The Historical Medical Equipment Society

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NEXT MEETING

Venue: ROYAL COLLEGE OF SURGEONS, LONDON

Date: APRIL 16th 2005

EDITORIAL

Our very successful meeting held in Manchester on 16th October, 2004 coincided with our Annual General Meeting and, as the list of officers indicates significant changes were agreed. As your Chairman/ President since inauguration of the Society in 1997, I felt it time to hand over to a younger generation, and I am very pleased to welcome Dr John Prosser of Worcester who has kindly agreed to fill my vacancy. As you will know, we experienced various problems in maintaining regular Bulletin publication until Dr Majumdar came to the rescue; however, he is now committed to working in India for long periods and I have volunteered to replace him as editor for the foreseeable future. No great change in format is envisaged but perhaps it will be possible to publish some coloured illustrations as a regular feature, dependant on the guidance of Dr Tim Smith our efficient Secretary/Treasurer. The Committee is also sorry to lose the advice and support of Dr Jean Guy, a valued member since our inception. As her successor, we welcome Dr Peter Mohr, Honorary Curator of the University of Manchester Medical School Museum who arranged our last meeting. As Dr. Mohr's informative account below indicates (see pages 3-4), the cased exhibits are but the tip of an iceberg, for much is in store as yet uncatalogued; nevertheless the exhibited items, adjacent to important thoroughfares used by students, are of the highest quality and the basis for an outstanding Museum. The Society looks forward to seeing more treasures in due course.

Shortened versions of the four papers given in Manchester are appended with selected illustrations which I hope will amplify the text. Alan Humphries' analysis of the Wilkinson Collection of pharmacy jars is, I believe, a very important guide to the dating and function of the various types of English delft-ware produced for pharmacists. Nasim Naqvi's find in Bolton of an extraordinary French apparatus to deliver intravenous oxygen stimulated an astonishing piece of therapeutic history; I for one had never envisaged such treatment was conceivable, or without hazard; the apparatus is now a prized donation in the Manchester Museum. We are also grateful to Dr Ibrahim Shaikh for his paper on the Victoria Cross on postage stamps and to Margaret Wilson for her guided visit to the Dental Hospital Museum.

Currently, we are arranging our next meeting which will take place in the Hunterian Museum at the Royal College of Surgeons of England on Saturday, 16th April, for which you should receive registration details shortly. After a major redevelopment, the Museum reopens on 12th February, and hence our Society has an early opportunity to appreciate a variety of novel and stimulating presentations. (see separate details on page 11).

You will note that the subscription has been raised from £10 (unchanged since 1997) to £15, in order to meet Bulletin costs and also assist meeting fees which often make no allowance for small societies supported mainly by members on modest salaries or living on pensions. For example, at the Royal College of Surgeons a simple slide projector fee will be £40 but for power point projection will be £115, a fee which we should avoid if possible. We hope you will agree to this modest rise in subscription. I look forward to seeing you at the Royal College of Surgeons in April.

A VISIT TO THE UNIVERSITY OF MANCHESTER MEDICAL SCHOOL MUSEUM

PETER MOHR, HONORARY CURATOR

History

The contents of the display cabinets in the entrance foyer and on the first floor of the Stopford Medical School Building represent the tip of an iceberg. They are the visible part of the University of Manchester Medical School Museum, a collection of many thousands of items of medical equipment and paraphernalia accumulated over more than 30 years, most of which is kept in storage.

