

rhage occurred on the forty-second day. No traces of the ligature were found at the autopsy. The vessel was not completely closed, the clot extending through a small chink in the ligatured portion and being continuous with that in the subclavian and carotid arteries. As all of these thrombi were solid, and could not be dislodged with a stream of water from a syringe, it was concluded that the hemorrhage came from the vertebral artery. It is fair to suppose that an additional ligature might have completely occluded this vessel, but owing to the local sepsis the result would doubtless have been the same. And furthermore it should be said, that the aneurism (subclavian) was well advanced toward consolidation. The constriction had probably been sufficient to stop the current in the sac, and that is the object of all operations.

It does not seem wise to divide the innominate artery between the ligatures to relieve axis tension, as has been done with apparently good results, in tying the carotid and other large vessels. The violence of the systolic impact, the strain upon the proximal ligature, and the tendency of that thread to cut through the arterial coats, the unreliable character of the proximal thrombus, the lack of the firm lateral support, which is present in the neck, thigh, and around other large arteries, the fact that the innominate artery is surrounded by loose cellular tissue, suspended, as it were, in soft non-resisting structures, would all seem to militate against the practice of severing this artery for fear of secondary hemorrhage. The writer has divided the carotid artery twice between the ligatures, and the subclavian and brachial once each. The retraction of the ends of the vessels within the sheath was marked and satisfactory in all but the brachial artery, the divided ends of which retracted very slightly, if at all. Union by first intention followed in all these cases, and hence the results were satisfactory.

As to the method of doing this operation, the writer fails to see wherein any great improvement can be made over that so clearly described by Dr. Burrell in 1895.⁶ The only variation made in the present case was in removing the sterno-clavicular articulation with bone and gouge forceps instead of a trephine. The operation was practically bloodless, only one vessel, the anterior jugular vein, being divided between ligatures to get it out of the way. No other large vessel or nerve was seen during the operation, except the innominate artery. The cellular tissue was carefully divided between two forceps by gentle strokes of the knife, instead of being torn or picked out of the way with a director.

The collateral circulation in these cases forms an interesting anatomical study for any one disposed to work it out. In a general way it may be said to become established through the left carotid and vertebral arteries, the Circle of Willis, the corresponding arteries of the right side, also through the thyroid arteries, the intercostals, especially the superior, the mammary, the profunda and princeps cervicis, and doubtless through many other smaller vessels of the arterial system. It is to be remembered that in ligation or other obstruction of any large arterial trunk, myriads of arteries, previously too small to be dignified with a name, take on a sudden dilatation and growth, and become the avenues of a large quantity of blood. The nearer the heart the obstruction is located,

the more pronounced is this change in the vessels. It is in this manner that the nutrition of the brain is maintained at a point which enables it to perform its function under these extraordinary circumstances. Arterial anastomosis is so free in the upper part of the trunk that almost any vessel may be ligated without fear of resulting gangrene. Perfect asepsis is the key to the situation. With that, success is probable; without it, failure may be expected in a majority of instances.

AN INCIDENT IN THE HISTORY OF VACCINATION.¹

BY W. S. EVERETT, M.D., HYDE PARK, MASS.

THE subject of vaccination may have been exhausted long ago so far as any interest attaches to its discussion, and its fabric may be worn threadbare—even to darning and patching—by the attrition of argument by friend and foe. But there are some incidents in the history of the war that it has waged in winning its way to its present unassailable position that are worthy, not only of lasting remembrance, but of being placed fairly and squarely upon some prominent and elevated pedestal, to be observed, known, acknowledged and remembered by all men everywhere. There are some facts demonstrative of its value, and of its power as an annihilator of one of humanity's greatest scourges, that are too valuable and too decisive to be permitted to be forgotten, and that must never be lost to sight or hidden under oblivion's veil.

