

Marks-Hirschfeld Museum of Medical History

October 2020



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Curator's Introduction

It gives me incredible pleasure to be writing my first contribution to the Marks-Hirschfeld Museum newsletter as curator. For those of you I haven't yet had the pleasure to meet, you can learn a little more about my background and my interests in this Faculty blogpost.

May 2020 was an unusual time to start a new job to say the least, but it did afford me a wonderful opportunity to get to know the collection. Its value and significance was immediately evident and I have grand plans for the development, preservation and presentation of the collection over the next decade.

Newsletter editor Robert Craig has once again produced a wonderfully compelling suite of articles for this edition. We lead with a fascinating summary of Western medical education and licensing: how kings, academics, scientists, philosophers and physicians each played their part in shaping the model of practice we recognise today. This edition also includes a unique insight into the quagmire of collection cataloguing—it's what our Museum volunteers grapple with every day they come in!

Finally, we are keen to hear from you, our friends and readers. Do you have a story to tell about your experience working in health? Is there a topic you are passionate about that you'd like to share? Would you like to know more about a specific area of our collection? If so then please get in touch by emailing the museum at medmuseum@uq.edu.au. We'd love to hear from you.

Until the next edition, stay happy and in good health.

Charla Strelan

Curator

Marks-Hirschfeld Museum of Medical History

The Journal of The History of Medicine and Allied Sciences

Robert Craig

A copy of Volume 1, Number 1 of the JHMAS is part of the Marks Hirschfeld Museum of History collection. This journal was first published in January 1946 by Henry Schuman in New York. It has been published continuously since that date, the most recent being Volume 75 April 2020. This will be the last printed edition because after this issue the journal will only be available online through the Oxford University Press. The journal publishes brief, previously unpublished papers relating to all aspects of the history of medicine and of the various sciences impinging on it. These criteria have been maintained throughout the journal's lifetime. An item from the journal stimulated to write a piece about medical education.

Summary of 'The Evolution of Medical Education and Licensing'

Robert Craig

Phyllis Allen wrote on The Evolution of Medical Education and Licensing 1540 – 1858 (Vol 1 No4, JHMAS). It outlines the way medical education and medical practice has developed in Britain and the Commonwealth which influences the present structure of health services in Australia. I added a paragraph to include the role of the Society of Apothecaries in the origins of modern pharmacists and general practitioners which had been omitted by Phyllis Allen. Variations in the USA and Europe, as well as developments in more recent years with the globalisation of the medical market come from a recent paper by Eugène Custers and Olle Cate: The History of Medical Education in Europe and the United States, With Respect to Time and Proficiency Academic Medicine March 2018; vol 93.

Such a history offers explanation for many assumptions underpinning regulations regarding training, practice and provision of health services in Australia. Before the seventeenth century medical education in England was dominated by the two universities, Oxford and Cambridge. The method was Mediaeval Instruction through study of theological commentary and verbatim knowledge of the classical texts (especially Hippocrates and Galen). Scholarship was assessed by capacity to argue and debate these texts with no practical exposure to disease or surgery. This system provided significant income for the universities but few useful physicians and no surgeons or apothecaries. Those who wished to practice medicine studied abroad especially at Padua and later in the protestant Dutch Schools such as Leiden. However, to practise in England applicants had to obtain university degrees at considerable expense and with bureaucratic hurdles called incorporation. Henry VIII who reigned from 1509 to 1547, not only broke with Rome and created the Church of England, but also took on the Universities' unregulated control of ineffective medical education. He licensed the Royal College of Physicians in 1518 to raise standards and founded practical medical training by establishing three medical lectureships and Regius Professors of Physic in Oxford and Cambridge. He compelled them to include teaching dissections at regular intervals in their courses and made the initial steps of unification between surgeons and physicians by requiring Barber Surgeons to provide the bodies and dissection demonstrations in this 'Elizabethan Code' of medical training. Contemporaneously John Caius founded 20 lectureships at his college (Gonville) in Cambridge.

Surgeons had followed a different route. Arising from a split from the Barber's Guild in 1368. Henry VIII formalised their right to incorporation to practice in 1540 by giving a charter to the Company of Barber Surgeons. However, the absence of a pragmatic time-limited curriculum ensured that there was little change and students still had to go abroad to study medicine. A report in 1623 showed all Henry's regulations were being ignored. Charles I tried to reform the code of practice, with the help of Archbishop Laud, to ensure demonstration dissections but the 'Caroline Code' continued to require Galenic and Hippocratic study whilst adding more practical medical instruction. This had the unfortunate effect of extending the time to graduate MD to fourteen years, much of which was spent in outdated study.

