Medicine in 1815 : an exhibition to commemorate the 150th anniversary of the end of the Napoleonic wars, 15 April to 31 December, 1965.

Contributors

Wellcome Historical Medical Museum and Library.

Publication/Creation

London, [1965]

Persistent URL

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Medicine in 1815

An exhibition to commemorate the 150th anniversary of the end of the Napoleonic Wars

Wellcome Building, Euston Road, N.W.1.

"The Midwife": A Rowlandson caricature of 1811. (No. 135).

MEDICINE in 1815

An Exhibition to commemorate the 150th Anniversary of the end of the Napoleonic Wars

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THE WELLCOME HISTORICAL MEDICAL MUSEUM
AND LIBRARY

THE WELLCOME BUILDING
Euston Road, London, N.W.1.

The Museum is situated on the south side of Euston Road, about 100 yards east of Gower Street. The nearest Underground stations are Warren Street (Northern Line), and Euston Square (Metropolitan and Circle Lines). Buses 14, 18, 30, and 73 pass the door. The Museum and Library are open to the public from 10 a.m. to 5 p.m. Monday to Friday.

INTRODUCTION

The battle of Waterloo (18 June 1815) marked the end of a quarter-century of war and revolution and the beginning of a new epoch. Much had been destroyed, but the basic ideas of the French Revolution—liberty, equality, fraternity—survived to work as a powerful ferment which is still active today. Many other new ideas and forms of organization also came out of these wars. The very word 'Humanitarianism' was first used in its modern sense of compassion for the weak, the sick, and the deprived at this very time. Crime and disease came to be viewed by advanced thinkers as a result of poverty rather than of individual vice. Out of the fighting itself came new advances in surgery, new measures of military hygiene and medical organization. To satisfy military needs on both sides there was a great expansion of medical staffs, and the young practitioners who had seen much war service were, when launched in civil practice, to bring about the radical reform of the profession.

Although the war was fought in three continents and involved all the nations of Europe, this exhibition is concentrated on the two great antagonists—Britain and France. The one had an ailing monarch who was being treated by his doctors for insanity when the revolution began in France and was still under treatment in 1815; his favourite Prime Minister, Pitt the younger, also suffered ill-health and died at the early age of 47 when English fortunes were at their lowest ebb. No wonder that Gillray and other satirists of the day depicted Britain as a sick man and its leading politicians as a group of bungling doctors!

In spite of this, the spirit of the people which enabled Britain to muddle through to victory was shown when from 1803–5 Bonaparte held an army of over 200,000 men on the Channel coast of France ready to invade England.

On the other side was the young and all-conquering Napoleon with his talented group of equally young Marshals. The Revolution had made a clean sweep of all the old corporations in France, including medical schools. The needs of war demanded new ways of training doctors, and with the old scholastic disciplines broken, they were now given a practical training at the bedside, a move which produced a new type of clinical medicine which was to be adopted everywhere. The greatest physicians and surgeons of the time were French. Dominique Jean Larrey, whom Napoleon made a Baron,

was the head of his army medical services. In 1792 he invented the mobile field hospital and the 'flying ambulance'. He brought tremendous gifts to his job and was personally engaged in the field on all Napoleon's campaigns.

Napoleon was at the height of his power when the battle of Trafalgar (21 October 1805) finally removed the threat of a French invasion of England. It was the long stranglehold of the Royal Navy which made his ultimate defeat inevitable. In Nelson, Hood, and St. Vincent, the Navy had outstanding leaders, and its medical services were well organized under Sir Gilbert Blane and his able assistants.

If the Army had Wellington and other excellent soldiers, it suffered severely from its chaotic and badly organized medical services. For long it was directed by a civilian who had never seen a campaign—Sir Lucas Pepys, president of the Royal College of Physicians, who, with complete disregard for practical efficiency, tried to extend the college's restrictive regulations to active service conditions. Only after the disaster of Walcheren in 1809, when a whole expedition was practically wiped out by disease, was urgent reform put in the hands of the capable Sir James McGrigor, the real founder of the modern R.A.M.C.

Some of the individual surgeons were outstanding; G. J. Guthrie used improved techniques in the Peninsular War and at Waterloo; J. C. Carpue performed successful pioneer operations in plastic surgery.

The efficiency of an army in those days depended on horse transport and the Army Veterinary Service was a direct outcome of the Revolution and the wars. The London Veterinary College was founded under the direction of a French émigré professor and trained all the qualified veterinary surgeons for the army. There were 21 at the battle of Waterloo.

Meanwhile, revolutionary sentiments were affecting the younger doctors at home. By an Act of 1749 those who had served in the Forces for three years were allowed to set up in civilian practice without further examination or licence, and many who had done so were now worrying about their status in the rigid hierarchy of the profession and demanding radical reform. Their efforts produced the Apothecaries' Act of 1815 which, despite the opposition of the Royal Colleges, allowed the Society of Apothecaries to become the chief examining body for qualifying general practitioners. Most of the G.P.s in the 19th century were to qualify in this way and their continuing efforts to achieve 'parity of esteem' led eventually to the Medical Act of 1858, the chief basis of the profession today.

It is interesting to note that among the first group of successful examinees after the 1815 Act was John Keats, the celebrated poet, who, after his apprenticeship to a G.P., studied for the examination at Guy's Hospital.

With regard to medical practice, treatment was still very much limited to bleeding, purging, and cupping. The G.P. performed simple surgery, often very skilfully, in the home of the patient. By now, it was respectable for him to do midwifery also, but the greater part of this practice was still done by untrained midwives. Hospital treatment was still kept for the very poor and the surgery done there, mostly amputations, was done without anaesthetics. The leading London hospitals (St. Bartholomew's, St. Thomas's, and Guy's) had an average of 10,000 patients a year and the annual expenditure of each hospital was around £10,000—a cost of £1 a patient for an average 4-week stay. A survey of the diseases of London, made in 1815, classifies them into the diseases of the upper classes and those of the lower classes. Gout was the chief disease among the rich; consumption (pulmonary tuberculosis) among the poor. Dentistry was still a trade and largely carried on by travelling quacks; in the country the local farrier was often the dentist also. The great John Hunter had experimented with the transplantation of living human teeth, but his work was not followed up. Artificial teeth were being made; often cut from ivory. Human teeth were also taken from dead bodies for this purpose and a fine haul was made at Waterloo to provide what were known as 'Waterloo teeth'.

THE DAWN OF SCIENTIFIC MEDICINE

Although it made little immediate difference to the treatment of the sick, a number of important discoveries which were to change the face of medicine were made at this time. A. L. Lavoisier, the French chemist who is regarded as the founder of modern chemistry and who was executed in Paris during the 'Reign of Terror' in May 1794, helped to explain the true character of respiration and the action of oxygen in the body. Thomas Beddoes, by his work on the therapeutic properties of gases, encouraged James Watt to invent the spirometer, which measures the volume of air in the lungs. He also set Humphry Davy on his life-work. It was Davy who first suggested the use of nitrous oxide as a surgical anaesthetic (1800); in 1815 he invented the safety lamp for miners, the first scientific contribution to industrial health. Another British chemist, John Dalton, discovered the law of chemical combinations and established the classification of elements by their atomic weights. So famous was British chemistry at this time that a contemporary caricature shows George III as 'A British Chymist Analizing a Corsican Earth Worm.'

It was in France, however, that chemistry was concentrated on finding new remedies, and two young chemists, Pelletier and Caventou, by a long series of experiments, succeeded in isolating some of the most important vegetable alkaloids—the active principles of plant drugs which had proved their value. Out-

standing among their successes was the isolation of quinine from Cinchona bark, the only true specific then known for any disease. It is ironic that it was malaria which wiped out the British army at Walcheren. Their work provided the basis for a great French physiologist, Magendie, to found the modern science of pharmacology and pointed the way to modern chemotherapy.

The most important and even sensational medical advance of the time was made in Britain with the introduction of vaccination by Edward Jenner as a preventive against smallpox, the most widespread and fatal disease throughout the 18th century. Its value was rapidly recognized everywhere and Napoleon saluted Jenner as a saviour of mankind, saying that he could refuse him nothing. Jenner's work was the foundation of the modern science of immunology, with its vaccines for polio, typhoid, etc.

The most widespread disease of the 19th century was pulmonary tuberculosis and among those who died young from this disease was the Breton physician René Laennec, who was a specialist in diseases of the chest and in 1816 invented the stethoscope, at first a simple hollow cylinder of wood.

Yet another means of diagnosis had been firmly established by Napoleon's favourite physician, J. N. Corvisart in 1808, when he translated an obscure German book of 1761 by the Austrian Auenbrugger. It dealt with the art of percussion. Corvisart also clearly differentiated for the first time between diseases of the heart and those of the lungs. He is regarded as one of the founders of modern cardiology.

New studies of anatomy and physiology which sprang from the pioneer work of John Hunter and from the classic work of Bichat in France put the surgeons in the van of progressive thinking about the nature of life and led to a new outlook which was to culminate in Darwinism and the evolution theory. Much of this new work was centred on the brain and nervous system. The work of Gall and Spurzheim led to a craze for phrenology. Spurzheim was actually lecturing in London in 1815. Later rejected as unscientific, phrenology nevertheless influenced the course of important research on the brain later in the century. This period also saw the beginning of another new cult—Homeopathy—with the publication of Samuel Hahneman's *Organon* at Dresden in 1810.

Meantime a new attitude to mental illness was emerging. The French physician Pinel was famed for removing the chains which bound the patients in the asylums in France; a Quaker hospital at York (The Retreat) was the first to do so here.

F. N. L. POYNTER,
Director, The Wellcome Historical Medical Museum and Library.

CATALOGUE OF EXHIBITS

(*N.B. All exhibits are from the collections of the Wellcome Historical Medical Museum and Library.*)

1. King GEORGE III (1738-1820). 'In the 74th Year of his Age and the 52nd of his Reign'; engr. portrait, coloured, by Stadler after Rosenberg; full length, facing left; on the terrace at Windsor. Published January 22, 1812, by Colnaghi & Co.

2. The Prince Regent, aft. George IV (1762-1830). Photogravure from a line-engraving by S. Bennet after a painting by W. Beechey. Specimen plate from the Edition de luxe of Cust's 'Royal Collection of Paintings at Buckingham Palace and Windsor Castle' (Wm. Heinemann, London).

Contemporary Caricatures

3. Doctor Sangrado curing John Bull of Repletion—with the kind Offices of Young Clysterpipe and little Boney. Col. etching by James Gillray. Published May 2, 1803, by H. Humphrey.

4. Britannia between Death and the Doctors. "Death may decide, when Doctors disagree". Col. etching by James Gillray. Published May 20, 1804, by H. Humphrey.

5. Doctor Pizzaro administring to his Patients! Anon. col. etching published by William Holland, July 8, 1799.

6. Physical Aid, or—Britannia recover'd from a Trance. Col. etching by James Gillray. Published March 14, 1803, by H. Humphrey.

7. Visiting the Sick. Col. etching by James Gillray. Published July 18, 1806, by H. Humphrey.

Letters and Documents

8. Medical bulletin on the health of George III, dated from Kew House, 29 January, 1789, signed G. Baker, J. R. Reynolds, and F. Willis.

9. Medical bulletin on the health of George III, dated from Kew House, 9 February, 1789, signed by S. R. Warren, F. Gisborne, and F. Willis.

10. Letter signed by George III from Kew, 30 April, 1801, mentioning that Sir Hyde Parker is to be relieved of his Command and is to be replaced by Lord Nelson.

11. Medical bulletin on the health of George III, dated from Windsor Castle, 2 February, 1811, and signed by H. R. Reynolds, Henry Halford, M. Baillie, W. Heberden, etc.

12. Medical bulletin on the health of George III, dated from Windsor Castle, 13 February, 1811, written entirely by William Heberden, and signed by him.

13. Autograph letter, signed, by Queen Charlotte, addressed to the King, 29 September, 1812, alluding to the trouble between the Prince Regent and his wife and daughter.

14. Autograph letter, signed, by Queen Charlotte, addressed to the King [1813]. The Queen forwards a petition for a pension from the widow of James Wyatt (1746–1813), the architect who built the Military College at Woolwich.

