

# The History of Orthopaedics and Trauma ( and wounds )



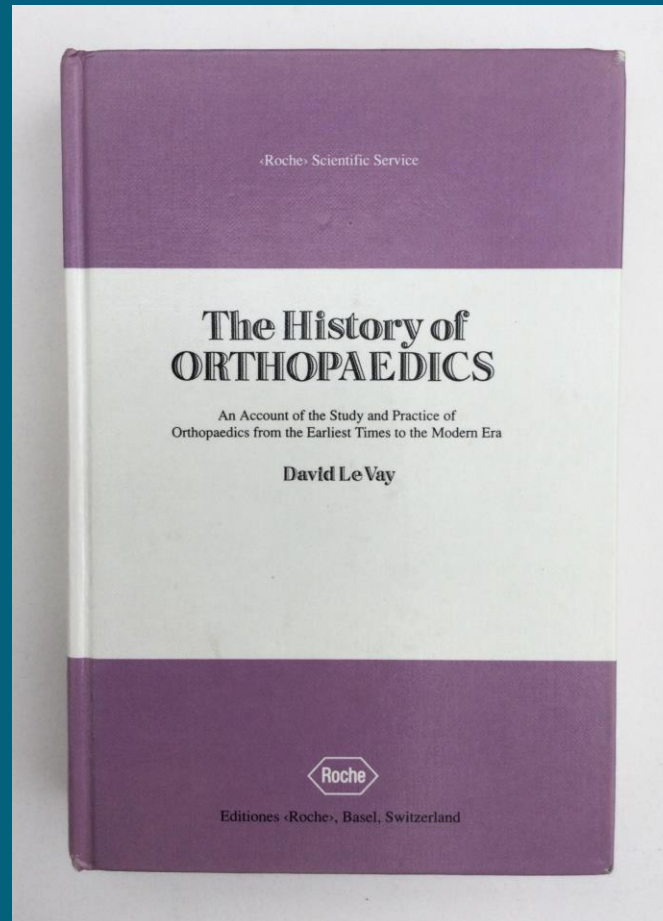
**Bryan Rhodes FRCS ( Orth ), DHMSA**

Consultant Trauma and Orthopaedic Surgeon  
Apothecaries Lecturer, Lancaster University  
Chairman, Lancaster Health and Medical Museum Collection





# Sources



# Aims

Ancient history of trauma

British history : 1550 to 1970

First world war

Implant surgery – hip replacement

Wound management



The Coat of Arms of the  
British Orthopaedic Association



# Ancient History - Egypt

Traumatic injuries well described in Edwin Smith papyrus ( c.1600BCE )

Lacerations : bandage with fresh meat on day 1 Also oil, ox fat and honey used

Stitching used in seven cases: copper and silver needles

Fractures: 'Figure-of-eight' bandage for fractured clavicle

Spinal cord injury also described

Earliest splints – wood and bark splints found in rock-cut tombs

Ebers papyrus – 'laudable' pus

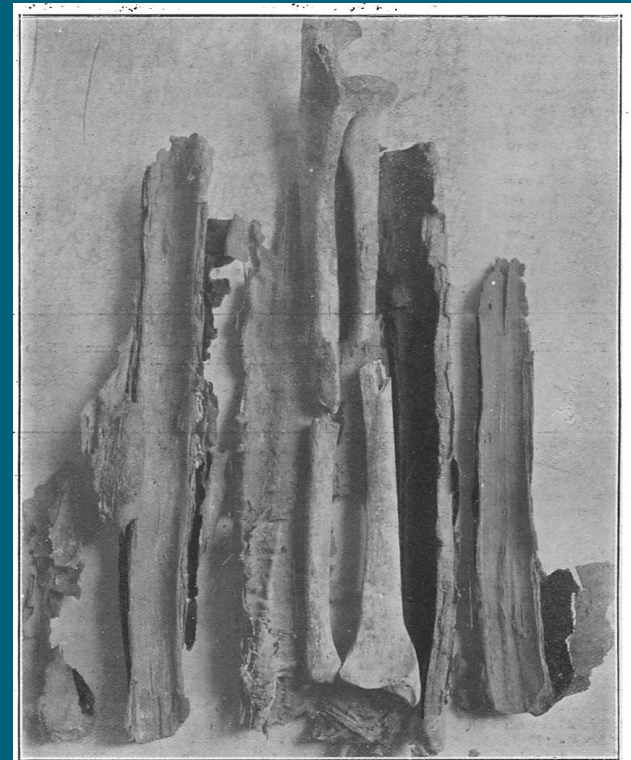


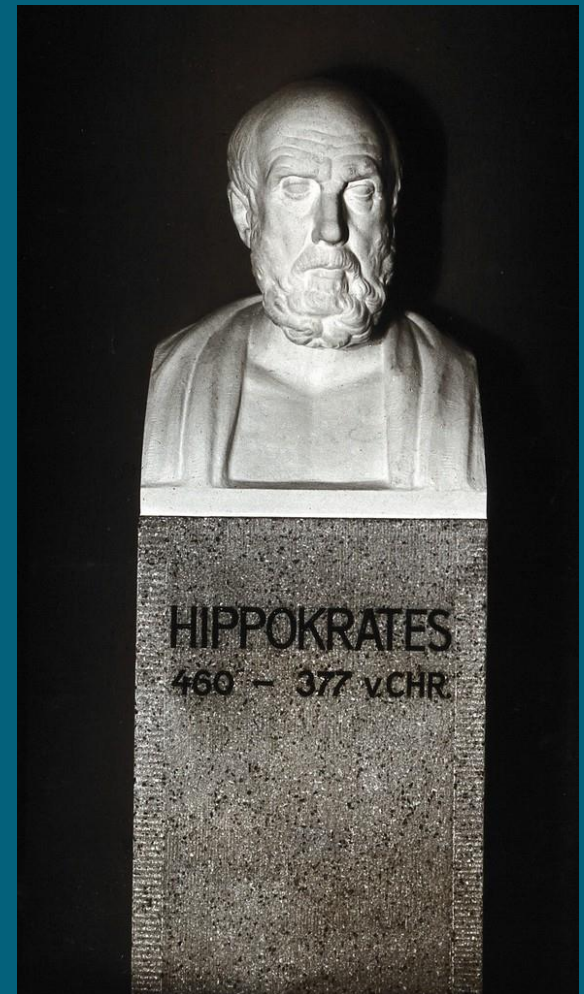
Fig. 6.—Fracture of left forearm set with bark splints. Note the blood-stained mass of vegetable fibre adhering to the ulna.

Bark splints for fracture c. 2400 BCE  
'The most ancient splints'  
G.E. Smith B.M.J. 1908

# Hippocrates ( 460 – c.377 BCE. )



Asklepeion of Kos  
Image : CC BY-SA 3.0



Wellcome images

# Hippocrates

- ‘What drugs will not cure, the knife will; what the knife will not cure, the cautery will; what the cautery will not cure must be considered incurable.’

From *Aphorisms*

For recurrent dislocation of the shoulder:

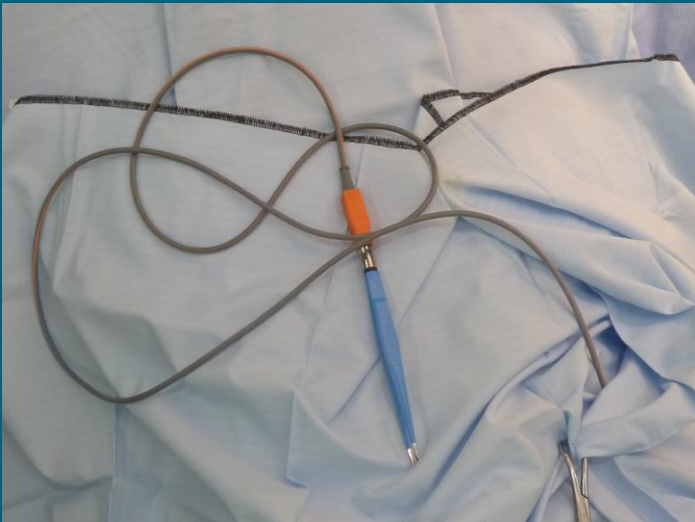
‘use cauteries that are not thick, not much rounded but of an elongated shape’



Bronze cautery, Roman era  
Image: Science Museum, London



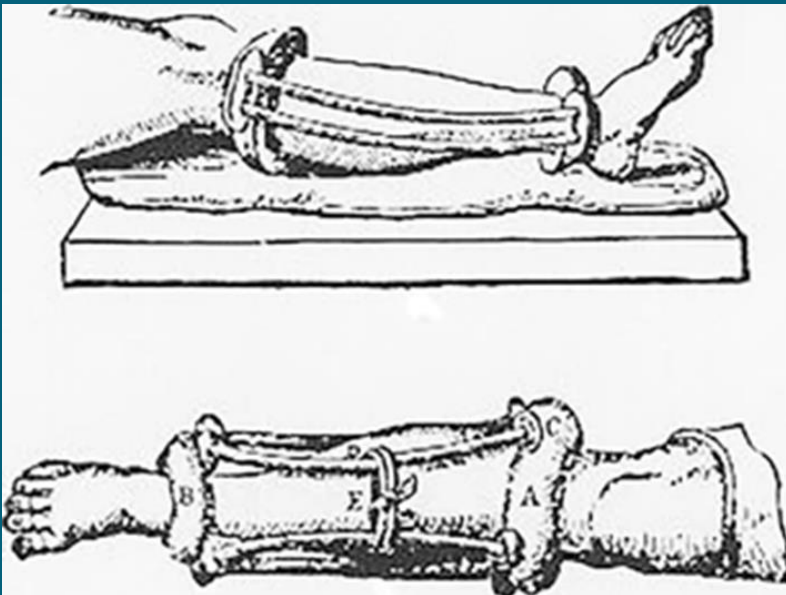
# Modern Cautery





# Hippocrates - On Fractures

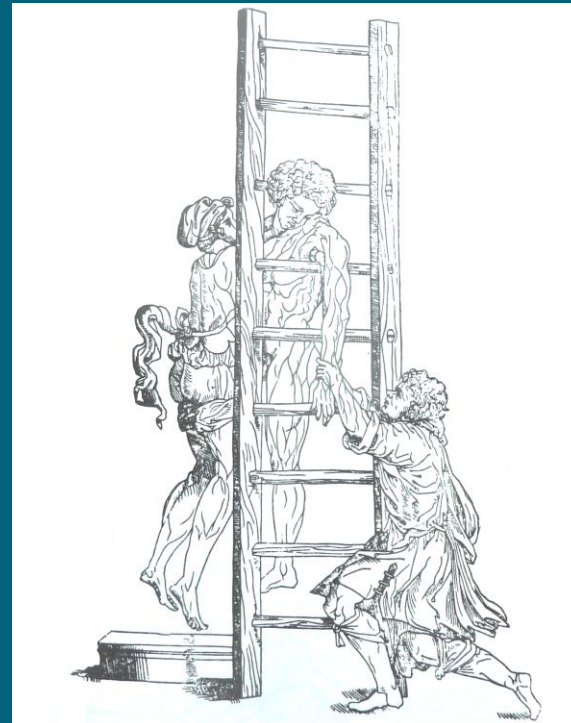
- Detailed description of bandaging
- Recognised importance of 'reducing' displaced fractures
- Understood challenges of treating open/ compound fractures



Tensioned tibial splint / traction device  
From D. LeVay 'The History of Orthopaedics'

# Hippocrates – On dislocations

- ‘dislocation at the ankle less troublesome than dislocation of the wrist’
- Described several methods of reducing shoulder dislocation



Guido Guidi  
Compilation, 1544  
Wellcome images

# The Hippocratic scamnum

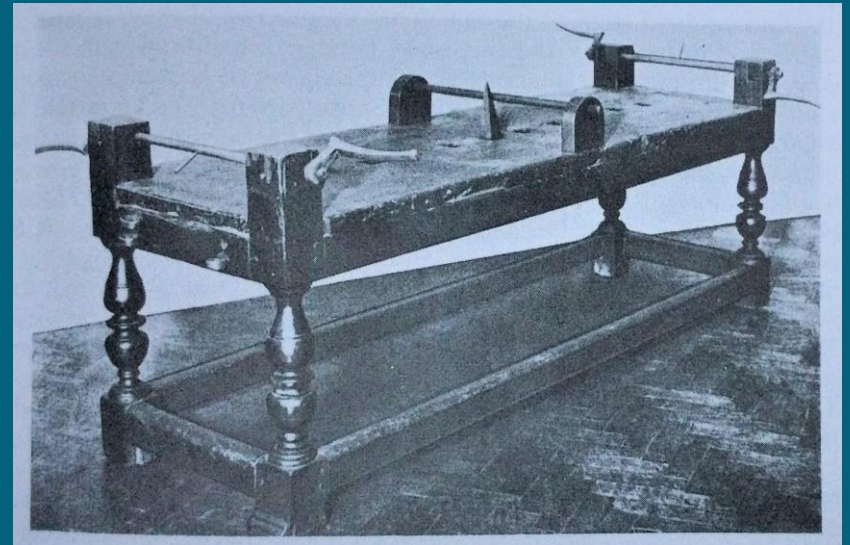
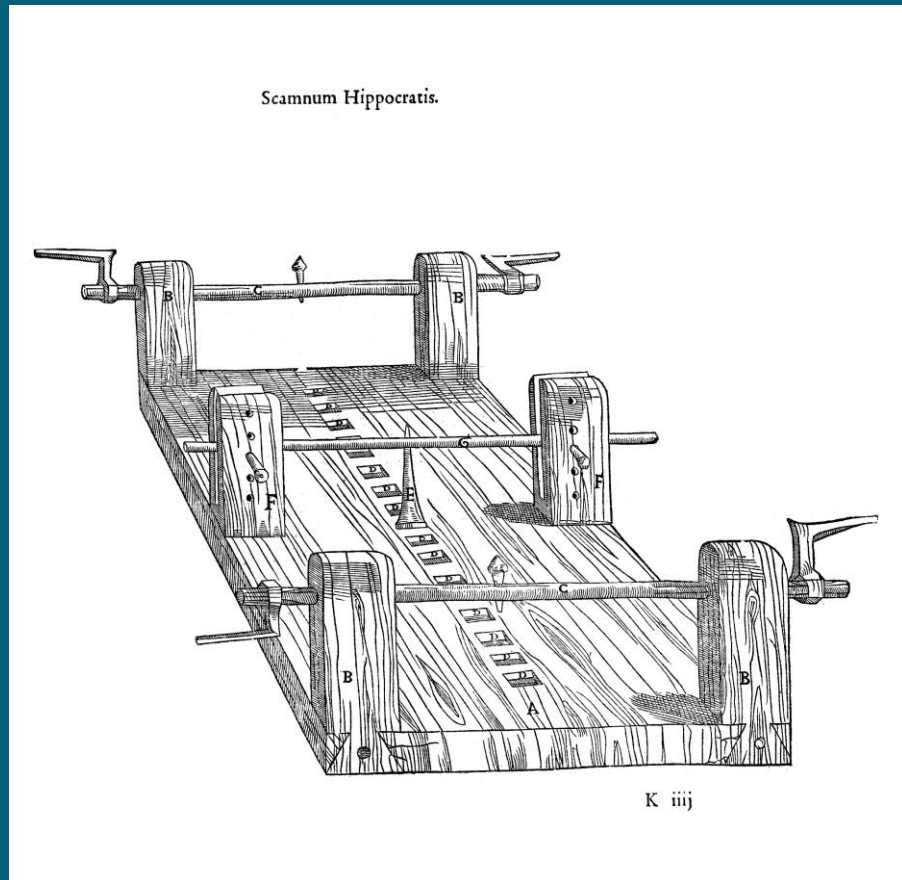


Image: from 'The History of Orthopaedics' by D. LeVay

# Modern Traction Table





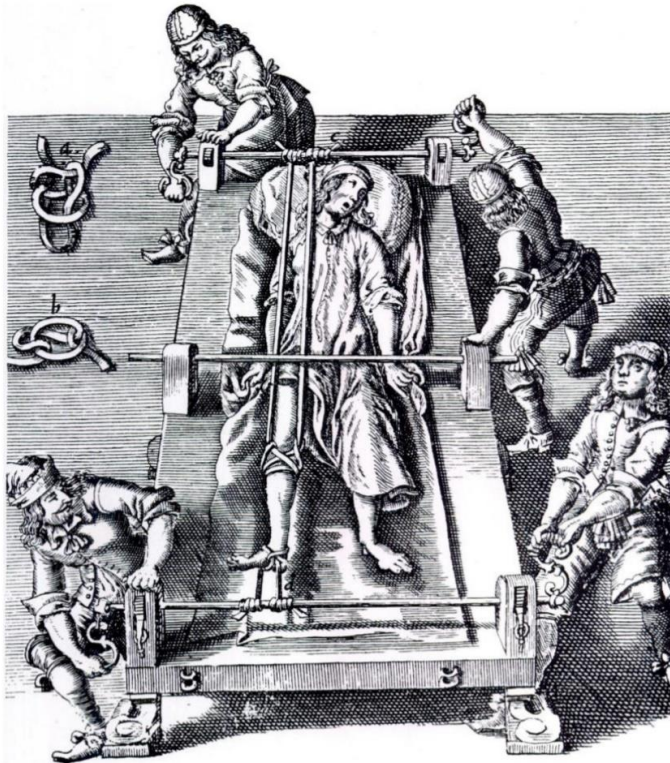
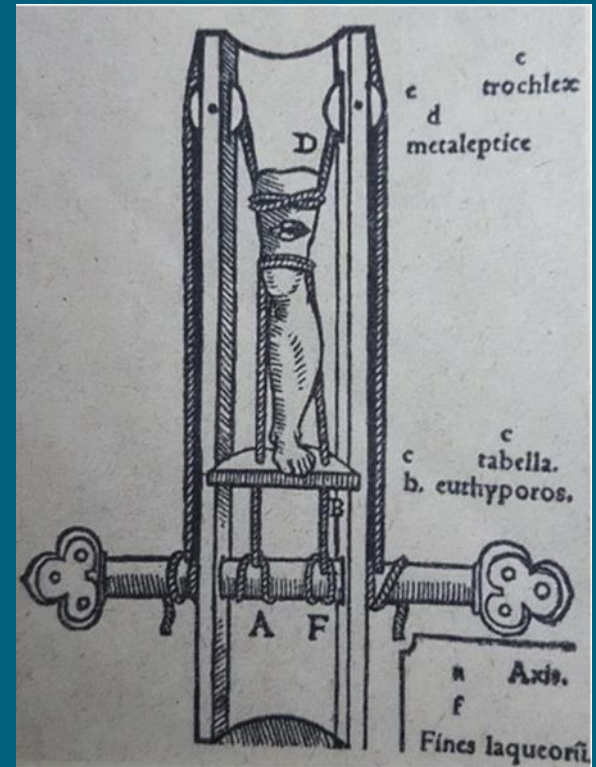


FIG 6

The Scamnum in use in the seventeenth century (Scultetus). This is the Vidian reconstruction without the modifications suggested by Littre.

