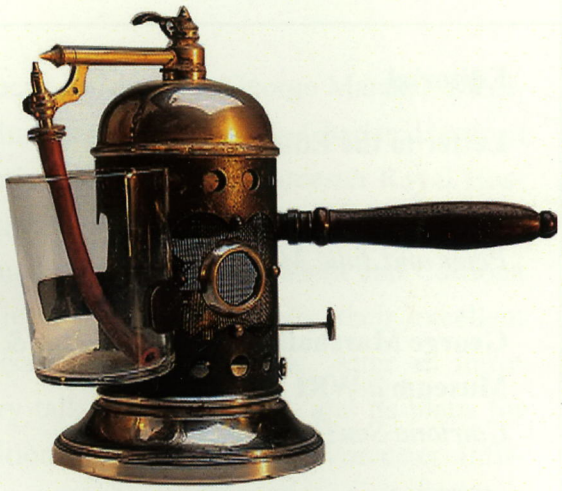
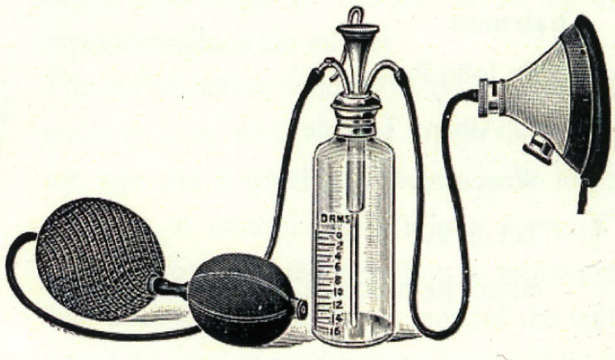
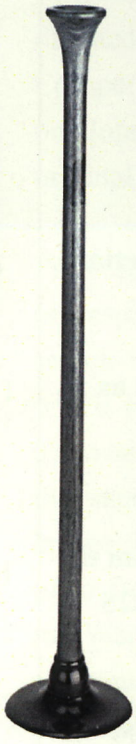
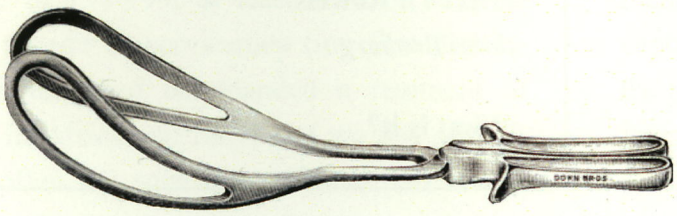




The Historical Medical Equipment Society





BULLETIN NO. 23 ISSN 1366 - 4719 FEBRUARY 2010

EXECUTIVE COMMITTEE

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FUTURE MEETINGS

SPRING MEETING SATURDAY 17th APRIL 2010
AT THE BRITISH DENTAL ASSOCIATION MUSEUM, LONDON

AUTUMN MEETING OCTOBER 2010 PROVISIONALLY AT THE UNIVERSITY HOSPITAL OF WALES, CARDIFF (ORGANISER - DR PETER LLOYD JONES)

EDITORIAL

Our second visit to the George Marshall Medical Museum in the superb Charles Hastings Education Centre at the Worcester Royal Hospital on 17th October, 2009 was another success and we thank our President and Catriona Smellie, Museum Curator for their excellent organisation and programme. After an introductory talk on the Museum and its plans for exhibition space in the old Worcester Infirmary by Catriona, John Prosser provided a beautifully illustrated and wide-ranging survey of medical history sites he had visited in Europe; this was followed by Mark Saunders on John Mudge's famous inhaler, with an original example (see summaries).

Professor Lewis's talk on 'Historical aspects of respiratory apparatus' analysed much research work leading to asthmatic inhalers in which he gave major credit to Dr Roger Altounyan who was a medical student with me in the same year at Emmanuel College, Cambridge; I hope the following digression will be of interest. Roger had been a Spitfire pilot in the War and thus started medicine late alongside mere schoolboys such as myself who were fortunately permitted to complete medical studies before National Service. At Cambridge in 1946-49, at least 90% of students were mature ex-servicemen (my first dissecting partner had commanded a regiment of tanks in Africa and Italy) and we few schoolboys often felt somewhat isolated, but not by Roger who was incredibly friendly to all. This may have something to do with Arthur Ransome's book for children "Swallows and Amazons" (1931), in which the boy Roger is based on Roger Altounyan who was observed playing with his sisters in the Lake District by Ransome. Roger was asthmatic which doubtless proved a spur for research on its management to produce his inhaler.

The AGM before lunch will be reported officially to you, but I wish to repeat that as Editor, age and ailments are slowly reducing my capacity to continue and I look forward to hearing from a member willing to replace me. The work is not onerous as most of the text is based on summarised papers provided by our speakers after each meeting. After lunch, Bryan Hibberd outlined the history of obstetric traction to emphasise the grim realities of obstructed labour in the 19th century, and Peter Mohr and Mick Crumplin discussed a crane's bill forceps donated to the Manchester Museum (see summaries); a tour of the well organised Museum and storerooms was followed by our usual identification session.

Included in this edition is part of a paper submitted by John Broberg some time ago but delayed until space was available; on reflection I think it is readily published in two parts, Part 1 on 'rowels' and Part 2 on 'setons' retained for the next edition. I also welcome a submission by Dr Ron Fairbrother, a "heritage volunteer" at the Royal College of Physicians and Surgeons of Glasgow, working on their instrument collection where he has discovered exceptional inventories of surgical instruments in the possession of the Glasgow Royal Infirmary from 1816, 1817 and 1825. These and contemporary Infirmary documents will be of considerable interest to many and access to further information is listed in his article.

