The Royal Mail steamship Acadia, commanded by Captain Harrison, arrived in the Mersey just after 9 a.m. on Wednesday, December 16, 1846, bringing with her news of Dr. W. T. G. Morton's successful demonstration of ether anaesthesia at the Massachusetts General Hospital, exactly two months earlier on October 16.

Contained in the mail were two communications addressed to Dr. Francis Boott of Gower Street, London. The first was a letter from Dr. Bigelow of Boston relating the efficacy of Morton's discovery and containing an account of a dental extraction performed under ether anaesthesia on Dr. Bigelow's daughter Mary. The second communication was a copy of the Boston Daily Advertiser which contained an article on sulphuric ether by Dr. Bigelow's son, then a surgeon at Massachusetts General Hospital. The two reports resulted in the administration of ether for dental extraction by Dr. Boott and Mr. Robinson on December 19, and for amputation of Frederick Churchill's leg by Professor Liston and Mr. Peter Squire on December 21, 1846.

Aboard the same wooden paddle-steamer was a young medical practitioner, William Fraser, M.D., a native of Dumfries, at that time employed as a ship's surgeon by the Cunard Steamship Company. Whether Dr. Fraser was present at the celebrated demonstration of ether by Morton on October 16 or at a subsequent operation we know not. It has been stated (McDougal, 1948) that Fraser did come into personal contact with Morton, but all we can say with certainty is that on a trip to Boston during the late autumn of 1846, he witnessed the successful administration of ether.

When the Acadia docked, Dr. Fraser disembarked and travelled northwards to visit his widowed mother. During this leave he visited the hospital and must have related with great enthusiasm an account of Morton's successes, for, within three days of his arrival at Liverpool, ether was administered in a surgical operating theatre for the first time on this side of the Atlantic, at Dumfries and Galloway Royal Infirmary (fig. 1).

The operation of December 19, 1846, is reputed to have been an amputation (McDougal, 1948) of a fractured limb (Underwood, 1946a, b; Watt, 1961) but for this there is no evidence. Certainly the local press had no detailed knowledge at this time of goings-on at the Royal Infirmary, for the first report of the use of ether for anaesthetic purposes did not appear until four weeks later in the Dumfries and Galloway Courier dated Monday, January 18, 1847. This simply stated:

**SURGICAL OPERATIONS WITHOUT PAIN**

We understand that several minor operations have been performed in the Dumfries Infirmary, when the patients were under the influence of sulphuric ether, the result of which were highly satisfactory, inasmuch as complete freedom from pain was obtained.

From what is now known regarding the nature of the two local surgeons involved in the experiment, one feels that had these men, William Scott and James M'Lauchlan, been of a less retiring disposition, their first trial of sulphuric ether might have had greater publicity at the time. Indeed, Scott's only communication to the medical press (1872) on this subject was a response to provocation.

The Visitor's Guide to Dumfries and Vicinity, published in 1871, makes up for the deficiencies in the local press. Almost a century after its first publication the title of this book is perhaps misleading, for the volume contained a comprehensive and illustrated account of every person, place, and recent event of note, and was compiled by a
local historian, William McDowall, author of *McDowall's History of the Burgh of Dumfries*. From the chapter devoted to Dumfries and Galloway Royal Infirmary these lines have been abstracted:

It is a noteworthy circumstance in the annals of the house, that anaesthetics were used here, for surgical purposes, sooner than in any other place on this side of the Atlantic. Soon after Dr. Morton, of America, discovered sulphuric ether, the news of its sleep-producing power was brought to Dumfries by a native of the town, Dr. Fraser, a surgeon in one of the Cunard steamers. That gentleman, when visiting at the Infirmary, having mentioned the discovery to Drs. M'Lauchlan and Scott, their interest was excited, and a patient opportunely coming in, they, by means of an improvised apparatus, caused him to inhale a portion of ether, which at once sent him into a deep sleep, during which the requisite painless operation was successfully performed by Dr. Scott. When, in March, 1868, the late Sir James Y. Simpson, who afterwards still further enriched the healing art and blessed the world with the boon of chloroform, was speaking on the subject at a conversazione of the Royal College of Surgeons in Edinburgh, he mentioned this important fact, and added, that after the ether had been first used here, it was next employed by Mr. Liston, the eminent surgeon in London.