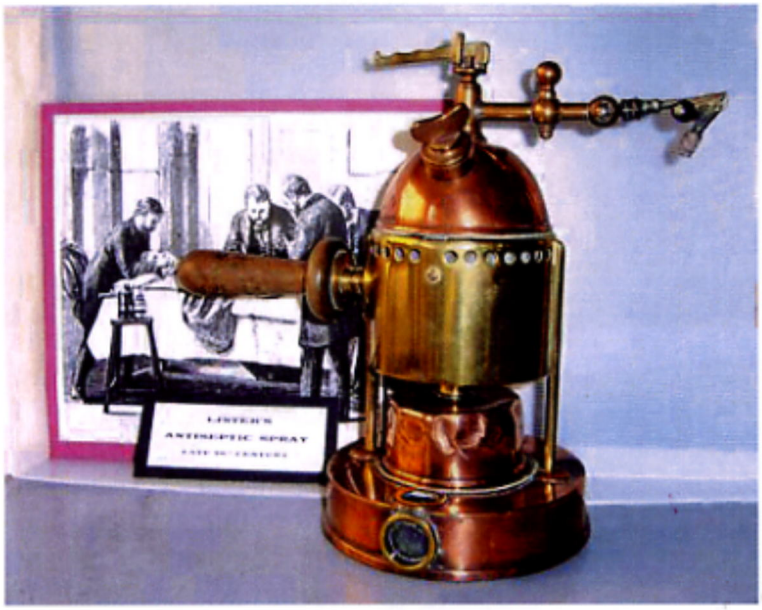

Fig.1

George A.G. Mitchell (1906-1993), the professor of anatomy, at the old Medical School (1874) in Coupland Street, built up a collection of antique medical instruments that were kept in his office. When the medical school transferred to the newly opened Stopford Building in 1973 Dr F.B. Beswick, the then executive dean, ordered that nothing was to be left in the old building, and any abandoned equipment, including Professor Mitchell's collection, were boxed up and stored in the new building. Among these items were a beautiful copper Lister's Spray (c.1872) (Fig.1), and an 1865 endoscope, designed by the Irish physician Francis Cruise (1834-1912) (Fig.2), which used an oil lamp as a light source. Many items, like an early Laennec stethoscope were clearly of historic interest and were a basis for an important collection. Mrs Charlotte Beswick volunteered to help out as an unofficial curator. Her permanent displays in the foyer showcases triggered much interest and further donations, notably the Hull Grundy collection of silver instruments and medical medals, and items from the Manchester Medical Society soon followed. In 1980 Mrs Beswick was given the honorary title of 'Curator of Exhibits', and in 1984 the North West Museum Services officially recognised the 'Medical Museum' in its Year Book. Bill Jackson, a retired pharmacist and medical historian, took over in 1995 and the present curator took over from Bill in 2002.

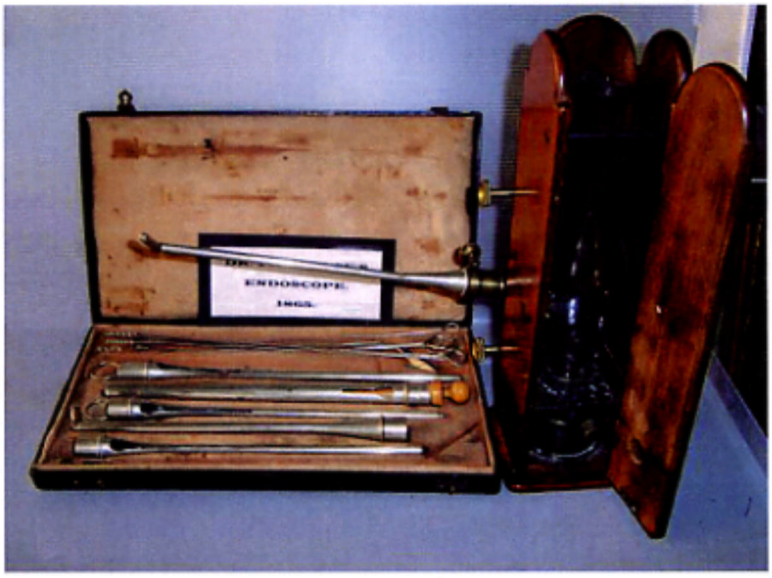

Fig.2

The collection

The collection consists of medical and nursing equipment, instruments, apparatus and some archival material, but does not include any anatomical or pathological specimens, which are housed in separate departments.