However, it remained profitable to the universities and ensured long incorporation lists and large fees but the requirement to study overseas

persisted and surgery and physic continued as a separate trade and profession. However, by 1663, Gresham College, an institution funded by the City of London financiers and merchants in cooperation with the newly formed Royal Society with its many Physician Members, was incorporated to enable the licensing of Physicians. This allowed the scientific and philosophical glitterati who founded modern medicine in England such as Willis, Wren, Radcliffe, Harvey, Bacon and Hobbes to lecture small groups of students and offer demonstrations with the intent of producing empirically inspired doctors. They promoted scientific interest, observation, research and the drive to collect and classify against the prevailing rigid but profitable conservatism of the day. The surgeons were granted the right to license as practitioners in 1745 and by 1820 St Thomas's, St Bartholomew's, St George's and The Middlesex Hospitals had private schools attached to teach would be practitioners with or without a Doctor of Medicine degree.

The Society of Apothecaries arose out of the Guild of Pepperers, but it was not until 1617 that it split from the Grocers Company. Many members were likely to have gained knowledge of the characteristics of materials from involvement in alchemy and examining biological fluids chemically. It was they who held the right to prepare medicines independently and by prescription of physicians. This was the guild which developed into pharmacists and the future General Practitioners, whose previous apprenticeship training was beneath the dignity of university recognition. The Society of Apothecaries gained the right to license medical practitioners in 1815.

However, it was not until the 1830s that apprentice surgeons were required to have a medical license before commencing surgical studies. In 1858 the Medical Act codified the requirements for the institutions who could licence medical practitioner with the aim of a designing and overseeing a training that would provide a safe practitioner on graduation. Pharmacists were excluded from medical practice by this act, and dentists continued to practice without licence or regulation.

In Europe gradual change occurred from similar origins by different routes. The conflict between practical competence, reputation and experience and the scholarly university study of classical learning and commentary was evident, though contact with the millennial golden age of learning in medicine and mathematics from Arabia was more likely to percolate through from the South with the Islamic control of North Africa and the Iberian Peninsula.

France followed a similar path to England and Scotland. Germany and the Netherlands, (possibly due to the more radical reformation) focussed less on the old ways and university regulations and degrees. They were more influenced by competency through experience and apprenticeship. They assessed their students by the recommendation of their masters and patients but the concept that exposure was sufficient rather than a testing of competence allowed for much variability in the years and quality of training. As a new country the United States started with little or no regulation. Unlike Europe, medical training was developed piecemeal often only requiring brief apprenticeships, usually but not exclusively, in hospital. Until the twentieth century there were no nationally accepted experiential or academic qualifications needed to obtain a licence to practice through one of the numerous competing institutions. William Osler (1849-1919) at Johns Hopkins Hospital in Maryland was arguably the founder of the gold standard to be followed by the rest of the world through a structured postgraduate residency training of seven or eight years in a well-funded teaching hospital. This innovation leapfrogged through the idea arising from 1858 of making a doctor safe to practice independently on graduating. Osler introduced the concept of competence testing of practical procedures particularly for special roles.

Since 1950, with the development of an international market for medical professionals there has been increasing standardisation of the content of training and competency in identified professional activities and academic knowledge in addition to requirements for a good professional standing. The expansion of technology as well as biological sciences and the dependence on other health practitioners in the provision of health services suggest it is time to reconsider a root and branch reform comparable to the Elizabethan Code of Henry VIII or the 1858 Medical Act to train personnel to service the complex needs of individual and public health services and to consider whether the aim to provide a safe practitioner using a single core training has outlived its usefulness.

