THOSE WHO WORKED IN THE DAWN OF ANÆSTHESIA.

CRAWFORD W. LONG.

At the recent unveiling of the statue of Dr. Crawford Long, in the Statuary Hall, National Capitol, Washington, Dr. Hugh H. Young, Johns Hopkins Hospital, who represented the medical profession of America, delivered an address which is in part as follows, as published in the July Hygeia, the health magazine of the American Medical Association:

In comparison with surgical anaesthesia, all other contributions to medical science are trivial. Before anaesthesia, surgery was a horror! Surgical operations were dreadful ordeals, a hell to the patients, a purgatory to the surgeons. The frightful shrieks from the operating rooms filled those waiting their turn in the wards with terror.

The awful experiences of operative surgery and the attendant high mortality caused the best minds in medicine to avoid operations. Indeed, for centuries many major operations in Europe were left to itinerant quacks, and in England the barber surgeons did the work while the medical profession stood by and vainly tried to assuage the anguish of the patient.

It was not until the early chemical discoveries of hydrogen, nitrogen, oxygen and nitrous oxide in the latter part of the eighteenth century that the way was found for a scientific anaesthesia. Sir Humphrey David said, in 1800, “Since nitrous oxide is capable of destroying pain it may be used in surgical operations,” and twenty-five years later Hickman anesthetized rabbits with nitrous oxide and carried out many operations on them successfully without a struggle. However, these demonstrations were unheeded, and the surgical theatre continued to be a torture chamber-

"ETHER FROLICS" ONCE POPULAR

But nitrous oxide and sulphuric ether, neglected by the medical profession, were seized on by the populace, who found in them

*A photo of this statue appeared in our April Number.
a pleasant means of becoming exhilarated. Itinerant lecturers on the marvels of chemistry roamed over the country and popularized their meetings by giving young people ether to breathe, while the audiences roared with laughter over their unconscious antics on the stage.

Knowledge of these drugs reached even to the distant rural hamlets. In one of these, Jefferson, in Jackson County, Ga., many miles from a railroad, Crawford W. Long was practicing his profession of medicine. Fresh from the University of Pennsylvania, he knew of the exhilarating properties of these drugs and frequently furnished ether to young men who met at his office for an "ether frolic" in the winter of 1841-1842.

But let him tell his story: "They were so much pleased with its effects that they afterwards frequently used it and induced others to do the same, and the practice soon became quite fashionable in the county and some of the contiguous counties.

"On numerous occasions I inhaled ether for its exhilarating properties, and would frequently, at some short time subsequent to its inhalation, discover bruised or painful spots on my person, which I had no recollection of causing and which I felt satisfied were received while under the influence of ether. I noticed that my friends while etherized, received falls and blows that I believed were sufficient to produce pain on a person not in a state of anaesthesia. On questioning them they uniformly assured me that they did not feel the least pain from these accidents. Observing these facts, I was led to believe that anaesthesia was produced by the inhalation of ether, and that its use would be applicable in surgical operations.

THE FIRST PATIENT

"The first patient to whom I administered ether in a surgical operation was James M. Venable, who then resided within two miles of Jefferson. Mr. Venable consulted me on several occasions in regard to the propriety of removing two small tumors situated on the back part of his neck but would postpone from time to time the operation from dread of pain.

"At length I mentioned to him the fact of my receiving bruises while under the influence of the vapor of ether without suffering, and as I knew him to be fond of and accustomed to inhale ether, I suggested to him the probability that the operation might be
performed without pain, and proposed operating on him while under its influence. He consented to have one tumor removed, and the operation was performed the same evening. The ether was given to Mr. Venable on a towel, and when fully under its influence I extirpated the tumor.

"It was encysted and about half an inch in diameter. The patient continued to inhale ether during the time of the operation, and, when informed that it was over, seemed incredulous until the tumor was shown him.

"He gave no evidence of suffering during the operation, and assured me, after it was over, that he did not experience the least degree of pain from its performance. This operation was performed on March 30th, 1842."

Here, then, was the first attempt to render a patient insensible to pain during a surgical operation! This was the beginning of a new era that was to revolutionize surgery and make it a million times more efficient in alleviating human ills.

Long did not rush into print, but like a painstaking, modest scientist quietly continued his work, removing another tumor on the same patient a few weeks later, and then amputating a toe under complete anaesthesia in July.

His meagre practice furnished him with only a few surgical cases each year. He continued to operate under ether, while he bided his time, waiting for a major operation before publishing his claims to a discovery that he well realized would revolutionize surgery and startle the world. Long thus succinctly gives his motives:

**Why Long Did Not Publish His Discovery**

"I was anxious, before making my publication, to try etherization in a sufficient number of cases to satisfy my mind fully that anaesthesia was produced by the ether, and was not the effect of the imagination or owing to any peculiar insusceptibility to pain in the persons experimented on.

