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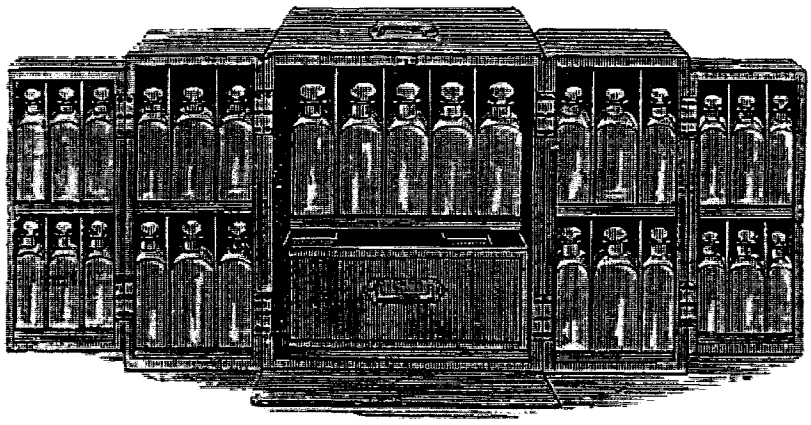
Historical Medical Equipment Society



Bulletin
No 7

January
2000

NEXT MEETING

Some people who were at the Meeting at the London Hospital in October will have noted that the next Meeting in Bath had been changed to the 13th May, 2000, instead of the 6th. Unfortunately, due to completely unforeseen circumstances, there has had to be a return to the 6th. We do apologise for this but please note. The next Meeting will definitely take place on the 6 th May, 2000 in Bath.

Historical Medical Equipment Society

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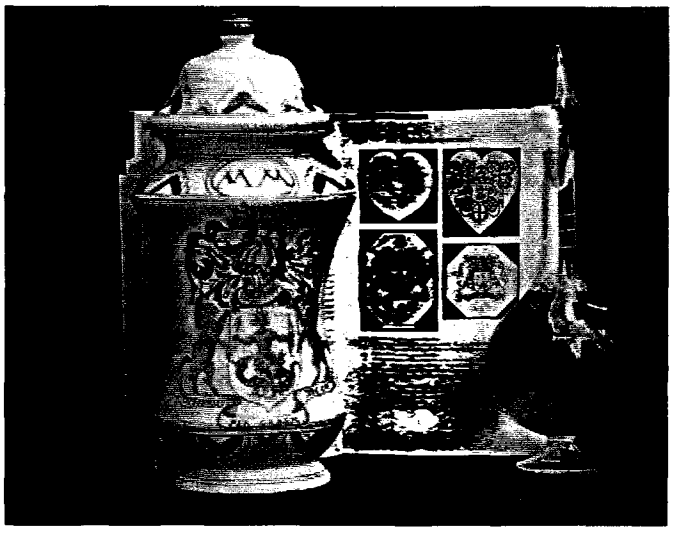
EDITORIAL

Once again we have come round to the time for another Bulletin, and, despite arguments as to whether this New Year really is the beginning of the new millennium or not, I suppose all of us are looking forward with some excitement to the fact that we have lived to see a year which begins with 20 instead of 19.

The last Meeting of the old century took place at the London Hospital on I6th October where we were well entertained with some quite gruesome, but very interesting, recounting of the history of "Cranioclasts and their cousins" by Bryan Hibbard and a history of Endoscopy and Endoscopes by Dr. Sisir Majumdar. A very good lunch at the notorious "Blind Beggar" pub, which seems to have completely lost its reputation and is now a most attractive place, was followed by lively discussion of some very interesting instruments brought by Members, in the Pathology Museum of the London where we also had the chance to hear the history of some of the most interesting specimens. We hope that a few more people will be able to attend the next Meeting in Bath and share the enjoyment of discussions with like minds.