15. Document dated from Carlton Palace, 21 March, 1821, signed by Everard Home, Henry Cline, Astley Cooper, and B. C. Brodie, stating: "We are unanimously of opinion that the tumor on His Majesty's head should be removed."

16. Document signed by George IV concerning the medical examination of convicts sentenced to transportation, 30 October, 1823.

Anti-Invasion Posters

1803–5

17. Third edition. Bob Rousem's Epistle to Bonypart. London: Printed for J. Asperne.

18. BRITONS, The Period is now arrived, when it is to be discovered whether you are to be FREEMEN OR SLAVES. Printed by W. Glindon for J. Ginger, 169 Piccadilly, where all Patriotic Publications may be had.

19. To the infamous Wretch, if there be such a one in England, who dares to talk of, or even hopes to find *Mercy* in the Breast of the *Corsican Bonaparte, the eternal sworn Foe of England*, the Conqueror and Subjugator of France. Printed for J. Ginger, 169 Piccadilly.

20. Plain ANSWERS to plain QUESTIONS, in a DIALOGUE between JOHN BULL and BONAPARTE, Met *Half Seas over* between Dover and Calais. London, Printed for J. Hatchard, N. 190 Piccadilly.

21. London, July 16, 1803. The DECLARATION of the Merchants, Bankers, Traders, and other Inhabitants *of London and its Neighbourhood.* Signed Jacob Bosanquet, Chairman. London, Printed for J. Asperne.

22. INVASION. Scene of a play. *Enter* JOHN BULL and BONAPARTE *from opposite sides, supposed to be meeting half way between* Dover *and* Calais. Printed for John Stockdale, 181 Piccadilly.

23. To the Inhabitants of the British Isles . . . signed Philo-Britannarum. Printed for John Stockdale, 181 Piccadilly.

24. Substance of the Corsican Bonaparte's Hand-Bills; or a *Charming Prospect for John Bull and his Family.* Printed for J. Ginger, 169 Piccadilly.

FRANCE

25. The inventor of the guillotine. Portrait, engr. by B. L. Prevost aft. J. B. Moreau, 1785. Joseph Ignace Guillotin, M.D. (1738–1814), at one time professor in the Faculty of Medicine of Paris, had a flourishing practice in the city when he was elected a Member of the National Assembly. He was noted for his moderate views and it was in order to reform the penal tortures then practised in French prisons that he invented the guillotine as the most speedy and humane method of execution.

26. Bonaparte. Premier Consul de la République Française. Head and shoulders facing half left within oval frame above a rectangular view of Bonaparte reviewing his troops in the courtyard of the Louvre. Aquafort by Levachez after Bouilly. Paris, Auber, an X (1802).

27. *Salaries for Medical Teachers*: The Revolution abolished the old corporations, including universities and medical schools. The revolutionary wars made it essential to provide trained doctors for the armies and the new 'Écoles de Santé' were opened adjoining large hospitals for this purpose. This document, signed by members of the Committee of Public Instruction (including Fourcroy and Lalande) and dated 25 September 1795 lays down the salary scales for the staff.

28. *The Italian Campaign*: Document announcing an increase of pay and allowances for certain of the medical staff attached to the field hospitals of the Army of the Alps, dated at Chambéry on 1 January, 1793. The 'Hôpital Ambulant' to which it refers had just been invented by Larrey and was used for the first time in this campaign.

29. *The Campaign in Egypt*: Document concerning the appointment of medical officers for the French army embarking at Toulon for the conquest of Egypt. Dated 12 floréal an VI (2 May 1798), it is signed by the five Inspectors General of the Army Medical Service, including Heurteloup, Parmentier, and Dumas.

30. Supplement à l'ordre du jour, du 27 thermidor an 8. Avis sur la Santé de l'Armée. This supplement to the Order of the Day, dated 16 August 1800, was printed in Cairo. It contains advice to the army on the preservation of health. Among the current diseases it mentions ophthalmia (trachoma), dysentery, and smallpox, and recommends a few simple hygienic measures, particularly warning against excessive drug-taking for trivial disorders.

31. *The Invasion of Britain*: Autograph letter, signed, from Senator François of Neufchateau to 'Citoyen Agasse', dated 3 nivose an XII (26 December, 1803) saying: 'Every Frenchman must do his bit in the attack on England'. His share is an article for the *Moniteur* (a journal) reviewing the Anglo-French treaties.

32. *The Peninsular War*: Autograph letter, signed, from Baron Faultrie, French General in Madrid, dated 25 February, 1811, to Alexandre Berthier, Prince de Neuchâtel, Major-General of the Army in Spain, sending medical testimony of his need for leave on health grounds. He has been on active service since 1792 and has had no leave since 1788.

33. Autograph letter, signed, from Divisional General Count Mathieu, Governor of Barcelona, dated 11 March, 1811, to the Duke de Feltre, Minister of War, appealing for victuals and pay for his soldiers. Meat is so short that he has reserved the bulk of it for the hospitals and the troops have a ration only twice a week.

34. *The Russian Campaign*: Autograph letter, signed 'L'Ordonnateur Barthonneuf' to Baron Bignon, dated Vilna, 11 October, 1812, concerning the establishment of a military hospital at Byalostok for 1000 patients. Both the Castle and a neighbouring convent were considered for the purpose.

35. Certificate, signed by Baron Larrey and J. J. Sue, respectively Surgeon and Physician in Chief to the French Army, dated 20 December, 1809, confirming that Jean Huete of the Imperial Guard, is unfit for further service because of his wounds.

36. Certificate, signed by Baron Larrey and J. J. Sue, dated 2 October, 1810, stating that Colonel Hercule Corbineau is unfit for further service since he has lost his right leg at the thigh.

37. Document, signed by Larrey and others, headed 'Grande Armée. Place de Metz' and dated 21 December 1813. It certifies that General the Baron de Beaumont had died from the 'nervous catarrhal fever' which was epidemic in the Army.

38. Document signed by Bonaparte as First Consul appointing Jean-Jacques Oleyn as 'Médecin Ordinaire' in the Rhine Army. Dated at Paris, 16 germinal, An 8 [i.e. 1800].

39. Document signed by Bonaparte as First Consul appointing Etienne Bornier as Surgeon (1st Class) in the temporary Military Hospital No. 1. at Dijon. Dated at Paris, 25 vendemiaire, An 9 [i.e. 1801].

40. Document signed by Bonaparte as First Consul appointing François Blondel, formerly Chief Pharmacist to the Army in Italy, as Chief Pharmacist to the Military Hospital at La Rochelle. Dated at Paris, 4 thermidor, An 8 [i.e. 1800].

41. Baron Dominique Jean Larrey (1766–1842), Surgeon-in-Chief to the French Army. Autograph letter, signed, to his wife, dated Vienna, 1 June, 1809. Larrey was certainly one of the greatest military surgeons of all time. Beloved of the troops in his care, he did everything possible to ensure their health in camp or garrison and their early and effective treatment when wounded in battle. He was with Napoleon throughout his campaigns. On 22 May, 1809, Napoleon met with his first defeat at the battle of Aspern-Essling (Vienna) and had to concentrate his army on a small island in the Danube until reserves arrived. Larrey tells of their sufferings. He himself had not undressed for ten days and he had to have horses killed to provide food for the 20,000 wounded

troops. Marshal Lannes, one of Napoleon's friends and leading aides, had been severely wounded and Larrey had been at his side for three days and nights in a vain attempt to save his life.

42. Larrey's original MS diary for the year 1813. The diary opens on 1 January 1813 at Königsberg, where he had been gravely ill of a 'malignant fever' which he had contracted during the retreat from Moscow. He was to visit the King of Naples and he describes his journey across Germany, where he lost no opportunity of examining hospitals and medical schools. He gives accounts of meetings with Meckel, Swediaur, and others. In October he records the battle of Leipzig, where there were 6000 wounded, including 10 Generals. At the end is a section, '*Reflections philosophiques sur l'exercice de ma profession*' with many allusions to his experiences in Russia. Inside the back cover is a note that he had sent his beloved Arab horse, Russo (of 'rare beauty'), to his wife from Dresden on 13 August.

43. Larrey, D. J. *Mémoires de chirurgie militaire, et Campagnes*. 4 vols. Paris, Chez J. Smith, 1812. Tome I, showing portrait of Larrey and illustrations of his 'flying ambulance' (1) in France; and (2) in Egypt, adapted for the camel.

44. A selection of Larrey's own instruments used by him in his war service.

45. Larrey, D. J. Portrait medal, bronze, 52 mm. 1847. By Louis Michel Petit, aft. David d'Angers. (Freeman (1964) 295).

46. Personal Field-Kit which Napoleon had specially made for presentation to each of his Marshals. The ingeniously fitted cylindrical case contains silver knife, fork and spoon, razors, shaving brush, tooth-brush, ear-scoop, tooth-pick, writing materials, and other utensils, all fine examples of craftsmanship. The outer case of the specimen shown has a silver plate with the monogram 'DM'; the only one of Napoleon's Marshals to whom these initials can be applied was Marshal Lannes (1769–1809) who was created Duke of Montebello in the year of his death.

13/1965

47. Sir James Wylie, Bt., M.D. (1768–1854). Portrait, oil, by an unknown artist. A Scottish graduate of Edinburgh, Wylie spent 60 years in Russia, where he became physician in turn to the Tsars Paul, Alexander, and Nicholas. He was one of the founders of the Medico-Chirurgical Society in St. Petersburg (1800) and in 1812 was made Director of the Medical Department of the Ministry of War. He was present at the battle of Borodino and performed over

200 operations on the field. He left a considerable fortune to the Tsar and this was used to build the military hospital and medical school in St. Petersburg which still bears his name. *Portrait presented by his great-nephew, the late Sir Robert Hutchison, M.D., P.R.C.P.*

48. Napoleon's gold-mounted pistols. The pistols (in their case) were taken from Napoleon's coach during the retreat from Moscow and came into the possession of Sir James Wylie, Bt., M.D., Physician to the Tsar Alexander. *Presented by the late Sir Robert Hutchison, M.D., P.R.C.P.* 12/1965

49. Document signed 'N' confirming the agreement reached between the Emperor Napoleon and the King of Westphalia (Jerome Bonaparte) concerning the administration of criminal justice in Westphalia. It opens: 'Napoleon, by the Grace of God and the Constitution Emperor of the French, King of Italy, Protector of the Rhine Confederation, Mediator of the Swiss Confederation, etc.' and is dated at Dresden, 14 May, 1813.

50. Napoleon's letter to the Prince Regent, written on board H.M.S. Bellerophon arriving in Torbay.

"On his Arrival on the Qr Deck on the night of the 15th abt ½ past 6 o'clock he said to Capn M. I come to claim the protection of your Prince & your Laws.
His L[ette]r to P[rince] R[egent]
Y[our] H[ighness] A prey to the factions which divide my country and to the enmity of the greatest powers of Europe I have terminated my political Carrer [sic] & I come like Themistocles to seat myself on the Hearth of the English People—I put myself under the protection of the Laws which I claim from Your Royal Highness as those of the most powerful, the most constant & the most generous of my enemies. Signed Napoleon."

On the verso of this leaf is a statement signed M. Gunthorpe: "Written on board H.M. Ship Bellerophon in Torbay by Barry O'Meara Esq. and sent by him to my friend Capt. Wm. Peake, R.N. who was then on a visit to me on board H.M. Marine Cruizer Vigilant then under my Command."

Barry O'Meara (1786–1836) was Surgeon to the Bellerophon and became Surgeon to Napoleon at St. Helena.

51. *A Description of the Island of St. Helena*, London, 1805.
This little book on St. Helena, the first to be written on the subject, may have been responsible for the choice of the island as a safe and healthy place of exile for the defeated Emperor.

52. Barry O'Meara: *Napoleon in Exile: or, a Voice from St. Helena.* 2 vols. London, 1822.
O'Meara was surgeon to Napoleon during his exile and in this work he tried to do for him what Boswell had done for Johnson. Many of his statements were disputed at the time. The portrait frontispiece is from a cameo executed before the battle of Marengo and presented to O'Meara by Napoleon's mother.