Image : from D. Griffiths and W. Brockbank  
( after Scultetus )

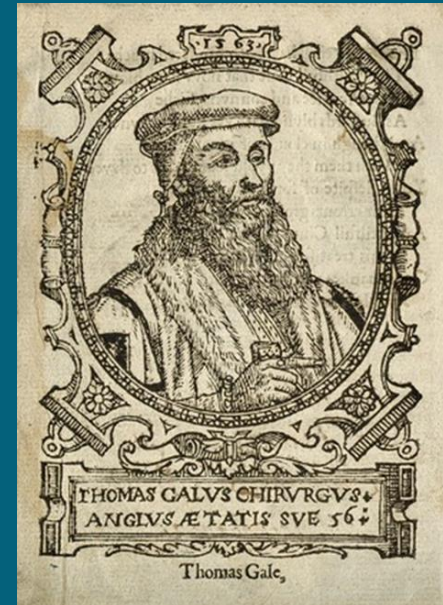


Glossocomium as modified by  
Francois Rabelais 1537

# Thomas Gale ( 1507 – 1567 )



Henry VIII and the Barber Surgeons  
by Hans Holbein the Younger



Thomas Gale. Woodcut, 1563.  
Image : Wellcome Collection

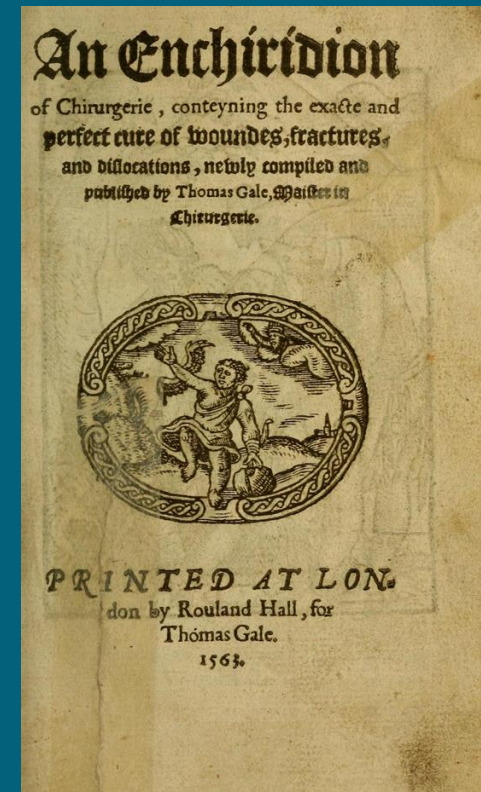


# Certaine Workes of Chirurgerie - 1563

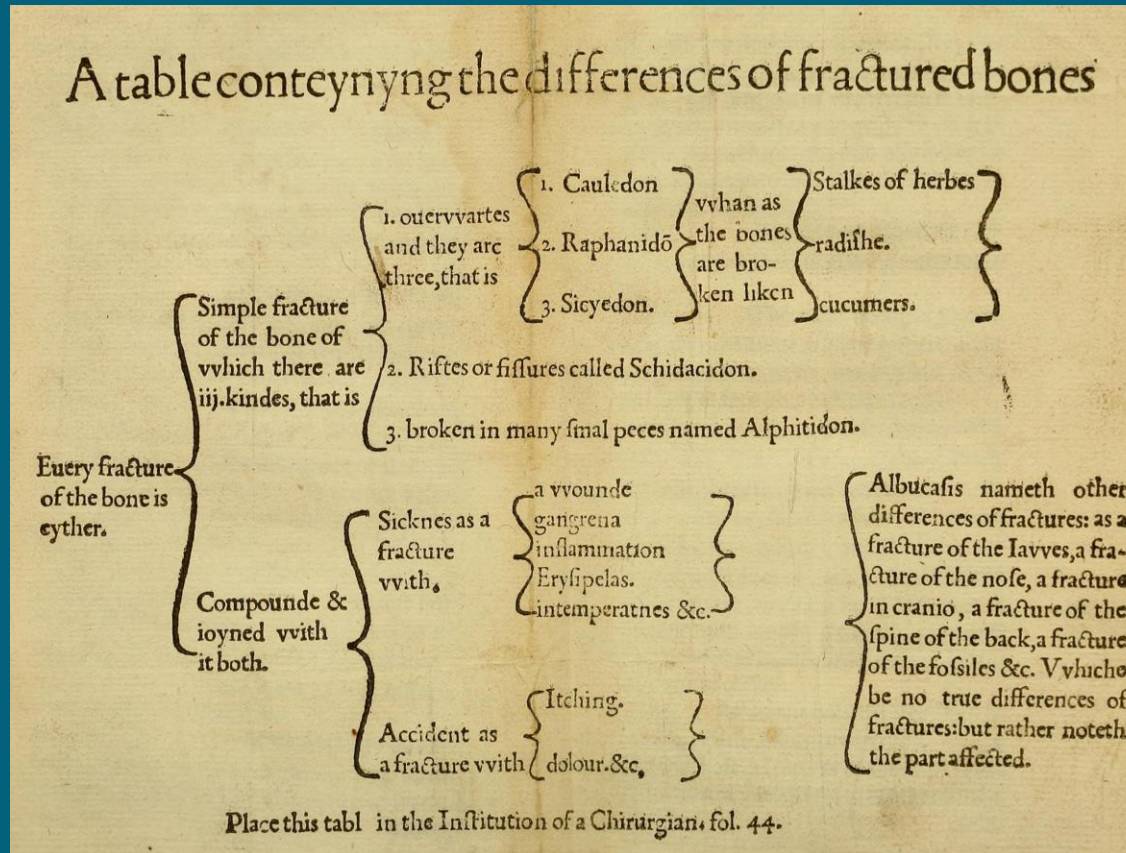


## The contentes.

1. An Institution of Chirurgerie. lib.i.
2. An Enchiridion contelning the cure  
of woundes, fractures, and dislocati-  
ons. lib.iiii.
3. An excellent treatise of the wounde  
made with gonneshoote, in whiche is  
confuted the grose opinion of Io. Vi-  
go, Brunswicke, Alfonso Ferrus,  
and others. lib.i.
4. An Antidotarie conteynning the prin-  
cipall and secrete medicines, vsed in  
the art of Chirurgerie. lib.i.



# Thomas Gale : Classification of Fractures 1563



From: Thomas Gale, 'Certain Workes of Chirurgerie' 1563



# Richard Wiseman ( 1620 – 1676 )



Image : R.C.S.E. collection

‘Severall Chirurgical Treatises’-  
1676

D’Arcy Power : “ he was the first of  
the great English surgeons”

# EIGHT CHIRURGICAL TREATISES,

ON THESE

## Following Heads :

(VIZ.)

- |                               |                                  |
|-------------------------------|----------------------------------|
| I. Of Tumours.                | V. Of Wounds.                    |
| II. Of Ulcers.                | VI. Of Gun-shot Wounds.          |
| III. Of Diseases of the Anus. | VII. Of Fractures and Luxations. |
| IV. Of the Kings-Evil.        | VIII. Of the Lues Venerea.       |

By **RICHARD WISEMAN**, Serjeant-Chirurgion to **KING CHARLES the II<sup>d</sup>**

The Fourth EDITION.

L O N D O N,

Printed for *Benjamin Tooke* : And *John Meredith*,  
in Trust for *Roylson* and *Elizabeth Meredith* :  
And are to be Sold by *S. and J. Sprint*, *B. Aylmer*, *H. Bonwicke*,  
*W. Rogers*, *C. Brame*, *T. Newborough*, *J. Nicholson*, *T. Chapman*,  
and *P. Monckton*, Booksellers. MDC C V.

## A TABLE of the Treatises and Chapters.

III. The History of the Disease, with the Diagnosticks and Prognosticks,	238	VIII. Of Gunshot Wounds in the Thorax,	410
IV. Of the Method of Cure,	242	IX. Of Symptoms of Gun-shot,	413
V. Of Ophthalmia, 301. Lippitudo,	309	An APPENDIX to the Treatise of Gun-shot Wounds,	414
VI. Of Egilops, Anchylops, &c.	310	I. Of Burns with Gun-powder, &c.	415
VII. Of the Tonfils,	316	II. Of Gangrene and Sphacelus,	417
VIII. Of Ranula,	320	III. Of Fistula,	431

### TREATISE V. Of WOUNDS.

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III. Of Wounds of the Nerves, Tendons and Ligaments,	339
IV. Of Wounds of the Face,	342
V. Of Wounds penetrating the Oesophagus and Aspera Arteria,	344
VI. Of Wounds of the Limbs,	345
VII. Of Wounds of the Breast,	347
VIII. Of Wounds of the Belly,	351
IX. Of Wounds of the Head,	354
An Additional Discourse of Wounds of the Brain,	380

### TREATISE VI. Of GUN-SHOT WOUNDS.

Chap.	Page
I. Of Gun-shot Wounds in general,	384
II. Of the Cure of Gun-shot Wounds; and first, of Extraction of Bullets, &c.	385
III. Of Dressing Gun-shot Wounds after Extraction,	389
IV. Of Accidents befalling Gun-shot Wounds, and of Sinuous Ulcers,	392
V. Of Gun-shot Wounds with Fractures,	395
VI. Of Gun-shot Wounds in the Joints,	406
VII. Of Gun-shot Wounds in the Belly,	408

### TREATISE VII. Of FRACTURES and LUXATIONS.

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I. Of Fractures,	434
II. Of Luxations in general,	448
III. Of Luxation of the Lower Jaws,	452
IV. Of Luxation of the Clavicle or Collar-bone,	454
V. Of Luxation of the Shoulder,	455
VI. Of Luxation of the Elbow-joint,	461
VII. Of Luxation of the Carpus, Metacarpus, and Fingers,	463
VIII. Of Luxation of the Hip, <i>ibid.</i>	463
IX. Of Luxation of the Knee,	465
X. Of Luxation of the Ankle-bones,	466
XI. Of Luxation of the Spine,	467

### TREATISE VIII. Of LUES VENEREA.

Chap.	Page
I. Of Lues Venerea,	468
II. Of the Remedies generally used in the Cure,	471
III. Of the Specificks in this Disease,	479
IV. Of the Cure of the Symptoms,	483
V. Of Gonorrhoea,	519
VI. Of the ill Consequences of a Gonorrhoea,	527

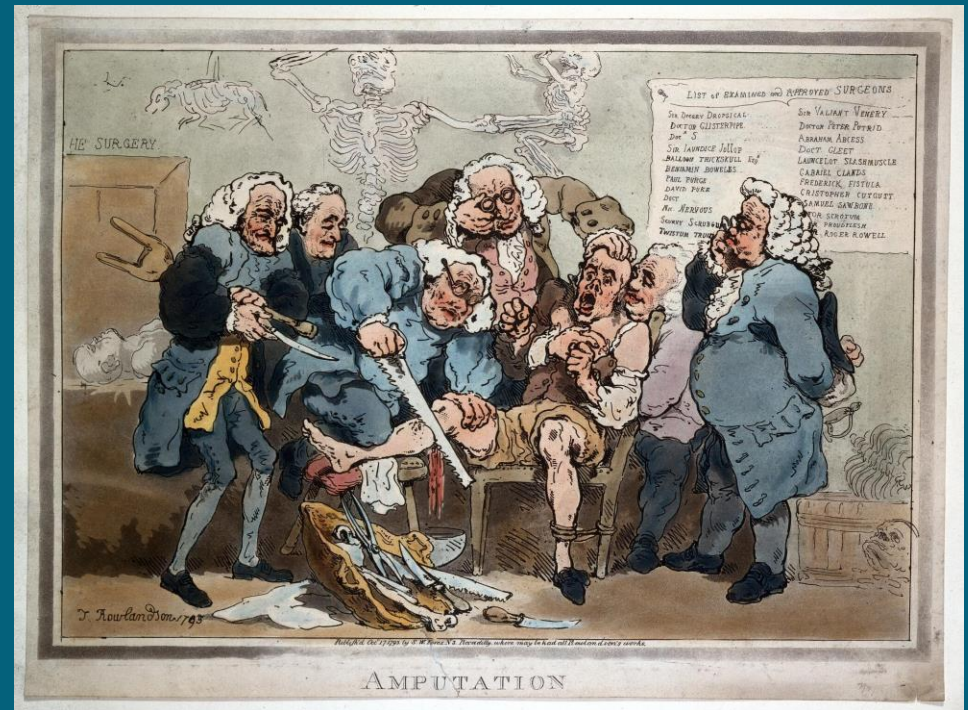
A TREA-



# Orthopaedics and the British Enlightenment

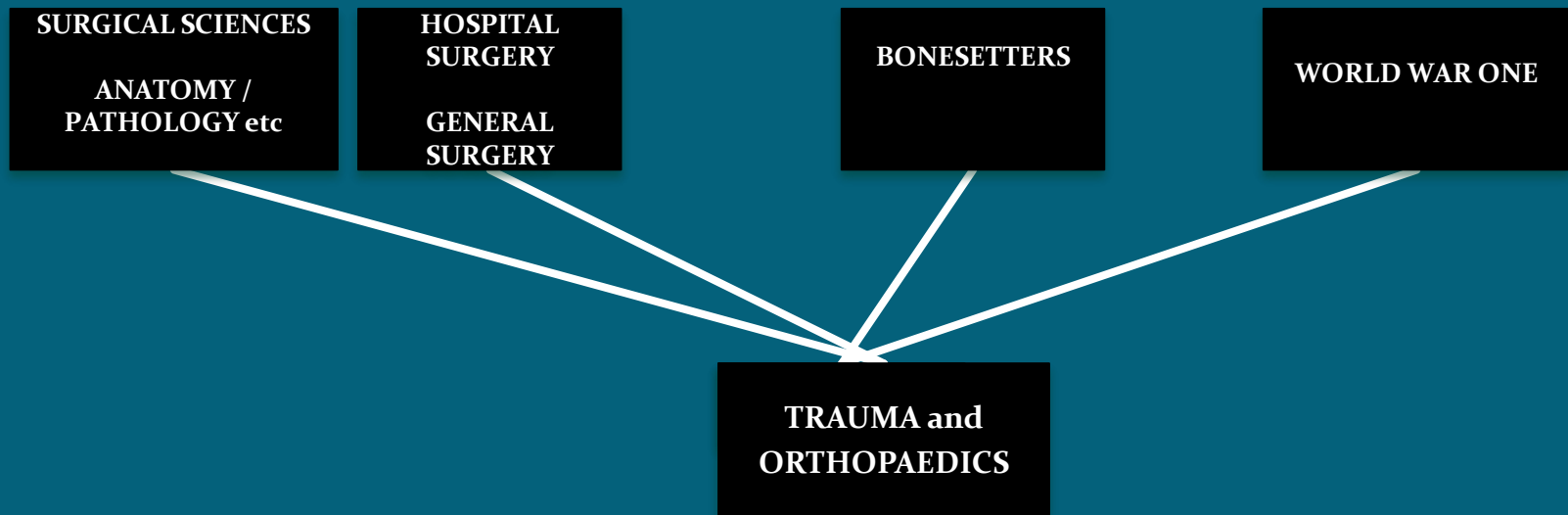


A surgeon operating on a man's shoulder  
by Gerrit Lundens c. 1677  
Wellcome images



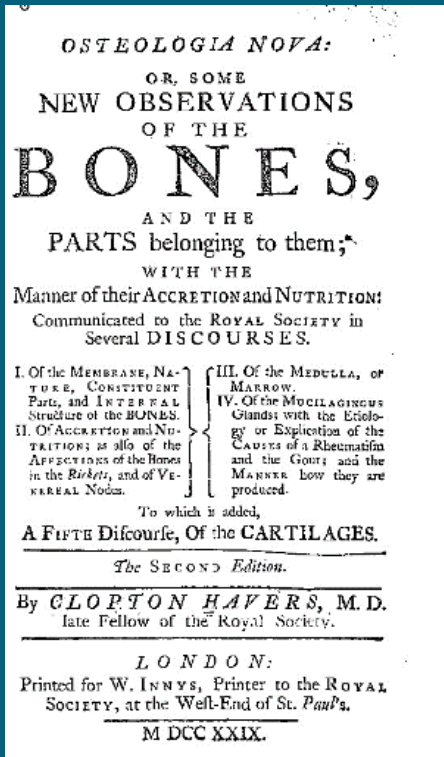
'Amputation' by T. Rowlandson 1793

# The Origins of Modern Trauma and Orthopaedics

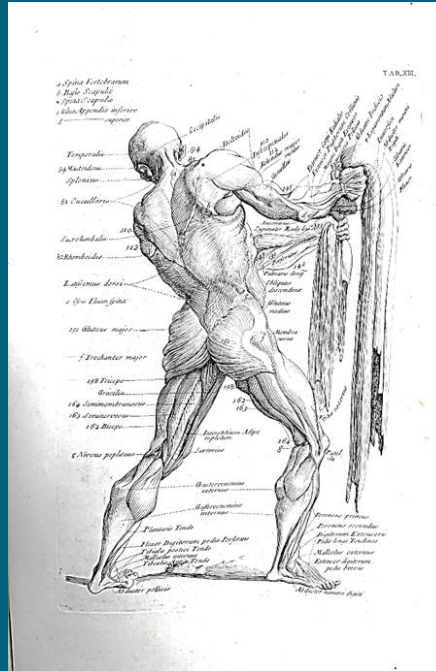




# Clopton Havers ( 1657-1702 )



# William Cowper ( 1666 – 1709 )



**Clopton Havers M.D., FRS. ( 1657 - 1702 )**  
***Osteologia Nova* - First published in 1691**

Image : William Cowper  
From 'Myotomia Reformata: Or An Anatomical  
Treatise on the Muscles of the Human Body' 1724

# William Cheselden ( 1688 – 1752 )



Image: Wellcome Collection

## OSTEOGRAPHIA, OR THE ANATOMY OF THE BONES. In FIFTY-SIX PLATES.

By WILLIAM CHESELDEN.