I have in my possession—and will show it to you by and by, if anybody takes interest enough in it to care to see it—a small gilded picture-frame, some four and a half by six inches in its dimensions, similar to those that are yet sometimes seen hanging upon the walls of ancient dwellings that have come down through successive generations to their present occupants and whose garniture and furnishings have always remained unchanged. They usually contain a silhouette of some ancestral head. This one of mine is a very harmless and innocent-looking little affair, in its diminutive quaintness, but connected with it is a bit of history that, it seems to me, justifies an attempt to rescue it from obscurity and to make it known to the world. Instead of the ancestral silhouette, there is fitted to it a piece of paper or of parchment I am unable to determine which—on which is written, in an elliptical space which is bounded by a huge serpent whose extremities are made to meet, in a bold, distinct, and though small, a clearly legible hand, a brief legend, which, I should think, in connection with this topic, might make it of interest to medical men. And so I have brought it here for you to look at, if you wish.

Tradition tells us that there was a banquet here in Milton on the 25th day of October, 1809, that was attended by a notable gathering; that chief among that company, and in whose honor it had been planned, were twelve children—eight boys and four girls. The archives of the town of Milton have carefully preserved a record of the transactions that led up to it and Rev. Dr. Teele, in his "History of Milton," has collated the facts and so arranged them that they will always be accessible to those who shall be interested in their perusal. The circumstances that had brought

¹ A paper read at a meeting of the Dorchester Medical Club held at the house of Dr. H. P. Jaques in Milton, March 11, 1896, and published by vote of the Club.

⁶ Op. cit.

that company together, and had made that day a general holiday, were these:

The position of vaccination as a preventive of small-pox was not as firmly established in 1809 as it is now. It had its friends and its advocates, and it had its opponents and its foes. We, who are strong and confident in the assurance of its protecting power, but who yet meet many opponents who are ready to contest every claim that is made for it still, can hardly realize the bitterness with which it was then assailed. Its friends here in Milton were sufficiently enterprising, resolute and progressive, to avail themselves of its protection, and to subject it to the most rigid tests.

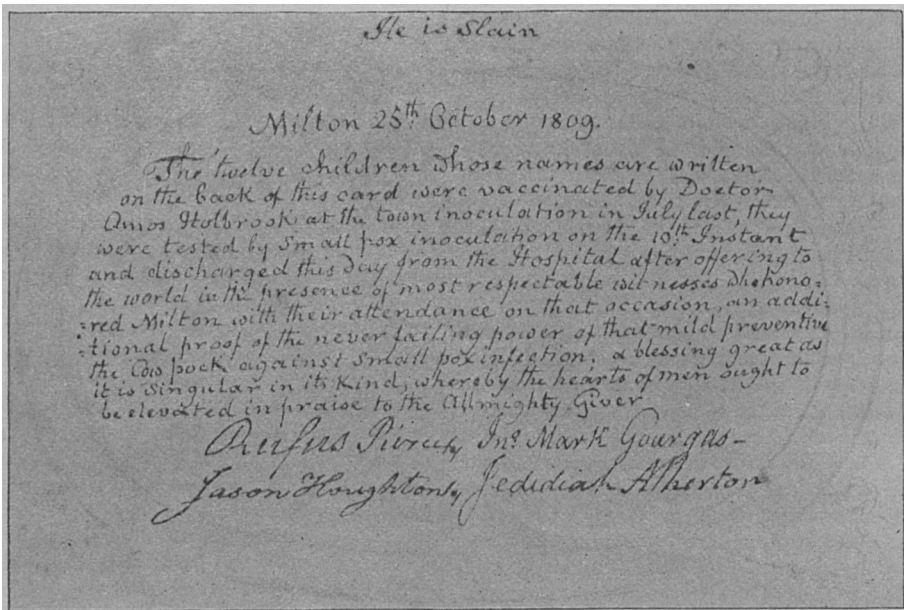
The town records will help us now. It is there on record that at a town meeting held July 8, 1809, a committee was chosen to take into consideration any

kine pock, and might be so inclined, might repair to be treated with inoculation from small-pox itself.