53. The cameo portrait of the Emperor presented by his mother to Barry O'Meara. 17/1965

54. Trephination set used by a French army surgeon; made by Grangeret of Paris, c. 1880. The case is inscribed 'Chirurgie Militaire'. The trepan provided is of the brace-and-bit type. The hand trephine was commonly supplied in English sets of the period.

55. A roundel of bone removed from a skull with the trepan in the above set.

56. Complete set of surgical instruments made by Grangeret of Paris, c. 1785.

57. Horatio Nelson, Viscount. (Duke of Bronte), K.B. Admiral. (1758–1805). H.L. to l., in uniform, with hat in which is the diamond aigrette presented by the sultan. Col. photogravure from a painting by L. Guzzardi at the Admiralty.

58. Tourniquet used by the surgeons Thomas Eshelby and Louis Remonier when amputating Nelson's arm aboard the *Theseus* off Santa Cruz, Teneriffe, 14 July, 1797. Remonier was a French émigré serving in the Royal Navy.

59. Medicine chest used by Nelson and kept in his cabin in the *Victory*. On the brass corner plates is inscribed the name of the vessel and the date 1803.

60. The *Times* newspaper for 3 October 1798, showing the first report of Nelson's victory over the French fleet on the Nile.

61. Spy-glass said to have been used by Nelson aboard the *Foudroyant*.

62. Pewter teapot used by Nelson on the *Victory*.

63. Sir William Beatty's original MS account of the fatal wound received by Nelson, with a statement of the course of the ball found at the post-mortem examination, dated from the *Victory*, 15 December, 1805. Beatty was surgeon in Nelson's flagship.

64. The same account as published in the *London Medical Journal*, with a coloured illustration of the fatal ball.

65. Sir William Beatty, *Authentic Narrative of the Death of Lord Nelson.* London, 1807.

66. *The Death of Nelson.* Nelson in the cockpit of the *Victory* lying in the arms of Captain Hardy with his surgeon, William Beatty, on the right. Line engraving by William Bromley after a painting by A. W. Davis.

67. Lord Nelson's lying-in-state in the Painted Hall of the Royal Hospital, Greenwich. Mérigot, after a painting by A. C. Pugin; published 1806. Water-colour over etched outline.

68. Lord Nelson's funeral; the river procession, showing the coffin being brought by barge from Greenwich to Whitehall with naval escort. Drawn, etched and published by J. T. Smith, 1806. Coloured by hand.

69. Invitation to Lord Nelson's funeral in St. Paul's Cathedral issued to Dr. Leonard Gillespie, Physician-General to Nelson's fleet.

70. Plan of the Battle of Trafalgar as depicted in The Panorama, Leicester Square, 1806. Coloured broadside.

71. Sir Gilbert Blane (1749–1834). *A Short Account of the most effectual Means of Preserving the Health of Seamen.* London, 1780.
Blane, who was Physician to the Fleet from 1779 to 1783, published this beautifully printed little book at his own expense for the guidance of medical officers in the Navy. He was responsible for ordering the regular issue of lemon juice in the Navy as a preventive against scurvy and he did more than any other to reform naval hygiene and medical organization.

72. Sir Gilbert Blane: Autograph letter, signed, to Henry Dundas, Lord Melville, Secretary of State for War; dated from the Sick and Wounded Office, 30 September, 1796. Blane was Commissioner for Sick and Wounded 1795–1802.

73. Thomas Trotter (1761–1832) *Medicina Nautica; an essay on the Diseases of Seamen.* 3 vols. London, 1797–1803.
As physician to the Channel Fleet Trotter worked hard to improve the conditions of naval Medical Officers and of seamen. His book offers a new theory of the causation of fevers.

74. Thomas Trotter: Original MS. letter dated from Portsmouth 26 October, 1796.
"It is time, however, that suffering human Nature should have a respite from blood and carnage. The scene of my practice has been a pleasure ground compared with the state of the Army, in all its operations. Our Officers have been equally distinguished in the Channel Fleet for the humane, as the heroic virtues; I hope for the honor of the Country, similar traits of character will be recorded by the Army Physicians."

75. Thomas Trotter. Portrait. Stipple engraving by Daniel Orme, 1796.

76. William Turnbull. *The Naval Surgeon; comprising the entire duties of Professional Men at Sea.* London, 1806.
Turnbull had experience as a naval surgeon on all stations. The plate shows the trepanning instruments which no naval surgeon should ever be without.

77. Autograph letter, signed, from Admiral Lord St. Vincent to Vice-Admiral Sir Charles Thompson, from the ship *Ville de Paris* off Cadiz, 17 September 1797. "Dr. Wein will be on board the 'Prince George' tomorrow morning to examine the two men reported by Captain Irwin as unfit to remain in this Climate".

78. Letter from J. N. Morris, Captain of H.M.S. *Colossus* off Ushant, dated 16 February, 1805, and addressed to the Principal Officers and Commissioners of His Majesty's Navy. He asks for water-closets to be fitted in the sick-berths of his ship while it is refitting at Plymouth.

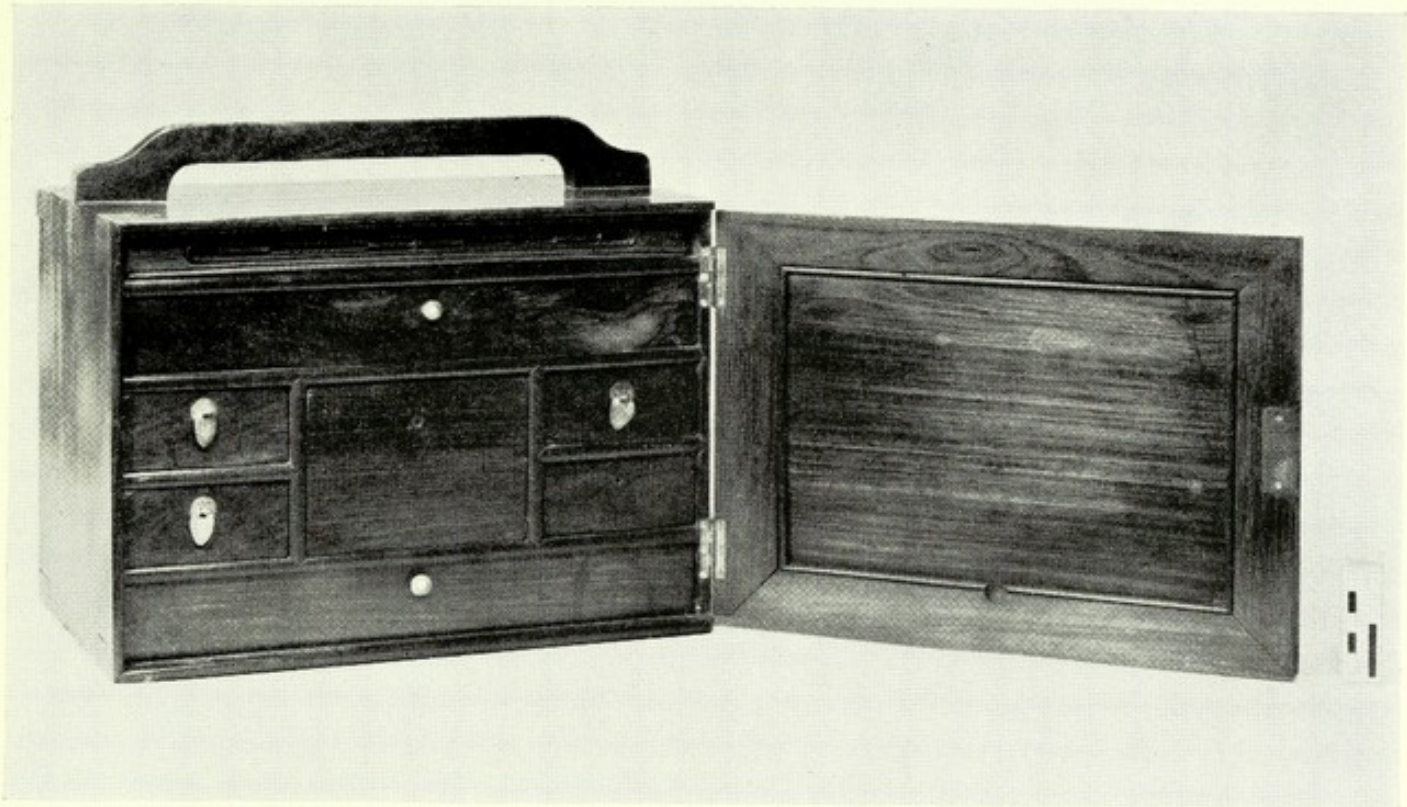
79. Discharge certificate for Wm. Elstob and W. Bramull from the Navy because of disability; signed by Admiral Bickerton and addressed to Captain Ross; from the *Prince* at Spithead, 27 April, 1814.

80. Regulations and Instructions for the Medical Officers of His Majesty's Fleet, issued by the Board of Admiralty, 1825.

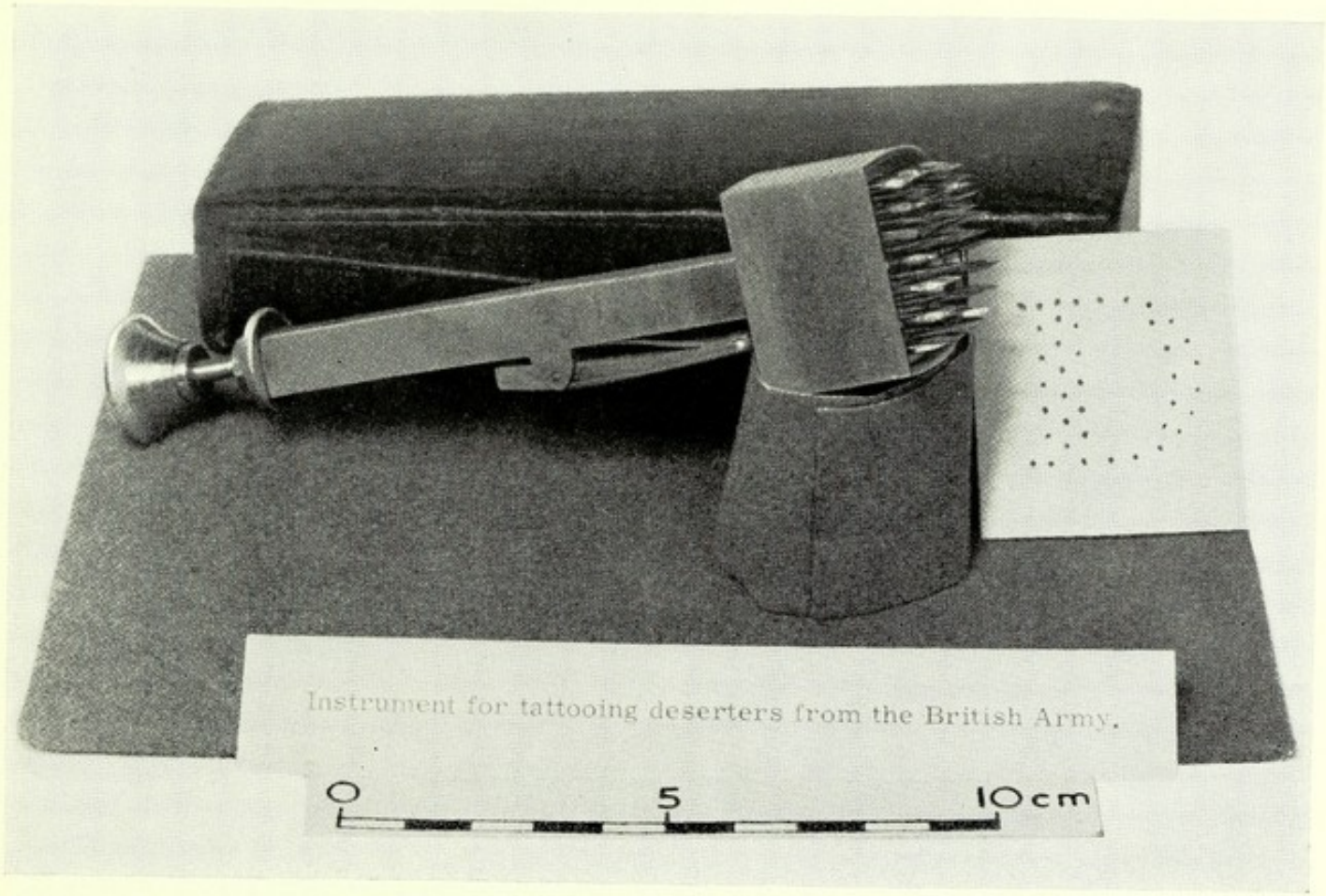
81. A Collection of documents on the victualling and medical services of Nelson's fleet. 15 volumes, folio. Vols. 1 and 15 on view.