Every BONE in the HUMAN BODY is here delineated as large as the Life, and again reduced to lesser Scales, in order to shew them united to one another.

Likewise the gradual Increase of the BONES, from the first Appearance of Ossification in the Fetus to that of an Adult, their internal Texture, as also the Ligaments of the Joints, and a great Variety of DISEASED BONES are here exhibited.

This Work was executed in a Camera Obscura contrived on Purpose by the Author, which renders it more exact and complete than any Thing of the kind whatever; one View of such Prints shewing more than the fullest and best Description can possibly do.

L O N D O N.

*Osteographia* 1733

# Nicolas Andry Orthopaedia 1741

Orthos = Straight

Paidon = Child



## ORTHOPÆDIA: Or, the ART of CORRECTING and PREVENTING DEFORMITIES IN CHILDREN:

By such MEANS, as may easily be put in  
Practice by PARENTS themselves, and  
all such as are employed in Educating  
CHILDREN.

To which is added,  
A DEFENCE of the ORTHOPÆDIA,  
by way of SUPPLEMENT, by the AUTHOR.

Translated from

The French of M. ANDRY,

Professor of Medicine in the ROYAL COL-  
LEGE, and Senior Dean of the Faculty of  
PHYSICK at Paris.

IN TWO VOLUMES.

Illustrated with CUTS.

VOL. I.

LONDON:

Printed for A. MILLAR, at Buchanan's Head, oppo-  
site to Catherine-street, in the Strand.

M. DCC. XLIII.



# John Freke FRS ( 1688 – 1756 ) - Freke's Commander ( 1743 )

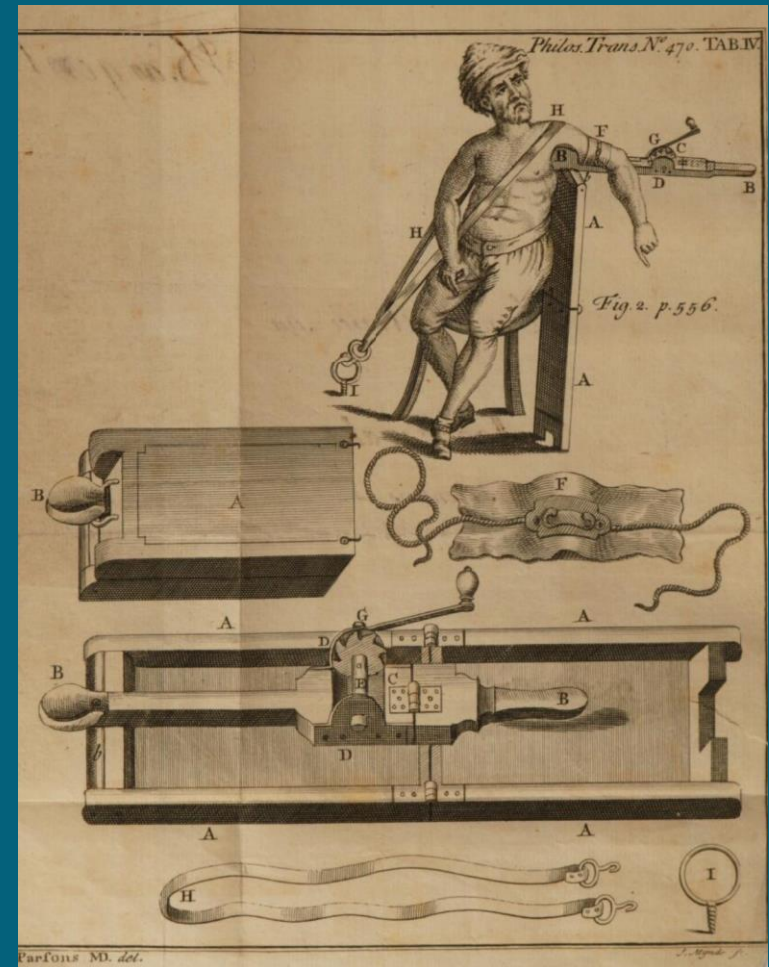
*The Description of an Instrument, called a Commander, for reducing a dislocated Shoulder; invented by Mr. John Freke, Surgeon of St. Bartholomew's Hospital, and F. R. S.*

GENTLEMEN,  
I Should not have presented this to you, but to shew in how small a Compass the whole Power which can be made use of in reducing a dislocated Shoulder can be contracted. If therefore a Machine for this Purpose be not portable, it matters but little to an afflicted Patient Ten Miles off, how good an Instrument is out of his Reach.

This Machine (see TAB. IV. Fig. 2.) which consists of Two Boxes *A*, joined at the Ends by



Image : St. Barts.  
Museum



## Percival Pott ( 1714 – 1788 )

Son of a scrivener

Apprenticed to Edward Nourse for 200 guineas

Became member of the Company of Barber –Surgeons

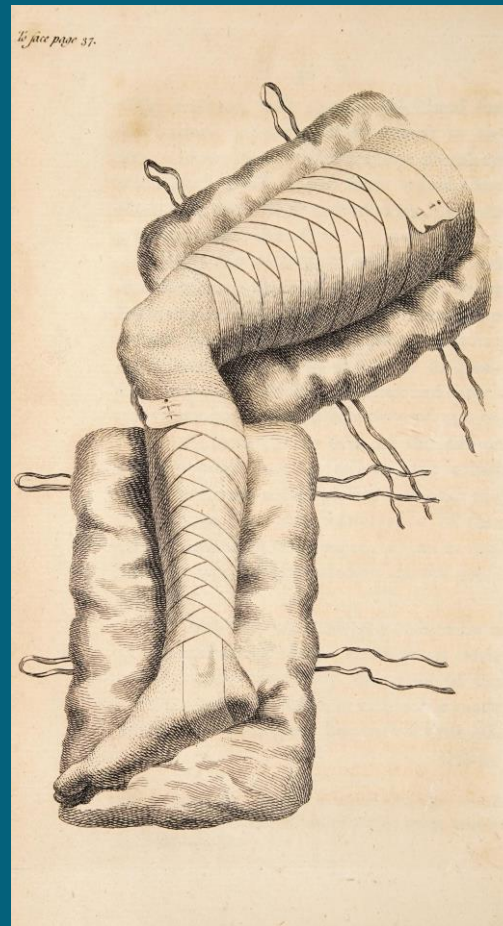
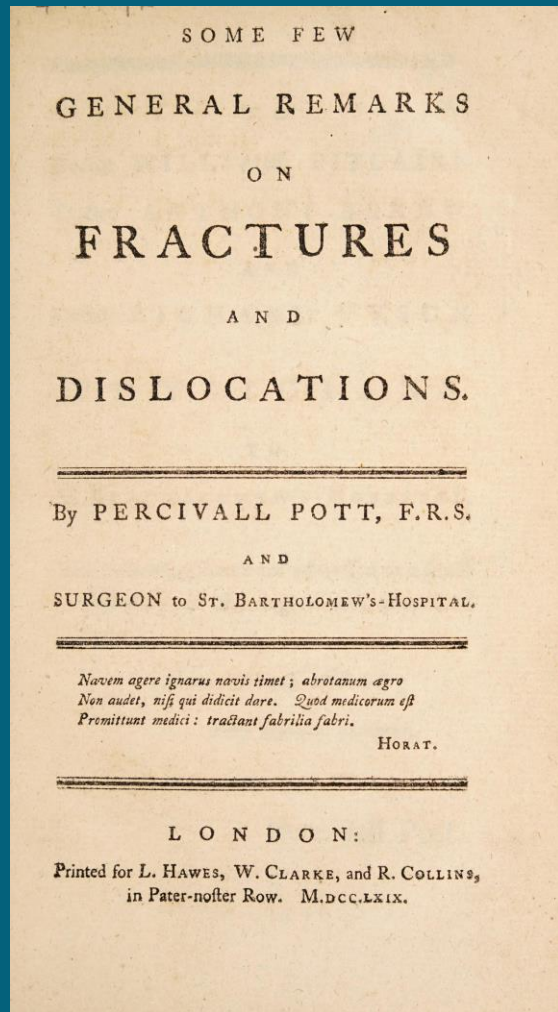
Surgeon to St. Barts

Sustained an open /compound fracture of the tibia in 1756

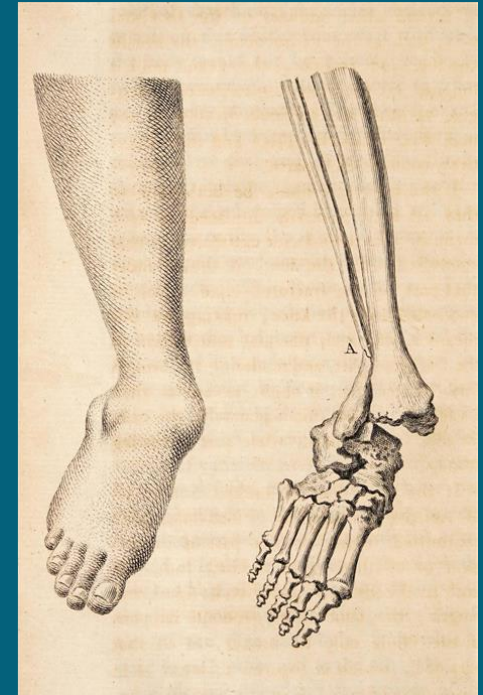


Portrait by George Romney  
Royal College of Surgeons of England

# Some Few Remarks upon Fractures and Dislocations - 1768



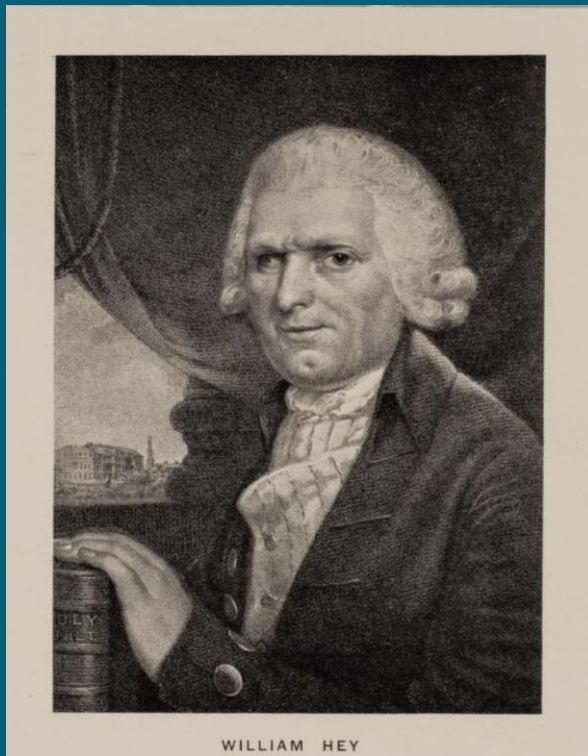
The 18-tailed bandage



Fracture – dislocation of the ankle



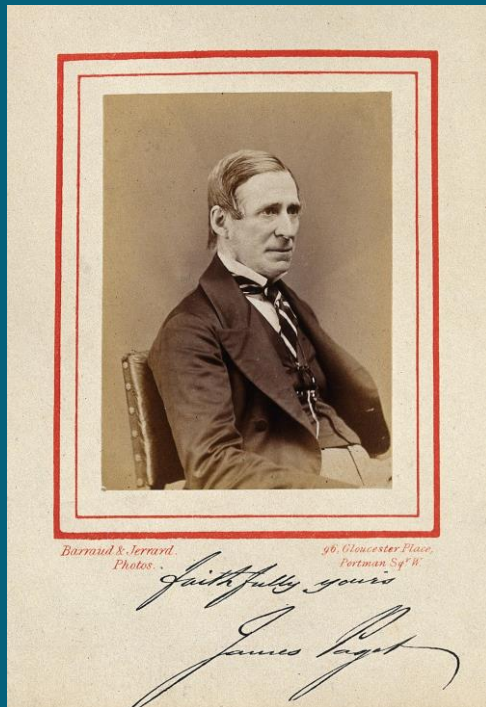
## William Hey ( 1736 – 1819 )



Provincial surgeon-apothecary  
Established Leeds Infirmary

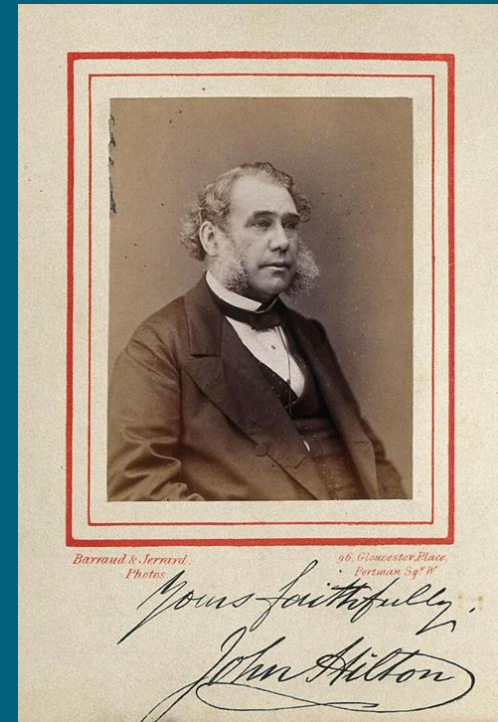
Known for Hey's saw, Hey's ligament  
and Hey's Internal Derangement of  
the Knee (1782)

James Paget ( 1814 – 1899 )



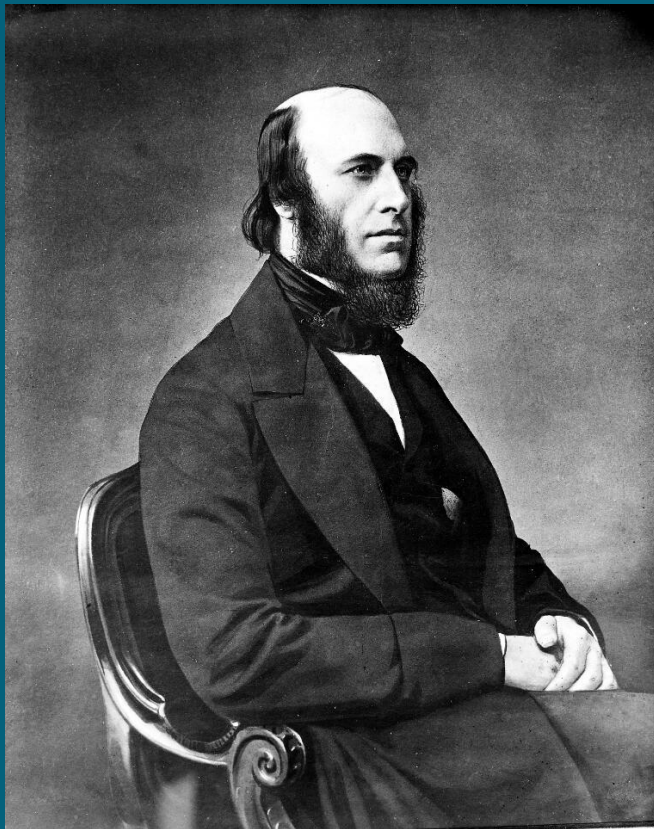
Lecture Notes on Surgical  
Pathology 1853  
Paget's disease of bone  
Paget's disease of the nipple  
Paget – Schroetter syndrome  
Carpal tunnel syndrome

John Hilton ( 1805 – 1875 )



Appointed Senior Surgeon at  
Guy's Hospital in 1849  
Brilliant anatomist – Hilton's law  
Published 'On Rest and Pain' in  
1863

## William John Little ( 1810 -1894 )



Wellcome images

Born at the Old Red Lion in London

Sought treatment for his own club foot  
Popularised achilles tendon tenotomy

Founded the Institute of Orthopaedics, 1840

Little's disease : spastic cerebral palsy 1862



# Specialist Orthopaedic Centres in England

1817 General Institute for the Relief or Persons  
Labouring under Bodily Deformity  
Now the Royal Orthopaedic Hospital, Birmingham

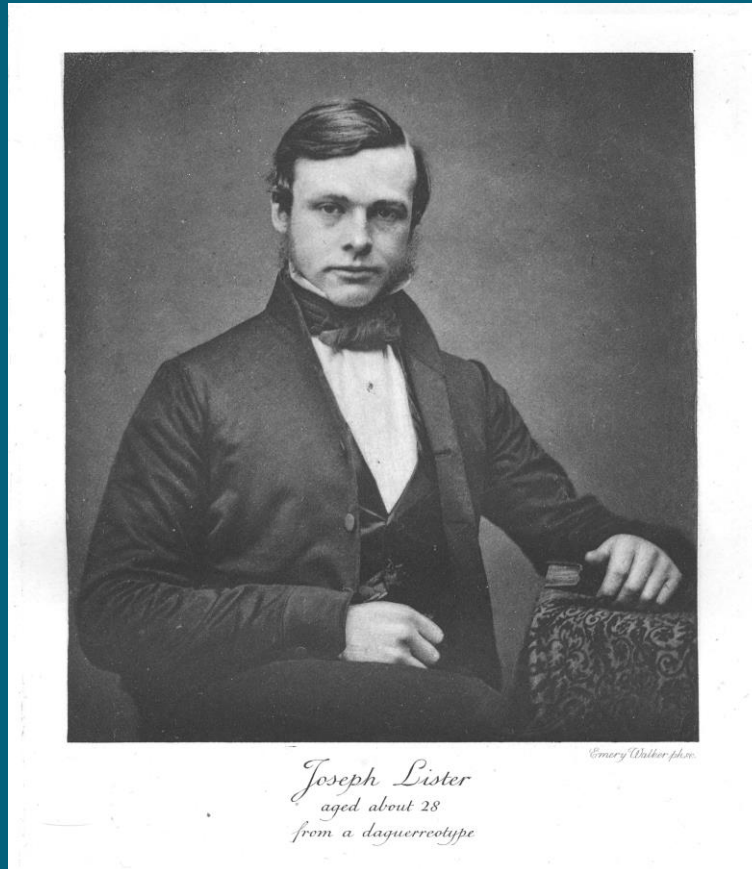
1840 Orthopaedic Institution, London – became the  
Royal Orthopaedic Hospital in 1845