"At the time I was experimenting with ether there were physicians high in authority and of justly distinguished character who were the advocates of mesmerism and recommended the induction of the mesmeric state as adequate to prevent pain in surgical operations. Notwithstanding that it was thus sanctioned, I was an unbeliever in the science, and of the opinion that if the
mesmeric state could be produced at all it was only on those of strong imaginations and weak minds, and was to be ascribed solely to the workings of the patient's imagination. Entertaining this opinion, I was the more particular in my experiments in etherization.

"Surgical operations are not of frequent occurrence in a country practice and especially in the practice of a young physician, yet I was fortunate enough to meet with two cases in which I could satisfactorily test the anaesthetic power of ether. From one of these patients I removed three tumors the same day; the inhalation of ether was used only in the second operation, and was effectual in preventing pain, while the patient suffered severely from the extirpation of the other tumors. In the other case I amputated two fingers of a negro boy; the boy was etherized during one amputation and not during the other; he suffered from one operation and was insensible during the other.

"After fully satisfying myself of the power of ether to produce anaesthesia, I was desirous of administering it in a severer surgical operation than any I had performed. In my practice, prior to the published account of the use of ether as an anaesthetic, I had no opportunity of experimenting with it in a capital operation, my cases being confined to small tumors and the amputation of fingers and toes.

"While cautiously experimenting with ether, as cases occurred, with a view of fully testing its anaesthetic powers and its applicability to severe as well as minor surgical operations, others more favorably situated engaged in similar experiments, and consequently the publication of etherization did not 'bide my time.'"

**Proof of Dr. Long's Claims**

But are Long's documents genuine, complete and convincing? I can personally testify that they are. In 1896, I chanced to meet Mrs. Fanny Long Taylor, who amazed me by saying that her father was the discoverer of anaesthesia. I had heard only of Morton, in whose honor, as the discover of anaesthesia, a great celebration was in preparation in Boston. I was thrilled when she said she could put Dr. Long's documentary proofs in my hands, and when a few days later I hurried through his time-stained papers, case histories, account books, affidavits from patients, attendants, physicians in his town and elsewhere in Georgia, all
of which furnished overwhelming proof of the originality of his
discovery and his successful employment of ether to produce
complete anaesthesia in numerous operations, I asked permission
to present his claims again in greater detail.

By happy fortune, I found one of Dr. Long’s assistants still
alive, and he (Dr. J. F. Groves) described Dr. Long’s methods
as follows: “Dr. Long poured ether on a towel and held it to
the nose and mouth . . . and determined when the patient
was sufficiently etherized to begin operation, by pinching him.
Then he gave me the towel, and I kept up the influence by holding
it still to the patient’s nose. The patient was entirely unconscious.”

Jackson and Morton united in claiming the discovery in 1846,
Morton admitting that he got the idea from Jackson and together
they obtained a patent for their discovery, the nature of the anaes-
thesia, which they called letheon, being kept secret. Wells then
came forth with his claim of having used nitrous oxide in 1844.
Morton and Jackson subsequently fell out, and Dr. Jackson,
hearing of Long’s claims, visited him in Georgia to investigate
them and then generously wrote as follows:

Boston, April 11, 1861.

To the Editors of The Boston Medical and Surgical Journal:

Messrs. Editors:—At the request of the Hon. Mr. Dawson,
U. S. Senator from Georgia, on March 8, 1854, I called upon
Dr. C. W. Long, of Athens, Ga. From the documents shown
me by Dr. Long, it appears that he employed sulphuric ether
as an anaesthetic agent:

1st, March 30, 1842, when he extirpated a small glandular
tumor from the neck of James M. Venable, a boy in Jefferson, Ga.,
now dead.

2nd, July 3rd, 1842, in the amputation of the toe of a negro
boy belonging to Mrs. Hemphill, of Jackson, Ga.

3rd, Sept. 9th, 1843, in extirpation of a tumor from the head
of Mary Vincent, of Jackson, Ga.

4th, Jan. 8th, 1845, in the amputation of a finger of a negro
boy belonging to Ralph Bailey, of Jackson, Ga.

Copies of the letters and depositions proving these operations
with ether were all shown me by Dr. Long.

I then called on Profs. Joseph and John Le Conte, then of the
University of Georgia at Athens, and inquired if they knew
Crawford W. Long

Dr. Long, and what his character was for truth and veracity. They both assured me that they knew him well, and that no one who knew him would doubt his word, and that he was an honorable man in all respects.

Subsequently, on revisiting Athens, Dr. Long showed me his folio journal, or account book, in which stand the following entries:

James Venable
March 30th, 1842, Ether and Excising Tumor $2.00
May 13th, Sul. Ether ... ... ... ... .25
June 6th, Excising Tumor ... ... ... 2.00

On the upper half of the same page, several charges for ether sold to the teacher of the Jefferson Academy are recorded, which ether Dr. Long told me was used by the teacher in exhibiting its exhilarating effects, and he said the boys used it for the same purpose in the academy. I observed that all these records bore the appearance of old and original entries in the book.