We continue to appreciate Peter Mohr's work as Secretary and Treasurer on our behalf with informative Newsletters, our website, www.hmes.org.uk and many other

contributions including accounts of visits to medical museums and sites, such as the old West Riding Pauper Lunatic Asylum, Wakefield recorded in this issue. We are sorry he is unable to continue after 2010 and the Committee would be pleased to hear from any members willing to undertake the Secretary's duties or Treasurer's duties, either indepentantly or combined. As Peter has written: "The job is straight forward and is a pleasure to do; most of the work is done on-line and provides a wide group of interesting new contacts and colleagues."

Good fortune to all members in 2010. I look forward to joining you at the Museum of the British Dental Association in London on April 17th.

Letters to the Editor

Sir,

During the necessary editing of my little piece on bloodsticks (Bulletin August, 2009), a serious error has crept in. A horse would never be hobbled preparatory to bleeding. Such would be unnecessary and downright dangerous.

Hobbles are means of casting a horse (that is to say, inducing lateral recumbency!) The confusion arises because one of the selected cuts (fig. 6) shows a horse wearing hobbles and other bits of equipment at the same time as being bled. However, for textbook purposes the artist has economically chosen to illustrate several different cuts in the one cut.

The cut is from the textbook *Le Nouveau Parfait Marechal* (1805) by Garsault.

Yours, etc

Evelyn Barbour-Hill.

STEPHEN G BEAUMONT MUSEUM

PETER & JULIE MOHR

The Stephen Beaumont Museum records the history of the west Riding Pauper Lunatic Asylum (renamed the Stanley High Royd Hospital in 1963.) It is located in the grounds of Wakefield's Fieldhead Psychiatric Hospital and anyone can visit, but is only open on Wednesdays. The collection includes plans and models of the original asylum; ECT equipment; a padded cell; various restraints, and the usual general medical equipment. It's well worth a visit if you are in the area.

The West Riding Lunatic Asylum opened in 1818 for 150 patients; it gradually expanded block by block until it occupied a 25 acre site in north Wakefield with its own church, imbecile home, reservoir, gas works, shops, farms etc. By 1900 there were over 2600 patients. The asylum was closed in 1963 and most of the buildings demolished, apart from the church and centre of the original building. The site is now occupied by the Pinderfields General and Fieldhead Psychiatric Hospitals.

Curator: Mike McCarthy 01924 328654
Stephen Beaumont Museum
Fieldhead Hospital
Ouchthorpe Lane

GEORGE MARSHALL MEDICAL MUSEUM AND Museum@ WRI

CATRIONA SMELLIE, Curator

When I began organising today's meeting with Peter Mohr, I was busy writing a 'stage 1' application to the Heritage Lottery Fund's *Heritage Grants Scheme* for an ambitious development project to install an exhibition space within historic Worcester Infirmary (recently purchased by the University of Worcester) (fig. 1). At the time, I hoped to be able to describe that project during this meeting but decided to hedge my bets and leave the title as an 'Introduction to the Museum'. Thus it is with great pleasure that I am now able to announce a successful application and therefore change the title of the talk to: Museum@WRI (WRI being the Worcester Royal Infirmary).

Fig. 1 Entrance to the Worcester Royal Infirmary, c. 2001, by John Prosser

In summary, Museum@WRI is a project to develop an interactive and educational gallery space (a sister site for the current Museum) designed for specific areas of the curriculum, and to be a centre of learning for the community targeting current government health agenda such as STIs, obesity or mental health. Stories of local healthcare, as well as Powick Lunatic Asylum and the WRI, will be celebrated and find a permanent home for future generations. Museum@WRI will utilise the George Marshall Medical Museum collections and space within one ward of the Infirmary (fig. 2), and display areas will be purpose built to be easily mutable. These areas will be produced and reproduced as time goes on, as a result of three 'mini projects' created by community groups and school students. In addition, storage space will be made available elsewhere in the Infirmary building for objects and educational materials.

This development is very exciting for everyone at the Museum, not least because we are finally able to install an exhibition space into the building where many of our objects were last in use. WRI was of course the location for the founding of the BMA in 1832 by Sir Charles Hastings, with many more influential men and women gracing its halls over the centuries. Furthermore, this offers the Museum an exciting opportunity to link in with the regeneration of this part of the city into what has been dubbed locally the 'Cultural Quarter', and which will include the new joint city/university library, *a first for Europe*. Museum@WRI will create a city-

centre foothold for the Museum, which we expect will prove to be enormously helpful in making us better known amongst residents and visitors (our current location is a real barrier to a lot of potential visits).

This project is by no means a certainty as yet, though we are quietly confident of success! We now have six months to develop the project to a

Fig. 2 Former ward, Worcester Royal Infirmary, c. 2008, anticipated for Museum@WRI

stage 2 application for the full project funding, and should know the result by October 2010, all being well. The Museum would appreciate all comments, suggestions and criticisms of this project from HMES members during this development phase. Please get in touch via email on Catriona.smellie@worcsacute.nhs.uk, or 01905 760738.

MEDICAL TOURISM, PART 1: BRUGES, LESSINES AND ECOUEN

JOHN PROSSER

Medical Tourism is a suitable title for this series as suggested by our secretary Peter Mohr. I have not seen this type of tourism mentioned in newspapers but perhaps it will start a trend encouraging visits to sites of historical medical interest. This combines well with the travels of my wife and self on holidays in Europe when apart from the usual visits when abroad we add, if possible, visits to local ancient hospitals, pharmacies or medical museums. This often proves both enjoyable and educational in expanding our knowledge of the development of Medicine, Hospitals and Medical Equipment over the centuries.

St John's Hospital Bruges

Pharmacy at St John's Hospital

We have visited sites as far apart as Copenhagen, Denmark and Williamsburg, USA but for this article I will confine accounts to recent holidays in Europe, starting with a short visit to Bruges in Belgium. This important medieval town is much visited by tourists for its history and beauty but it also has an early medieval hospital dedicated to St John, founded about 1188, to offer shelter and food to pilgrims, passers-by and travelling salesmen. The main part of the hospital is now a picture gallery but one can still visit the splendid pharmacy which gives a flavour of the medical care of past centuries.