1872 Wingfield Convalescent Centre, Oxford opened.  
Renamed Nuffield Orthopaedic Hospital in 1950



Site of former RNOH  
outpatient clinic, Great  
Portland Street, London

# Hospital Surgery - Joseph Lister 1827 -1912



Wellcome images

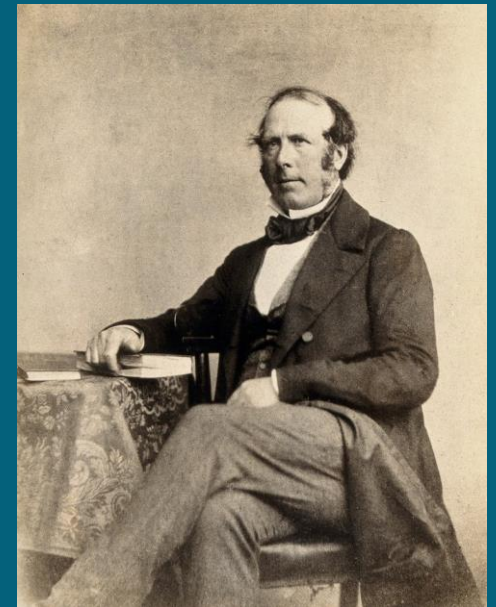
## Lister in London – UCL / UCH



Image: BR collection



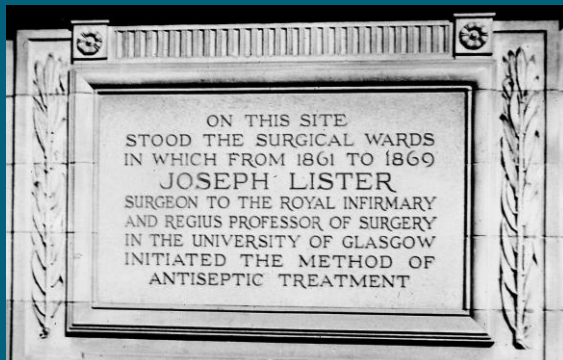
Joseph Jackson Lister  
Wellcome images



William Sharpey, Professor  
of Physiology, UCL  
Wellcome images



# Lister in Glasgow ( 1861 – 69 )



Photo's: Wellcome images

# Carbolic acid

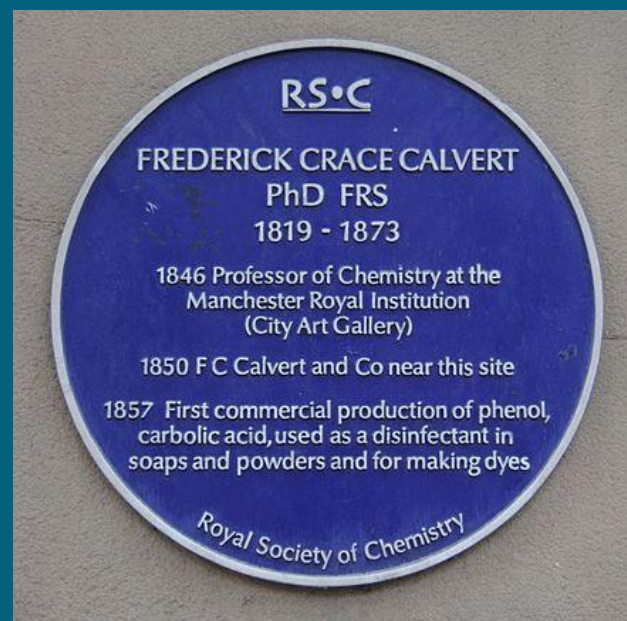
*The Lancet* - March to July, 1867

“On a New Method of Treating Compound Fractures, Abscess, etc., with Observation on the Conditions of Suppuration”

First case was an open/compound fracture

Used German creosote then carbolic acid

Dressing – lint soaked in carbolized oil



## Lister's carbolic sprays for the operating theatre – 1871 to 1887



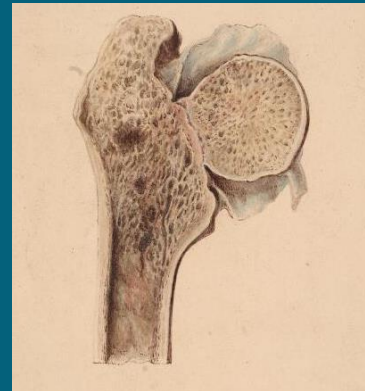
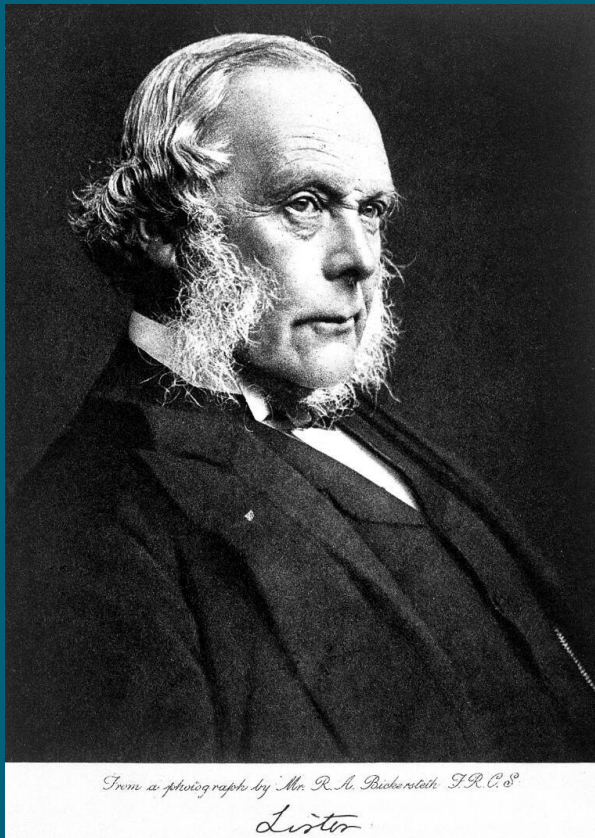
The 'donkey engine'  
Wellcome images



The steam spray  
Image: RCSPG



# Lister – orthopaedics and trauma

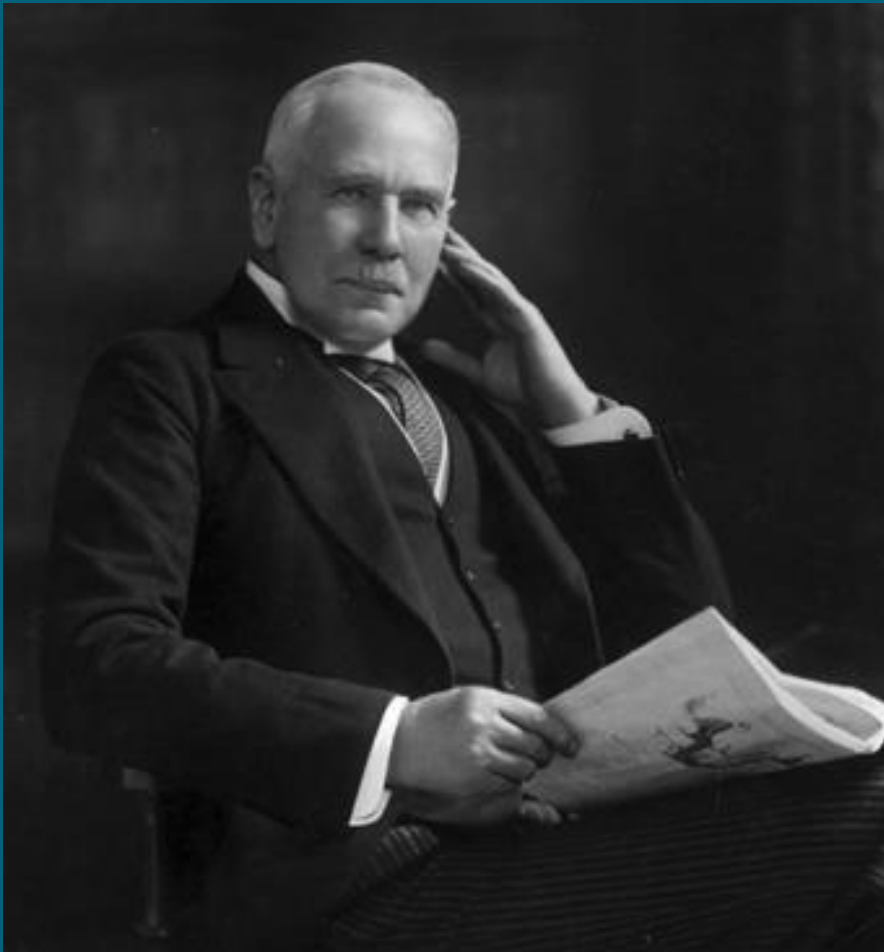


Ununited fracture neck of femur  
Wellcome images



Examples of catgut in carbolic oil  
prepared by Lister  
Wellcome images

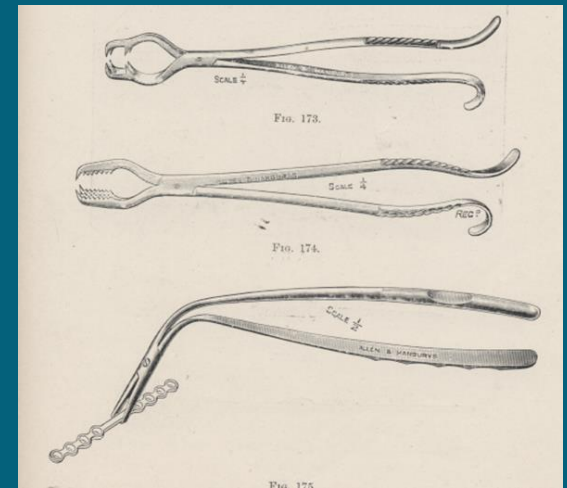
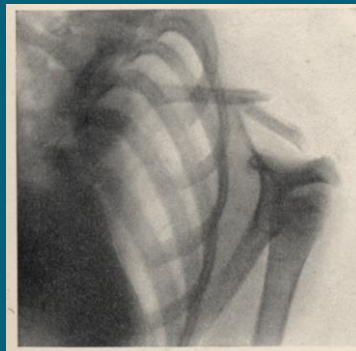
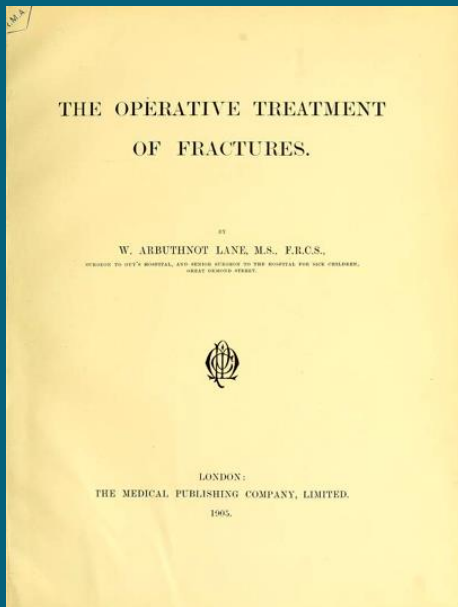
## William Arbuthnot Lane ( 1856 - 1943 )



Aseptic surgery  
Internal fixation – plating  
Aseptic No-Touch Technique ( ANTT )

Paediatric Cleft palate operation  
Colectomy – large bowel excision

# W. A. Lane - Operative Treatment of Fractures



Lane's aseptic no-touch  
technique - instruments



## Sekkotsu ( Judo ) – Japanese bonesetters



Wellcome images

# The Compleat Bone-setter 1656

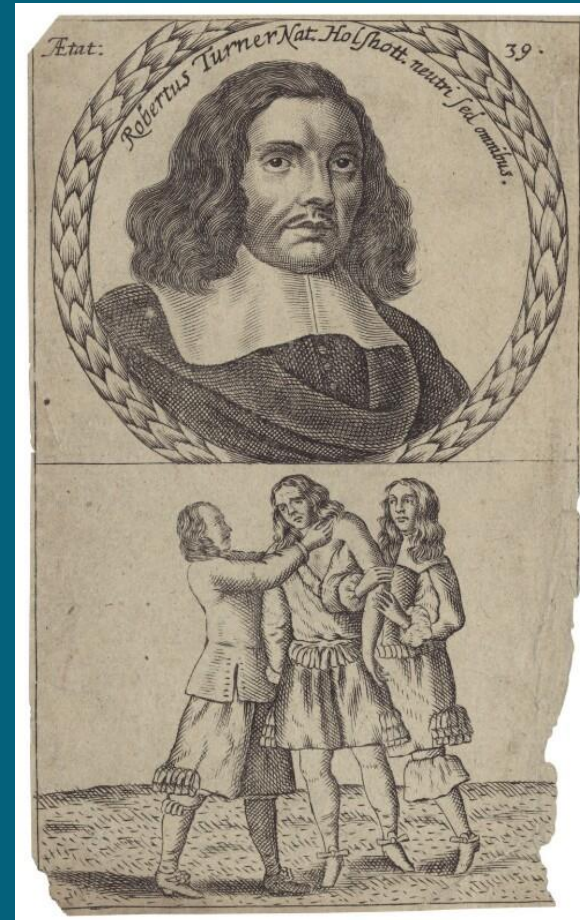
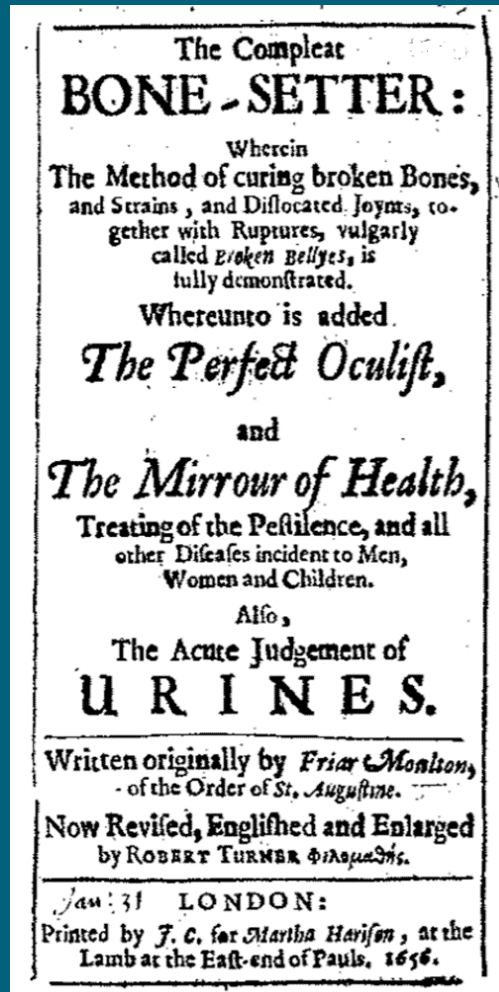


Image: National Portrait Gallery

# The Compleat Bone-setter

*Another Plaister for the same.*

Take Holly-hock Roots 3 ounces,  
 Acorn-budds 3 quarters of an ounce.  
 Flowers of Self-heal 1 ounce and a half,  
 Sallet-Oil,  
 Oil of Myrtles; of each 3 quarters of an ounce,  
 Red Wine 24 ounces,  
 Self-heal Water 12 ounces;  
 Frankincense,  
 Myrrhe; of each 1 dram,  
 Deeres suet 1 scruple and a half,  
 Turpentine half an ounce,  
 Sealed earth half a dram,  
 Mummy two Drams and a half.

First bruise the Holly-hock roots, Self-heal flowers, and Acorn-budds, very small, and beat them to pap; then add thereunto the Wines, Oils, and Self-heal Water, and boyl all together,

C 4

A plaister for eluxation ( p23 )

*A Salve very good for an extenuated or withered Member.*

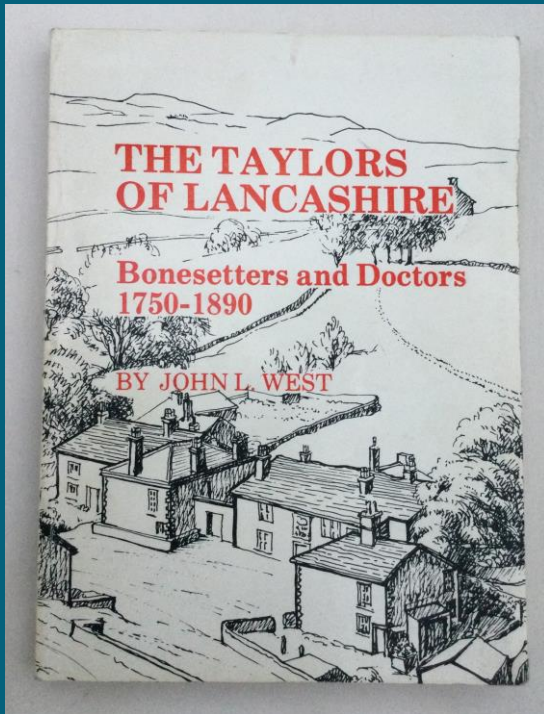
Take Cats Grease,  
 Deers-suet,  
 Bears-Grease,  
 Hogges-Grease,  
 The marrow of Neats feet,  
 Honey,  
 Doggs-Grease,  
 Badgers-Grease; of each a like quantity:

Boyl them all together in Wine to an oyntment; then strain it, and there-with anoynt the place affected, before the fire, twice a day.