September 25, 1809. At the special town-meeting held this day, it was "voted to procure a place for a hospital where persons should repair who were to be tested with small-pox inoculation, and no person should be allowed to leave the hospital without a certificate from Dr. Holbrook," who, the committee had arranged, should superintend the whole transaction.

We hear no more from the committee till October 30th. But great things had been going on. They then made their final report at a town-meeting held on that day. They reported that the parents of twelve children had been found who were willing that their children should be tested with small-pox inoculation.

How in the world the parents of twelve children



measures for inoculating with kine pock, such individuals as had never had small-pox, and to report at an adjournment of this meeting to the last Saturday in August. August 26, 1809, this committee reported "that they had procured certificates from respectable physicians calculated to remove all doubt that the kine pock — if really had — is a perfect preventive of small-pox." They had also agreed with Dr. Amos Holbrook to inoculate with, and carry through said kine pock, any inhabitants who might wish to secure themselves against small-pox. Under this arrangement, 337 persons were so inoculated.

We come now to a fact that shows the spirit of the community that was represented at that town-meeting, and the determined character of the men who were having the matter in charge. That committee evidently were not chosen at random nor without due consideration of their fitness for the duty and service that was required. They declared at that same August town-meeting that they should not feel that their trust had been faithfully executed, until some decisive test had been made, and some persons tested with small-pox inoculation; and they made a request that a special town-meeting be called in September, to appoint a place where persons who had been inoculated with

could be found, in the state of feeling that then existed in regard to vaccination, who could be induced to submit their children to this crucial, if not cruel test, was one of the many marvels of that excitable period, and is beyond our comprehension now. But they were found; and it can only be explained upon the theory that great trials develop great characters, and that a victim is always ready for the sacrifice, when a great principle demands a great defence. These twelve children were taken to the house of one Stephen Horton, who had contracted to make his house a hospital for the occasion, and to have the care and custody of the children during the period that they were confined there. For this service he was paid twenty dollars. At his house, on the 10th day of October, 1809, in the presence of "respectable witnesses" as the record has it, they were inoculated with small-pox virus obtained from Dr. Welch, of Boston, who testified to having furnished pure small-pox material for vaccination.

The respectable witnesses to this transaction, were the President of the Board of Health of Boston and their physician, and others whose names are appended to the certificate.

The committee made their final report on the 30th, as has been stated, and they reported that these twelve

children had been inoculated with pure small-pox material on the 10th inst., had been kept under strict observation and surveillance until the 25th, when they were discharged, without a single instance having occurred that presented any indication of the disease.

The town record modestly refrains from any allusion to the pomp and ceremony attending their discharge. But it was thought that such an occasion was deserving of a suitable recognition, and so the ovation that has been alluded to was planned.

The final act in the demonstration of that October afternoon was the distribution or presentation to each of those twelve children of a certificate similar to the one I have in my possession now.

The committee, in making their final report on the 30th, state that such a certificate had been distributed to each of those twelve children who had been discharged from the hospital on the 25th; and a statement of the whole transaction was prepared and is preserved in the archives of the town, where it has lain for nigh a century, and where it is to be found to-day.

And that is all. The occasion has passed. The tumult, the excitement, the agony of suspense are gone. Who approved, and who opposed this measure, matters not now. Friend and foe have ceased contending; they who demanded this trial of faith, and the victims who offered the sacrifice, are silent; and none are now living who witnessed the scene.

But the fact remains, immovable as the mountains, unending as eternity, unchanging as truth. Twelve children here in Milton have been vaccinated with bovine virus, have subsequently been inoculated with pure unadulterated, unmitigated, unmodified virus of small-pox itself, and have escaped without a sign or a manifestation of the disease. The facts are fully authenticated. They are beyond denial. They are beyond dispute. There they stand. And there — like Bunker Hill and Lexington — they will stand forever.