Patients' cubicles at Notre Dame a la Rose, Lessines

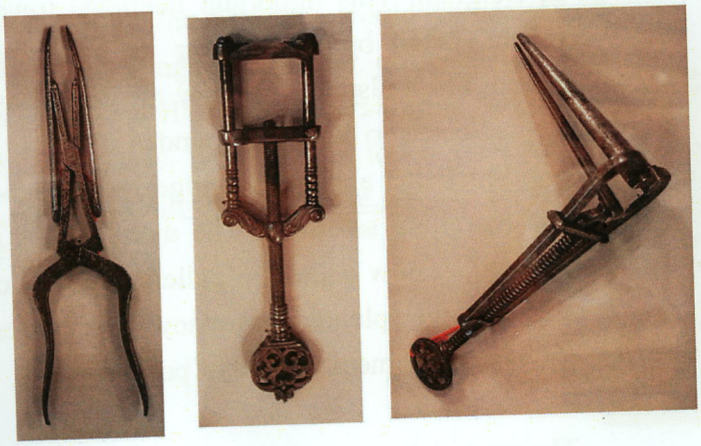
The next visit was to Lessines also in Belgium.

Although the town itself is not remarkable, the Convent of Notre-Dame a la Rose certainly is. Founded in 1242, it was a self-sufficient religious community with a farm, gardens, a cemetery and even an ice chamber to supply ice in summer. When we visited, the building was under restoration, but a model in the entrance shows the extent of the original construction. The hospital ward looked clean and comfortable, not at all a bad place to rest for a night or two; it is situated close to the highly decorated chapel where faith and prayer offered the main hope for comfort or cure. The convent contains an excellent medical museum with medical artefacts from the 16th to the 20th century.

A glimpse of the museum at Notre Dame a la Rose

Our next visit was to a small exhibition of renaissance surgical instruments in a museum housed in a beautiful chateau, a short train journey from the centre of Paris. The Chateau D`Ecouen contains many renaissance items and for this exhibition they had accumulated a number of fearsome instruments nicely decorated but probably little different from medieval ones. The patients certainly suffered much in the absence of modern anaesthesia.

Lancets, fleam, spring lancets and bleeding bowls at Notre Dame a la Rose



Medieval instruments at Chateau D'Ecouen

Clyster set at Chateau D'Ecouen

THE MUDGE INHALER

MARK SANDERS
www.inhalatorium.com

John Mudge (1721 -1793) was a man of science. Apart from being a physician he was also an astronomer, winning the Copley Medal in 1777 for his work on the reflecting telescope. He grew up in the South-West of England, the son of a headmaster. His brother Thomas Mudge became famous as an horologist, inventing the lever escapement. His sons, Zachery and William had distinguished careers in the navy and as Superintendent of the (newly formed) Ordnance Survey.

Mudge practised as a physician in Plymouth. In 1778 he wrote '*A Radical and Expeditious Cure for a Recent Catarrhous Cough*[1] in which he described and illustrated a pewter tankard adapted to the purpose of an inhaler. Mudge is credited as being the first to describe such a vessel as an 'inhaler'. His device was not simply a bright idea published for posterity, it was a commercial reality and was supplied by pharmacy wholesalers for 160 years! In his book Mudge explained the working and use of his inhaler and stated it could be bought from William Barnes, the pewterer of 157 Fleet Street London – this was a close neighbour to the shop of the famous watchmaker, his brother, Thomas Mudge.

Mudge's cure for a catarrhous cough was to inhale vapour impregnated with opium. He urged readers not to experiment with other substances in the inhaler, for fear of spoiling its efficacy and reputation.

The Mudge inhaler was a pewter tankard adapted by; exterior holes to the top of the hollow handle, and interior hole to the bottom of the handle leading into the inhaler, a lid with a mouthpiece connector and a valve, additionally a flexible mouthpiece made of metal spiral bound with silk and finishing in a wooden tip (fig. 1)

Fig.1 Mudge inhaler, woodcut from his book, 1778 (ref.1).

The patient was instructed to hold the tankard to his armpit, under the bed covers, and to inhale and exhale through the device loaded with hot water and elixir paregoricum (a mixture of opium, benzoic acid and camphor). The inhalation exerted a negative pressure in the top of the inhaler which caused a small cork ball to close the valve and air to be drawn in through the holes in the handle, passing through the warm water and becoming impregnated with the medication. On exhalation a positive pressure at the top of the inhaler would open the valve permitting air to escape.

'Examples of the Mudge Inhaler can still be found today. The photograph shows a Mudge Inhaler bearing the mark of William Barnes (fig.2), but other markings and unmarked ex-

Fig.2 Original Mudge inhaler, made by Barnes, c.1778 (private collection).

amples also exist. The Mudge Inhaler is shown in pharmacy trade catalogues through the Victorian era and up to 1938. Over the course of its 160 year history the Mudge Inhaler was used with many different inhalants, despite the original counsel of its inventor.

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19th CENTURY AIDS TO OBSTETRIC TRACTION

"AGAINST ALL ODDS"

BRYAN HIBBARD

Although obstetric forceps were available in the 17th and 18th centuries they were used infrequently, especially in Britain where practice was guided by dictums such as "where they save one they murder many" (William Hunter). Often the baby was dead before consideration was given to assisting delivery and British practitioners favoured craniotomy (1). Forceps were applied only about once in every 350 deliveries whereas craniotomy was performed more than twice as frequently. In France and Germany forceps were used more than twice as often as in Britain, whilst craniotomy was rarely employed. As the Industrial Revolution transformed materials and the construction of surgical instruments, an active approach to obstructed labour evolved including more traction force. In Britain simple measures predominated – such as hooks which fitted in the fenestra of forceps attached to a tape or rope. Europeans, with their disdain for craniotomy devised various attachments to increase the mechanical advantage of their heavy forceps, often mediated by hooks or ropes passed through the fenestra and attached to pulleys, such as Delore's (1867) *pulley tractor* (fig. 1).