A salve for a 'withered member' (p25)  
 ( Neats feet = cow's hooves )



# Provincial Bonesetters



The Taylors of Lancashire  
The Huttons of Westmoreland  
The Crowthers of Wakefield  
The Masons  
The Bennetts of Oxfordshire  
The Thomas's of Anglesey

John Wallin / Sarah Mapp - Epsom  
Ellen Haythornthwaite – Trough of Bowland

# Sarah Mapp ( 1706 – 37 )

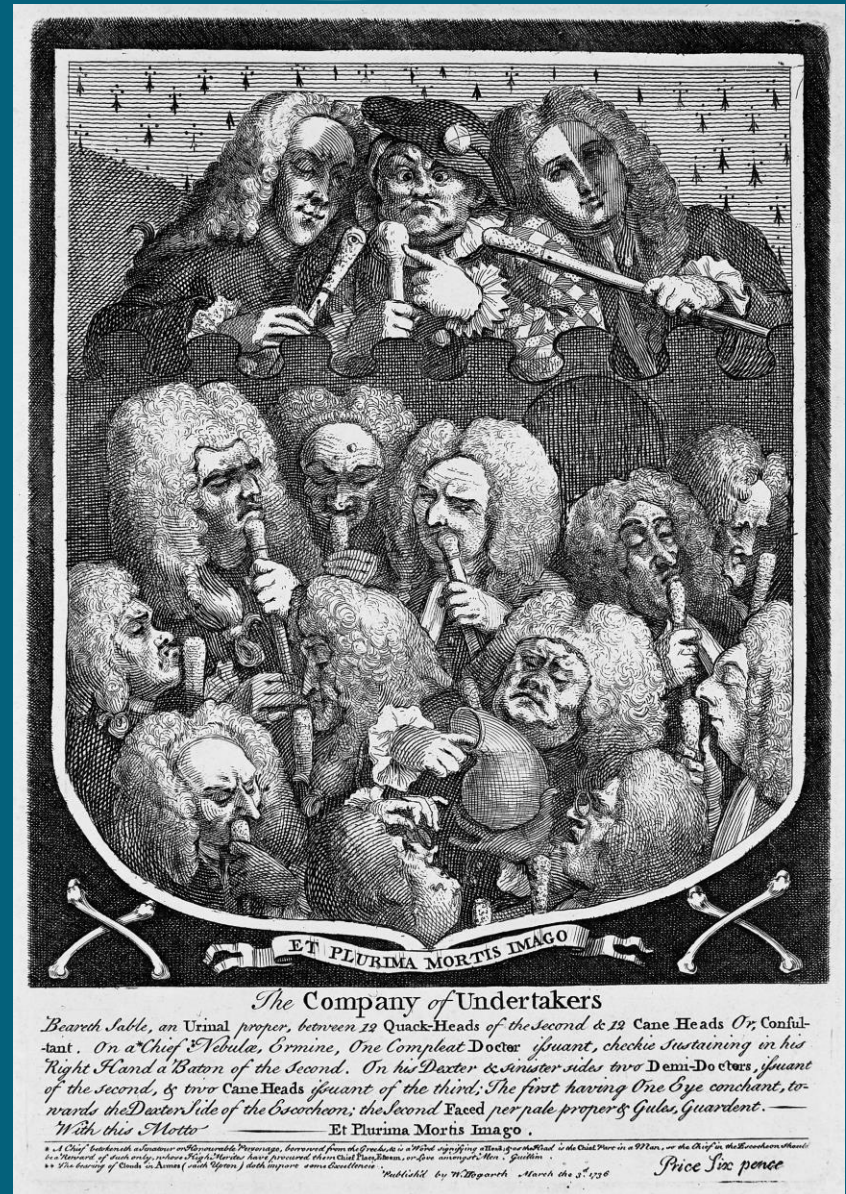
Daughter of John Wallin bonesetter

Worked as a bonesetter in Epsom

In 1736 started a weekly practice at Grecian Coffee House, London

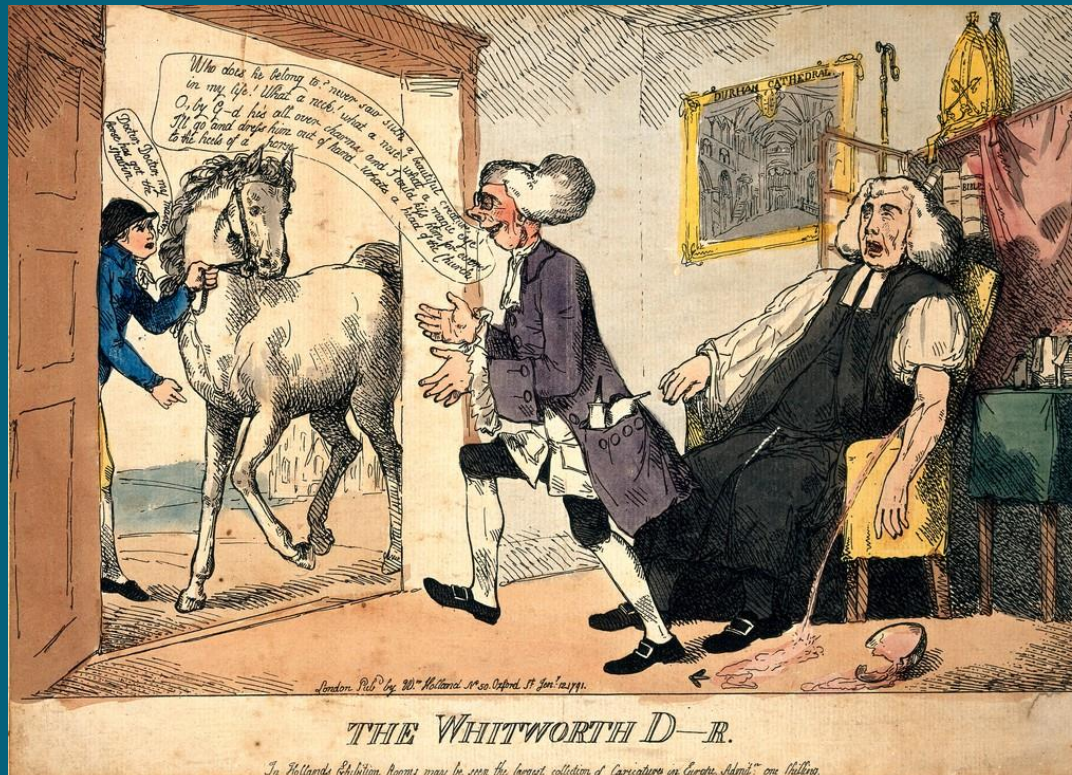
Treated the scoliosis of Sir Hans Sloane's niece

Image: W. Hogarth 1736





# The Whitworth 'Doctors'



5 generations

1720s to 1867

The last one: James Eastwood Taylor qualified MRCS. and LSA.

Cartoon showing John Taylor deserting the Bishop of Durham in order to treat a horse . By W. Holland 1791  
Wellcome images



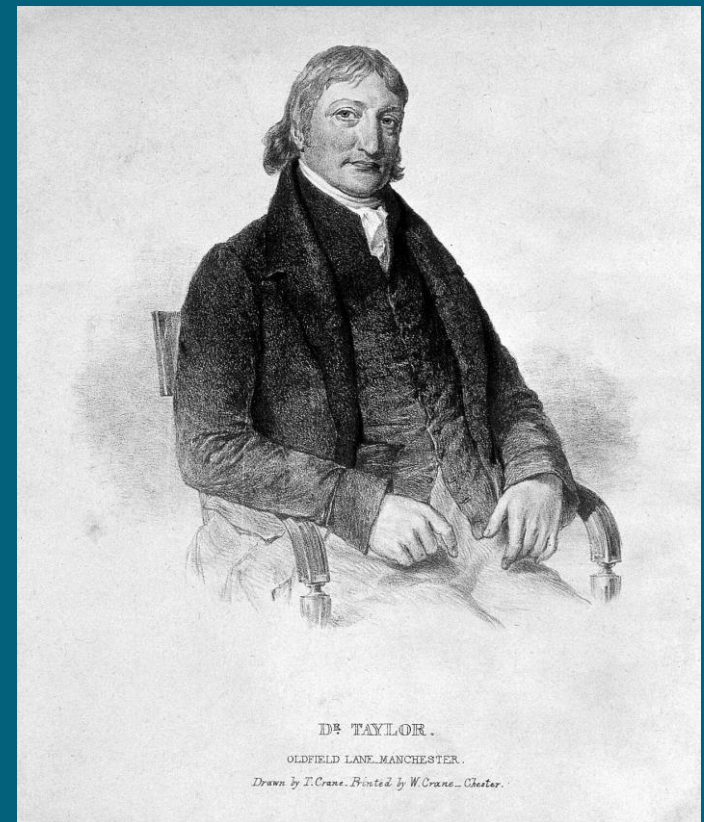
# Edmund Taylor ( 1773 – 1853 ) The ‘Oldfield Lane Doctor’

Son of a ‘cow doctor’ and great-grandson of Whitworth farrier

About 1800 he established a practice at Oldfield lane, Salford

Treated human patients and horses!

Tried and convicted in Lancaster in 1826 for negligence in case of compound / open fracture of tibia. Fined £50 ‘on the ground of want of attention subsequently to the loss of the bone’



# Welsh bonesetters - Cemaes Bay, Anglesey



## Evan Thomas II ( 1804-1884 ) Liverpool Bonesetter

EVAN THOMAS  
BONE SETTER,  
No: 3, Great Crosshall Street,  
(*Third Door from the Chapel*),  
LIVERPOOL,

“ My father and I are the practitioners of an art which does not belong to the exact sciences: the result often is that, under the best of treatment, trivial cases go wrong, and again many times a course of treatment not to be justified ... succeeds”

H.O. Thomas, March 1861

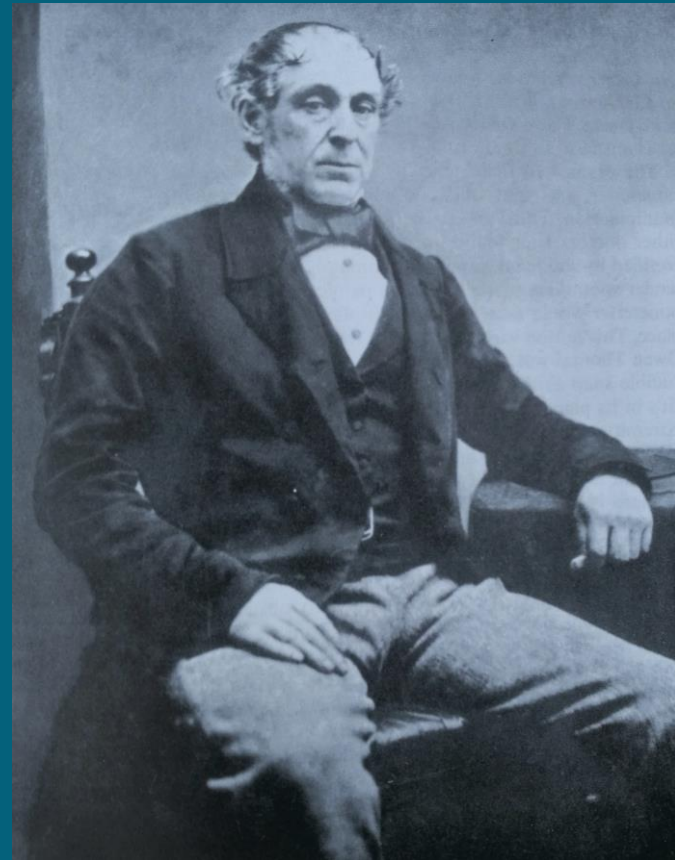
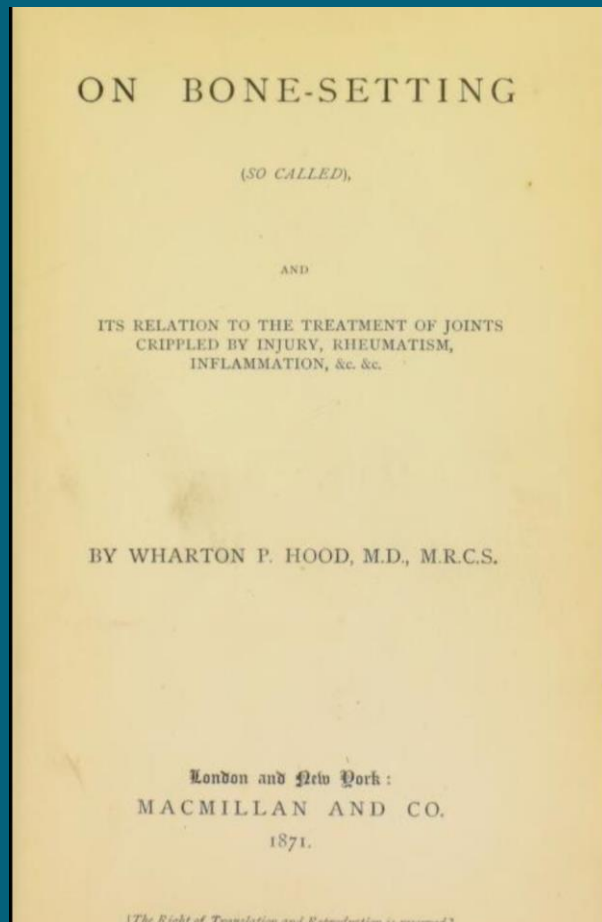


Image: from 'Hugh Owen Thomas, a personal study'  
By Frederick Watson, 1934



# The Fall of Bonesetting



The Medical Act of 1858

Xrays - 1895

Litigation e.g. Evan Thomas

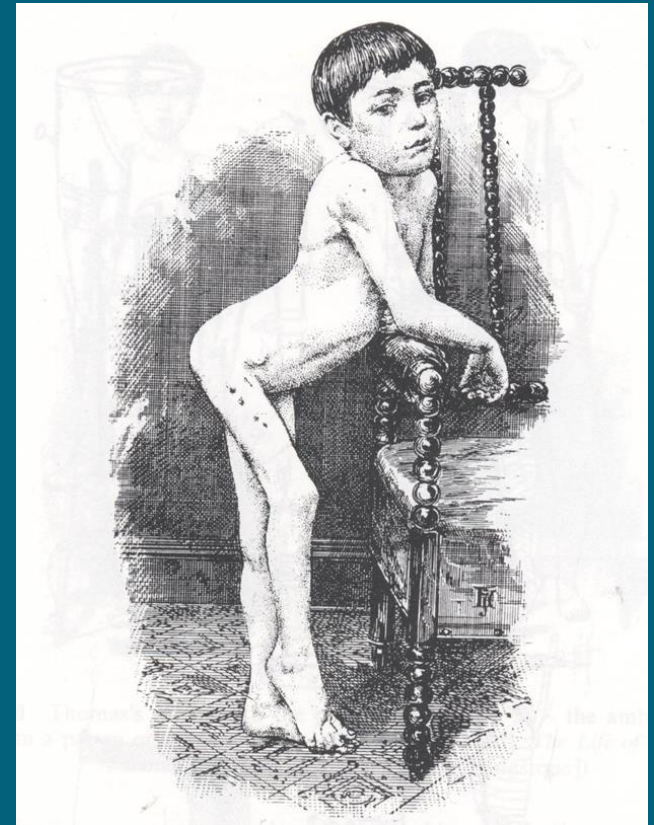
New provincial medical schools

## Hugh Owen Thomas and Robert Jones - Liverpool



## 11, Nelson Street

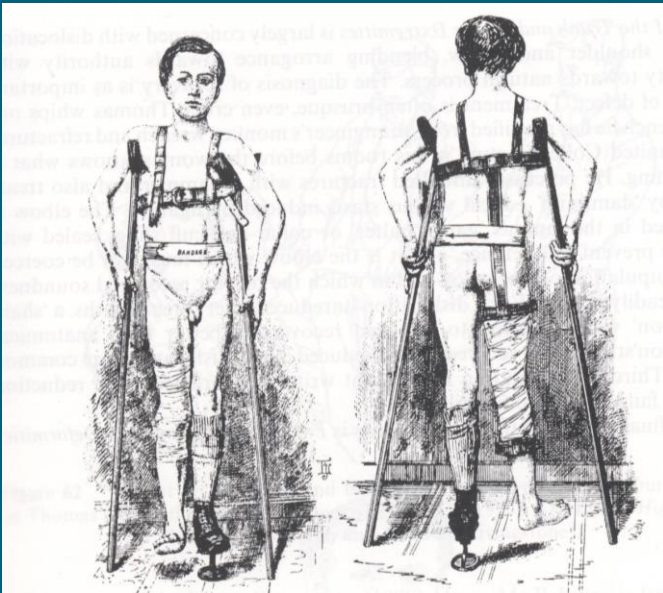
- Most patients were from the docks – sailors etc.
- Many presented late e.g. dislocations and fractures
- Used labourers to assist with manipulations
- High incidence of Tuberculosis
- Sunday was 'freeday' – Nelson Street besieged with patients



Child with tuberculosis of the hip joint



# Thomas's splints



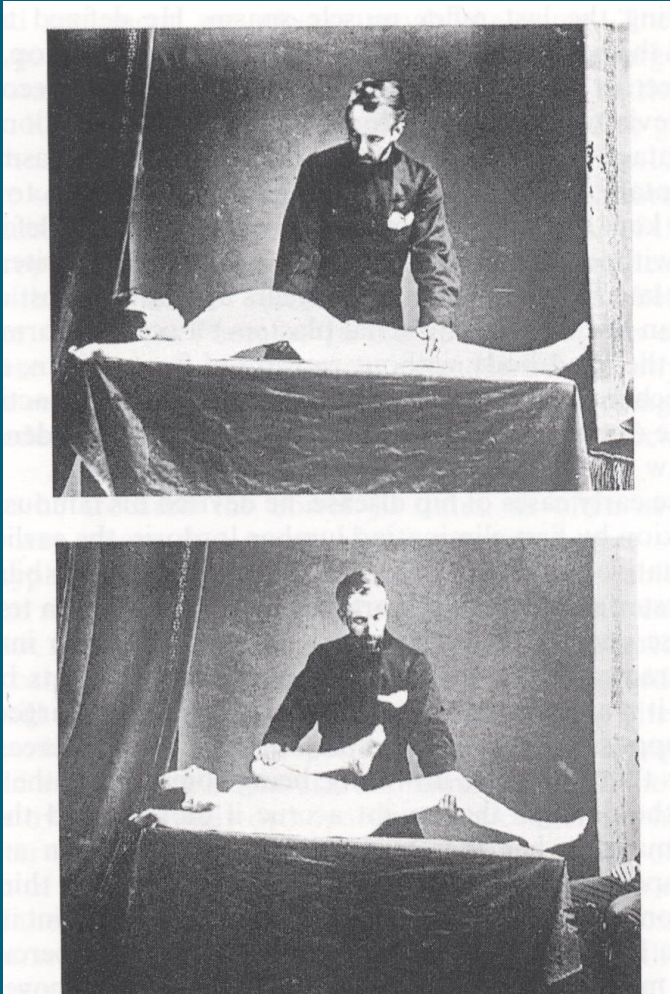
Thomas's ambulatory hip splint  
Wellcome images