A special mention should be made of the huge collection of glass lantern slides, which belonged to William Stirling (1851-1932), professor of physiology 1885-1919. The thousands of old slides consigned to a dusty storeroom were fortunate to survive, yet now they provide a unique view of medical teaching during the Edwardian period.

The process of modernisation and replacement has proved to be a fruitful source of museum objects. Old equipment has to be replaced, often it is junked, but sometimes a staff member, will ask the Museum to 'save' the item, pleading a case for its conservation. Ophthalmologic equipment, ECG machines, and a range of hospital and university equipment have been acquired in this manner. There is, for example, an excellent collection of urological instruments, monaural stethoscopes and tonsil guillotines, paediatric instruments, endoscopes, stomach pumps and much more.

The Museum has obvious connections with the Medical School, and the local medical profession. An eclectic range of personal items, university robes, equipment, diaries, notebooks, even a 'doctors' whistle, have been accumulated over the years. Notebooks etc. belonging to Lord Stopford (1888-1961) Dr Catherine Chisholm (1878-1952), the first woman medical graduate in 1904, Sir Harry Platt (1886-1986), the doyen of orthopaedic surgeons, and Sir John Charnley (1911-1982), the pioneer of total hip replacement, all have their place in the Museum.

The Manchester Medical Society's display includes surgical instruments made by Peter McEvedy (1890-1951), a surgeon at Ancoats Hospital, a set of obstetric forceps belonging to Thomas Radford (1793-1881), lecturer in midwifery, and a monaural stethoscope belonging to cardiologist professor Graham Steell (1851-1942.) A comprehensive collection of obstetric forceps illustrates all the major developments in their design from 1690 to the present day. The works of medical artists includes pictures by Dorothy Davison (1890-1984), the first medical artist connected with the Manchester Medical School, who worked with the neurosurgeon Geoffrey Jefferson (1886-1961) and Richard Neave, now retired, from the Art in Medicine Department who is well known for his work on facial reconstruction and forensic identification. There is a good collection of Faraday electrical stimulating machines, X-ray tubes and high-frequency ('violet ray') machines from the 1930s. The pharmacy items on display include a reproduction leech storage jar, pill rolling machine, and a rare ointment mill. The oldest items are six apothecary drug jars (c.1650 to 1760) originally collected by a former professor of pharmacology and later rediscovered in a university basement.

Using the Museum

The Museum deals with numerous inquiries and loans items to meetings, but the main purpose of any university museum is to aid research and teaching. The medical instrument collection offers medical historians the opportunity to study the evolution of equipment design and ask questions about the manufacture and materials of pre-twenty-first century instruments. The future development of the Medical School Museum must surely be through interaction with other museums, sharing with and supporting outside exhibitions, and making the exhibits more accessible to the public – a website, on-line catalogue and visits from local history groups are planned for the future.

(This paper is based on a longer article written jointly with Bill Jackson for a forthcoming issue of the *Bulletin of the John Rylands Library).*