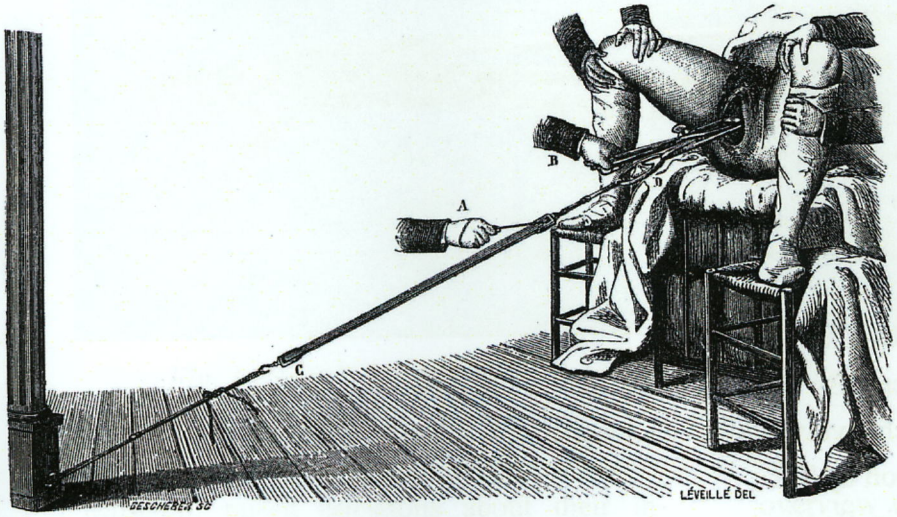

Figure 1. Delore's cord and pulley tractor 1867. Note the interposed dynamometer (D)

Mattei (ca. 1863), devised an apparatus to provide forceful and prolonged traction, using a U-shaped frame to restrain ischial tuberosities; a rope from the forceps was attached to a crossbar via a pulley. Numerous designers adopted and modified the same concept, including the following three. Joulin's (1867) *aide-forceps* were poorly designed and relatively ineffective because the transverse ischial bar limited traction direction and control (fig. 2). Joulin interposed a

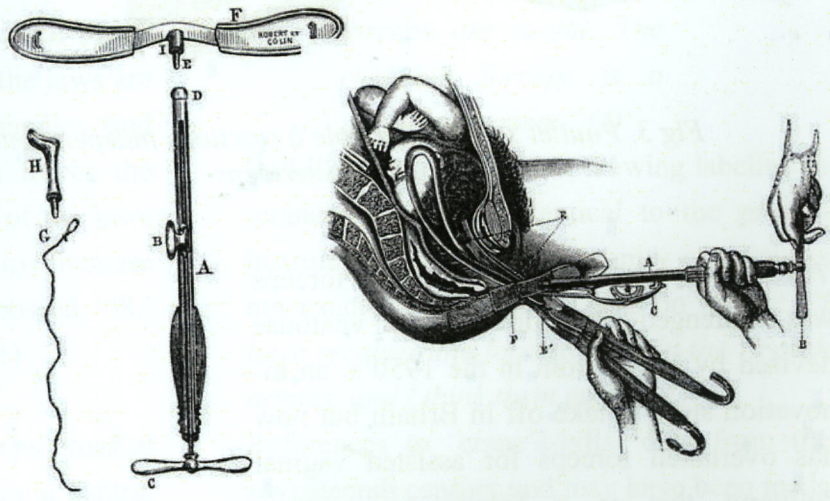

Fig 2. Joulin's aide-forceps (1867). A cord passed through the fenestra is attached to the hook B on the worm screw. Note the interposed dynamometer C. A chain saw G is used for embryotomy when all else has failed.

dynamometer and measured the traction between 20 and 60kg, claiming sustained traction of this order achieved delivery in 10-30 minutes. Chassagny (1861) was an early proponents of *tractions mecaniques* and of sustained, rather than intermittent, traction - *tractions soutenues*, but did not publicize this until 1875. Poullet (1875) was prolific experimenter with mechanical novelties. His *tracteur pour appliquer la force mécanique* was used with forceps or with his sericeps, a fabric device based on a Japanese concept. His final assault was his *forceps souple à tractions indépendantes* or *nouveau sericeps* (fig. 3). These powerful aids, in vogue for about 30 years, were born out of desperation, whilst possible abuse is self-evident. By the 1860's a more scientific approach evolved with the development of axis traction by Tarnier in France and Milne Murray in Britain, although that is a story for another day.

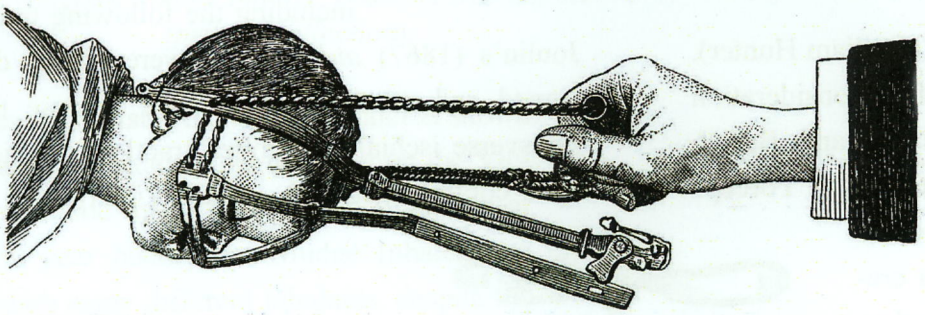

Fig 3. Poullet's forceps souple à tractions indépendantes or nouveau sericeps.