THE LATHE ROOM AT NELSON STREET

From 'Hugh Owen Thomas, a personal study'  
By Frederick Watson, 1934

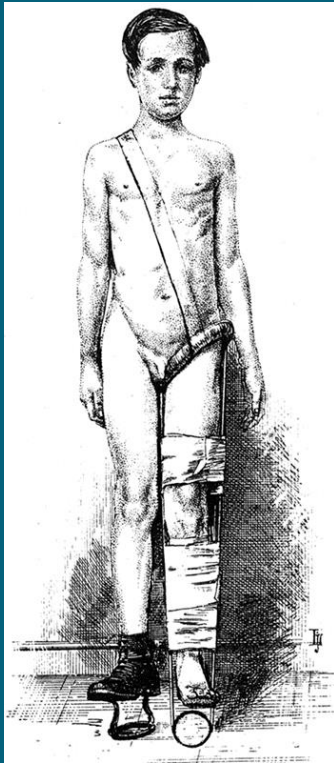
## Thomas's Test for Hip Disease



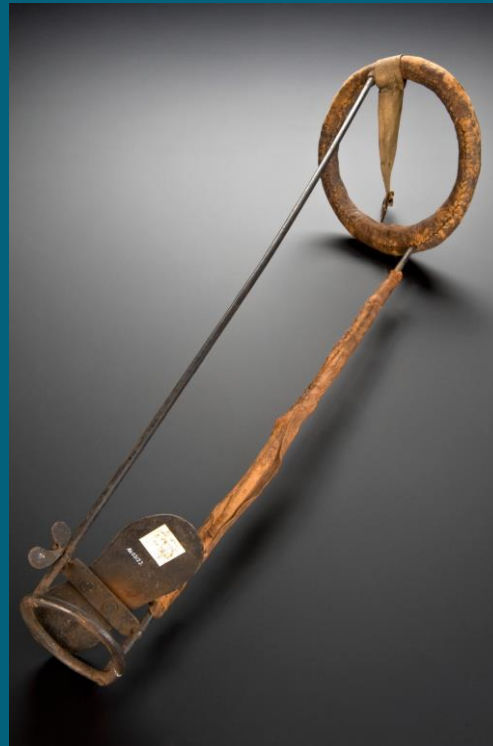
## Thomas's wrench



# Thomas's Ambulatory knee splint



Thomas's Ambulatory knee splint  
Wellcome images



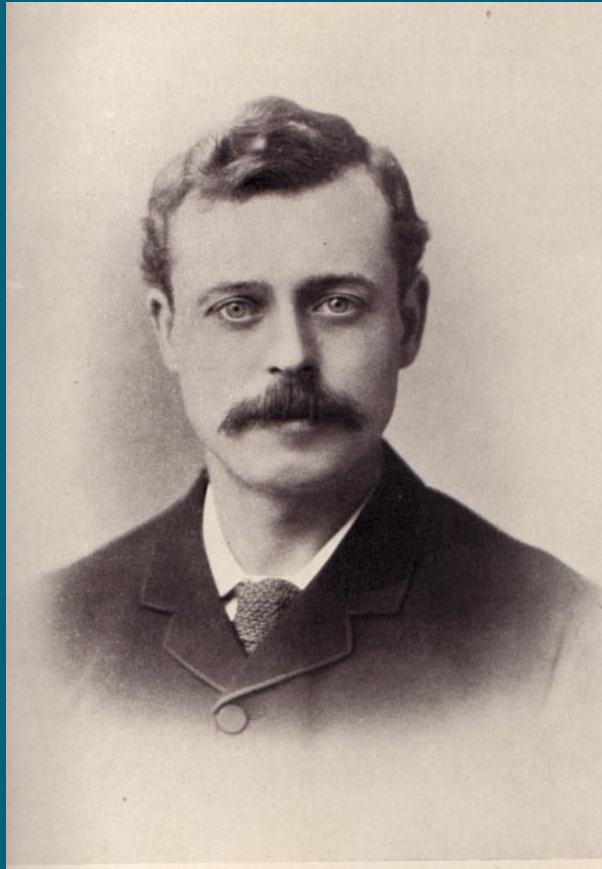
Wellcome images



Wax seal 'H.O.T' !

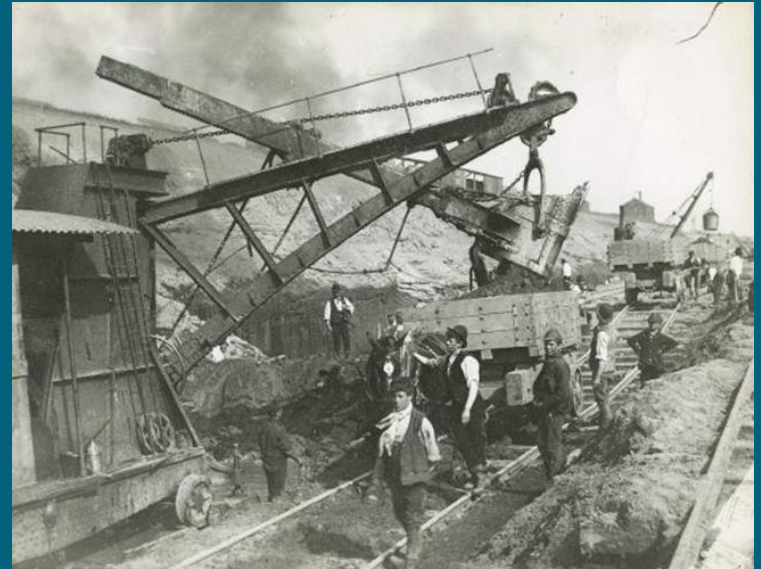
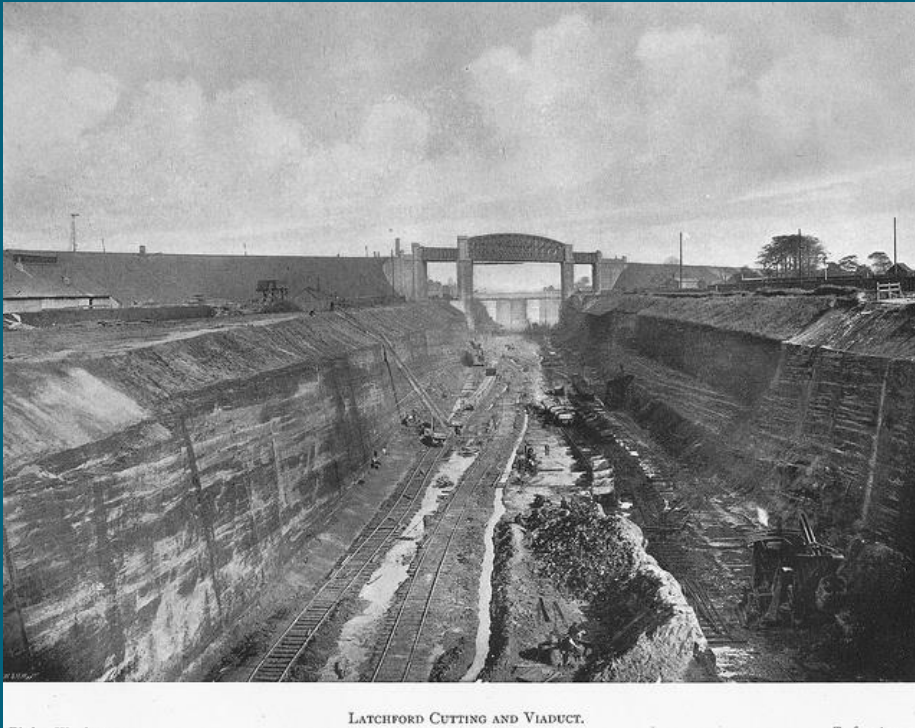


## Robert Jones ( 1857 – 1933 )



Manchester Ship Canal

# Construction - 36 miles



# The Late 1800s / Early 1900s

1887 - American Orthopaedic Association formed

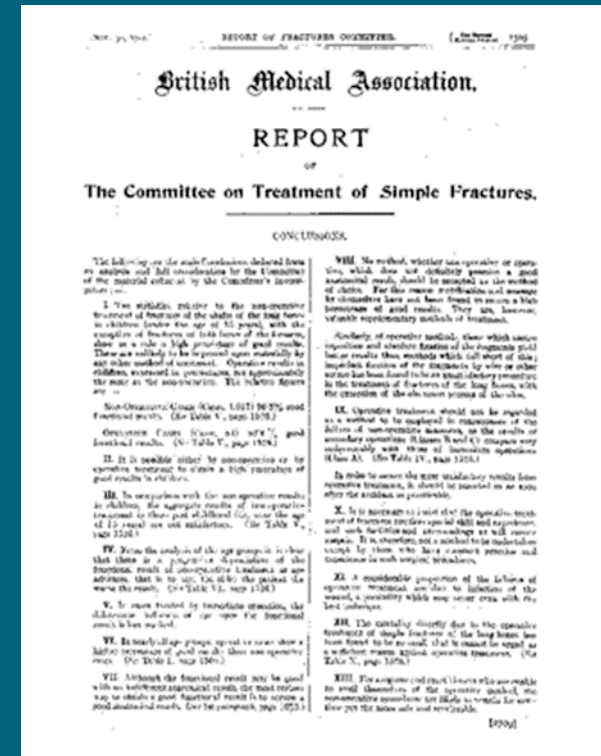
1894 – British Orthopaedic Society ( BOS ) formed

1895 - Discovery of xrays

1900 – BOS folds

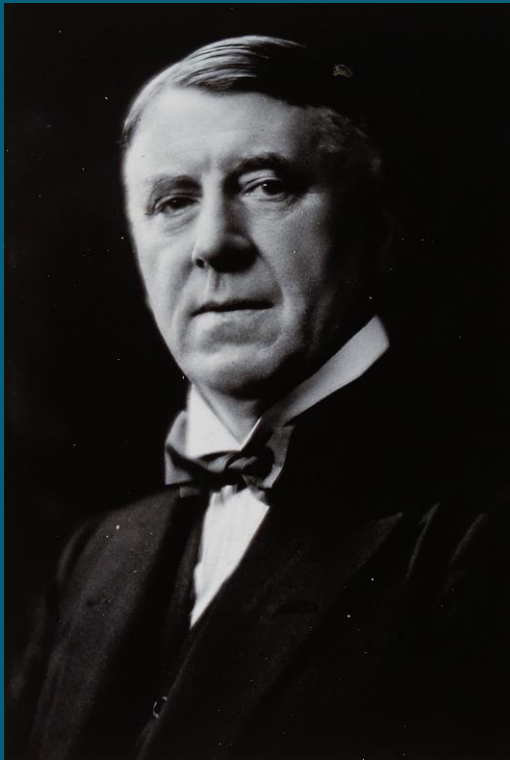
1912 – BMA enquiry into fracture treatment

1913 – International Medical Congress in London





# Berkeley Moynihan ( 1865 – 1936 )



General surgeon in Leeds

Established 'The Chirurgical Club' in 1909

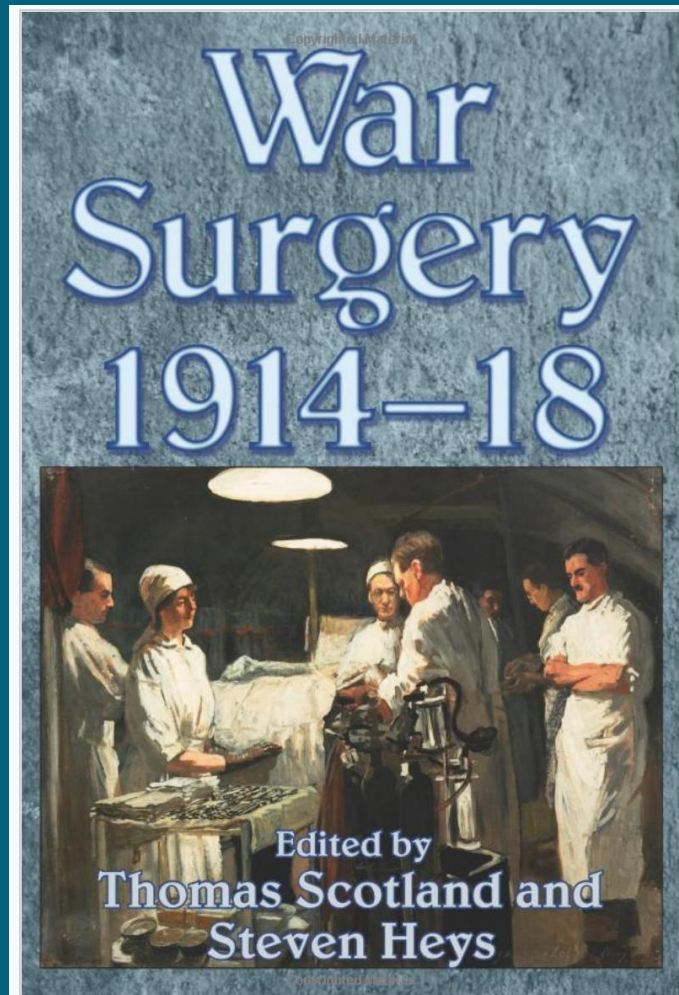
Members included Robert Jones, Henry Gray and Harold Stiles

1914 - Colonel to the Army Medical Service

1915 – Carried out a review of the medical services on the Western Front for Alfred Keogh

Highlighted the poor management of open / compound fractures

# The First World War



“slaughter, on an industrial scale”



Western Front:

1.84 million British  
servicemen wounded in  
battle

6.22 million British  
non-battle sick or injured  
servicemen



# Trenches



© IWM Q 10622

# Battlefield Wounds – Western front

Wounding Agent	% Total Wounds
Shell-high explosive or shrapnel	58.51%
Rifle or Machine Gun Bullet	38.98%
Bombs/Grenades	2.19%
Bayonets	0.32%

Table: Tom Scotland  
Data: Mitchell & Smith  
*History of the Great War Medical Services* 1924



Passchedaele, 1917  
IWM Q 5935

# The Evacuation Pathway

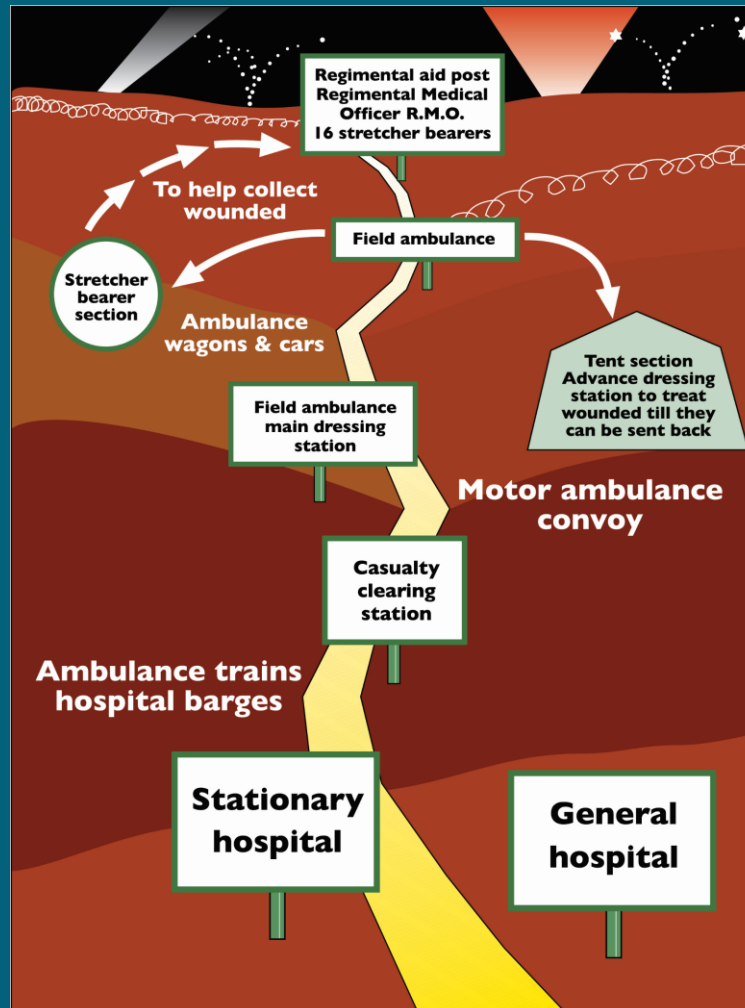


Image : Tom Scotland



## Advanced Dressing Station



IWM E( Aus) 714

## Casualty Clearing Station

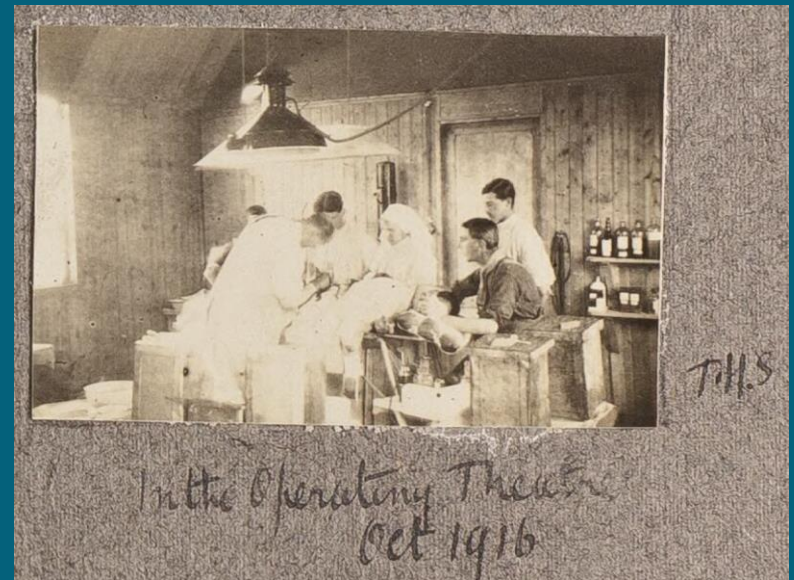


No 2 Casualty Clearing Station Oultersteene  
© IWM Q 434

# Casualty Clearing Station



CCS near the Somme frontlines 1916  
Wellcome images



34th CCS operating theatre  
Image: Howard Somervell  
From : Album of photographs of 34 (1/1 West  
Lancashire) Casualty Clearing Hospital  
[Museum of Military Medicine](#)