82. Amputation set made by Evans and used by the surgeon Thomas Major in 1793.

83. Leonard Gillespie (1758–1842), Physician to the Fleet. A pocket set of instruments, a tourniquet and 2 fleams in a case, all used by him during his naval service.

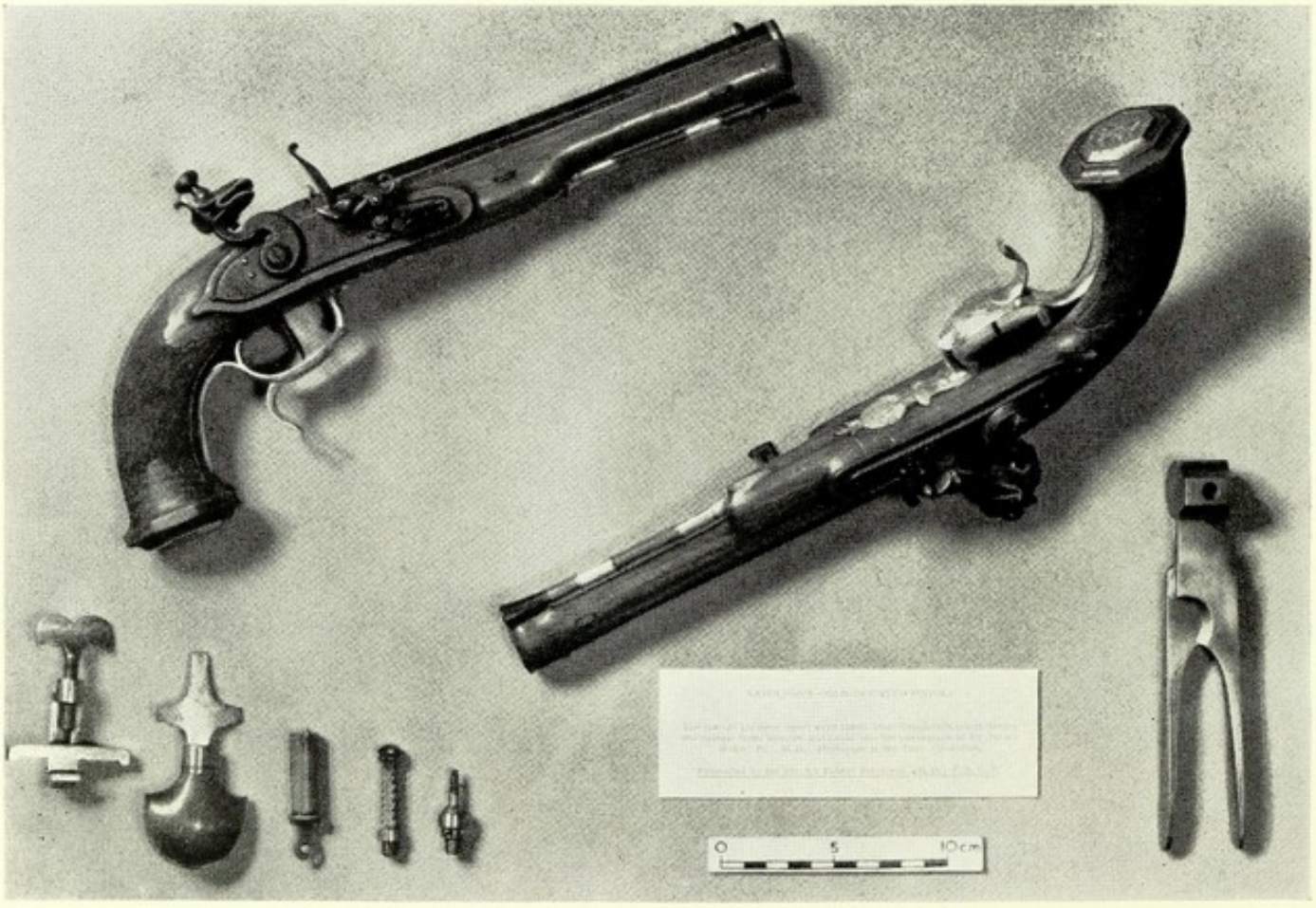


Medicine chest used by Nelson and kept in his cabin in the *Victory*. (No. 59).



Instrument for tattooing deserters from the British Army. (No. 105).

A tooth brush used by Napoleon, gold-plated and engraved with the imperial insignia. (No. 247).



Napoleon's gold-mounted pistols. (No. 48).

84. Original MS. Memorandum from the War Office, dated 2 February, 1795, concerning the medical care of the troops assembled for embarkation at Plymouth. The efforts of Lord George Lennox to establish a military hospital at Plymouth had been frustrated by the Army Medical Board, despite recommendations from the Secretary of State for War. He was forced to establish a temporary hospital in some disused stables which were almost uninhabitable in winter. In the last six months 1000 men had been in this 'hospital' and 200 had died there.

85. Document from the Army Medical Board dated 13 April 1795, concerning the appointment of medical officers to the Forces under orders for embarkation. They 'acquiesce' in the Secretary of State's appointment of Dr. Ghillan as the Physician "as he has a Licence from the College".

86. Certificate of enlistment oath dated 30 November 1798. In addition to swearing that he was a Protestant, the recruit, Henry Case, also had to swear that he had "no Rupture, nor ever was troubled with Fits; that [he was] in no ways disabled by Lameness or otherwise . . .".

87. Memorial written and signed by Thomas Young, Inspector General of Hospitals for the Land Forces, recounting his career in the Army and suggesting that he be "awarded some mark of public distinction such as has frequently been bestowed on officers of his rank and service." [c. 1805]

88. Letter signed Castlereagh and dated Downing Street, 3 August, 1809, to Sir Arthur Wellesley (afterwards the Duke of Wellington) rejecting the application of Dr. Ferguson, Inspector General of Hospitals to the Army in the Peninsular War, for increased pay and allowances for Medical Officers.

89. Letter from Lord Fitzroy Somerset to Dr. Ferguson, dated Visen 10 April, 1810, telling him that Lord Wellington has been informed that the current orders for Medical Officers do not allow pay for a servant.

90. Instructions for the Regulation of Regimental Hospitals and the Concerns of the Sick. Horse Guards, 24 September, 1812.

91. Document signed by George III appointing Robinson Ayton, Gent., as Assistant Surgeon to the 60th (or Royal American) Regiment of Foot, dated 23 March, 1809.

92. Document signed by George III appointing James Taylor, Gent., as Surgeon to the Forces, dated 25 June, 1815.

93. Document signed by George III appointing William Knott, Gent., as Hospital Assistant to the Forces, dated 16 June, 1815.

94. Document, addressed to the Duke of Wellington, signed by Sir J. R. Grant, Inspector of Hospitals, giving return of pay due to John Gunning, the Deputy Inspector, from 25 April to 24 June, 1816. Gunning's pay was 23/6 a day.

95. Before appointment as Regimental Surgeons candidates had to obtain a certificate declaring their fitness for the post from a board of examiners at the Royal College of Surgeons. These two certificates, dated 4 March, 1814, and 2 June, 1815, have the signatures of the leading surgeons of the time.

96. Sir Charles Bell (1774–1843) *A Dissertation of Gun-shot Wounds.* 8vo. London, 1814.
Bell urges the need for order and method in dealing with the wounded on a battlefield and recommends that the inspection of the wounded with a view to immediate operation on the severely wounded should be done at the earliest opportunity. Among the cases he cites is that of a foreign nobleman who led his troops against the French at Borodino and was seriously wounded in the thigh. (p. 53).

97. George James Guthrie (1785–1856) Portrait, stipple engr. by J. Cochran aft. H. Room, 1839.
Guthrie was a military surgeon throughout the Peninsular War and performed some pioneer operations at Waterloo. In 1816 he founded an eye infirmary which became the Westminster Ophthalmic Hospital. He later became president of the Royal College of Surgeons and published excellent works on military surgery based on his practice in the wars.

98. George James Guthrie. *On Gun-shot Wounds of the Extremities requiring the different Operations of Amputation.* London, 1815.
On page 175 Guthrie refers to 'the great and decisive influence of practice in the peninsular war.'

99. Joseph Constantine Carpue (1764–1846) Photograph from a mezzotint by C. Turner, 1822.
Surgeon, anatomist and pioneer in electrotherapy, Carpue studied at St. George's Hospital and was then appointed staff-surgeon to

the Duke of York's Hospital, Chelsea. He was an early supporter of vaccination, introduced it in many army depots, and later worked with Pearson at the National Vaccine Institution. He was elected F.R.S. in 1817.

100. Joseph Constantine Carpue. *An Account of two successful operations for restoring a lost nose from the integuments of the forehead, in the case of two officers of His Majesty's Army.* 4to. London, 1816.
Carpue was an early British pioneer of plastic surgery and recommended it to his pupils for 15 years before an opportunity of performing a successful operation came his way. One of the patients had lost his nose through abuse of mercury, the other by a sabre cut at the battle of Albuera.

101. Cupping set by Laundy, c. 1800. After scarification a heated cup was applied. As the cup cooled a partial vacuum was formed and the blood flowed freely from the incisions.

102. Set of surgical instruments in case with brass plate inscribed "W. Ward, Army Surgeon, 1812". They were used in the Peninsular War and at the battle of Waterloo. Presented by the late H. M. Morgan, M.R.C.S.

103. Set of surgical instruments which belonged to the Surgeon John Abernethy (1764–1831). Presented by Dr. Cyril Elgood.

104. Mahogany medicine chest with silver-gilt fittings believed to have belonged to the Duke of York, brother of George III.

105. A tattooing instrument for marking deserters from the army with a capital letter 'D' about one inch high.

THE PROFESSION AND MEDICAL REFORM

106. Edward Harrison (1766–1845). *Remarks on the ineffective state of the Practice of Physick in Great Britain.* London, 1806.
An Edinburgh graduate practising in Lincolnshire, Harrison drew up proposals for the reform of the profession and the establishment of a medical register. Although he had the support of William Pitt and Sir Joseph Banks (President of the Royal Society) both the Royal Colleges as well as the Society of Apothecaries opposed all suggestions for reform.

107. Edward Harrison. *An Address . . . containing an Account of the Proceedings lately adopted to improve Medical Science, and an Exposition of the intended Act for regulating Medical Education and Practice.* London, 1810.
Harrison claimed that only one in nine of the medical practitioners in England were qualified by education or training. 'The title of Doctor, the highest in Physic, is no longer confined to regular graduates. It is assumed at pleasure by medical men of every description, as well as the rapacious Quack and common Farrier. Thus prostituted, it is rather a term of reproach than an object of ambition.' (p. 43). Pointing out the defects in the system of medical education he writes: 'It is a remarkable fact, though certainly not very creditable to an enlightened nation, that London is the only considerable metropolis in Europe where no medical school has been founded by the Government.'
Harrison's proposed Bill did not reach the Statute Book.

108. Jeremiah Jenkins. *Observations on the Present State of the Profession and Trade of Medicine.* London, 1810.
This work is dedicated 'To the Right Honourable and Honourable the Members of the British Legislature . . . exposing a traffic which not only tampers with the lives of His Majesty's subjects, but reflects Disgrace on the Government of the Country . . .'.

109. *Observations on Medical Reform.* By A Member of the University of Oxford. London, 1813.
The anonymous author (who is obviously a physician) refers to 'the morbid tendency of the present generation to reform', declares that 'the division of labour is the corner-stone on which the social edifice is founded' and that 'there must be the general Practitioner for humbler stations'.