More examples from the Manchester Medical School Museum

Cupping and bleeding set

Replica leech storage jar

Two early 19th Century wooden artificial legs

EQUIPMENT FOR PARENTERAL ADMINISTRATION OF OXYGEN

NASIM NAQVI, BOLTON

The medical use of oxygen by inhalation is life saving therapy that is universally employed in modern clinical practice. Soon after oxygen was discovered by Joseph Priestley and Karl Scheele in 1775, its administration by inhalation was considered to be beneficial in cyanosis due to a variety of causes. Its use by the intravenous route was investigated as early as 1838 in animal experimentation to discover its benefits. In humans, intravenous administration of oxygen was used by a German doctor in 1902; the patient was suffering from terminal tuberculosis and died the next day. The experiment was considered to be inconclusive. In 1916 the British physician Tunnicliffe published his work on the use of oxygen by the intravenous route.[1] His paper published in the Lancet cited papers from France and Germany where intravenous oxygen was employed in animals and also in man. His paper also described a simple apparatus consisting of a double mouthed bottle containing a solution of sodium carbonate, with oxygen from a cylinder via pressure tubing delivered to one side of the bottle and similar tubing connected to the other side; to this a needle was attached for insertion into the vein. This tubing also had a glass T-piece interposed; to the third end of the T-piece another small tube was attached with a controllable clamp. The clamp was the safety mechanism and allowed manual control of the amount of oxygen entering the bottle by the observer counting the number of bubbles per minute. A total of 500-1000 ml of oxygen were administered at a rate of 10-20 ml per minute. The conclusion was that intravenous oxygen relieved the cyanosis and dyspnoea; it was also found to be safe at the rate and volume prescribed by the author. The observations were subjective as the technology to measure blood oxygen levels was not yet available.

In 1934 an apparatus was described to administer oxygen by the subcutaneous route.[2] It was invented by a French doctor and claimed to be useful in curing anoxaemia or cyanosis due to a variety of conditions. The paper reported a few case histories where subcutaneous oxygen improved the cyanosis. It was also used in patients who were not cyanosed or seriously ill to lower Basal Metabolic Rate. The price of the apparatus was quoted as $150; this method of delivery was considered to be cheaper than inhalational techniques.

In 1938 subcutaneous oxygen was also recommended in sciatica by injecting oxygen in the back and gluteal region till the area 'ballooned up'. The communication was restricted to letter correspondence and not much information was recorded.[3]

In 1940 the Lancet published a report from two Indian doctors who injected intravenous oxygen in six patients suffering from bronchopneumonia.[4] The oxygen was injected with the help of an air-tight Collins' syringe into a leg vein at an average rate of 15 ml per minute to a maximum of 300 ml; five of their six patients died after 4-6 days while the sixth patient fully recovered. In summary it was concluded that the amount of oxygen that can be given by the intravenous route is not sufficient to cause any improvement, though the authors claimed to observe distinct clinical improvement. The patients survived up to six days after the injection of oxygen showing that air embolism did not occur. I have not been able to establish what is an air-tight Collins' syringe.

The special apparatus described in one of the above papers was named Oxygenateur de Precision du Dr Bayeux (Fig.1). It is housed in a wooden box 19x15x8 cm size. Full details of the inventor and manufacturer are engraved on a quadrangular metal piece fixed on the top of the box.

When opened it shows two compartments, one contains fairly sophisticated instruments consisting of pressure gauges , reducing valves, metal tubing for the gas passing from one place to another and a graduated circular gas flow control. The