## T. Howard Somervell with Officers of the West Lancs. / 34<sup>th</sup> CCS



T. Howard Somervell ( 1890 – 1975 )



Image from : Album of photographs of 34 (1/1 West Lancashire) Casualty Clearing Hospital  
Museum of Military Medicine



## Base Hospitals – Wounds: ‘Second look’



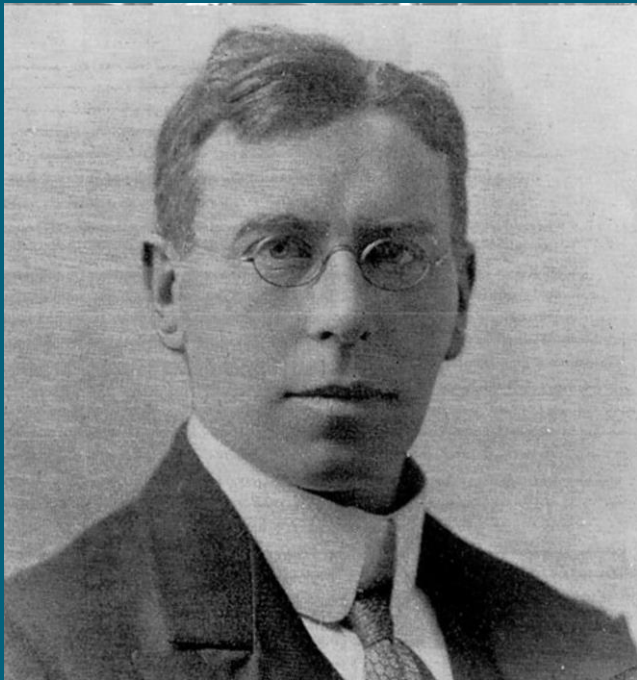
World War I: British army operating theatre at Wimereux Base Hospital, near Boulogne.  
Wellcome images



Patient in Traction – Le Touquet Red Cross Hospital, 1917  
c. IWM Q2410



## Henry Gray ( 1870 – 1838 )



From Aberdeen

Appointed Consulting surgeon to the British 3<sup>rd</sup> Army

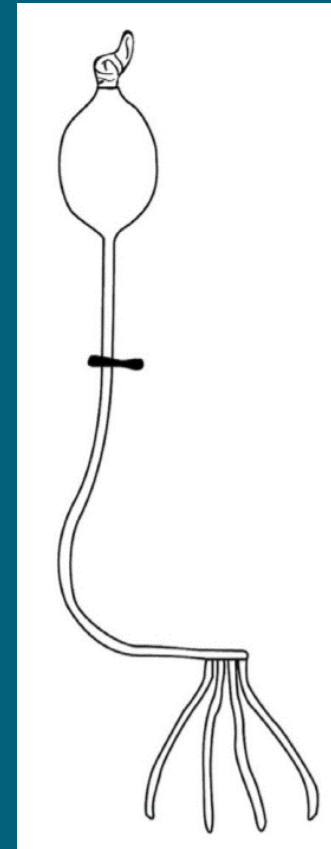
Published '*The Early Treatment of War Wounds*' emphasising importance of en bloc wound excision

Studied impact of the Thomas splint at the Battle of Arras – mortality reduced from 80% to 19% with the splint

# Carrel - Dakin Irrigation



Mock-up of Carrel – Dakin irrigation



Alexis Carrel : designed tubing  
Henry Dakin: 4% Na Hypochlorite

## Casualties - Auxiliary / Voluntary Aid Detachment ( VAD ) Hospitals



Calgarth Hospital - November 1914



## Robert Jones ( 1857 – 1933 )



Became a Major attached to the 2<sup>nd</sup> Western Territorial unit

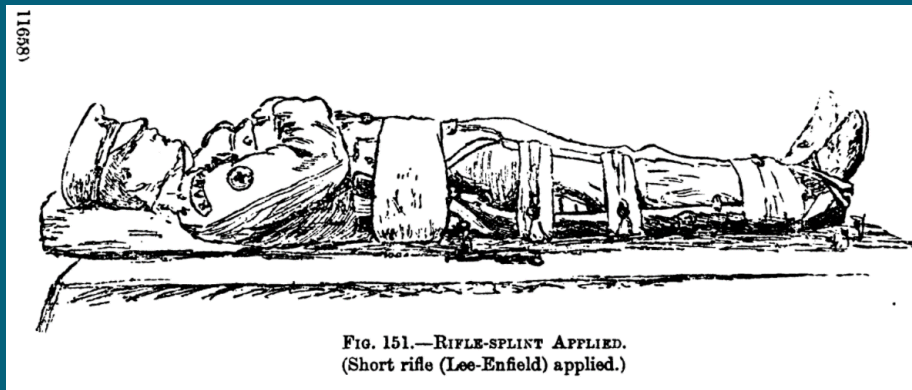
Reviewed British facilities for injured servicemen – deformity / rehabilitation

Appointed Director of Military Orthopaedics in 1917

Established Alder Hey and Shepherd's Bush Military Orthopaedic Hospitals

20 specialised military orthopaedic hospitals by the end of the war

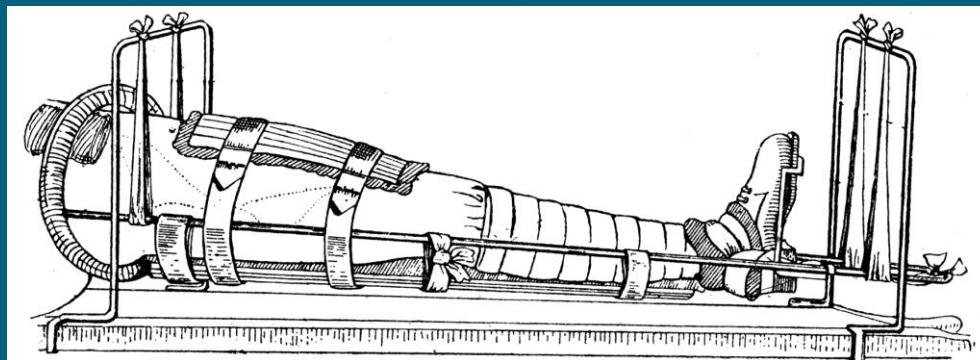
# Flimsy splints / Rifle splint



# The Thomas Splint



Lancaster collection



Thomas splint with suspension bars and Tapson sole clip: From W. G. Macpherson



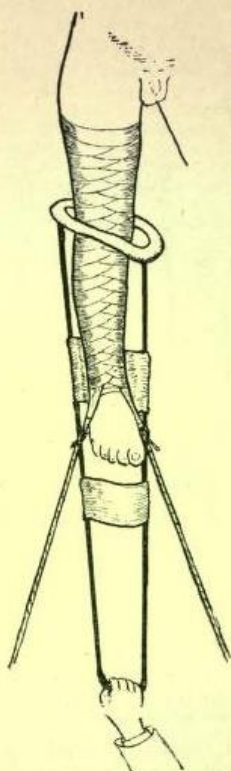


Fig. 106.—Introducing limb through ring of Thomas's knee splint.

6 or 8 in. beyond the foot. Care must be taken to avoid internal or external rotation of the limb, the foot being kept at right angles. Local splints can then be employed, and are made of block tin or sheet iron. They can be moulded by the hand to fit the limb, and yet, being gutter-shaped, they are rigid

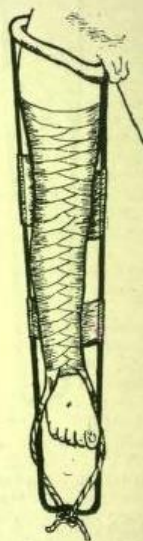


Fig. 107.—Knee splint in position, traction applied.

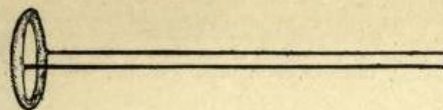


Fig. 117.—Thomas's knee splint, modified, used to maintain extension of the humerus in the abducted position.

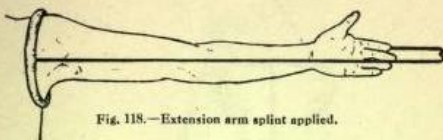


Fig. 118.—Extension arm splint applied.

and maintains adequate fixation. As so much destruction of bone may be produced by modern shrapnel, and even by rifle bullet, great care must be taken to prevent over-extension, otherwise non-union will ensue.

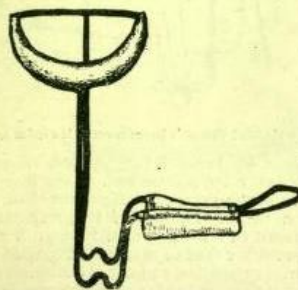


Fig. 119.—Modified Thomas's humerus-extension splint.

FOREARM

MS  
J



# Notes on Military Orthopædics

By  
(Colonel Sir) Robert Jones, C.B.  
Inspector of Military Orthopædics, Army Medical Service

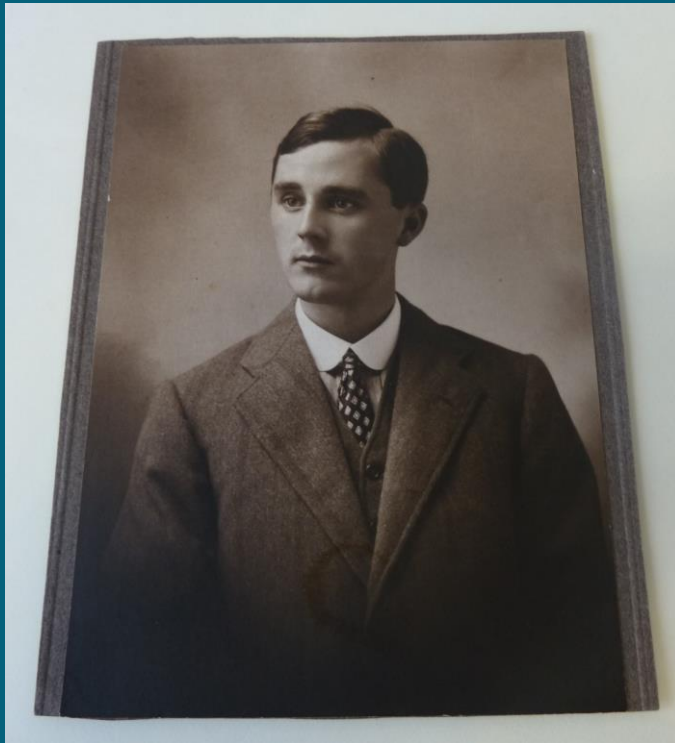
With an Introductory Note by  
Surgeon-General Sir Alfred Keogh, G.C.B.  
Director-General, Army Medical Service

ILLUSTRATED

263875  
27.1.32

Published for the British Red Cross Society by  
CASSELL AND COMPANY, LTD  
London, New York, Toronto and Melbourne  
1917

## Harry Platt ( 1886 – 1986 )



Harry Platt operating at the Grangethorpe Military Orthopaedic Hospital, Manchester, 1918

# The British Orthopaedic Association 1918



Image: Royal Lancaster Infirmary collection



# British Orthopaedic Association ( B.O.A. ) - 1918

## Surgical Specialty Societies:

1. Orthopaedics ( B.O.A. ) 1918
2. Neurosurgery 1926
3. Obstetrics and gynae. 1929
4. Cardiothoracic 1934
5. ENT 1943
6. Urology 1945
7. Plastic surgery 1946
8. Paediatric surgery 1953
9. Maxillo-facial 1962
10. Vascular 1966



Coat of arms of the B.O.A.

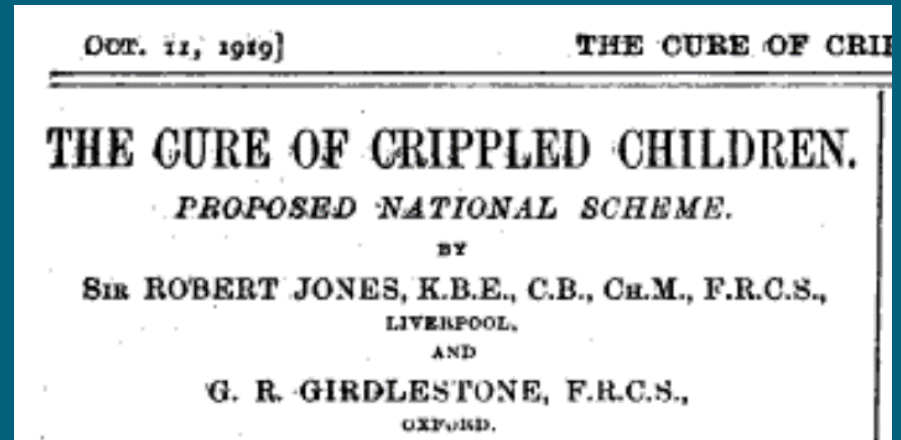


## Post war – The National Scheme

Separate children's orthopaedic hospitals

Robert Jones and Agnes Hunt Hospital  
Chailey Heritage Hospital, Sussex  
Lord Mayor Treloar, Alton  
PMROH, Edinburgh ( originally the  
Edinburgh Hospital for Crippled  
Children )

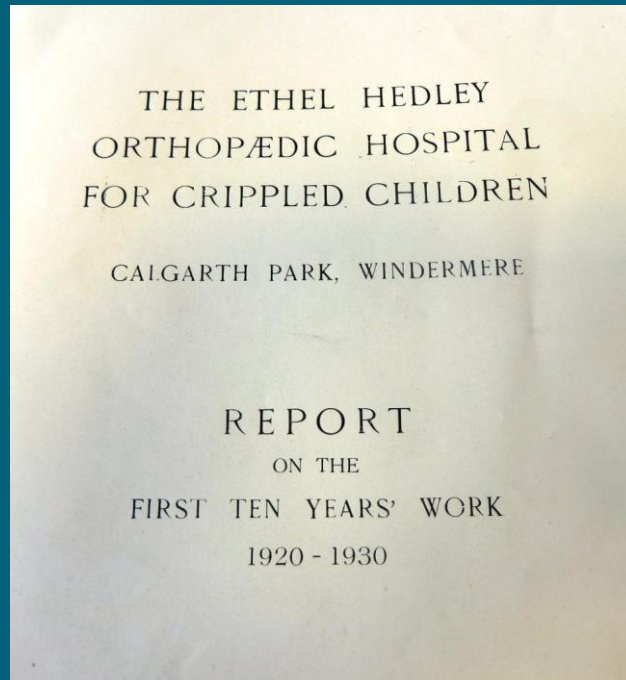
Calgarth – became the Ethel Hedley  
Children's Orthopaedic Hospital



*The British Medical Journal*

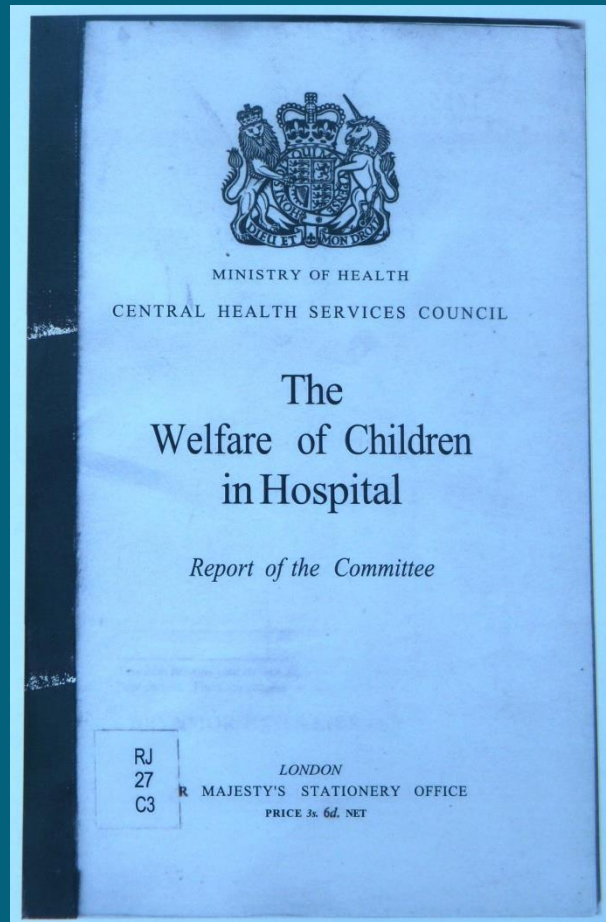
Vol. 2, No. 3067 (Oct. 11, 1919), pp. 457-460

# Ethel Hedley Children's Orthopaedic Hospital 1920 - 70



Harry Platt examining a child at EHCOH

# The Platt Report - 1958



Sir Harry Platt

# Plaster-of-Paris – Plâtre Coulé 1798

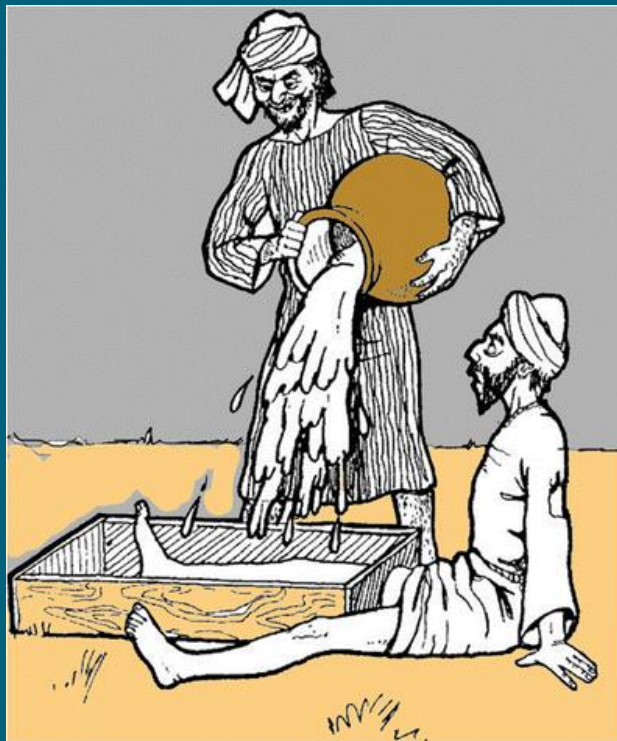
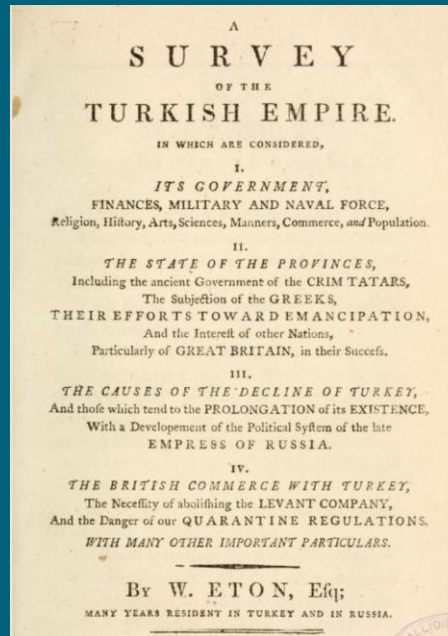


Image: C.L. Colton



TURKISH ARTS AND SCIENCES. 213  
or mixed with it (or vinegar) at the first making  
of the plaster.