110. [George Darling]. *An Essay on Medical Economy, comprising a Sketch of the State of the Profession in England, and the Outlines of a Plan calculated to give to the Medical Body in general an increase of Usefulness and Respectability.* London, 1814.
Writing anonymously, the author complains that the physicians are monopolists and that general practitioners have too low a status and often have to work at a lower standard than they are capable of in order to earn a living. He suggests that all practitioners (apart from pure surgeons) should be graded as junior and senior physicians, with fees according to their grade.

111. Great Britain, Parliament. *An Act for better regulating the Practice of Apothecaries throughout England and Wales.* 12 July, 1815.
The Apothecaries Act of 1815 is one of the landmarks in the

history of the medical profession in England. For nearly a century the London Society of Apothecaries used the powers given to it by this Act to bridge the transition between Medicine practised as a 'trade'—for the great body of general practitioners had only an empirical training by apprenticeship—and the university trained profession of today.

112. Robert Masters Kerrison. *Observations and Reflections on the Bill . . . for "better regulating the Medical Profession as far as regards Apothecaries"*. London, 1815.

113. George Man Burrows (1771–1846). *A Statement of Circumstances connected with the Apothecaries' Act, and its Administration.* London, 1817.
Burrows, a London practitioner and a qualified apothecary, took up the cause of medical reform from Harrison and organized an Association of Surgeon-Apothecaries [i.e. General Practitioners] of England with more than 3000 members. James Parkinson, who first described 'shaking palsy', was on the London Committee. They discussed the desirability of a separate 'College of General Practitioners' but finally agreed to support the Society of Apothecaries as their representative body. The Apothecaries Act of 1815, which gave the Society the right to examine and license apothecaries after five years' apprenticeship, was the general practitioners' charter. The great majority of family doctors in the 19th century qualified in this way.

114. John Keats (1795–1821). Portrait. Stipple engraving by H. Meyer aft. a sketch drawn from life by J. Severn.
After apprenticeship to a general practitioner the celebrated poet studied at Guy's Hospital and was among the first group to take and pass the new qualifying examinations instituted after the Apothecaries Act of 1815.

115. Great Britain, Parliament. *An Act to amend and explain an Act . . . for the better regulating the Practice of Apothecaries throughout England and Wales.* 6 July, 1825.

116. *Transactions of the Medical Society of London*, Volume I, 1810.
There were very few medical journals published in Britain at this time. The *Lancet* and the *British Medical Journal* were still unknown. The Royal College of Physicians did not publish a record of its proceedings. *The Medical Society of London* was founded in 1773 by a group of non-collegiate physicians led by the Quaker John Coakley Lettsom. It did much to advance professional standards and was active in many good causes, especially in supporting

Jenner in the Vaccination controversy. A painting by Zoffany (1733–1810) depicting Lettsom and his family in the garden of their home at Camberwell is hanging in the Wellcome Library, adjacent to the Exhibition Gallery, and may be seen by visitors.

117. *Medico-Chirurgical Transactions.* Published by the Medical and Chirurgical Society of London. Volume I. 3rd ed. 1815.
In 1805 a breakaway group in the Medical Society of London established this new society which continues today as the Royal Society of Medicine. The Transactions were published without a break and are now the *Proceedings of the Royal Society of Medicine.*

118. Philibert Joseph Roux (1780–1854). *Relation d'un Voyage fait à Londres en 1814; ou Parallèle de la Chirurgie Angloise avec la Chirurgie Françoise.* Paris, 1815.
This French visitor to London is struck by the high quality of the surgery there, which he attributes to the influence of John Hunter; he says it is 'at least of equal rank with Medicine'. He names Home, Cline, Abernethy and Blizard among the leaders, and among the younger generation Astley Cooper, Brodie, Travers, Lawrence, Charles Bell, and McGrigor. He remarks on the popularity of anatomical and surgical teaching, even among 'men of the world and people of high rank' who have a positive enthusiasm for the subject and have spectators' places reserved for them at demonstrations or operations. He found the hospitals better fitted for their job than those in France, but much smaller and less comfortable for the patient than those in Paris.

119. John Cross. *Sketches of the Medical Schools of Paris. Including Remarks on the Hospital Practice, Lectures, Anatomical Schools, and Museums; and exhibiting the Actual State of Medical Instruction in the French Metropolis.* London, 1815.
The reputation of French medical education was so high that many English students went to Paris to study whenever conditions allowed. By 1830 the majority of students went there for anatomical study, for the restrictions on the use of cadavers in England were only removed by the Anatomy Act of 1832. In his preface Cross writes: 'I shall always recollect with pleasure the treatment I received there and the readiness I found in every man of science to shew, communicate, and explain whatever was worth seeing, learning, or inquiring after.' He mentions particularly the help given him by Pinel, Dupuytren and Magendie.

120. *Surgeons' Hall at the Old Bailey.* Tempera, by Hudson; with inscription relating to the Company's Statutes of 1745.
In 1745 the Surgeons broke away from the old Barber-Surgeons'

Company and built their new hall close to Newgate Prison and just round the corner from the College of Physicians in Warwick Lane. In 1800 they secured a royal charter establishing the Royal College of Surgeons of England, and in 1811 moved into their new building in Lincoln's Inn Fields where they are today.

121. *The Royal College of Physicians, Warwick Lane.* Oils on canvas by an unknown artist.
The College lost its building in the great fire of London of 1666 and the new one was built by Robert Hooke and first occupied in 1679. In 1825 the College moved to a new home in Pall Mall which it left for its present buildings in Regent's Park in 1964.

122. *The Royal College of Physicians, Pall Mall.* Oils on canvas by B. Moor. c. 1828.

123. *St. Bartholomew's Hospital* in the early 19th century. Line engraving by Chabot after King and Delamotte; coloured.

124. *St. Bartholomew's Hospital Medical College.*
Certificate, signed by John Abernethy and others stating that Richard F. George had received 18 months' practical instruction and has spent 12 months as Dresser under Abernethy. 1818–20.
John Abernethy, who was elected assistant surgeon to the hospital in 1787, is justly looked on as the real founder of the medical school. A new lecture theatre was built for him in 1791 and a larger dissecting room in 1822. His lectures were given in the evening.

125. *St. Bartholomew's Hospital Medical College.*
Certificate, signed by John Abernethy and Edward Stanley stating that John S. Stamp has completed courses in anatomy and surgery. May, 1821.

126. John Abernethy (1764–1831). Portrait; soft ground etching by W. Daniell after G. Dance, 1793.

127. *St. Thomas's Hospital.* Aerial view of the old building at Southwark. Line drawing by Toms.
St. Thomas's used to adjoin Guy's Hospital and the two were known as the 'United Borough Hospitals'. St. Thomas's was moved to its present site at Lambeth, facing the Houses of Parliament across the river, to make way for the present London Bridge Railway Station.

128. *Guy's Hospital.* Engraving by J. Rogers after Whittock.

129. Sir Astley Paston Cooper (1768–1841). Portrait, stipple engr. by J. S. Agar from a drawing by A. Wivell. Pub. by Geo. Lawford, 1825. Cooper was the outstanding British surgeon of his time. He studied in London, Edinburgh, and Paris, and became F.R.S. in 1802. He taught anatomy at St. Thomas's and Guy's Hospitals and published a great deal. He was made a baronet in 1821.

130. *St. George's Hospital.* Seen from Hyde Park Corner. Col. lith. 1797.

131. *Middlesex Hospital.* Interior view of ward. Aquatint by Stadler after engraving by Rowlandson and Pugin.

132. *The Edinburgh Medical School.*
This celebrated school had already passed the peak of its fame by 1815 and was for a time noted for the jealousy and quarrels among its professors. This letter of 24 June, 1812, was written by Andrew Duncan, Senior, to Dr. J. C. Lettsom, referring to the attack on him which he suspects was made by James Gregory, the inventor of 'Gregory's powder'.

133. *The School of Medicine in Paris*, 1808. Col. etching by Chapuy aft. Toussaint.

134. Certificate for a man-midwife. Certificate, signed by Andrew Thynne, M.D., dated 19 January, 1791, stating that Norris Peacock has attended lectures on midwifery and the diseases of women and children "at my Lying-in House in Water Lane", and testifying to his competence in the subject.

135. The Midwife. Col. etching (after pen and ink drawing) by T. Rowlandson. Published 1811.

THE DAWN OF SCIENTIFIC MEDICINE

136. Antoine Laurent Lavoisier (1743–94). Portrait, in medallion, with scene below depicting his trial and imprisonment. Aqua forte by Duplessis Bertaux.
Lavoisier was the first to appreciate the significance of Priestley's isolation of oxygen. He demonstrated the true nature of respiration and the biological role of oxygen.

137. A. L. Lavoisier. Portrait, whole length, standing by table with laboratory apparatus. Line engraving by Nargeot after Boilly.

138. Lavoisier in his laboratory. Experiments on respiration. Facsimile of a drawing by Mme. Lavoisier. Heliogravure by Arents.

139. A. L. Lavoisier. *Traité élémentaire de Chimie, présenté dans un ordre nouveau et d'aprè les découvertes modernes.* 2 vols. Paris, 1789.
The first edition of the classic work which is regarded as the foundation of modern chemistry.

140. *Elements of Chemistry . . . by Mr. Lavoisier.* Translated from the French by Robert Kerr. 4th ed. Edinburgh, 1799.

141. A. L. Lavoisier. Portrait medal by A. A. Caqué, 1821.

142. Original document signed by Thibaudeau, 'Representative of the People', ordering the inventory and valuation of the contents of Lavoisier's laboratory. It is dated 17 brumaire, l'an 3 (i.e. 9 November. 1794), six months after Lavoisier's execution. The Committee of Public Safety ordered that the laboratory should be taken over by the 'Central School of Public Works'.

143. John Dalton (1766–1844). Portrait, h.l. seated. Pen and brush drawing; unsigned.
Dalton discovered the law of chemical combinations and tabulated the atomic weights of various elements; he also discovered colour blindness, made important investigations into the constitution of gases and founded meteorology as a science.

144. John Dalton. *A New System of Chemical Philosophy.* Manchester, 1808–27.

145. Apparatus used by Dalton in his researches. (Reproductions.)

146. Sir Humphry Davy (1778–1829). Portrait. Mezzotint by C. Turner aft. a painting by H. Howard.
Davy gained his first knowledge of chemistry in his home town at Penzance. In 1798 he was appointed assistant to the Pneumatic Institute at Clifton, near Bristol, which had been founded by Dr. Thomas Beddoes for the purpose of determining the therapeutic action of the newly discovered gases. While there Davy investigated the properties of nitrous oxide (laughing gas), and noticed its anaesthetic properties. He suggested that it might be used with advantage in surgical operations but did not attempt to demonstrate this. In 1801 he was appointed assistant lecturer at the newly established Royal Institution, where success and fame came rapidly. In 1803 he became F.R.S., and was Secretary of the Royal

Society 1807–12, and President 1820–27. He first isolated sodium, potassium, and chlorine and studied the properties of iodine. In 1815 he invented the miners' safety lamp which is known by his name.

147. A British Chymist Analizing a Corsican Earth Worm. Pub. by Wm. Holland, 1803.
The 'British Chymist' in this caricature of 1803 is George III. The legend tells us what the British thought of Bonaparte; the choice of subject shows us how popular chemistry was at this time when fashionable society was crowding Humphry Davy's lectures at the Royal Institution.

148. *New Discoveries in Pneumatics.* Royal Institution. Col. etching by James Gillray. Pub. by Humphreys, 1802.

149. Royal Institution. View of Library. Col. line engraving by Stadler after an engraving by Rowlandson and Pugin. Pub. by Ackermann, 1809.

150. Sir Humphry Davy. *Elements of Chemical Philosophy.* Part I, vol. I, 1812.

151. Laughing Gas. A new comic song. Sung with unbounded applause by Mr. W. Smith of the Royal Surrey Theatre. London, John Guest, n.d. The cover has four lithographed scenes of the effects of 'laughing gas'.

152. James Curry (c. 1763–1819). *Observations on Apparent Death from Drowning, Hanging, Suffocation by Noxious Vapours. . . . and an Account of the Means to be employed for Recovery.* 8vo. London, 1815.
The plate (facing p. 196) shows a simple apparatus for artificial respiration, a refinement on the direct mouth-to-mouth method.