Fig. 1

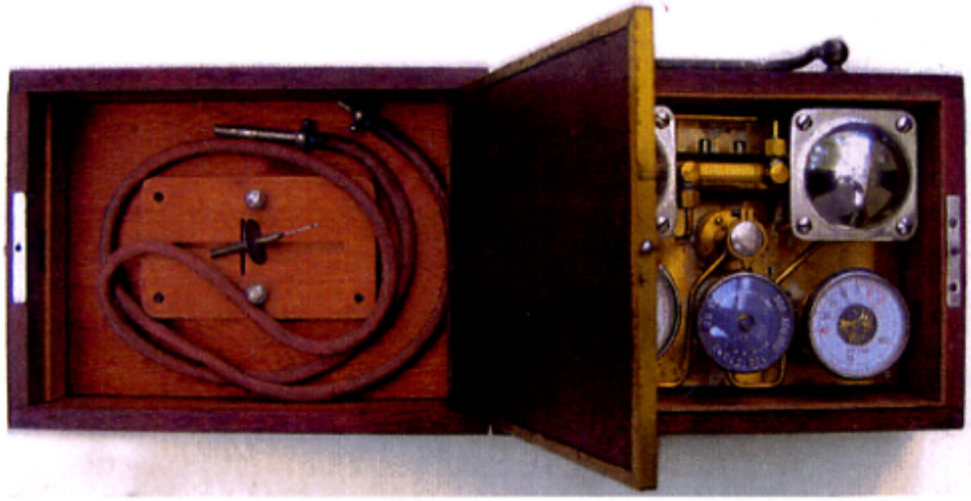

Fig. 2

oxygen cylinder can be connected to a special inlet from which gas is delivered into a pressure gauge, then into the first reducing valve and to the second reducing valve; the amount to be injected is controlled by a circular flow meter graduated from 10 to 100 ml per minute. Finally, it passes through a low pressure gauge and on to the rubber tubing via a detachable metal connection. The other end of the tubing can be connected with a needle that in turn goes into the vein. The metal connection, needle and rubber tubing can be stored in the other compartment accessed by lifting a lid (Fig.2). The apparatus was also described by Langton Hewer in his book published in 1937.[5] It was made in Paris and numbered 846; the name of Wooley Sons and Co Ltd., Manchester is also written inside. The apparatus was purchased some years ago by the author from a Bolton antique dealer and it has now been donated to the Manchester Medical Museum. One similar apparatus exists in the George Eliot Hospital Museum in Nuneaton.

[1] Tunnicliffe FW, Stebbing GF. The intravenous injection of oxygen gas as a therapeutic measure. *The Lancet* 1916; 2: 321-322.

[2] Simon OB. Subcutaneous oxygen therapy. *Anesthesia and analgesia* 1934;233-237.

[3] Brown HH. Oxygen in the treatment of sciatica. *BMJ* 1938; 2: 1390. See also *The Lancet* 1938; 2: 456.

[4] Singh I,Shah MJ. Intravenous injection of oxygen. *The Lancet* 1940; 1: 922-923.

[5] Hewer CL, *Recent advances in anaesthesia and analgesia.* (London: J and A Churchill, 1937) 321-322.

THE MANCHESTER CONNECTION: THE WILKINSON DRUG JAR COLLECTION

ALAN HUMPHRIES, THACKRAY MUSEUM, LEEDS

The collection of English delftware pharmacy jars assembled by Dr John Frederick Wilkinson, became the property of the Thackray Medical Museum when he died aged 101 in September 1998. It is the largest world collection of these jars and a great resource for those interested in the history of pharmacy and delftware potteries.

Fig.1

John Wilkinson, born 10th June, 1897, was an original Boy Scout in 1908 and served in the Royal Naval Air Service in the First World War, being on HMS Vindictive during the Zeebrugge Raid in 1918 for which he was bal-

Fig.2

loted for a Victoria Cross. Subsequently, he studied chemistry in Manchester becoming BSc 1920, MSc 1921, PhD 1923, and was appointed Director of the Laboratory for Clinical Investigation and Research at Manchester University. On studying medicine, he qualified MB 1928, MD (Gold Medal) 1931 and FRCP 1937 to become Director of the Hae-

Fig.3

matology Department, Manchester Royal Infirmary, Consultant Haematologist to the Christie Cancer Hospital and Lecturer in Haematology, Manchester University. Wilkinson conducted research on pernicious anaemia discovering the achrestic form (Israels-Wilkinson Anaemia) and became President of

Fig.4

the European Society and Vice-President of the International Society for Heamatology. He retired in 1966 but continued private practice for nearly 20 years; he died in 1998.

In the early 50's he started collecting pharmacy jars and, in 1956, had the good fortune to purchase the largest single group of jars from one pharmacy, the 'Richmond Collection' of 44 jars made about 1745 for the

pharmacy of Matthew Bowes of Richmond, Yorkshire. Eventually, he collected 430 English and 194 Continental jars, all now displayed in a dedicated gallery in the Thackray Museum. The earliest jars labelled purely for apothecaries were made about 1640 for three basic purposes:

Fig.5

a) dry for powders, plasters and ointments being globular or cylindrical in shape (fig.1); b) wet for syrups, oils and waters, commonly having a globular top with spout and handle, standing on a conical foot (fig.2); others resembled a dry jar with a spout and handle; c) dry container for pills, initially based on miniature globular dry jars but later a cylindrical shape (fig.3).