I saw a case of a most terrible compound fracture of the leg and thigh, by the fall of a cannon, cured in this manner. The person was seated on the ground, and the plaster case extended from below his heel to the upper part of his thigh, whence a bandage, fastened into the plaster, went round his body. He reclined back when he slept, as he could not lie down. During the cure, where they saw matter or moisture appear through the plaster coating, they cut a hole with a knife to dress the wound, or let out the matter more freely.

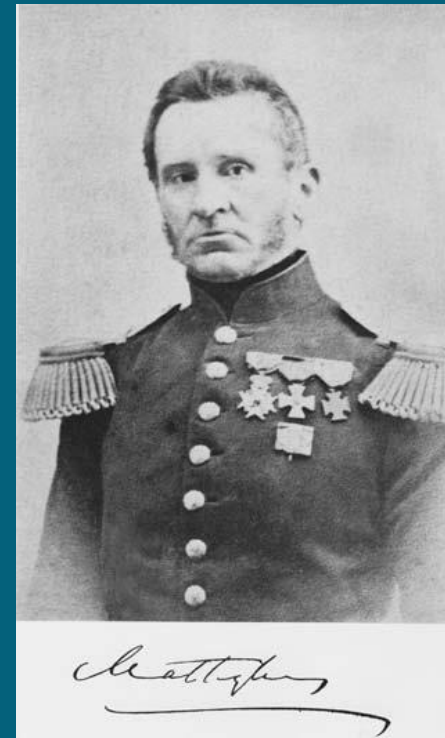


# The Plaster Bandage - 1852

Invented by Antonius Mathysen ( 1805-1878 )  
as an improvement to starch impregnated  
bandage

Dutch army surgeon published book in 1852

Hoffa stated in 1903:  
“ the plaster bandage will remain the essence of  
orthopaedics for all time “



Antonius Mathysen

# Implants - Total Hip Replacement

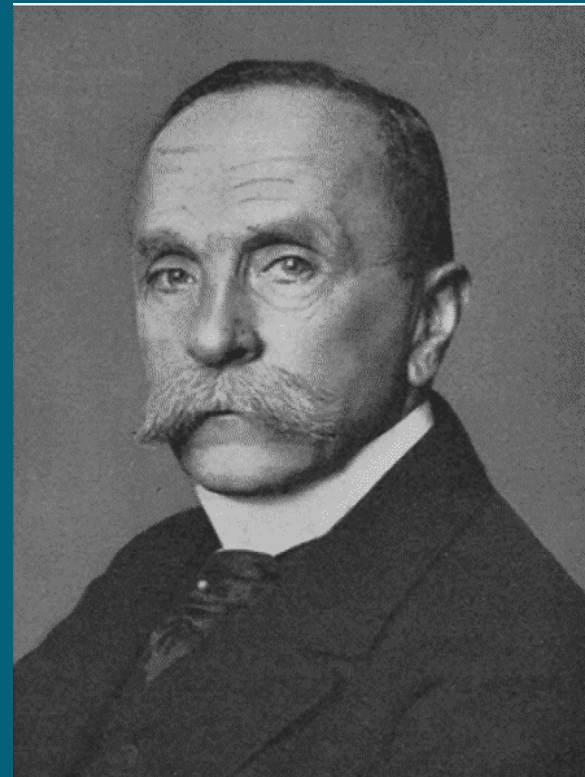
Themistocles Gluck ( 1853 – 1942 )

Born in Romania but trained and worked in Germany / Berlin

Experimented with bone cement and was first to perform joint replacements

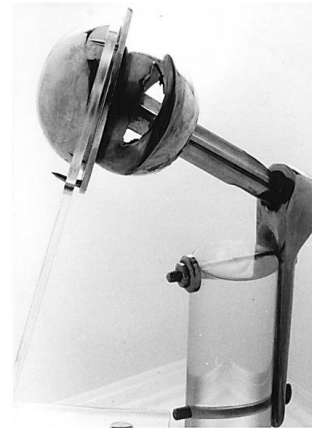
Used ivory implants in hip, knee, wrist, elbow and ankle in 1880s

Tuberculous joints: infection



Themistocles Gluck

# Philip Wiles (1899-1966)



**Philip Wiles 1899-1967**  
**The Middlesex Hospital**

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*Wiles PW, The surgery of the osteoarthritic hip, 1958 Br J Surg 45:488-97*

Slide courtesy Sean Hughes

## The Judet Acrylic Hip Implant - 1946

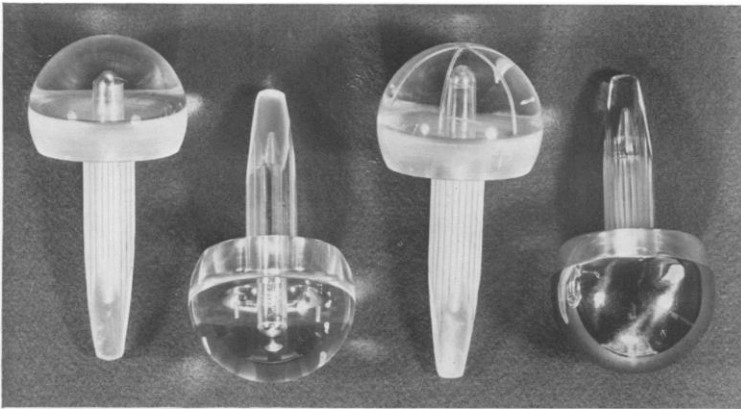


FIG. 2.—From left to right, the standard Judet prosthesis and three modifications, namely, the head containing four wire X-ray markers to detect any rotation of the prosthesis; the head containing Mr. St. John Buxton's umbrella X-ray marker; and the head armoured with a stainless steel cap in order to avoid wear of the acrylic resin over the area of weight-bearing. (Down Bros. and Mayer & Phelps.)

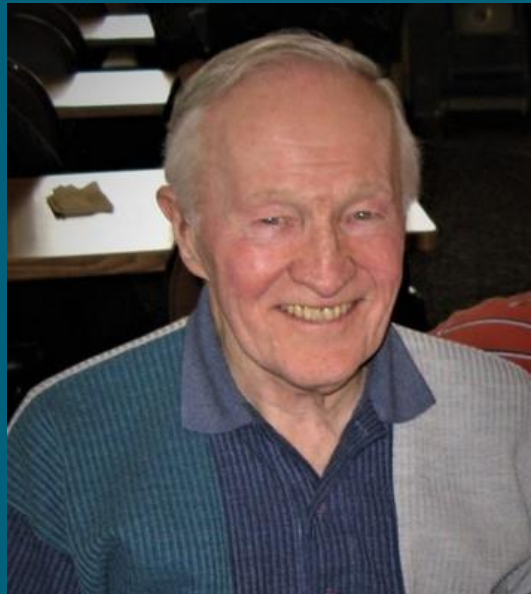


Image: from Nissen K.I., Postgrad. Med. J. , 1952  
'Judet Arthroplasty of the Hip'

Robert and Jean Judet



## The McKee Farrar Total Hip - 1966

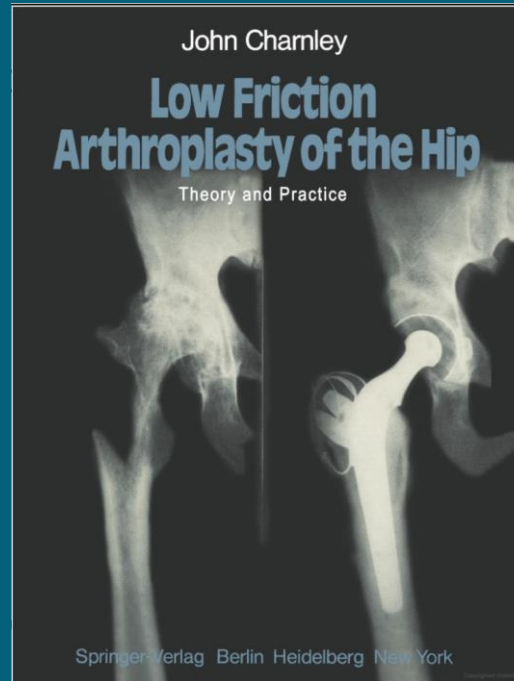


G. Ken McKee ( 1906-91 )



John Watson-Farrar ( 1926-99 )

# John Charnley ( 1911 – 1982 ) - Wrightington



Official opening of the new biomechanics lab. at Wrightington - 1961

# Modern Orthopaedic surgery



**Fig 3**

# The Exeter Total Hip - 1970



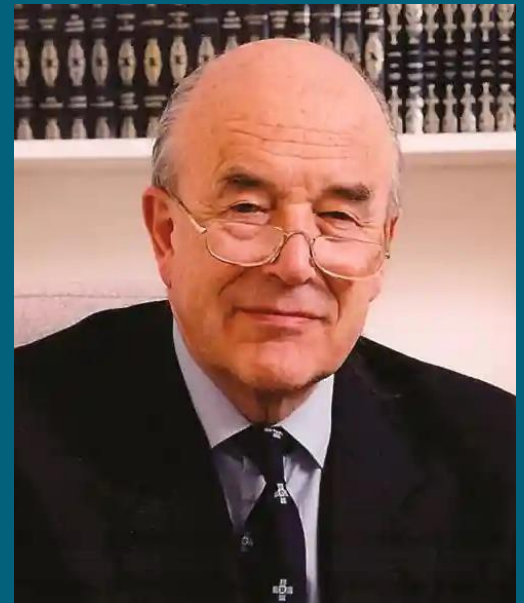
Original stem



1988 stem



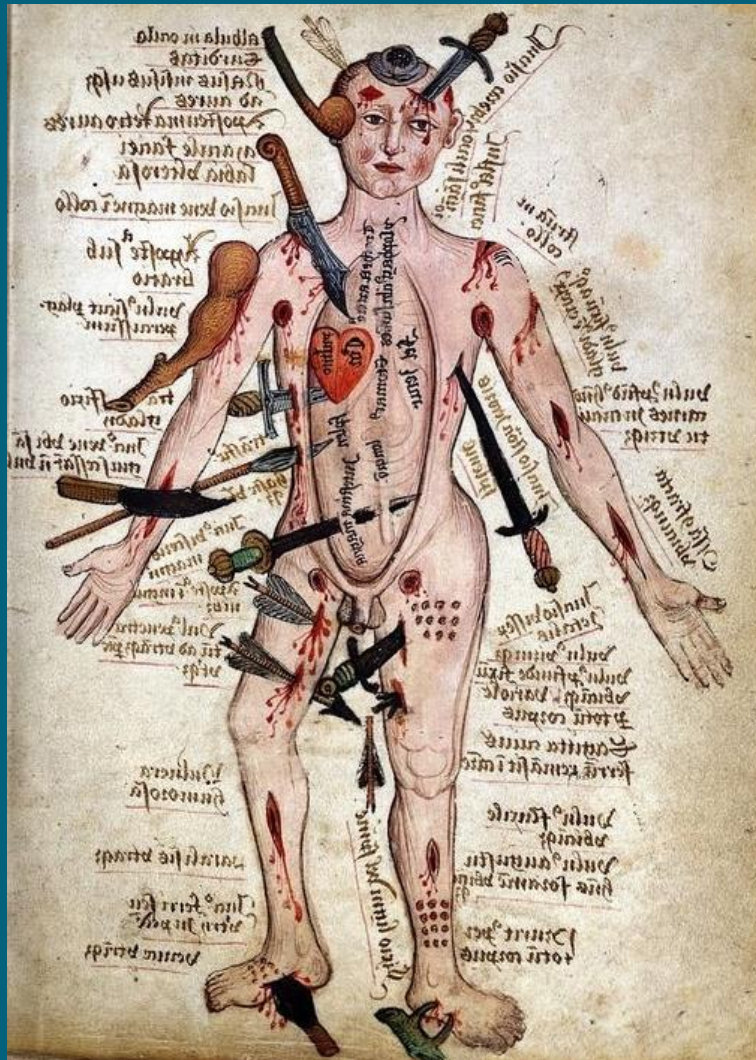
Clive Lee



Robin Ling



# Wounds



‘Wound man’ from  
*Anathomia* - 15<sup>th</sup> century

Wellcome images

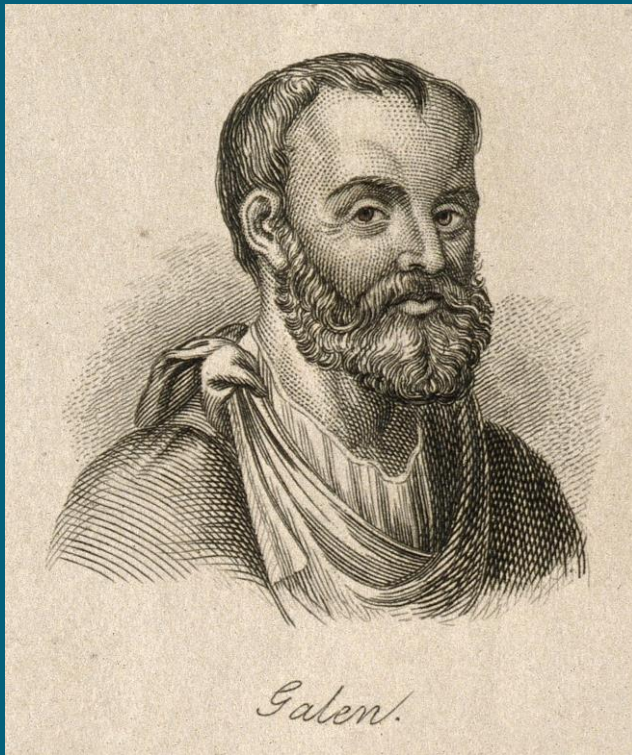
# Early topical wound treatments

Animal	Vegetable	Mineral
Bile	Bark	Alum
Blood	Dyes	Antimony
Butter	Fruit	Arsenic
Cobwebs	Herbs	Clay
Cochineal	<b>Honey</b>	Copper salts
Egg-white	Leaves	Lead salts
Faeces ( dung )	Oil	Mercury salts
Grease	<b>Resin ( eg Dragon's blood )</b>	Potassium salts
Meat	Sap	Tar / Pitch
Milk	Sugar	Zinc salts
	Turpentine	
	<b>Wine / vinegar</b>	

Modified from:

R.D. Forrest  
*Early History of  
Wound Healing*  
Journal of The  
RSM. March 1982

# Galen ( 129 CE – 210 CE )



Born in Pergamon – now Bergama

Developed a successful treatment for gladiators wounds

Spent 3 years as surgeon to the gladiators

Used Chinese silk for sutures and first to record the use of dried animal intestine as suture material

Used dove droppings in some wounds

## Early surgical options – primary closure of wound

Non-Suture	Suture	Description
Ant heads	Hair	Celsus
Thorns	Cotton	Susruta
Linen strips	Silk	Susruta
Curved pin	Hemp	Susruta
Fibula ( Roman )	Gut ( catgut )	Galen
Staple ( hand )		
Staple ( machine )		



Bronze Roman fibula  
Wellcome images

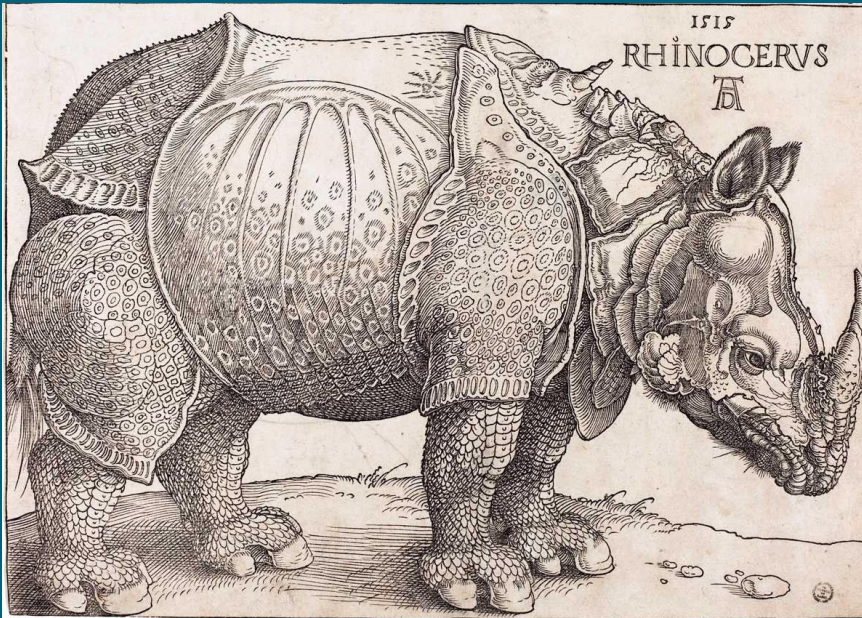


## Haemorrhage , cautery and ligatures



Silk Ligatures Image cc Science Museum

What is the difference between an orthopaedic surgeon and a rhinoceros ?



A: One is thick skinned, short sighted and charges a lot ... the other is a rhinoceros !