I have waited expecting Dr. Long to publish his statements and evidence in full, and, therefore, have not before published what I learned from him. He is a very modest, retiring man and not disposed to bring his claims before any but a medical or scientific tribunal.

Had he written me in season I would have presented his claims to the Academy of Sciences of France, but he allowed his case to go by default, and the Academy knew no more of his claims to the practical use of ether in surgical operations than I did.

Charles T. Jackson, M.D.

Long's claims were, therefore, shown to rest on solid evidence. He had produced complete anaesthesia by ether, which he personally administered; and he had operated painlessly on several persons four years before any one else. He had kept his anaesthetic secret but had told fellow physicians of his town and state of his work. By strange coincidence Morton did not publish his epoch making cases, but it remained for one who had not even done the operations, Dr. H. J. Bigelow, to become his mouthpiece and advocate. The next years witnessed a sad spectacle of litigation and controversy between the rival New England claimants for a
bonus from Congress for the discovery of anaesthesia. In this Dr. Long took no part, but a presentation of his documents by Senator Dawson of Georgia promptly killed the bill to give Morton $100,000.

That the general usage of ether in surgery came after the surgeons of the Massachusetts General Hospital had operated on persons anaesthetized by Morton in October, 1846, no one will gainsay. But in this epoch-making discovery there is surely glory enough for all. No true friend of Long would try to belittle the great achievements of Morton and his surgical co-workers in Boston from which world-wide recognition of the possibility of surgical anaesthesia came.

**Benefits to Surgery and Humanity**

Before anaesthesia, only thirty-four patients a year were operated on at the Massachusetts General Hospital. In five years the number had tripled, and in fifty years the increase was a hundred fold.

In the surgical textbooks before 1842 one finds described only minor procedures and emergency operations. Within ten years the changes wrought were immense; splendid new conquests over disease by surgery were reported. The advance was rapid, but not until Pasteur's great work on spontaneous generation (1862) and diseases of silkworms in 1865 and Lister's announcement of his discovery of surgical antisepsis in 1867, was the capstone placed on Long's work of fifteen years before. Surgery was delivered from the horrors of pain and infection, and, like an animal freed from a black dungeon of despair, bounded forth into the pure light of science.

Disease, now explained by the germ theory, rapidly fell before one masterful research after another, while surgeons boldly went forth to conquer the hidden terrors of the abdomen, the chest and the brain, and every corner of the human organism was finally brought under the searching rays of scientific medicine.

Without the gift of anaesthesia, where would surgery be to-day? Accustomed as people are to behold with complacency the wonderful accomplishments of modern medicine and surgery, what a tumult would ensue were surgeons to revert again to the days of the great discoverer whose memory was celebrated in the unveiling of the splendid replica of Crawford Williamson Long.
NOTES OF THE CRAWFORD W. LONG MEMORIAL.

The Statuary Hall, in which the statue of Long was placed, occupies the space under the great dome of the Capitol Building at Washington. Up to 1857, it was the meeting place of the House of Representatives, and all visitors visit this part of the great structure. It divides the Senate from the House, and each of the 48 states, which go to make up the United States, is permitted to place two statues in the Hall, as representatives of their greatest citizens.

The statue was conceived by J. Massey Rhind, and carved from Georgia marble by James K. Watt. It is stated to be exquisitely beautiful and luminous in its virgin purity, the face perpetuating the spirit of the physician-anaesthetist seeking surcease from pain for suffering humanity. The statue was the gift of The Crawford W. Long Memorial Association.

Among those present were the daughters of Dr. Long, Mrs. Frances Long Taylor, and Miss Emma Long. Dr. Joseph Jacobs, pharmacist, once a clerk in the drug store of Dr. Long, also attended the unveiling. Mrs. Rebecca Felton, former Senator from Georgia, and who is now 91 years of age, insisted on being wheeled into the Hall that she might, "out of the fulness of her heart, voice the gratitude of all womenkind for pain relief in childbirth."

In the little town of Jefferson, Georgia, the first permanent memorial may be seen. It is a modest marble tablet, and reads:—On this spot Dr. Crawford W. Long, discoverer of ether, performed the first painless operation in surgery March 30th, 1842. In the centre of the old-fashioned public square of this miniature city in the foot-hills of the Blue Ridge Mountains, there is also a monument built in the form of the Washington Monument on the Potomac.

Popular legend has it that Dr. Long's first operation was performed under an old mulberry tree which stands directly north of the Monument. Souvenir hunters take small parts of this tree away, and numerous mementoes have been carved the most noted being a pen used by Woodrow Wilson in signing important documents.

Dr. Wm. Hamilton Long spoke as representative of the Southern Association of Anaesthetists.