Jars have been given identifying names based on the following design features:

(i) The 'Pipe-smoking Man' is in fact a misnomer as the image is of a 'Green Man' poking out his tongue (fig.4): of 55 known jars, three are dated including two of 1665 in the Wilkinson collection; (ii) The 'Ribbon Scroll' from 1660 to 1680; (iii) The 'Angel' from 1665 to 1723, of which the Wilkinson Collection has 60 (fig.5); (iv) The 'Fleur-de-Lys' 1660 - 1750; (v) The 'Wyvern', 24 known examples; (vi) The 'Apollo and Serpent, only 12 known examples; (vii) The 'Peacock and Apollo', 1670-1700, is commoner, of which the Wilkinson Collection has 16; (viii) The 'Bird and Basket', 1680-1750, of which the Wilkinson Collection has 115; (ix) The 'Cherub and Trumpet', 1700-1780, of 49 known examples, 16 are in the Wilkinson Collection; (x) The 'Cherub and Shell', 1700-1780 is by far the commonest (fig.6), of 670 known examples, 150 are in the Wilkinson Collection.

Fig.6

Up to approximately 1700, it is assumed jars were made in London but after this date, manufacture in Bristol, Liverpool or Dublin is possible; analysis of the clays used may provide more evidence. The contents of pharmacy jars can be classified as conserves, syrups, ointments, plasters, oils, pills or tablets; the ingredients used covered an enormous range including the oils of earthworms and swallows.

Finally, to emphasise another Manchester connection, there are five jars in its Medical School Museum, of which one 'Bird and Basket' type for chamomile oil belonged to John Wilkinson, before he gave it to another Manchester collector.

THE VICTORIA CROSS ON POSTAGE STAMPS

IBRAHIM SHAIKH

The Crimean War (1853-1856) was fought by Britain, France and Turkey against expanding Russian influence in the Black Sea and the Balkans. The War became famous for the Charge of the Light Brigade and for nursing improvements brought about by Florence Nightingale. The suffering of British soldiers shocked the nation. Of the 98,000 troops sent to the Crimea 22,180 died. Queen Victoria and Prince Albert were amongst those appalled by the losses and were moved to take a greater interest in their army. They introduced the Victoria Cross. Queen Victoria met the returning troops at Woolwich Arsenal and in Hyde Park on the 26th June 1857 presented medals to the first recipients. She ordered that photographs be taken of the individual soldiers who received the award.

On the 150th anniversary of the War the Royal Mint issued a commemorative pack of postage stamps. Six of the stamps featured the photographs ordered by Queen Victoria.

Six portraits of war, six faces of bravery. Royal Mail marks the incredible courage and heroism of the British soldier in the Crimean War, on the 150th anniversary of our involvement.

A book entitled "*Supreme Courage*" by General Sir Peter de la Billiere contains stories of heroism from the 150 year history of the Victoria Cross.

HUNTERIAN MUSEUM PROJECT, ROYAL COLLEGE OF SURGEONS OF ENGLAND

As you should know, our next meeting takes place in the new Hunterian Museum on 16th April, following a major redevelopment lasting two years and costing some three million pounds, under the direction of Stella Mason and Simon Chaplin. In broad terms, the object is to encourage more visitors to the museum by reducing the number of purely pathological and comparative anatomy specimens on display, by adding a historical background to the development of surgery during the last two centuries including recent practices, and by employing much more graphic material. The Museum will be open to the public from 12th February, 2005, Tuesdays to Saturdays, 10am to 5pm.