After 250 years of dominance, the forceps was challenged by the first practical ventouse devised by Malmstrom in the 1950's, an innovation slow to take off in Britain but now has overtaken forceps for assisted vaginal delivery; this is a tribute to James Chalmers's successful campaign here in Worcester. Despite more Caesarean sections, today 25 to 30% of deliveries, ventouse application has increased tenfold in 20 years whereas forceps delivery has decreased by two thirds.

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CRANE'S-BILL FORCEPS – THEIR POSSIBLE USE AS BULLET EXTRACTORS?

PETER MOHR & MICK CRUMPLIN

A pair of unusual forceps, donated to the University of Manchester Medical School Museum, raised questions about their intended purpose and use. Made of steel, of slender construction and an overall length of 230mms, the lower handle curves downwards resembling a pistol grip; instruments of this shape are often referred to as 'crane's-bill forceps,' but are rare in British instrument catalogues and, as discussed below, may be of French origin – *bec de grue*(1). Their limbs do not cross and are connected by an inset or in-centric pivot ensuring the jaws are opened by approximating the handles and closed by a steel spring, which forces the handles apart. The distal 30mm. of the jaws have backward-pointing teeth to increase their grip. The lower jaw is embossed '08,' but there is no maker's mark (fig.1)

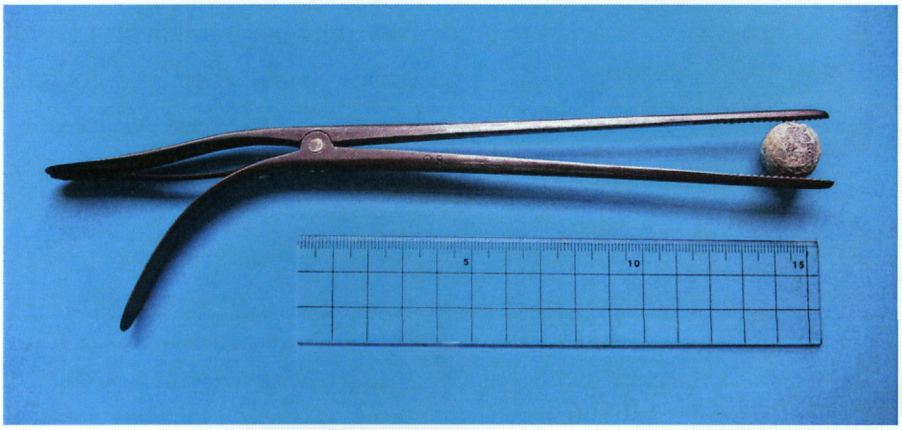

Fig. 1 Crane's-bill forceps in the Manchester Medical School Museum grasping a lead bullet.

The limbs of most pivoting forceps cross at which point they are connected by a centric pivot which ensures that closure of the handles also closes the jaws, the reverse movements of this crane's-bill forceps, and related wound dilators, wound retractors and mouth gags, etc (2). The spring ensures jaw closure to assist the extraction of bullets or shell fragments but more particularly clothing and other debris in-driven by missiles. Instruments with sprung handles, such as some needle holders or bone cutting forceps with centric pivots, are not uncommon, but differ from the crane's-bill forceps in that the spring keeps the jaws open, rather than closing them. Crumplin's overview of bullet forceps (3) refers to the use of crane's-bill forceps for bullet extraction described by Sir Charles Bell's in 1814:

> *"The forceps, which are generally made for the extraction of balls often cannot be used; when a simple lever or spoon, or even common dressing forceps are useful. The cranebill forceps is a useful instrument."(4)*

Bell illustrates this with a drawing labelled as 'cranebill forceps', identical to the present instrument (fig.2.) Their country of origin is not exactly clear, but he goes on to say: *"I have received the forceps used in the French armies, and I think them excellent."*

References to 'crane's-bills' date from the seventeenth century and may have been made for general use, but also for bullet extraction. Kirkup illustrated two examples of straight forceps with close-sprung handles from as early as the 1590's (2). Diderot illustrated

forceps with close-sprung handles from as early as the 1590's (2). Diderot illustrated two types of angled forceps for bullet extraction; one without a sprung handle and one with long jaws and a sprung handle, labelled

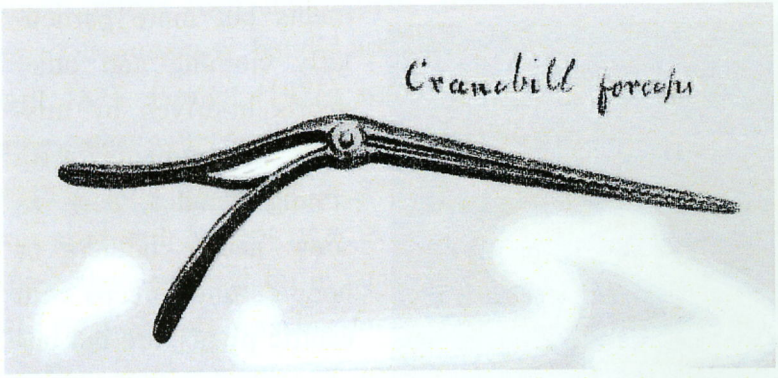

Fig. 2. Drawing of 'cranebill' forceps by Charles Bell (ref 4)

bec de grue (5). Perret's catalogue showed three different sizes of angled forceps with sprung handles (6). These earlier instruments, all French, were of a more angular and robust construction, but there are design similarities to the forceps demonstrated.