Accounts of the Dumfries operation have been recorded elsewhere (Underwood, 1946a, b; McDougall, 1948; Watt, 1961). Residence in Dumfries during the past two years has given the author of this paper an opportunity to investigate the incident more fully and to elicit details of the three relatively unknown men who participated in the experiment—William Fraser, William Scott, and James M'Lauchlan.

**WILLIAM FRASER**

The churchyard of St. Michael’s, Dumfries, is known throughout the world, for here lie the mortal remains of the Scots poet, Robert Burns, and his wife, Jean Armour. Also in this kirkyard, and of especial interest to anaesthetists, is a stone on which is recorded the death of William Fraser, M.D., at Spanish Town, Jamaica, on June 26, 1863.

William Fraser was born in 1819, one of the family of eight of James Fraser, a surgeon and druggist who resided in Dumfries. After an apprenticeship to his father and a period of study at St. Andrew’s University, he took the M.D. in 1840.

James M’Lauchlan, the senior of the two surgeons at the Royal Infirmary in 1846, was a personal friend of the Fraser family and had been assistant to William Fraser’s father early in his medical career. William Fraser, the junior surgeon, was only a few months younger than William Fraser and, since both spent their boyhood in Dumfries, it is more than likely that they were known to each other also. Apart altogether from sheer personal enthusiasm, therefore, there seems to be every reason why Fraser should have visited his two surgical colleagues at Nithbank in 1846.
to give an account of what he had witnessed in Boston.

Taking note of the slowness of travel in these days, the late Dr. Stanley Sykes (1960) rightly wondered how Fraser, having disembarked at Liverpool on December 16, 1846, could reach Dumfries in time for the operation of December 19. His detailed investigation of the two possible routes, sea and rail, are typical of the meticulous writings of that author and it might seem impertinent to suggest that there was not only a possible, but even a probable alternative means of transport available to Dr. Fraser, as advertised on the front page of the Dumfries and Galloway Courier of Monday, December 14, 1846. According to this newspaper, Fraser’s first available sea transport was the Carlisle, Annan and Liverpool Steam Navigation Company’s “splendid and powerful Steamship, Royal Victoria, 450 Tons (with new tubular boilers and her hull and machinery completely overhauled and put in first-rate order)”. This ship left Liverpool at 8 p.m. on Thursday, December 17, for Port Carlisle and Annan Waterfoot, the trip taking about 10 hours. From the latter port, situated some 16 miles from Dumfries, connecting coaches were available “to forward Passengers and Parcels from Vessel to Mr. Fraser’s, King’s Arms, Dumfries”, so that Dr. William Fraser could have arrived home by the forenoon of Friday, December 18.

There can be no doubt that his visit to Dumfries was primarily to see his widowed and grief-stricken mother. There had just been a succession of deaths in the family, and of a one-time total of eight children only two now remained alive, one of them the 27-years-old ship’s surgeon.

Of his subsequent career, nothing is known save that he settled, with his wife, Mary Cummins, son William and daughter Mary, at Saint Catherine in Jamaica. He died there on June 26, 1863, aged 44 years. According to information obtained from the Archive Section, Island Record Office, Spanish Town, Jamaica, the entry of his burial reads, “William Fraser, Medical Doctor, proprietor of Two Mile Wood, aged 44, Abode Two Mile Wood Pen, Saint Catherine. Buried 1863, June 27th, at Private Ground, Two Mile Wood, by G. J. Hadfield.” No cause of death was given, as certificates of death did not become legally obligatory till 1877. The acting archivist knows of no descendants in Jamaica. Apparently Dr. Fraser’s widow did not leave a will there, and, as Two Mile Wood had passed into other hands by 1882, it is possible she returned to Britain.

Careful examination of the Dumfries newspapers has revealed no tribute to the deceased gentleman. In the Dumfries and Galloway Courier dated Tuesday, August 4, 1863, there appeared the simple notice:

DEATHS

At Spanish Town, Jamaica, on the 26th day of June last, William Fraser, Esq., M.D., of Two-Mile-Wood Pen, son of the late James Fraser, Esq., surgeon in Dumfries. Friends will please accept of this intimation.