Fig.1

The Hunterian specimens which survived the bombing of 1941 are housed in a central glass-walled, two storeyed feature named the Crystal Cabinet (fig.1). The bulk of the specimens which filled the old gallery will remain available in an adjacent Collections Study Centre. There is an Introductory Gallery, a Post-Hunter Gallery, an Art Gallery and a Silver and Steel Gallery devoted to the Historic Instrument Collection. All these features are found on the lower floor of the Museum; the upper floor has a Science of Surgery Gallery and a temporary exhibition space. The Science of Surgery concentrates on the two hundred years since the College acquired the Hunterian collection in 1800; for example, Lister's Cabinet of instruments, experimental apparatus and equipment as well as items for cardiac surgery, laparoscopy and joint replacement form part of this Gallery. Those who have seen the old Hunterian Museum will observe a very different presentation, making much more use of graphic displays but incorporating many old items as well as many new acquisitions, bought by the College, loaned from other institutions and especially donations from Fellows and well-wishers of the Museum. Mick Crumplin and myself as Honorary Curators of the Instrument Collection have exhibited a significant proportion of the Collection in the Silver and Steel Gallery, either in four wall cabinets or in sixteen sliding drawers devoted to surgical specialities. The wall cabinets concentrate on the evolution of instrument structures and materials, and on specific topics such as haemorrhage arrest, amputation, endoscopy and foreign body removal. We also have a wall of graphic displays.

If members are unable to attend our next meeting, I am certain they will not regret a personal visit to the Museum on the days and times listed above.

John Kirkup

EUROPEAN ASSOCIATION OF MUSEUMS OF THE HISTORY OF MEDICAL SCIENCES (EAMHMS) AND VIENNA, 2004

This Association was formed in 1983 to bring together curators, researchers and others working in medical museums by meeting at a Congress every two years, by publishing the communications of the Congress and by producing a Bulletin once or twice a year. The influence of French and Dutch membership has always been strong but today at least twenty countries are represented including the United States of America. All publications are published in French and English. The current President is Marie-Veronique Clin of the Medical History Museum, Paris, one of the Vice-Presidents is Stella Mason of the Royal College of Surgeons, London and the Secretary is Kees Grooss, Museum Boerhaave, Postbus 11280, 2301 EG Leiden, The Netherlands. Other officers come from Sweden, the USA, France, Austria, The Netherlands, Germany, Portugal, Latvia and Belgium.

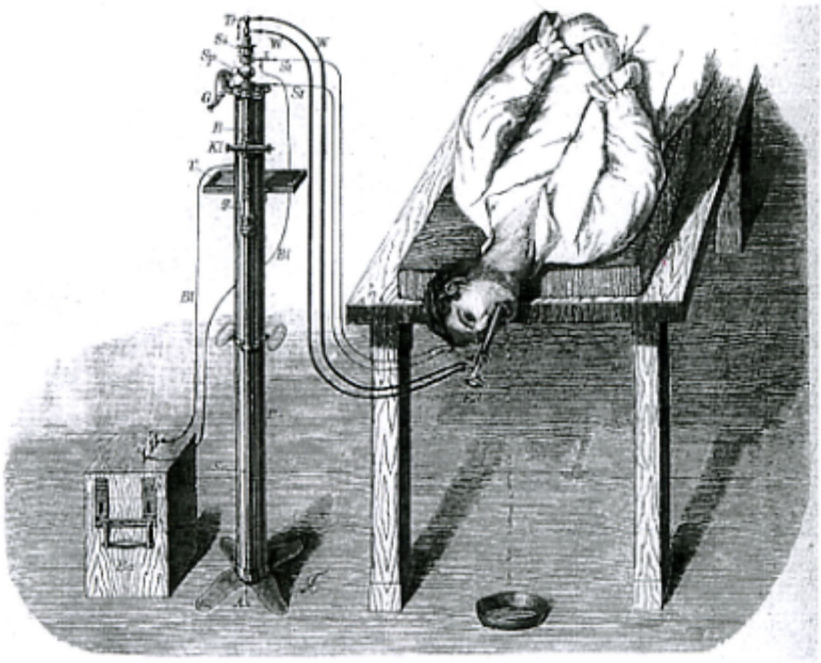

Fig. 1
The Mikulic-Leiter oesophagoscope. The complex electrical apparatus required a water-cooling system

The Congresses provide an opportunity to discuss a selected topic in depth, although open papers are also permitted, and also to visit important museums and special collections, as well as tour notable cities.. And, of course, one meets others with similar interests to develop friendships and sources of knowledge which assist the identification of objects and also personal research, as well as promoting routes of communication on return home.