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SURGICAL INSTRUMENT INVENTORIES FROM THE GLASGOW ROYAL INFIRMARY, 1815, 1817 & 1825

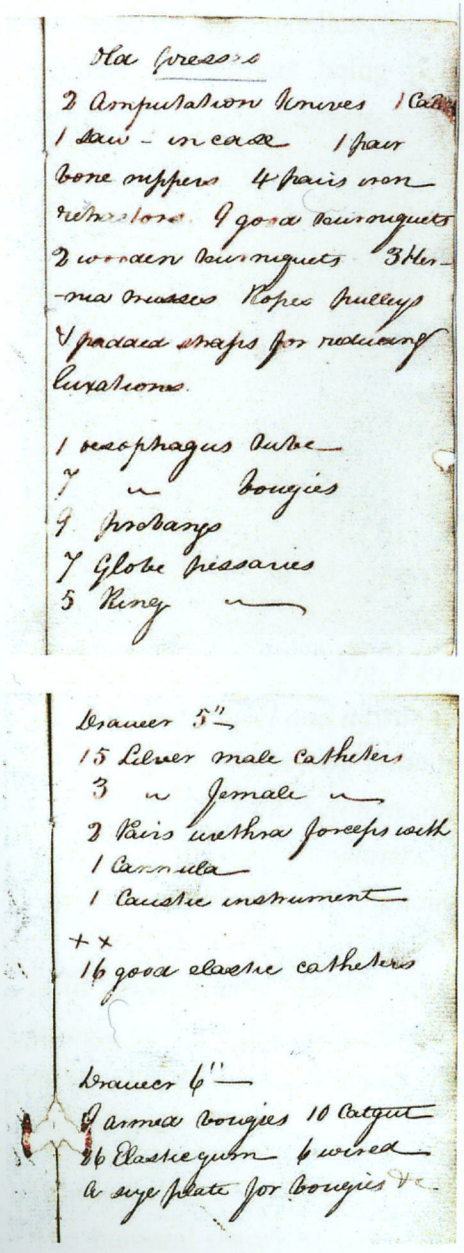
RON FAIRWEATHER

In 1794 the citizens of Glasgow, having obtained a Royal warrant from George III in 1791 (1), completed the construction of the Glasgow Royal Infirmary, a modern, well-equipped hospital of 136 beds which increased in size by 1816 to 226 beds (2).

A Board of Managers published a comprehensive annual report covering funding, expenditure, staffing and also a punctilious record of all ward and outpatient activity (3). And annually, the surgical staff provided the Board with an inventory of the surgical instruments owned and held by the Infirmary; this would have been the responsibility of the Surgeon's Clerk, a junior doctor appointed to assist the four permanent surgeons in the wards (4). These inventories did not form part of the published annual report, but were retained in the general records of the Infirmary. Very few of these early 19th century documents are known to survive in Scotland. Recently, however, three such inventories from 1815, 1817 and 1825 were located in Glasgow. The documents consist of:

1. A small notebook, hand written (the 1825 inventory), and
2. Loose quarto sheets, hand written (the 1815 and 1817 inventories).

Having transcribed these documents (fig.1), it is clear these inventories provide a precise picture of the stock of surgical instruments that a modern, well-equipped hospital of the period would have held. At this time, the annual report of the Glasgow Royal Infirmary routinely contained the numbers and types of surgical operations for every year, including those for which



Old Presses

2 amputation knives
1 catline
1 saw - in case
1 pair bone nippers
4 pairs iron retractors
9 good tourniquets
1 wooden tourniquet
3 hernia trusses
ropes, pulleys and padded straps for reducing luxations
1 oesophagus tube
7 oesophagus bougies
9 probangs
7 globe pessaries
5 ring pessaries

Drawer 5th

15 silver male catheters
3 silver female catheters
2 pairs urethra forceps with 1 cannula
1 caustic instrument
16 good elastic catheters

Drawer 6th

9 armed bougies
10 catgut
26 elastic gum
6 wired
A size plate for bougies etc.

Fig. 1 Pages 4 & 11 from the 1825 MS inventory with transcriptions by author.

we now have the inventories. Two points emerge from these records. Firstly, how relatively few operations were undertaken in these years, being approximately 2.5% to 3.75% of the total number of hospital patients (both medical and surgical), admitted in a single year (5), (6), (7). Secondly, the fairly limited range of surgical procedures performed, being confined to amputations, 'extirpation' or excision of tumours of breast, lip and other areas, lithotomy, hydrocele tapping and occasional cataract surgery and trepanation.

These inventories and associated lists of surgical activity in the Glasgow Royal Infirmary for the years 1815, 1817 and 1825 will provide a useful resource for those interested in this aspect of medical history. The documents can be accessed online, both in the original and transcribed forms, together with scans of the annual returns for these years, at the Royal College of Physicians and Surgeons of Glasgow website – www.rcpsg.ac.uk (search under "Online Exhibitions" and then click "Surgical Inventories")

Acknowledgements: I wish to acknowledge with thanks the assistance of Mrs Carol Parry, Library and Heritage Manager, Royal College of Physicians and Surgeons of Glasgow and Mr Alistair Tough, Archivist, NHS Greater Glasgow and Clyde Health Board Archive, Mitchell Library, Glasgow.

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3. Anon, p.10
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5. Twenty-first Annual Report of the Glasgow Royal Infirmary, 1815, pp.5 & 6
6. Twenty-third Annual Report of the Glasgow Royal Infirmary, 1817, p.6
7. Thirty-first Annual Report of the Glagow Royal Infirmary, 1825, p.15

ROWELS & SETONS, ANCIENT THERAPIES: ILLOGICAL & LOGICAL LOGIC Part 1 - Rowels

JOHN BROBERG

Definitions

A **rowel** is a piece of cloth, leather or any insoluble material (fig.1a), placed between the skin and underlying muscle or bone. Their aim was to stimulate a humoral flow (serum); they were not placed in traumatic wounds.