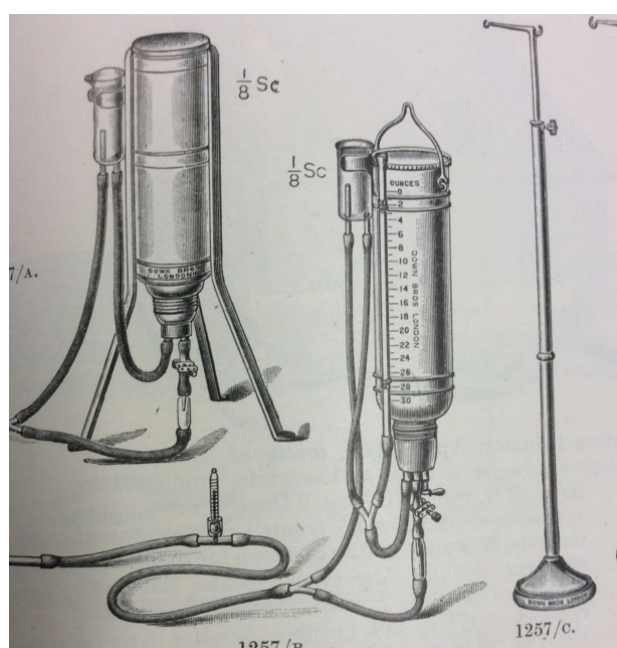
Museum Cataloguing

Robert Craig and Andy Reed

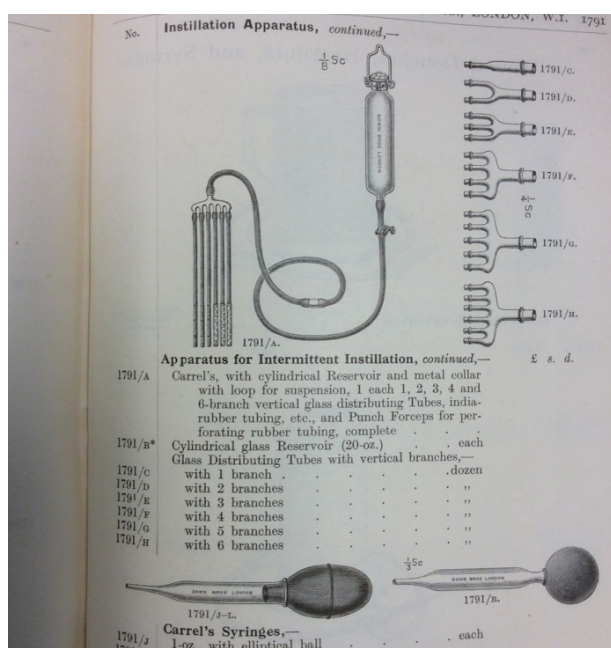
The Acquisitions Policy for the Marks Hirschfeld Medical museum determines the range of the collection based on a checklist of priorities such as national and international importance, and relevance to Queensland and its medical services and health professionals. After acquiring items, the work of cataloguing and registration is ongoing to identify and be able quickly find all the 7000 or so items in the collection and to avoid the tedious job of hunting through numerous boxes of items for displays, exhibitions or anniversaries. In addition, the collection requires continued checks to ensure correct and comprehensive registration and entry on to the electronic database

Whilst the origins and ownership of each item are a priority complete documentation is an impossible task because of the lack of available information, however we can expect to identify the name and use of each item and possibly the place of manufacture and the earliest date it came into use as well as its physical characteristics, significance and condition. An extensive collection of medical suppliers' catalogues of medical instruments, equipment and furniture are used by the volunteers to record these details on numbered sheets which, with any accompanying documentation, is added to the museum database. There are about 80 catalogues in the collection. The most useful are those of the major suppliers to Queensland doctors and hospitals. For medications and testing chemicals we have several pharmacopoeias. Most of the instruments came from Britain with a large number from Germany followed by the USA. We have an Arnold and Sons 1905 catalogue and an Allen and Handbury's from 1902 but this copy is too fragile for regular use, so an Allen and Handbury's from the 1930s is used more often.

Downs Surgical is represented by an appendix from 1910 but a large two volume publication covering their products sold in 1955 is comprehensive for that era, however with a strong base in Brisbane many of the items in the collection can be found in the more limited offerings in Taylor and Elliott's catalogues from 1922 to 1948 (also known as Elliot's or T& E Surgical as a division of DHA, Drug Houses of Australia). Zimmer and Aesculap are the most frequent German manufacturers and Medical and Hospital Suppliers, V.Mueller, Codman (a division of Johnson and Johnson) and Becton and Dickinson for syringes represent USA suppliers but some items originate from other countries such as Japan, France or Czechoslovakia and Italy. We have a useful reference book for Antique Instruments by Elizabeth Bennion and several short texts on specialised instruments and their uses.