153. Instructions for resuscitation in apparent death from drowning, intense cold, hanging, suffocation, etc. Broadside, printed by Goodwyn, Tetbury.

154. The miners' safety lamp. An early version of the Davy lamp invented in 1815, the first practical contribution to industrial health and preventive medicine. Some of the early modifications failed to embody the precision of Davy's design and mine explosions continued to be a threat to the miner, as can be seen in the following.

155. *Contemporary Bills reporting mine disasters* :

1. A Full Account of the Dreadful Disaster which happened on June 19th 1823 at Walker Colliery . . . Newcastle. Broadside. Printed by Wm. Stephenson, Gateshead.

2. The Miner's Petition from West Bromwich. In verse. One stanza reads :
"Then help it is call'd for, by all who surround,
To see where their mangled bodies can be found;
Some crush'd all to pieces—their brains fly around!
Then pity poor Colliers that work under ground."

3. Dreadful Explosion in a Pit called No. 1 Pit, near Washington in the County of Durham on Thursday last, Nov. 20, 1828.

ANATOMY AND PHYSIOLOGY

156. John Abernethy. *An Enquiry into the Probability and Rationality of Mr. Hunter's Theory of Life.* London, 1814.
Abernethy succeeded Sir William Blizard as professor of anatomy and surgery at the Royal College of Surgeons and this book contains the text of his first two lectures. A medical critic wrote that it was 'too much tainted with *medical reasoning* for a surgeon.' The theory may be seen in these two quotations :
'Mr. Hunter . . . patiently and accurately examined the different links of this great chain [of living beings], which seems to connect even man with the common matter of the universe.' (p. 17)
and 'The experiments of Sir Humphry Davy seem to me to form an important link in the connexion of our knowledge of dead and living matter. He has solved the great and long hidden mystery of chemical attraction.' (p. 48).

157. Sir Everard Home (1756–1832). *Lectures on Comparative Anatomy; in which are explained the Preparations in the Hunterian Collection.* 2 vols. London, 1814.
This work eventually extended to 6 volumes, the last being published in 1828. A pupil of John Hunter, Home was first keeper of the Hunterian Collections and destroyed Hunter's MSS. after utilising them in his publications. He was surgeon to St. George's Hospital 1793–1827 and first President of the Royal College of Surgeons.

158. Sir William Lawrence (1782–1867). *An Introduction to Comparative Anatomy and Physiology ; being the two Introductory Lectures delivered at the Royal College of Surgeons, on the 21st and 25th of March, 1816.* London, 1816.
A pupil of Abernethy, Lawrence followed him as surgeon to St. Bartholomew's Hospital and later became president of the Royal College of Surgeons. His lectures were remarkable for their attack on Abernethy's views of structure and function. In his preface he acknowledges the influence of Cuvier and Bichat. Lawrence is regarded as one of the founders of physical anthropology.

159. Marie François-Xavier Bichat (1771–1802). *Anatomie générale, appliquée à la Physiologie et à la Médecine.* 2 vols in 4. Paris, An X (1801).
In his short life Bichat revolutionized descriptive anatomy and opened up a new field of study for pathology in the membranes or tissues of the body. The effect of his ideas on his contemporaries is well shown in George Eliot's *Middlemarch*, where the young doctor-hero Lydgate is ambitious to follow in Bichat's footsteps.

160. M. F.-X. Bichat. *Physiological Observations on Life and Death.* Translated by F. Gold. London, 1815.

161. M. F.-X. Bichat. Lithograph by Gsell from a sculpture by Pierre David.

162. James Carson (1772–1843). *An Inquiry into the Causes of the Motion of the Blood.* Liverpool, 1815.
In his Gideon Delaune lecture of 1962 Lord Cohen of Birkenhead 'rescued Carson from obscurity' by his appraisal of his physiological work on the motion of the blood. Carson's book is dedicated to Sir James McGrigor, Director General of the Medical Department of the Army, acknowledging the favours he has received in his army service.

163. Sir Charles Bell (1774–1843). Portrait; lith. by R. Martin.
Bell was a surgeon and anatomist educated in Edinburgh who advanced our knowledge of the nervous system. His *New Idea of the Anatomy of the Brain* (1811) is a classic. During the wars he also wrote on military surgery. He was one of the founders of the Middlesex Hospital Medical School and later became professor of surgery at Edinburgh.

164. Sir Charles Bell. *The Anatomy of the Brain explained in a series of Engravings.* London, 1802.

165. Jean Nicholas, Baron Corvisart (1755–1821). Portrait. Engraving by Blot after a painting by Gerard, 1809.
One of the founders of modern cardiology, Corvisart established the art of percussion as a diagnostic procedure through his translation of a forgotten book of 1761 by an Austrian, Leopold Auenbrugger. He was the first to show how to differentiate clearly between cardiac and pulmonary disorders and to explain the mechanism of heart failure. Corvisart was Napoleon's favourite physician.

166. *Nouvelle méthode pour reconnaitre les Maladies Internes de la Poitrine par la Percussion de cette cavité, par Auenbrugger . . . Ouvrage traduit du Latin et commenté par J. N. Corvisart.* Paris, 1808.

167. Letter from Corvisart to Larrey, dated from Paris, 11 June, 1813. Corvisart thanks Larrey for the trouble he has taken with regard to the body of General Kirgener, who was killed at Markersdorf. "I have not yet written to the pharmacist of the Guards' Hospital to claim the general's heart, for I think that these specimens are never despatched here very quickly, but I shall see to it."

168. Clinical thermometer introduced by James Currie (1756–1805). Currie made some pioneer investigation of fever. He was also the first editor of Robert Burn's *Collected Works.*

169. French clinical thermometer; late 18th or early 19th century.
This is an early example of the Continental type; the centigrade scale is hand made and is placed in a tube separate from the mercury capillary scale.

170. Matthew Baillie (1761–1823). Portrait. Stipple and line engraving by H. Cook after a painting by J. Hoppner.
A nephew and pupil of William Hunter, Baillie was the first notable English pathologist. His work on *The Morbid Anatomy of the Human Body* (1793) was the first systematic treatment of the subject as an independent science.

171. *The Atlas* to Baillie's pioneer work on morbid anatomy was published between 1799 and 1802. The engravings were drawn by William Clift, who was chiefly responsible for preserving the Hunterian Museum.

172. John Richard Farre (1774–1862). *Pathological Researches. Essay I. On Malformations of the Human Heart.* London, 1814.

In this work Farre accurately describes and illustrates fifteen cases of the condition now known as the 'tetralogy of Fallot' (the 'blue baby syndrome') and which was first noted by Steno in the 17th century. Farre was physician at the Royal London Ophthalmic Hospital (Moorfields) of which he was co-founder.

173. Joseph Hodgson (1788–1869). *A treatise on the diseases of arteries and veins.* London, 1815.
This classic account of aneurisms and valvular disease contains the first description of the dilatation of the aortic arch which came to be known as 'Hodgson's disease'. The book is based on Hodgson's successful Jacksonian Prize essay (1811) for the Royal College of Surgeons.

174. Contemporary instruments used in the surgical treatment of aneurism.

175. R. T. H. Laennec (1781–1826). *De l'auscultation médiate.* 2 vols. Paris, 1819.
This is the book in which Laennec's invention of the stethoscope was made known to the world. He was the greatest authority of his time on tuberculosis, a disease with which he was himself affected and from which he died.

176. Laennec using his new stethoscope on a patient in the Hôpital Necker in Paris in 1816. From the mural by Théobald Chartran in the Sorbonne.

177. An original Laennec stethoscope, presented by Laennec to Dr. Béguin, a French army surgeon, whose widow gave it to Dr. F. N. Humphreys in 1863.

178. Gaspard Laurent Bayle (1774–1816). *Researches on pulmonary phthisis.* [Translated] From the French . . . By William Barrow. London, 1815.
The translator says that this book was recommended to him during his studies in Paris. He deplores the low state of knowledge of this disease in Britain, a subject in which France was pre-eminent, and attributes the cause to the ignorant prejudice in England against anatomical dissection and post-mortem studies. At the time of writing, this disease was the greatest single cause of death in the population.

179. Joseph Adams (1756–1818). *A treatise of the supposed hereditary properties of diseases.* London, 1814.
Strongly influenced by John Hunter, the author denies that 'Gout,

Consumption and Madness' are hereditary diseases, as was commonly thought. He made a distinction between 'family' diseases, in which contagion probably plays a part, 'connate' (i.e. congenital) diseases, and hereditary predisposition.

180. Sir James Fellowes, M.D., F.R.C.P. *Reports on the Pestilential Disorder of Andalusia . . . 1800 . . . 1813. With an account of that fatal epidemic at Gibraltar during . . . 1804.* London, 1815.
Fellowes was physician to the Forces and chief of the medical staff at Cadiz until 1815. His brother, Sir Thomas Fellowes, was the admiral in charge of gunboats at Cadiz.

181. Guillaume, Baron Dupuytren (1777–1835). Portrait. Lithograph after Maurin by G. E. Madeley.
Duypuytren was Chief Surgeon to the Hôtel Dieu in Paris and the ablest French surgeon of his time.

182. A selection of Baron Dupuytren's own instruments including his lithotome and cataract knives.

183. Philippe Pinel (1745–1826). *A treatise on insanity.* Translated from the French by D. D. Davis. Sheffield, 1806.
Pinel was consultant physician to Napoleon and professor of hygiene at the École de Médecine in Paris. At the same time he was physician to the two most important French hospitals for the insane, the Bicêtre (1793–5) and the Salpêtrière (1795–1826). His order to release the patients there from their chains symbolized dramatically the new non-restraint treatment of the mentally sick in which he was a pioneer.

184. Thomas Bakewell. *A letter addressed to the Chairman of the Select Committee of the House of Commons appointed to inquire into the state of Mad-houses; to which is subjoined, Remarks on the Nature, Causes, and Cure of Mental Derangement.* Stafford, 1815.
Bakewell, who had his own private asylum at Spring Vale in Staffordshire, claims that he effected more cures there than did the Retreat at York. He stresses the dangers of *large* institutions, where patients suffering all degrees of mental illness were kept together; he also deplores the general neglect of medical treatment of the insane.

185. John Haslam (1764–1844). *Observations on madness and melancholy.* London, 1809.
Haslam was apothecary (or medical officer) to Bethlem from 1795–1816, a position which gave him exceptional opportunities for the

study of mental illness. Constraint and force were prominent in his practice and after giving evidence before the Select Committee of the House of Commons appointed to consider the better regulation of Madhouses (1815–16), the Governors of the hospital were forced to dismiss him by the public protests at the conditions found there.

186. Andrew Marshal (1742–1813). *The morbid anatomy of the brain, in mania and hydrophobia.* London, 1815.
Marshal had a private anatomy school in Thavies Inn. Arguments over the ideas set out in this posthumous work had led to quarrels between Marshal and John Hunter, who had denied that morbid appearances might be found in the brains of those who suffered from mania.

187. *Short Account of the . . . Lunatic Asylum at Edinburgh.* Edinburgh, 1812.
After a slow start with subscriptions and plans the Edinburgh Asylum was eventually opened in 1813. It catered for three classes of patients—the well-to-do, at 3 guineas a week, the middle class at 1 guinea a week, and the paupers who were paid for by their parishes at 7 shillings a week. The Account speaks highly of the Retreat at York and of the 'mild form of treatment' which it instituted and which it was proposed to adopt at Edinburgh.

188. *Regulations of the Glasgow Asylum for Lunatics.* Glasgow, 1814.
The Glasgow Asylum was opened in 1814.

189. George Nesse Hill. *An essay on the prevention and cure of insanity.* London, 1814.
Hill argues that insanity always has a foundation in physical disease, that it consists of two forms, Mania and Melancholia; that it is *not* a hereditary disease; and that it is as generally curable 'as any of those violent diseases most successfully treated by medicine.' He says that 'too many very intelligent . . . practitioners even in this day of enlightened humanity, either wholly neglect the victims of insane disease, or hastily consign them as loathesome terrific objects to chains, painful coercion, starving and darkness.'

190. S. W. view of Bethlem Hospital and London Wall. Etching by J. T. Smith, 1814.

191. St. Luke's Mental Hospital. Interior view of ward with patients. Col. engraving by Stadler after an engraving by Rowlandson and Pugin.