Setons are strings or tapes, threaded through incisions by seton needles (fig. 1b,c,d) and also wounds, the strings being pulled back and forth intermittently. Herbs were tied into the strings, or the tapes were coated with medicaments to promote drainage and stimulate wound granulation.

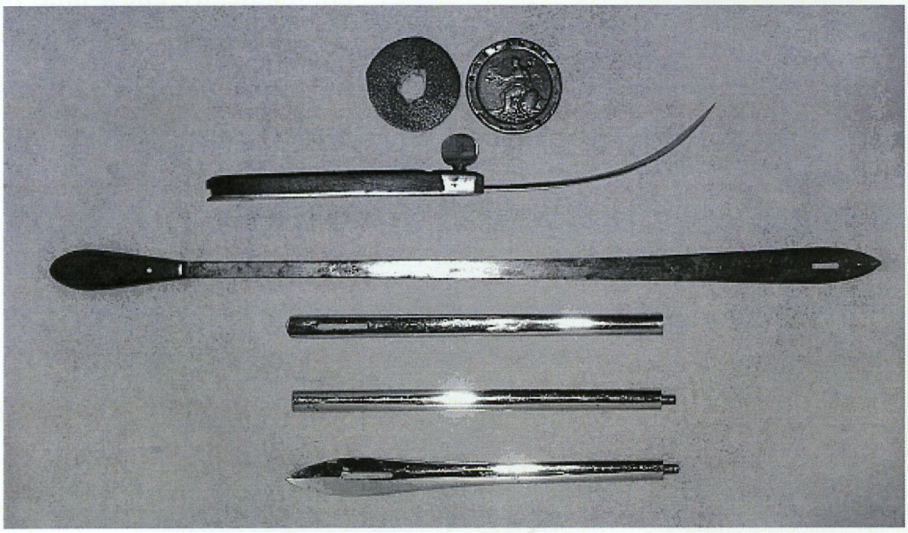


Fig. 1 From the top,
a). A leather rowel and a two penny piece of 1797, 4 cm. diameter.
b). A frog seton needle in its handle.
c). An 18th. cent. Seton needle suitable for treating fistulous withers, 35cm. long.
d). A three part French seton needle, 48cm. when fully assembled.

Rowels

The humoral theory taught that imbalance of the body's fluids (blood, yellow bile, black bile and phlegm) caused diseases and, therefore, the removal of excess fluids would improve the patient's condition. If bleeding and purging were the main methods of systemic removal, a rowel was more precise in the belief fluid was extracted from a specific part. In 1738, Bracken considered all rowels acted systemically by acting as an extra anus to remove fluid!(1) Study of particular observations offers appraisal of their underlying logic. In 1614, Heresbach wrote:

"Against many diseases both of horses and bullocks they use the root of the herb called Black Hellebore, of some Bearsfoot, or others Setterwort. Which they thrust in the breast of a beast. Making a hole before with a bodkin (large needle). A sheep or swine...you shall help y thrusting through their ear, the root of the Setterwort."(2)

In 1681, Markham wrote of the cure of ophthalmic conditions such as 'Moon eyes or Lunatic eyes' by plastering a horse's temples, then:

"... *under each eye with a sharp knife make slits of an inch long about four fingers beneath his eyes, and at least an inch wide of the eye veins: then with a cornet loosen the skin about the breadth of a groat , and thrust therein a piece of leather as broad as a two pence with a hole in the midst, to keep the hole open, and look to it once a day to see the matter may not be stopped, but continually run the space of ten days."*(3)

These rowels draw the humour downwards out

of the head, a logic applied to an illogical, or more correctly an inaccurate premise. Henry Bracken recommended systemic rowelling for headache, seizures and apoplexy. Markham described his technique as 'a plain rowel' and concluded:

"The benefits of rowelling are to separate and dissolve evil humours that are gathered together in one place...it gives strength to sick joints and comforts any part that is oppressed with cold phlegm or hot choleric substance." (3)

E.R.Gentleman gave the same advice in 1680, stating fore-leg lameness should be treated with a rowel in the breast, offering instructions on various ways of placing these. He also provided drawings of rowels in the margin of his pages (4).

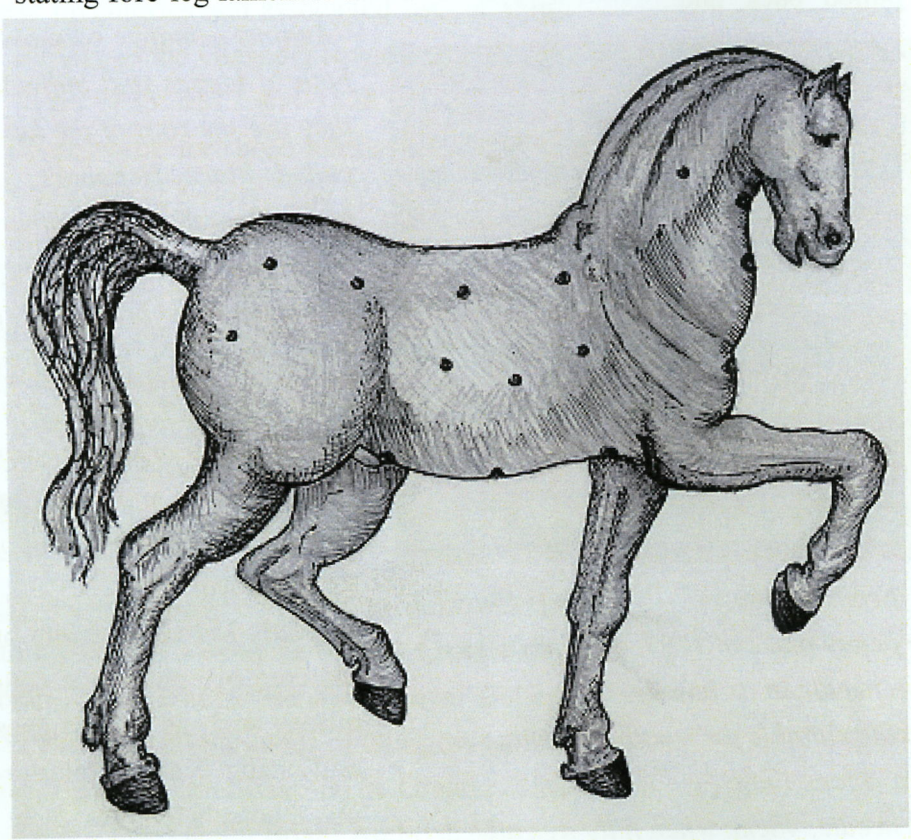


Fig.2. Horse marked with possible rowelling points (NB. 9 on its other side).