The last Congress from 1st to 4th September, 2004 was held in Vienna at the Institute for the History of Medicine, organised by Manfred Skopec and Michaela Zykan, on the theme of "Endoscopic instruments in diagnosis and therapy". This title was no accident, for the Institute is home to probably the most important and largest collection of endoscopic material world-wide, inheriting the pathway laid down by Maximilian Nitze, surgeon and by Josef Leiter the Viennese instrument maker who devised the first practical cystoscope, illuminated with a platinum wire lamp and electricity in 1879. Leiter then improved the cystoscope by miniaturising an electric light bulb in 1887. Not

surprisingly the collection is entitled 'The Nitze-Leiter Museum for Endoscopy'. This contains over 2,000 instruments associated with urology, gastroenterology, oesophagoscopy (fig.1), colonoscopy, bronchoscopy, otorhinolaryngology, ophthalmology and laparoscopy. It possesses pioneering endoscopes, either original or restored versions, of Bozzini's (1806), Segalas' (1826) and, Desormeaux's (1853). During the Congress the Museum was extended by a temporary display of endoscopes loaned by visiting members.

The Institute also has a magnificent Collection of Anatomical and Obstetric Wax Models over two centuries old and an excellent Collection of Anaesthetic and Intensive Care Objects. Near by we visited the Museum of Dentistry, the Federal Museum of Pathological Anatomy and Sigmund Freud's Museum sited in his original home. Many excellent papers were delivered and, on the final day, a joint meeting was held with Historical Committee of the European Urological Association. We were dined in the magnificent Natural History Museum and also in the Monastery of Klosterneuburg where we drank excellent wine produced by the monks. On all counts it was a highly successful Congress.

The next Congress in September, 2006 will take place at the Paul Stradin Museum of the History of Medicine in Riga, Latvia. The Association has a large and enthusiastic Latvian membership, based on the Museum created from the personal collection of Professor Stradin, an outstanding surgeon and health administrator. Riga itself is a large city retaining many ancient buildings from the days of the Hanseatic League and many other cultural features. For those interested in this important and helpful Association, write to Kees Grooss at the above address: the annual subscription is 30 euros.

RECENT BOOKS OF INTEREST

Bryan Hibbard, *The Obstetrician's Armamentarium; historical obstetric instruments and their inventors* (San Anselmo: Norman Publishing, 2000) pp. viii, 324, over 500 illustrations. ISBN 0-930405-80-3. From Royal College of Obstetricians and Gynaecologists or direct from publisher by email: orders@jnorman.com Written by one of our members, this monumental and comprehensive work is unequalled, and also beautifully produced.

Nasim Naqvi & M Donald Blaufox, *Blood Pressure Measurement: an illustrated history* (New York & London: Parthenon Publishing,1998) pp. xiii, 156, 44 illustrations and an appendix of 46 photos of Dr Blaufox's personal collection of blood pressure devices. ISBN 1-85070-013-3. Dr Naqvi is also a member of our Society. This comprehensive historical study is of great value in identifying obscure devices.

John Blandy & John Lumley, *The Royal College of Surgeons of England: 200 years of history at the millenium* (London: Royal College of Surgeons, 2000) pp. xi, 193, 500 colour illustrations. ISBN 0-632-05396-8. From the College direct. This handsome large format volume contains a chapter on the museums and special collections including instruments and pharmacy jars.