192. Edward Jenner (1749–1823). Portrait in oils by J. R. Smith, R.A. Smith's pastel portrait of Jenner (also in the Wellcome Museum) was exhibited at the Royal Academy in 1800 and this painting must have been made soon afterwards.

193. Edward Jenner. *An Inquiry into the Causes and Effects of the Variolae Vaccinae, a Disease discovered in some of the Western Counties of England, particularly Gloucestershire, and known by the name of the Cowpox.* London, 1798.
The first edition of the epoch-making work which introduced the practice of vaccination and marks the beginning of immunology.

194. Edward Jenner. *Further observations on the Variolae Vaccinae, or Cowpox.* London, 1799.
Open at the letter from Henry Cline, dated 2 August, 1798, announcing his successful inoculation with the cowpox virus given to him by Jenner.

195. Edward Jenner. *A Continuation of Facts and Observations relative to Variolae Vaccinae, or Cowpox.* London, 1800.
Jenner states in this work that more than 6,000 persons had been vaccinated, and that a great number of them had afterwards been inoculated with smallpox matter and otherwise exposed to infection without results.

196. Edward Jenner. Autograph letter, signed, to Dr. Jean De Carro of Vienna, dated London, 4 May, 1807.
Dr. De Carro was responsible for establishing vaccination throughout the Austrian empire and countries to the east.
Jenner writes: "I must now tell you how vaccination is going on here. Owing to the illiberal, the cruel, conduct of a few medical men in this country who deluded, I may almost say *bewitch'd*, the common people with their infamous publications, the practice among the inferior orders of Society was nearly abandon'd, and the smallpox again let loose upon them."

197. Edward Jenner. *Facts for the most part unobserved, or not duly noticed, respecting variolous contagion.* London, 1808.

198. Edward Jenner. *Instructions for Vaccine Inoculation.* Handbill. *London*, c. 1801.

199. Vaccine Points used by Jenner.
The ivory points were dipped in the lymph from the pustule of a person who had been vaccinated between five and eight days

previously, allowed to dry, and then re-dipped. The lymph on these points remained active for a time and enabled it to be sent from one place to another.

200. *Smallpox and Inoculation Hospitals.* Anniversary report, signed for the Committee by A. Highmore, 12 March, 1807.

201. Royal Jennerian Society, Minute Book of the Directors from 16 September, 1805, to the final meeting on 3 August, 1809.

202. Engraving of gold medal presented to Jenner by the Surgeons of the Royal Navy on 20 February, 1801.
The medal is known only from this engraving, for only one example was struck and this has been lost. Subscriptions for the medal were organized by Dr. Thomas Trotter, physician to the Fleet.

203. Portrait medal of Jenner made by F. W. Loos, Germany, c. 1805.

204. Medal of the Société Centrale de Vaccine, France, by Andrieu, 1804. This bears a portrait of Napoleon and was presented to Pierre Bretonneau (1771–1862), physician and surgeon.

205. Medal of the Vaccinations Municipales de Paris, by Depaulis, 1814.

206. Medal of the Schutzpocken Commission, Germany, by A. Guillmaud, 1803.

207. The Cow Pock, or, The Wonderful Effects of the New Inoculation. Col. etching by James Gillray. Pub. by Humphreys, 1802.

208. The Cow Pox Tragedy. Scene the Last. By G. Cruikshank. Pub. by M. Jones, 1812.

209. The cottage where Jenner performed the first Vaccination. Water-colour by F. Pick, dated September 1865.

210. James Moore (1763–1834). *The History of the Small Pox.* London, 1815.
The folding frontispiece is "A dramatic representation of the power of the Hindoo Goddess of the Small Pox". James Moore was Director of the National Vaccine Establishment from 1809. He was a brother of the famous Sir John Moore of Corunna.

211. R. M. Lemotheux. *Dissertation sur la Vaccine.* Paris, 1815.

212. Thomas Bateman. *A Practical Synopsis of Cutaneous Diseases according to the Arrangement of Dr. Willan.* 2nd ed. London, 1813.
Willan and Bateman were the first to attempt a systematic study of skin diseases.

213. E. G. Jones. *An Account of the Remarkable Effects of the Eau Médicinale d'Husson in The Gout.* 2nd ed. London, 1810.
Gout was the commonest disease among the upper classes. On p. 92 ff. of this book we are told that Sir Joseph Banks suffered for 23 years and was confined to bed with it when Lord Spencer recommended this French remedy. Banks found immediate relief and was able to resume his normal life.

214. *Medical Instructions for the afflicted with Rheumatism, Palsy . . . containing Directions for the use of the Cajeput Oil.* By a Medical Practitioner. London, 1815.
A footnote in this pamphlet tells us that 'The Cajeput Opodeldoc is prepared at the Chemical Hall, Piccadilly, opposite Bond Street, by the direction of the Author, where any medical man may obtain the recipe for making it.' The oil was a liniment.

215. Samuel Farr (1741–1795). *Elements of Medical Jurisprudence . . . to which are added, Directions for Preserving the Public Health.* 2nd. ed. London, 1814.
The medico-legal section of this little book is clear and straightforward but the brief section on public health reminds us how little organized knowledge there was in this field at the beginning of the 19th century.

216. Mathieu Joseph Orfila (1787–1853). *Traité des Poisons.* 2 vols. Paris, 1814.
Orfila was one of the founders of the Académie de Médecine in Paris and the leading medico-legal expert of his day. His pioneer work on toxicology was one of the earliest contributions to forensic medicine as well as to pharmacology.

THE BEGINNINGS OF BRITISH OPHTHALMOLOGY

Until the end of the 18th century the treatment of eye-diseases and the correction of defects of vision were still largely in the hands of travelling practitioners.

When the English troops returned from Egypt in 1803 it was found that practically all of them were suffering from 'Egyptian ophthalmia' (a mixed infection of purulent ophthalmia and trachoma); when they were demobilised they spread the disease

all over Britain. A young surgeon named John Cunningham Saunders (1773–1810), encouraged by Astley Cooper, began to make a specialty of diseases of the eye and ear and he was the chief founder of the *London Dispensary for Curing Diseases of the Eye and Ear* which was opened in Charterhouse Square on 25 March, 1805. This later became the famous Moorfields Eye Hospital. After the early death of Saunders the chief surgeons to the hospital were Benjamin Travers and Sir William Lawrence.

217. J. C. Saunders. *A Treatise on some practical points relating to the Diseases of the Eye.* London, 1811.

218. *Plan of the Royal Infirmary for the Diseases of the Eye. Instituted 1805.* London, 1805.

219. John Vetch. *An Account of the Ophthalmia which has appeared in England since the Return of the British Army from Egypt.* London, 1807.

220. James Ware. *Remarks on the Purulent Ophthalmy which has lately been epidemical in this Country.* London, 1808.

221. John Williams. *Traité des Maladies des Yeux, avec des Observations Pratiques, constatant les succès obtenus, tant à Paris qu'à Londres.* Paris and London, 1815.

222. Spectacles in metal case dated 1793. The small oval lens became popular towards the end of the 18th century.

223. Silver mounted spectacles with double hinged side-pieces. Late 18th–early 19th century. In a shagreen covered case.

224. *Les Lunettes.* Col. lithograph by L. Boilly depicting five heads with spectacles, pince-nez, monocle, etc. Pub. by Delpech, Paris, c. 1800.

225. Case of ophthalmic instruments by Grangeret of Paris, c. 1800.

FROM PHARMACY TO PHARMACOLOGY

226. *The Ormskirk Remedy for the Bite of a Mad Dog.*
Before the time of Pasteur, rabies was one of the most dreaded diseases and there were several well-known 'remedies' of which

the Ormskirk powder was the most famous. The two original packets of the powder on view were found unopened in a deed-box in a lawyer's office in Cornwall. They date from the end of the 18th century.

227. *Drug Jars from John Bell's Pharmacy*, c. 1800.
They are of Durham Castle 'Davenport' ware; one is marked 'Theriac', one 'Sambucus', and another, without indication of contents, was probably used for one of the medicinal syrups.

228. R. J. Thornton. *A New Family Herbal; or a Popular Account of the Nature and Properties of the various plants used in Medicine, Diet, and the Arts. With plates drawn from nature by Henderson; and engraved on wood by Thomas Bewick.* London, 1810.
Open at the section on foxglove (digitalis).

229. *Pharmacopoeia officinalis Britannica: being a new and correct translation of the late edition of the London Pharmacopoeia . . .* by Richard Stocker. London, 1810.

230. MS. letter dated Paris, 14 December, 1811, from the 'Inspecteurs généraux du Service de Santé militaire' to 'S.E. le Ministre Directeur de l'administration de la Guerre'; reporting on the quality and commercial value in Paris of two samples of cinchona, made at the request of the Commissar of the army in Aragon.

Cinchona Bark (formerly called *Peruvian* or *Jesuits' Bark*) was the only known specific for any disease. It was introduced into Europe from South America in the 1630s and was widely used against malaria as a tincture made from the powdered bark until modern times. Lack of it doomed the British expedition to Walcheren in 1809. The document shown here testifies to the greater foresight of the French army Medical Service. They not only provided the bark to the French Army in Spain but made sure that it was of the best quality, the price being 14 francs a kilogram. The attention paid to it in France may have been responsible for its selection by Pelletier and Caventou for inclusion in the long series of experiments by which they attempted to isolate the active principle (the alkaloid) from the plant. Success came to them in 1820 with the isolation of quinine from Cinchona Bark.

231. The Caribbean Jesuits Bark. Col. engraving by J. Pass, 1801.

232. The Officinalis or True Jesuits Bark. Col. engraving by J. Pass, 1801.

233. Specimen of *Cinchona lancifolia* Mutis. From the Howard Collection of Cinchona barks.

234. Pierre Joseph Pelletier (1788–1842). Bronze portrait plaque by Cormier after the statue by E. Lormier.

235. Joseph Bienaimé Caventou (1795–1877). Bronze portrait plaque by Cormier after the statue by Lormier.

236. Original preparation of quinine by Pelletier. Presented by the Faculté de Pharmacie, Paris.

237. Sir Benjamin Collins Brodie (1783–1862). Engr. portrait by J. Brain after H. Room.
Brodie was a pupil of Sir Everard Home at St. George's Hospital and became a Fellow of the Royal Society in 1810, receiving the Copley Medal in 1811 for his studies of the physiological effects of some vegetable poisons (including curare). He was professor of comparative anatomy and physiology at the Royal College of Surgeons of England in 1816 and later became president of the College and of the Royal Society as well as surgeon to George IV, William IV, and Queen Victoria.

238. Specimen of native pot curare.
The extraordinary powers of the South American arrow-poison have been put to medical use only since the Second World War and it is today widely used as a muscle relaxant in surgical operations. Brodie was among the first to make a scientific study of its properties, being followed later by Claude Bernard.

239. Brodie's report, published in the *Philosophical Transactions of the Royal Society* (1811).

240. François Magendie (1783–1855). Photograph from the portrait by Guérin.

241. Christian Friedrich Samuel Hahnemann (1755–1843). *Organon der rationellen Heilkunde.* Dresden, 1810.
The first edition of the book on which *homeopathy* was founded. It was unscientific in that it was based entirely on treatment of symptoms and ignored the growing science of pathology. The treatment by minute doses did however prove a valuable corrective to the widespread habit of excessive medication.

242. C. F. S. Hahnemann. Engr. portrait by Camille Pacces.

243. *The London Dentist.* Anon. engraver after Dighton, c. 1784.
This mezzotint showing a dentist operating in an apartment in St. James's is thought to portray the Chevalier Ruspini, the most famous London dentist of his time. He was Surgeon-Dentist to the Prince of Wales, afterwards Prince Regent and George IV.

244. Ruspini's Trade-bill, with his mark of the Prince of Wales's feathers.

245. Ruspini's display stand for showing artificial teeth, made in the form of the Prince of Wales's feathers to represent a lower and upper jaw.

246. "Acute Pain". Col. etching showing dentist extracting a tooth by a thread. Pub. by E. Orme, London, 1810.