WILLIAM SCOTT

William Scott is essentially the principal figure in the Dumfries operation, for it was he who actually administered the sulphuric ether. He was a member of a family noted for enterprise and drive. His father conducted a successful hosiery business and was responsible for the introduction of the tweed trade to the town where the family eventually owned three of the largest mills. Unlike his four brothers, however, William Scott did not follow in his father’s footsteps but went to Edinburgh to study medicine. After qualifying M.D. at Edinburgh University, he settled in his native Dumfries and conducted a successful practice from his residence at 26 Castle Street.

It was as a young surgeon of 26 that Scott made trial of etherization as described to him by William Fraser. Although the original record of this operation cannot be traced, there is no doubt that such evidence did once exist, for the author found in the library of the Royal College of Surgeons, Edinburgh, details of cases of amputation performed in Dumfries without anaesthesia during the years 1840-46. In an accompanying letter, Dr. Borthwick, then clinical clerk to Dumfries Infirmary, offered Professor James Y. Simpson further information from the hospital records.

The date, December 19, 1846, is that given by Scott himself in his letter to the Lancet, written on October 15, 1872. The letter tells how the news was brought to Dumfries and is also part evidence that Fraser came to England aboard the Acadia. It reads as follows:
THE FIRST EUROPEAN TRIAL OF ANAESTHETIC ETHER

Sir,—Dr. Vivian Poore, in his “Clinical Remarks on Chloroform and its Administration”, published in your last number, states that Mr. Liston was the first person in this country to exhibit ether previous to an operation. I beg to state that I have a prior claim to Mr. Liston in this matter, as I exhibited ether on the 19th December, 1846, to a patient in the Dumfries and Galloway Royal Infirmary. My much esteemed friend, the late Sir J. Y. Simpson, having investigated the facts, with the statement I have made, was so satisfied with the authenticity of it that he not only in his lectures to the students attending his class, but also in his lecture on Anaesthetics delivered before the College of Surgeons in March, 1868, stated the priority of my claim to Mr. Liston. I may add that I received my information relative to the anaesthetic properties of ether from the late Dr. Fraser, surgeon of the Cunard steamer which brought the important news from New York, and I operated as I have said within forty-eight hours of the discovery having been brought to this country.

Your obedient servant,
WM. SCOTT, M.D.,
Surgeon to Dumfries and Galloway Royal Infirmary.

October 15th, 1872.

Despite the absence of any earlier report in the medical literature, it emerges from the above communication that Scott had not concealed his claim and that Professor Simpson had taken the trouble to investigate its validity. Moreover, there is no doubt that Sir James satisfied himself on this point, for, at a lecture entitled, “Anaesthetics: their history and practical application”, delivered before the President and Fellows of the Royal College of Surgeons, Edinburgh, on Friday, March 27, 1868, he gave William Scott priority over Professor Liston in the first surgical use of sulphuric ether. This meeting was reported at length in the Edinburgh Evening Courant on the following day.

The editor of the Dumfries and Galloway Courier, on this occasion, made up for past omissions by reporting in that newspaper on April 7, 1868:

THE USE OF ANAESTHETICS

The interesting fact was mentioned by Sir James Y. Simpson, in a lecture on Anaesthetics, delivered in the Royal College of Surgeons, on the evening of Friday, the 27th ult., that our townsman, Dr. Scott of Dumfries, was the first in this country to use anaesthetics for the prevention of pain in surgical operations. The agent he used is stated to have been sulphuric ether, and it appears that it was subsequently used for the same purpose by the great Liston in London.

Professor Simpson’s son, the late Sir W. G. Simpson, Bart., B.A., added an editorial note to his father’s collected works (1871) on the use of sulphuric ether in the practice of midwifery, which reads:

In a lecture delivered to the Royal College of Surgeons, Edinburgh, on 27th March, 1868, Dr. James Simpson stated that Dr. Scott of Dumfries was the first in this country to make trial of sulphuric ether in surgery.

(Ed.)