This Bulletin contains a notice of a Millenium souvenir which is being produced by the Society of Apothecaries. There will be a jar, which will cost £99 and a plate, which will cost £79. An illustration of the jar is included. Applications must be made directly to the Society of Apothecaries, NOT to anyone from HMES. We also thought that members with computers might like to have the web site address of the Wellcome Library. This is very useful if one is coming from afar and would like to know in advance if a publication they wish to see is available. Just tap in: http://www.wellcome.ac.uk

Finally we come again to the question of contributions for the Bulletin. To keep the Bulletin going we really do need more, so do get writing. If you have a computer you can e-mail the document directly to me and do not even have to go to the post-box. Another thing is that, having got the Bulletin on its feet, I would like to hand over to someone else in the not-so-distant future due to pressure of other demands on my time. With the sterling assistance of Philip Harris Medical, the job is as streamlined as we can get it and I am more than willing to help anyone who takes over. So, is there a volunteer out there willing to help the Society into the new Millenium?



This Millenium Jar is available from: The Society of Apothecaries, Apothecaries Hall, Blackfriars Lane, London EC1. Price £99. Plate Price £79, also available.

BOOKS FOR SALE

Treves, F. Intestinal Obstruction, 1888. 1/4 leather. £45
Treves, F. Surgical Anatomy, 1897. £30
Bailey, H., and McNeill Love, R. J. A Short Practice of Surgery, 1932.
Vols I & 11. £10

Please apply direct to Dr. C. Brightman, Public Health Laboratory, St. Anne's Road,
Lincoln LN2 5RF Tel: 0522-528607 or Fax: 0522-546997

CRANIOCLASTS AND OTHER DESTRUCTIVE INSTRUMENTS by BRYAN HIBBARD

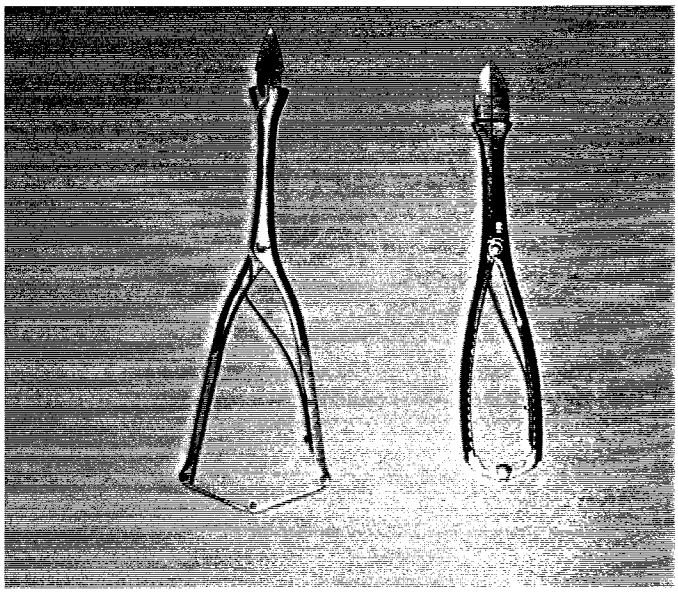
In the middle ages midwifery was primitive and dominated by midwives steeped in folklore and superstition, herbal potions and fumigations, and aided and encouraged by astrologers and a flask of wine. There was a generally persisting belief that the fetus was solely responsible for escaping from the uterus so that there was no indication for active assistance of the mother in labour so long as the fetus was alive. By the same reasoning the dead fetus vvas incapable of delivering itself and assistance would then be needed.

Prior to 18th century all manner of culinary and other devices had been used soup ladles, bent nails, hooks. In the 11th century Albucasis gave detailed instructions for the use of three hooks, to be inserted in the eyes, neck, mouth, collar bone or ribs. Purpose designed instruments began to appear in the 16th century. For example Rueff (1554) illustrated instruments for opening the birth passages, the *speculum matricis* (opening instrument) and the *apertorium.* The mother was then refreshed with 'sweet spices and convenient meat and drink before proceeding to extraction of the baby using the *rostrum anicis* or the *forceps longa et tersa.* In the 17th century Paré described hooks and talons(crotchets) and these were followed by spear perforators to perforate the head, with various extraction devices, or *tire-têtes.*

It might have been thought that the wide recognition of obstetric forceps in the 18th century would have led to reduction in the need for destructive instruments but their design and use was pursued with renewed vigour into the 19th century, especially in Europe where practice was traditionally more aggressive, initially by refining the standard tools of the trade, but later by the construction of novel instruments. They fulfilled their intended function with varying degrees of success.