247. Napoleon's tooth-brush.
The silver-gilt handle bears Napoleon's famous monogram. The part with the bristles is removable and can be replaced when worn. The emperor brushed his teeth regularly with an opiate dentifrice and was very particular about all aspects of his toilet.

R 8539

248. Dental instruments used on Napoleon's teeth (during his exile on St. Helena) by Dr. William Warden, Surgeon to H.M.S. Northumberland. Formerly in the possession of Admiral Sir George Cockburn and the Baroness D'Erlanger.

A113069

249. Napoleon's dentist.
M. Marmont, Chirurgien-Dentiste; autograph letter, signed, to the Secretary of the Disciplinary Council, dated Paris, 21 November, 1814, explaining why he has not reported for compulsory guard-duty.

250. The dental mirror invented by Marmont.

R 690

251. 'Waterloo Teeth'.
Human teeth, as well as ivory, were used for making artificial dentures, and a fine haul was made from the bodies of those killed at Waterloo. These were widely known as 'Waterloo Teeth' and some specimens are shown.

252. Case of dental instruments used by a court dentist. French, early 19th century.
The instruments include dental forceps, keys of Garengeot's

design, an Archimedean drill, a mirror, scalers, stoppers and burnishers. They all have mother-of-pearl handles and are silver mounted.

PHRENOLOGY

253. Franz Joseph Gall (1758–1828) and Johan Gaspar Spurzheim (1776–1832). *Recherches sur le Système Nerveux en général, et sur celui du Cerveau en particulier.* Paris, 1809.
Gall elaborated a theory linking psychology with organic structure. After he and his pupil-collaborator Spurzheim were forbidden to lecture by the Austrian government, they left Vienna and Gall settled in Paris, where an official commission was set up to investigate the value of his work. Spurzheim became the great populariser of the new theory in England and America.

254. Thomas Forster (1790–1845). *Sketch of the New Anatomy and Physiology of the Brain and Nervous System of Drs. Gall and Spurzheim, considered as a complete system of Zoonomy. With Observations on its tendency to the improvement of Education, of Punishment, and of the Treatment of Insanity.* London, 1815.
Spurzheim was giving lectures and demonstrations in London when this book was published. 'Before the time of Gall, the minute Anatomy of the Brain was quite unknown. . . . Gall and Spurzheim, by a method of dissection entirely new, have at length unfolded the parts of the Brain . . .' Although Zoonomy (Phrenology) was accepted only temporarily by the world of science the work of Gall and Spurzheim gave a great impetus to research on the brain and central nervous system.

255. Review of Spurzheim's book in *The London Medical and Physical Journal*, Volume 33, 1815.

256. J. C. F. Spurzheim. Mezzotint by James Egan after a painting by W. Yellowlees.

257. F. J. Gall. Silver portrait medal by F. W. Loos, 1805. Struck in honour of Gall's lectures in Berlin.

258. Human skull with phrenological markings. On the left cranium the Gall-Spurzheim organs are named in French. On the right there is a list in Italian of the groupings of the faculties.

259. Phrenological snuff-box. The lid bears three different views of the skull (anterior, posterior, and lateral) with the Gall–Spurzheim areas marked out into 27 organs, each numbered. The key to these numbers is on the bottom of the box.

260. Phrenological Head, marked with the Gall–Spurzheim areas. Sold by J. de Villo, 367 Strand, 11 April, 1821.

261. Contemporary caricature. Rare Specimens of Comparative Phrenology. An old Maid's skull phrenologised. Col. engr. by F. C. Hunt after a design by E. F. Lambert. Pub. by Harrison.

262. Phrenology no. 1. Sketches of Science series. "Bless me, what a bump!" A wife practises phrenology on her husband, with phrenological head at side. Unsigned, col. engr. Pub. by J. McLean.

263. 'Phrenological Office for Servants'. Showing applicants for jobs being assessed phrenologically. Col. engr. by W. Taylor.

264. Phrenology. Lecture on Heads. Col. etching by T. Rowlandson, 1808.

THE ARMY VETERINARY SERVICE DURING THE NAPOLEONIC WARS*

The Army Veterinary Service in Great Britain was the outcome of the French Revolution. The Revolution drove Vial de St. Bel, the first Professor of the London Veterinary College, to England, and antagonism to the Revolution involved Europe in war.

From May 1796, with Treasury sanction and with the approval of the Commander-in-Chief, the Duke of York, the London Veterinary College set about providing veterinary surgeons for the British Cavalry Regiments. Eventually qualified men were also provided for the Artillery and the King's German Legion.

The first qualified veterinary officers to see active service took part in the Expedition to Holland in 1799. Five officers, one with the Artillery Drivers and four with the Cavalry Force of Light Dragoons were engaged in this campaign.

*I am indebted to Mr. J. Barber-Lomax, Veterinary Historian to the Wellcome Historical Medical Museum and Library, for this section.

By 1801, forty-four veterinary surgeons had entered the Army out of about one hundred trained by the College, and, in that year, two served with the Dragoons engaged in Abercrombie's campaign in Egypt.

At the Bombardment of Copenhagen in 1807 there was one veterinary officer with the Artillery Drivers and four with the King's German Legion.

In the Corunna Campaign, six veterinary surgeons and one veterinary pupil accompanied Sir John Moore's Army in the disastrous winter retreat to the coast.

During the Walcheren Expedition, also a disaster, in 1809, six veterinary surgeons were with the Army, one of them, F. C. Cherry, later became (1839) the Principal Veterinary Surgeon to the Army.

The Peninsular Campaign, 1808–14, was notable for the failure to provide veterinary surgeons for the Artillery. Wellington, in 1811, described Spain as the grave of horses. Thirty-five veterinary surgeons served in the Peninsular at one stage or another and by 1814 the Cavalry were better provided with veterinary surgeons than at any previous period in the history of the war.

The Waterloo Campaign saw considerable addition to the veterinary service of the Artillery Drivers, seven officers serving with this corps, which existed to care for the horse teams pulling the guns belonging to each battalion of Infantry. In spite of this increase in numbers of Army veterinary surgeons particularly those attached to the Artillery Drivers, the Royal Horse Artillery, with their 1,570 horses, had still no veterinary service.

Twenty-one veterinary surgeons in all were present at the Battle of Waterloo.

During the whole period of the Napoleonic Wars, a total of 45 veterinary surgeons saw active service in the various campaigns out of some 150 graduates trained in the London College during this period.

265. Charles Vial de St. Bel (1750–1793). First professor of the Veterinary College, London. Portrait (photograph).

266. St. Bel's plan for the establishment of a veterinary school which was accepted by the London Committee of the Odiham Agricultural Society in February 1791.

267. St. Bel's proposals for the Regulations of the Veterinary College and students which were accepted by the Governors in September 1791. (Copy).

268. Architect's impression of the proposed Veterinary School in the St. Pancras Fields 1792. (Photograph).

269. *An account of the Veterinary College from its institution in 1791.* London, 1793.
The booklet issued by the Governors in 1793 was designed to start a recruiting drive for new members at a time when the finances of the College were giving cause for alarm.

270. Charles Vial de St. Bel. *Lectures on the Elements of Farriery.* London, 1793.
Each copy of the book was issued with a box of plaster hooves and shoes. The preliminary discourse is an admirable and correct account of the early history of the veterinary art.

271. Edward Coleman (1765–1839), Principal of the Veterinary College, 1794–1839. Principal veterinary surgeon to the Cavalry and veterinary surgeon to the Ordnance. (Photograph).

272. Edward Coleman. *A Dissertation on Suspended Respiration from Drowning, Hanging, and Suffocation.* London, 1791.
This work is based on an essay with which Coleman obtained the Humane Society's prize in 1790. In June 1831, the Royal Society conferred its Fellowship on Coleman for this work.

273. *A brief examination of The Veterinary College and of their grounds of their petition presented to the House of Commons.* London, 1795.
This pamphlet was issued in 1795 to inform the public that the Governors of the Veterinary College were petitioning Parliament for financial assistance. Money was voted later that year on condition that veterinary surgeons were trained for the cavalry regiments and the annual grant was continued until 1813.

274. James White (17 –1825). *A complete system of Veterinary Medicine.* 2 vols. London, 1804.
James White was gazetted as veterinary surgeon to the Royal Dragoons on qualifying in 1797, serving with this regiment, entirely at home, for seven years. In this first volume of *A Complete System* White describes contagion as being the chief cause of glanders and distinguishes between glanders and strangles: it is for this that White will be remembered for it placed him in a position superior to his contemporaries save for Peall of Dublin.

275. Bracy Clark (1771–1860). *A series of original experiments on the foot of the living horse.* London, 1809.
Clark, who was apprenticed to a surgeon of Worcester for seven years, obtained his diploma from the Veterinary College in 1794. He was a Fellow of the Linnaean Society and a member of the

French Academy of Sciences. His literary output was enormous, his professional books and communications being at least forty-five in number. Clark devoted his life and fortune to work on the foot of the horse until it became an obsession.

276. Edward Skellett (fl. 1807). *A Practical Treatise on the Parturition of the Cow.* London, 1807.
Skellett was an unqualified country practitioner who settled in London and specialised in dairy practice. He had studied comparative anatomy and in this work disagrees with, and corrects, Monro's account of the development of the bovine amnion. Skellett injected the blood vessels of the uterus in order to trace the circulation in the placenta, and his detailed work on foetal development reveals his scientific mind.

277. Thomas Peall (17 –1825). *Observations on some of the more Common Diseases of Horses.* Cork, 1814.
Peall qualified at the London College in 1796 and in 1800 was appointed Professor to the Royal Dublin Society's Veterinary College. His first-class work, in advance of his time, was largely overlooked probably because he practised in Ireland.

278. The Veterinary Surgeon of the Royal Dragoons, 1796. Col. print.
The uniform worn by the veterinary surgeon in 1796 was identical in pattern in each branch of the Cavalry, but differed in colour depending on that worn by the Regiment.

279. Royal Horse Infirmary, Woolwich. Built about 1804. A hospital and veterinary store for the Artillery, and the headquarters of the Army Veterinary Service until 1882. (Photograph).

280. William Percivall (1792–1854). Served in the Peninsular War and in the Waterloo campaign as a veterinary surgeon with the Royal Artillery Drivers. He accompanied the British Army from Waterloo to Paris. (Photograph).

THE BATTLE OF WATERLOO
18 June 1815

281. Arthur Wellesley, 1st Duke of Wellington (1769–1852). Portrait, half-length, looking to right, in uniform, with orders and sash. Mezzotint by W. Say after a painting by T. Phillips. Pub. by W. Say, 8 November, 1814.

282. The issue of *The British Press* for 23 June, 1815, containing a detailed account of the battle of Waterloo with a list of the most important casualties. Open at the leader giving a summary of the account.

283. 'Blind man's watch' presented to Wellington by the King of Spain. The watch is in a gold case with a large external hour hand of green enamel so that the time can be felt in the dark. It was made by Breguet of Paris and is mentioned in the volume of *Wellingtonia* published by John Timbs in 1852. Attached by a cord is a 'lucky charm' consisting of a holed flint.

284. Wellington's medicine chest.
The chest was supplied by John Bell and has the name 'Arthur Wellesley' written on the labels of the bottles. They contained tincture of rhubarb, ether, and other common medicaments. Wellington had the chest with him throughout the Peninsular Campaign and at Waterloo.

285. Hair cut from Wellington's head and preserved in a gold locket.

286. Map of the battlefield at Waterloo published in London in 1816.

287. A four-keyed French cavalry bandsman's trombone, picked up on the battlefield of Waterloo, near the 'Ferme de Hougomont'.

288. Letter written from Brussels, 12 June, 1815, by Colonel J. Cameron asking for a special clothing allowance for the troops transferred from the Peninsular. Cameron was killed at Waterloo six days later.

289. Letter written from Brussels, 27 July 1815, by Joseph Muter and addressed to Sir Roderick Murchison. Muter had lost his right arm at Waterloo and wrote this letter with his left hand. He writes "I have been unhappily detained here by a wound . . ."

290. The Duke of Wellington's Funeral Procession at Hyde Park Corner passing Apsley House, the Duke's residence in London, 18 November, 1852. Copy of the painting by Louis Hague at Kensington Palace.

Printed by the Clunbury Press, Berkhamsted, Herts. C89454