It is easiest to understand the misplaced logic of rowelling in pleurisy and pneumonia when post mortem examination revealed an excess of fluid in and around the lungs which early veterinarians thought that, by removal with 24 rowels (fig. 2) the body would benefit. They failed to realise the fluid in the lungs was the result of inflammation not the cause, whilst further fluid loss must have weakened animals even further. Markham instructed that rowels should be placed by cutting through the skin 1 inch and loosening this with a cornet (a blunt spike of an antler tine), then placing a piece of leather with a hole in the middle within this space. Later the rowelling scissors or rowelling bistoury was developed. The scissors had beaked blades to pinch up a piece of skin and automatically cut a hole in it; the scissors handle had an open finger hold, resembling a probe, suitable for inserting into the cut to develop the sub-cutaneous space (3).

REFERENCES

1. Bracken, H. *Farriery Improved* (1738) p. 99.

2. Heresbach, C. *The Whole Art and Trade of Husbandry* (1614) v 3, leaf 124.

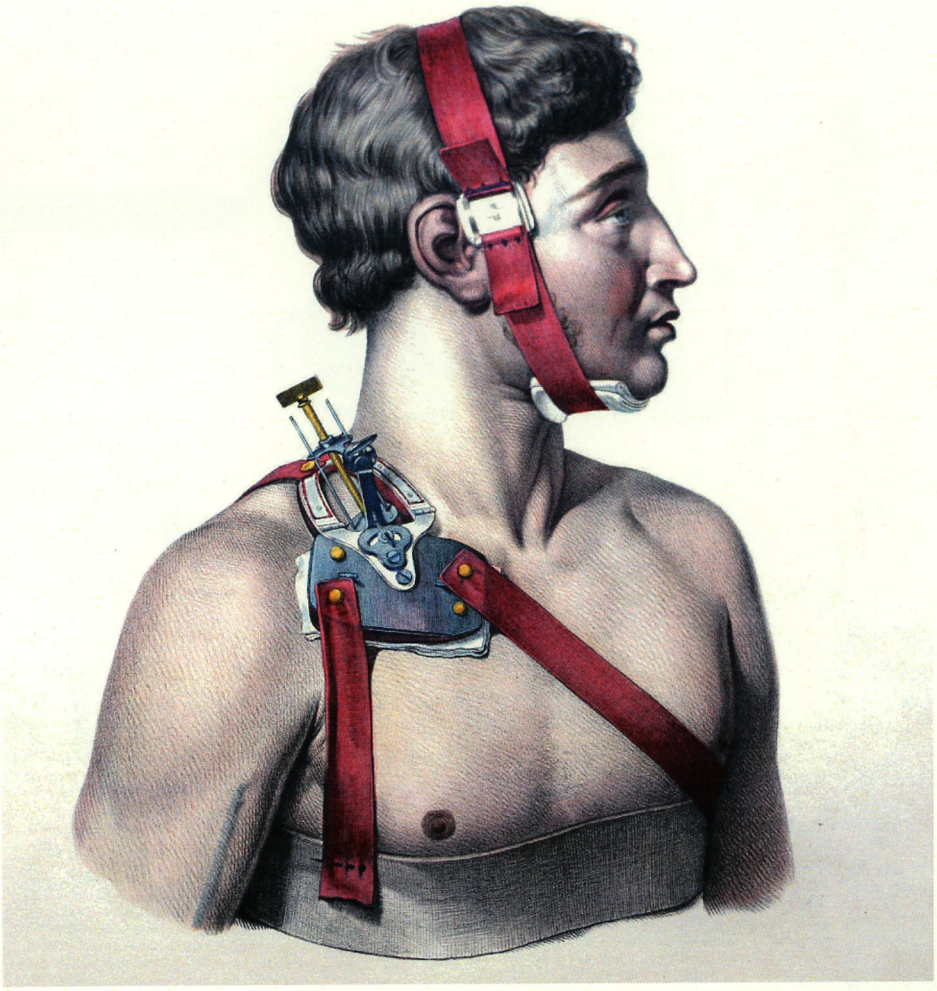
3. Markham, G. *Markham's Master-Piece* "(1734) pp. 144–145.

4. Gentleman, ER. *The Experienced Farrier* (1680) pp. 117-119

[NB. Part 1 of paper presented by John Broberg at the 35th Congress of the World Association for the History of Veterinary Medicine, Turin, 2004. Part 2 on setons to follow]

WHAT IS IT?
[February 2010]

This engraving c.1837 shows two pieces of equipment in use, one simple and the other complex. What are they and what are they attempting to treat?



WHAT IS IT? [August 2009]

This brass-banded mahogany box was standard issue to ships' surgeons working for the Peninsular and Orient Steam Navigation Company, from at least 1870 to 1904. The partial velvet decoration may date from about 1875. Necessarily the contents are reasonably comprehensive and on display are items for amputation, Hey's skull saws, a finger saw for excision of compound fractures and various minor instruments for dissection, ligature, etc. Hidden beneath are a skull trephine, bullet forceps, bone cutters, bone elevator, trocars and cannulae, and a probe.