It is, of course, quite possible that this may not be the only instance where this test of the power of vaccination has been applied, though no such application of the test has come to our knowledge thus far. If there are other instances, and if they have resulted as favorably as in this instance, they simply render the test more decisive; if there have been failures, they have not been made known; and if this should be found to be the only case where such an experiment had been tried, then this simple and unpretentious little certificate (a representation of which is shown on page 78) and such of its fellows as have been preserved, become the lonely, if not the only, silent and yet eloquent, undisputed and indisputable witness, after all these many intervening years, of one of the most momentous happenings of modern times.

The legend within the ellipse is here transcribed:

MILTON, 25th October, 1809.

The twelve children whose names are written on the back of this card were vaccinated by Dr. Amos Holbrook at the town inoculation in July last; they were tested by small-pox inoculation on the 10th instant, and discharged this day from the Hospital, after offering to the world in the presence of most respectable witnesses who honored Milton with their attendance on that occasion an additional proof of the never-failing power of that mild preventive, the Cow Pock, against small-pox infection, a blessing great as it is singular in its kind, whereby the hearts of men ought to be elevated in praise to the Almighty Giver.

The signatures to this certificate are

RUFUS PIERCE,
JASON HOUGHTON,

JNO. MARK GOURGAS,
JEDIDIAH ATHERTON.

All these are names that have stamped their impress upon Milton history. The name of Gourgas has disappeared; but the names of Pierce, Houghton and Atherton are well remembered still.

Over the head of the serpent whose body surrounds this legend, is the inscription, "He is slain."

The names of the twelve children who were subjected to this test and are referred to in the certificate as being on the back of this card must not be omitted. They are —

JOSHUA BRIGGS,
THOMAS STREET BRIGGS,
MARTIN BRIGGS,
CHARLES BRIGGS,
CATHARINE BENT,
RUTH C. HORTON,

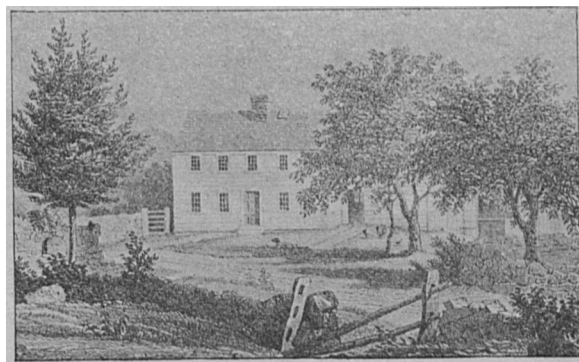
SAMUEL ALDEN,
BENJ. CHURCH BRIGGS,
GEORGE BRIGGS,
JOHN SMITH,
SUSANNA BENT,
MARY ANN BELCHER.

They are all now dead. How many of the certificates that were distributed to them on that afternoon have been preserved is not known.

Dr. Teele has copied one into his history, and perhaps others may be heard from hereafter, though these are all of which any knowledge has yet been obtained.

The one copied by Dr. Teele differs somewhat in its phraseology, while it certifies to the same fact.

The one here shown was not one of the twelve that were given to the children. It never left the posses-



sion of one member of the committee that superintended the whole transaction, and by whose authority they were prepared and issued, and whose names are appended thereto. This particular one was retained by Jason Houghton, whose name appears among its signatures, and was preserved by him with great care, so long as he lived, as being among the most valuable relics of his time. It had its place in his farmhouse (a picture of which is shown, as being of some interest in this connection) there upon the banks of the beautiful Lake Wissahickon (now a part of our park system) here in Milton, during his subsequent life, a period of nigh forty years. It then remained among the family relics, until, two generations afterward, the estate changed ownership, and the treasures and heirlooms of a century and a half, were broken up and dispersed. Since that dispersion it has been in my hands. Its genuineness cannot be questioned. It represents an undoubted fact of history. It is just what, and all, that it claims to be. And it has seemed to me to be of sufficient importance and significance to be worth making its existence known.

A METHOD OF INDUCING LABOR. — Kossmann recommends the injection of a drachm of glycerin within the cervix to induce labor.