An Infusion Apparatus Advertised in an Allen & Handbury's Catalogue ca 1930



An Instillation Apparatus Advertised in an Downs Bros Catalogue 1910

The work of categorisation is analogous to the identification of other collectables such as silver, china or postage stamps (but without the standardisation of hallmarks of recognised assay offices, ceramic marks or inscriptions and watermarks). Even the identification of the metal, wood, plastic or ivory/ bone used is open to doubt but we check whether it is magnetic and rely on inscription (such as 'Stainless Steel') and note a plated appearance and characteristics of grain, colour patina and smell. Manufacturers trademarks are often helpful and frequently the country of manufacture is impressed on the item. Sometimes the surgeon or hospital has engraved a name or department on it. A quick inspection may be adequate for many items and often the original box or packaging accompanies the article or better still a letter from the donor as to who owned and used them. However, for unfamiliar instruments and unmarked items much volunteers' time has been expended looking through the illustrated catalogues. (Help from an orthopaedic surgeon or theatre nurse would be appreciated if anyone is interested!)

The delight experienced by finding the exact item in an old catalogue after an hour or more of searching is one of the many reasons why volunteers continue to work on the museum project which otherwise may seem a tedious occupation. An example is the Mackenzie Ink Polygraph (The MHMM has a nearly complete boxed example and I found a picture of a fully set up example on the London

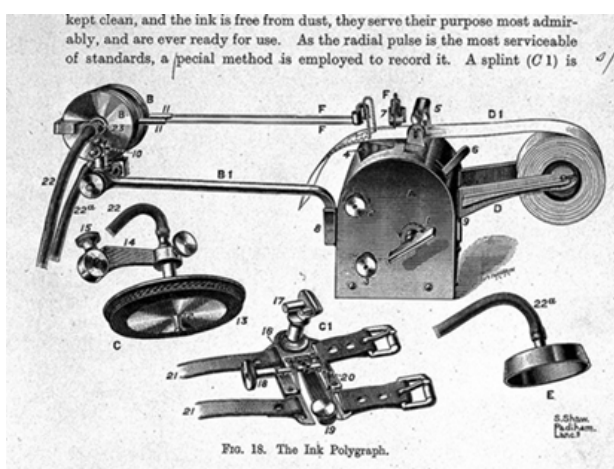


Fig. I: Mackenzie Ink Polygraph (Supplementary Allen and Handbury's catalogue 1910)

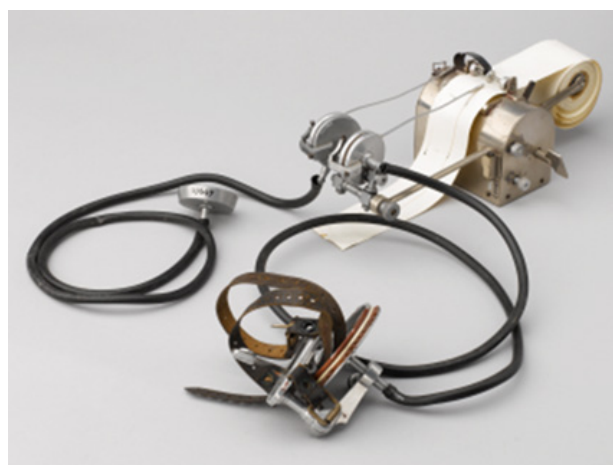


Fig II: Complete Ink Poly graph (Picture form London Science Museum Website)

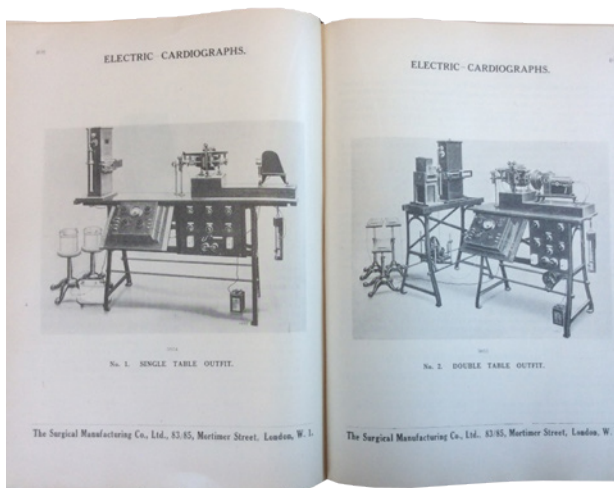


Almost complete Mackenzie Ink Polygraph from the MHMM Collection

Science Museum website) and we found it in an Allen and Handbury's 1910 supplementary catalogue:

James Mackenzie developed a machine to accurately monitor and record the heart movements from pulse, apical beat and heart sounds early in the 20th century. After earlier experimental prototypes Thomas Lewis produced a clinically useable instrument to measure the electrical discharges from the heart muscles and nerves through standard skin electrodes. In a 1910 Surgical Manufacturing Co catalogue these illustrations show early ECG machines. It was collaboration between Lewis and Mackenzie which correlated the two sets of observations and allowed them to set up the first specialised cardiac clinic at the London Hospital.

However, it is not just for the use of museum workers that illustrated catalogues have proved to be invaluable. In the past medical



Single Bench and Double Bench Electro Cardiographs Equipment from (1910)

and other measures left some bleeding that could only be controlled by a special clamp. I took my problem to my handyman together with my illustrated catalogue. He used steel spring wire, solder, and a dozen metal tops from beer bottles. The latter were perforated in four places so that gauze pressure pads could be attached. The instrument worked perfectly.” [Smith, A & B.J. Dalton (eds) ‘Doctor on the Landsborough’, James Cook University, 1997]

Other benefits are the camaraderie developed between volunteers and the sense the work is worth doing to prevent the permanent loss of the narrative of the development of medicine in Queensland through neglect or destruction. Please let us know if you are interested in joining our group

Some Items from the collection:

This instrument set has so far defied our efforts to identify it. The providence is not recorded; the stainless-steel box is about 300mm by 20mm and contains right angled applicators with mostly graded club shaped detachable heads Any ideas?



Unidentified Instrument Set

practitioners have used illustrated catalogues to obtain equipment from local sources, rather than waiting weeks or months for instruments to be sent to them, doctors have been able to ‘make do’ using local talent with materials at hand. As an example of incidents where a doctor has obtained a device with nothing but a picture of it, Dr Joseph Arratta, who was the resident medical officer in Muttaborra (near Longreach, western Queensland), wrote of such a case in his personal memoirs:

“I remember one unusual accident case from whom I had to enlist the services of my handyman. The patient had been thrown from his horse and a wooden stake had caused a wound involving the mouth and the side of the throat within. Removal of the lacerated tonsil



A Papier-Mache aid for teaching oral and nasal gastric intubation from a nursing museum



Fig. I: For injecting warm liquified paraffin wax probably for anatomical demonstration specimens.



Fig. II: A micrometer-controlled syringe for accurate small amounts possibly for research or clinical use in toxicology and immunology

News and Ideas

Would you like to share your experiences with medicine?

We invite readers to share their personal memories and experiences of studying and practicing medicine or other health disciplines in Queensland. These stories will form a new, regular column of the Mark-Hirschfeld Museum newsletter. Please email your story to medmuseum@uq.edu.au.

Get involved with the Museum

Donate to the Museum

The Museum is managed by a team of dedicated volunteers. Our generous philanthropic supporters are vital to the works of the Museum, and we welcome donations in support of our collection preservation and archival programs, exhibitions and educational activities.

Through your gift you will be playing a vital role in preserving medical history and building a significant collection to deliver inspiring and engaging learning opportunities to our students, researchers and the community.

You can support the Museum by [donating online](#), contacting us on 07 3365 5081 or emailing med.advancement@uq.edu.au

Become a volunteer

If you'd like to join the volunteer team, please contact us at medmuseum@uq.edu.au



Join the conversation

Contribute to the Museum newsletter

The Marks-Hirschfeld Museum of Medical History newsletter is issued four times per year. We are always on the lookout for interesting materials that explore the rich tapestry of medical history. If you would like to contribute a story or have a topic that you would like to see included in future editions, please send an email to medmuseum@uq.edu.au.

Our next newsletter will be distributed in December 2020. If you are interested in submitting an article, please send your story and photographs by no later than Monday 23 November.

Share your feedback

What do you think of our new newsletter format? Do you have ideas for new sections or subjects? Send through your thoughts or suggestions by clicking [here](#).

The University of Queensland, Level 6, Oral Health Centre, Herston Rd, Herston Qld 4006

www.medicine.uq.edu.au

CRICOS Provider Number: 00025B to m.miladinovic@uq.edu.au