It is no secret that Simpson had many enemies and one might suspect that his support for Scott found root in a dislike for Professor Liston. There is no evidence that such was the case; indeed, it would appear that relations between the two were good. On hearing of Liston’s success with ether, Sir James left for London immediately and spent the remainder of his Christmas 1846 vacation at University College Hospital. At this juncture, however, it is relevant to indicate that Professor Simpson gave precedence to Scott only with regard to the date of his operation. The Dumfries experiment had little or no influence on the adoption of this drug as an anaesthetic agent, in which respect credit must be accorded to the London trials.

Another local reference to December 19, 1846, is contained in the “Local Parish Histories and New Statistical Account”, published in the Dumfries and Galloway Courier on April 25, 1876. The following is an extract from the chapter relating to the Royal Infirmary:

It is remarkable that the first use of anaesthetics in an operation in Great Britain took place in the Dumfries Infirmary. The discovery was made in the United States. A Dr. Fraser, a native of the town, the surgeon of the Cunard steamer which brought the news to this country, came to Dumfries immediately after his ship arrived and gave the information of the discovery to his professional brethren there, who lost no time in making an experiment. On the 19th December, 1846, Dr. Scott, in the presence of Dr. M’Lauchlan and his other colleagues, administered sulphuric ether to a patient in the Infirmary, and afterwards performed on him a painless operation. The honour of being the first to use anaesthetics in this island has at various times been claimed by others, but it is now generally admitted that the Dumfries Infirmary was really the scene of its first use in this country.

William Scott suffered chronic ill-health for several years before his death at the age of 67 (fig. 2). The cause of death was registered as (1) sclerosis of the spinal cord and (2) progressive muscular atrophy.
The senior surgeon to Dumfries and Galloway Royal Infirmary in 1846 was James M’Lauchlan, a man of unremitting professional zeal and industry (fig. 3). After completion of his basic education, he became apprentice to Dr. James Fraser of Dumfries, father of the ship’s surgeon. Following a keen canvass and a stirring contest, he was elected surgeon to Dumfries Infirmary in May 1835 (Dumfries and Galloway Courier, 1848).

The part played by Mr. M’Lauchlan in the Dumfries operation is difficult to ascertain. Certainly his name is given specific mention in reports of the incident (McDowall, 1871; Courier, 1876; McDougal, 1948). Is his name included because he performed or assisted at the operation, because he was the senior surgeon, because the invalid was M’Lauchlan’s patient, or because he had participated in the pre-operative discussion and preparation? Reports state that other (unnamed) professional colleagues attended this trial of ether, so the inclusion of M’Lauchlan suggests that his part in the experiment was an active one, possibly that of assistant to Scott. It is unlikely that Scott acted as anaesthetist and M’Lauchlan as surgeon. More likely, William Scott rendered the patient unconscious and then, with his colleague’s assistance, performed the operation. Certainly, in his letter to Lancet, Scott claimed to have been both anaesthetist and operator by stating, “I exhibited ether on the 19th December, 1846”, and later, “I operated . . . within forty-eight hours”.

During the course of this investigation, much has been discovered concerning the lives of these three men that is irrelevant to this essay. For James M’Lauchlan, the advent of ether marked the end of a life of toil and industry, because he
died two years later at the height of the cholera epidemic of 1848. His remains lie in the quiet country churchyard at Kirkgunzeon, in Kirkcudbrightshire, 9 miles from Dumfries.

ACKNOWLEDGMENTS

During this investigation I had the valued assistance of the staff of the Ewart Library, Dumfries, and of Miss Dorothy U. Wardle, Royal College of Surgeons, Edinburgh. The drawing of the old Dumfries and Galloway Royal Infirmary was reproduced from a map of Dumfries in 1836, by kind permission of Robert Dinwiddie & Co. Ltd. Mr. Roland McGowan of Alleyford, Kirkgunzeon, kindly presented me with a portrait of James M'Lauchlan, painted by an unknown artist in 1844. For the photographic reproduction of that painting and the other illustrations I am grateful to Mr. A. A. Jenkins, Department of Pathology, Dumfries Royal Infirmary.

REFERENCES

___ (1846). December 14.
___ (1847). January 18.
___ (1847). February 23.

_Dumfries and Galloway Courier_ (1848). December 19.
___ (1868). April 7.
___ (1876). April 25.
___ (1887). July 30.

Simpson, Sir J. Y. (1847). Correspondence on amputations. Royal College of Surgeons, Edinburgh.