EMBRYULCIA, or the reduction in the size of the fetus to overcome obstruction, has three phases: Perforation of the head, comminution or crushing, and extraction.

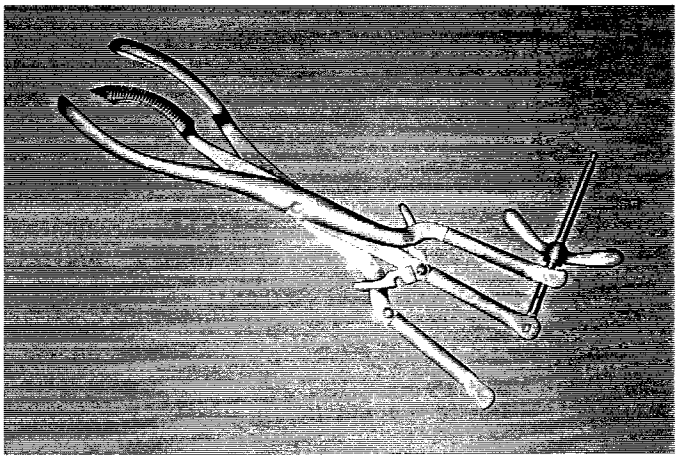
PERFORATION was the normal precursor to extraction but was occasionally advocated at the onset of labour in gross pelvic contraction. Variations of the simple spear perforator were still appearing towards the end of the 19th century but generally had been abandoned a century earlier in favour of scissors designs, which required tvvo hands to operate them, followed by more complicated cross-over patterns, usually spring loaded, which could be used with one hand. In Europe trephines were the perforators of choice by the mid 19th century.



A CROCHET AND A BLUNT HOOK were essential tools for the obstetrician for 3 centuries. The crotchet was used both for extraction by inserting through the perforated cranium and for *morcellement,* or piecemeal destruction of the fetus. They were of infinite variety - usually simple and made locally, but many had guards to protect the maternal soft tissues (and the operator).

The concept of crushing the vault, and later the base, of the skull was reintroduced toward the end of the 18th century, using instruments borrowed from surgeons, such as toothed lithotomy forceps. By the early l8th century there was a wide variety of purpose designed derivatives, or CRANIOTOMY FORCEPS, intended to combine tractor and crushing functions.

CRANIOCLASTS evolved for crushing the base of the skull when vault crushing was insufficient and they



became bigger and stronger, vvith serrated or toothed blades. AR Simpson's designs became very popular and had many modifications. Simpson, among many anecdotes, quoted a case of Hamilton's in which he took 8 hours to remove the cranium with the craniociast. The exhausted Hamilton had to be wrapped in blankets and carried home but the outcome for the patient was not stated.

CEPHALOTRIBES (Head crushers) were powerful devices with great mechanical advantage, which functioned as both crushers and tractors and Baudeloque,

who was the originator, was awarded a prize of 2,000 francs by the French Academy of Sciences. However the brutal and unwieldly construction betrayed their European origins and, although there were some lighter British versions, they were generally unpopular in Britain. Churchill (1866) said *"It would require unusual hardihood to venture upon the latter instrument (the cephabtribe) in private practice in this country "*

In the second half of the l9th century new destructive instruments abounded, including Ferguson's *Basylist* and Hubert's *Transforator* for crushing the base of the skull and extracting, and a variety of DECAPITATORS, commonly a hook with a serrated or knife edge on a long shaft. Flexible wire saws were also popular and were sometimes incorporated in the blades of forceps.

Destructive instruments had their heyday in the third quarter of the l9th century but Caesarean section was by this time becoming safer, especially if performed 'early'. A typical risk figure quoted for a large London practice in the 1860s was a maternal mortality rate of 67% if the operation was performed within 24 hours of the onset of labour. In France the maternal mortality for operations in 'early' labour was only 19%, rising to 81% when the mother was suffering from 'exhaustion'. By the last quarter of the century feelings ran high between the destructionists and caesareanists, especially in London, but Caesarean section was rapidly gaining momentum. There was also a move away from the heavier, complicated and dangerous destructive instruments in favour of simplicity. Nevertheless the hook, crotchet, decapitator and combined craniodast and cephalotribe remained standard labour ward equipment until the middle of the 20th century.

