sherwood, Burritt
 Sims, J. Marion
 Southworth, M. A.
 Smith, Charles D.
 Smith, David
 *Smith, Gilbert
 Smith, J. Lewis
 Smith, Joseph M.
 Smith, James O.
 Smith, Stephen
 *Snowden, John
 *Spring, Edward
 Stearns, John
 Stephens, James J.
 Stephenson, Mark
 Stevens, Alexander H.
 Sterling, John W.
 *Stickney, J. Dwight
 Stewart, James
 Stillman, J. D. B.
 Stillwell, J. E.
 Stewart, F. Campbell
 Stimson, Edwin B.
 Stone, John O.
 Storer, Ebenezer
 Stout, Arthur B.
 Strube, F.
 Sweeny, Hugh
 Sweeny, Owen
 *Swett, John A.
 Swift, H. S.

 *Taft, Marcus L.
 Taylor, Isaac E.
 Tellkamp, Theodore A.
 Thayer, Henry W.
 Thomas, T. Gaillard
 Thompson, A. G., Jr.
 Tomes, Robert
 *Townsend, Peter S.
 Trudeau, James
 Tucker, C. P.
 Tuttle, John T.

 Underhill, Alfred
- Uhl, David

 *Vaché, Alexander F.
 Van Arsdale, Henry
 Van Arsdale, Henry
 Van Arsdale, Peter
 *Van Buren, Thomas
 Van Buren, P.
 Van Buren, William H.
 Vanderpool, Edward S.
 Vandervoort, John L.
 Van Hovenburgh, H.
 Van Kleek, John R.
 Van Pelt, M. D.
 Van Rensselaer, Alex.
 Van Roth, W.
 Van Winkle, Ed. H.
 Varick, Theodore R.
 Vermilye, Wm. E.
 Voss, L. H.

 Wallace, W. W.
 Walsh, Hugh
 Warner, E. B.
 Warren, James
 *Washington, James A.
 Watson, John
 Watson, Alex. T.
 Watts, Robert
 Weed, John W.
 Weeks, Cyrus
 Wells, Daniel
 Wells, Ovid P.
 Westervelt, John S.
 White, Ambrose L.
 White, Francis W.
 White, Oliver
 White, Samuel P.
 Wight, L. L.
 Wilhelm, H. N.
 Wilkes, George
 Williams, M. W.
 Wilson, William
 Wood, Isaac
 Wood, James R.
 Wood, Stephen
 Woodhull, H. B. W.
 Woodward, George F.
 Worster, Joseph
 Wright, Aaron

 Young, William.