Based on a paper presented at the meeting of the Society on 16th October 1999.

For a detailed history and illustrations of these and other instruments see: The Obstetrician's Amamentarium by Brian Hibbard. San Francisco: Norman Publishing, to be published early 2000.

NOTES & QUERIES (3)
Bleeding Lancets

Notes

Therapeutic bleeding by scarification and venesection, or even arteriotomy is very ancient. The bleeding or thumb lancet (fig.1). characterised by a pointed lance shape and protected by two mobile leaves or guards., evolved from the fleam (fig.2) in the 16th century, possibly in Italy. Pare (1564) and Botallo (1577) illustrate both lancet and fleam and the latter figuresin the coat-of-arms of the Barber Surgeons Company of l,ondon. From the 17th to mid 19th centuries the bleeding lancet (or leeches) dominated venesection in France and Britain but, from the 18th century, bias replaced by the spring lancet (fig.3) in Austria, Germany and Holland. A mixture of the two instruments was found in the United States. The spring lancet has a blade, at right angles to the main axis of the instrument, closely resembling that of the fleam.

The object of these instruments was to inflict a small wound in a vein by nicking but not dividing it, nor injuring adjacent nerves and arteries. and avoiding infection although, unhappily, complications were not uncommon. Employing a tourniquet, a set quantity of blood was extracted.

Today we use an oblique pointed hollow needle and syringe to puncture veins and it seems remarkable that such needles were not available before 1,860. or so, when introduced for hypodermic injection.

Queries

1. Who invented the bleeding lancet and where?
2. Why was it considered an improvement on the fleam, particularly as the spring lancet reverted to a fleam shaped blade?
3. Indeed, was the spring lancet an improvement on the thumb lancet? Can the national differences in practice be explained?
4. Narrow hollow needles with blunt tips were used to inject anatomical specimens in the 18th century.

Why did a century pass before these needles were given a penetrating point?

5. Have you any other observations?

Readers views., observations and corrections are sought. Please write to John Kirkup, 1 Weston Park East, Bath, BAI 2XA. UK or phone or fax 01225 423 060.

REPLIES TO NOTES AND QUERIES (2)

Bow or Tenon Saws for Amputation?

I regret I had no response to this topic.

John Kirkup

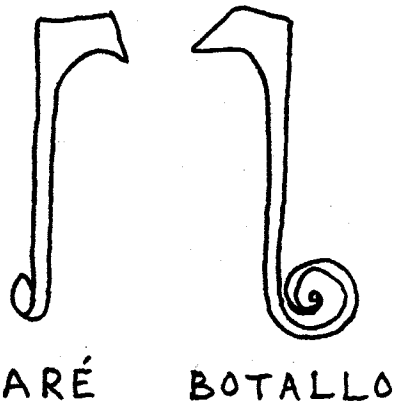


Fig. 2. Fleams of the 16th century.

Captions to Notes & Queries (3).

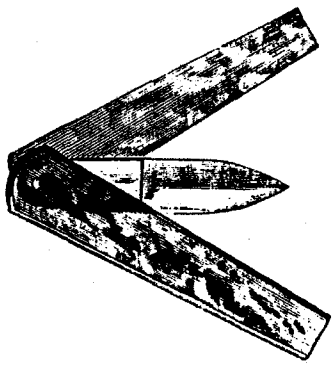


Fig. 1. Typical bleeding lancet with tortoiseshell leaves.

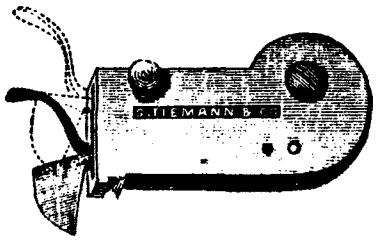


Fig. 3. Spring lancet following spring release.