Hands On Learning
with Reading Museum Service

READING MUSEUM SERVICE

MEDICINE
VICTORIAN MEDICAL EQUIPMENT

H373





Medicine and surgery have been practiced for thousands of years. Trepanning - the practice of cutting out sections of the skull and exposing the brain - has been successfully carried out since Neolithic times. It may have been done to treat conditions such as epilepsy or mental illness. In many cases the patient clearly survived even though the operation was carried out using flint tools.

The tools have changed over the years, although the need to make a quick and neat cut is still a basic surgical practice. Some technologies have had a brief period of fashion and have then been abandoned. In other cases innovations have dramatically changed both practices and success rates. The discovery, in the nineteenth century, of germs and the need to keep both the patient and equipment clean is an example of this. The objects in this box are from the nineteenth and early twentieth centuries and reflect this ongoing process of adaptation and innovation.

Above: A Neolithic skull showing evidence of trepanning and a print of the same operation in the eighteenth century.

Lancets (open and closed)



For thousands of years, small knives like these were used to open veins in the arm to allow blood to flow in the belief that it would heal various ailments. The Greek doctor Galen (AD 129-200) thought that blood could stagnate and that, at times, there could be too much blood. Both of these conditions were thought to lead to illness, which could be dealt with by cutting a vein and allowing a quantity of blood to be released. Bleeding was used to treat almost any serious illness. It was during the Victorian period that doctors came to realise this treatment did harm rather than good.

The practice of blood letting (phlebotomy) was practised until the 1860s. Sometimes a glass cup that contained heated air, or leeches, was used to draw out blood. In the nineteenth century scarification machines were invented which made cuts to a measured depth. Sometimes blood letting to the point of fainting was considered beneficial and many sessions would only end when the patient began to swoon. Today blood is regularly taken for testing, but bleeding is seldom used as a treatment in itself.

Above: A Victorian scarification contraption - with the blades exposed.

Reading Borough Council

Heritage Lottery Fund

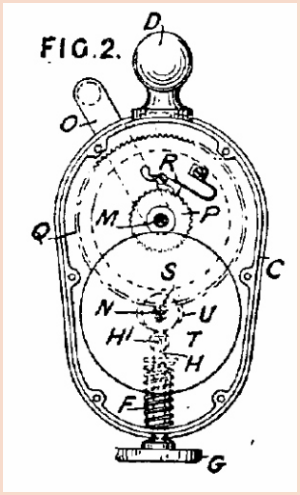
Hands On Learning
with Reading Museum Service

MEDICINE
VICTORIAN MEDICAL EQUIPMENT
H373

Dr Macaura's Blood Circulator



The vibrating pad on this device is stamped with 'Pulsocon Patent 13932'. The British patent 190513932 was applied for by Gerald Joseph Macaura MD (USA) in 1905. Dr Macaura claimed that his machine allowed treatment 'through the garments of the patient, and a greater penetration obtained than with hand vibrators, as hitherto constructed'. He applied for patents for improvements to his machine in 1908. A rash of further improvements and international patents were applied for in the mid-1920s. This example of Dr Macaura's Pulsocon probably dates from this later period.



Dr Macaura is described in some sources as an American quack, calling himself a vibrotherapist. Some of the instruction books that originally went with these machines seem to have claimed ridiculous effects, including the ability to cure deafness! His various patents were all applied for from different addresses, suggesting a wandering lifestyle. However, the only illness which his patent applications refer to is sciatica, which seems a more modest and realistic claim.



Massage has a long history as a treatment for aches and pains and is still widely used, so some of Dr Macaura's claims are perhaps not too absurd. Electrically powered vibrators are still sold for the purpose of pain relief.

Above right: A diagram of Dr Macaura's Blood Circulator from his patent application of 1905. Below right: Dr Macaura.

Hands On Learning
with Reading Museum Service

MEDICINE
VICTORIAN MEDICAL EQUIPMENT
H373

Small Drum Steriliser and Cheatle's Forceps





During the nineteenth century doctors became aware of the need to work in sterilised conditions to prevent the spread of infection. Perhaps the most famous British pioneer of this concept was Joseph Lister, who washed his hands and sprayed his surgical instruments and dressings with a carbolic acid solution to kill off bacteria. Despite initial scepticism his 'antiseptic' technique clearly worked and led to the 'aseptic' technique which is the basis of modern practice. (*Antisepsis* involved the continuous spraying of carbolic on to the hands, instruments and surgical site; *asepsis* involves the prior scrubbing of hands, prior sterilisation of instruments and no-touch techniques).

An early method of sterilisation of surgical instruments was by immersing them in boiling water for 20 minutes. They were removed from the boiling water with Cheatle forceps. Most bacteria were killed by this method, but it did not kill spores. Sterilisation by steam under pressure was found to be more effective. Dressings and instruments were packed in drums and placed in an autoclave. This was a pressurised device invented in 1879 by Charles Chamberland (a colleague of Louis Pasteur). Such sterilisation killed all bacteria, viriuses, fungi and spores, but was not in widespread use until the mid twentieth century.



Above: Dr Joseph Lister.

Today, instead of sterilising in the wards and operating theatres, equipment is sent to a central sterilising service and returned pre-packed. Some items of equipment (syringes, for example) are used only once and then disposed of.

Hands On Learning
with Reading Museum Service

READING MUSEUM SERVICE

THE BERKSHIRE MEDICAL HERITAGE CENTRE

MEDICINE
VICTORIAN MEDICAL EQUIPMENT
H373

Ceramic Medicine Measure

Victorian physicians prescribed complicated medicines, specifying exact dosages. Apart from preparations of opium and digitalis most of these had little beneficial effect except psychologically - the patient felt better just by being given a bottle of medicine.

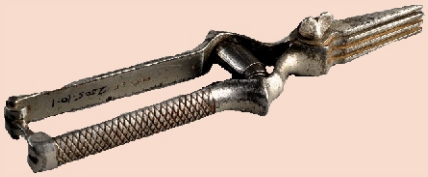


Bullet Extractor

Before X-rays it was sometimes difficult for a surgeon to locate a bullet inside the body. This instrument could be poked into a bullet wound and the surgeon would feel for the metallic clink of the bullet. He would then try to grasp the bullet and remove it. The device became redundant with the invention of X-rays.



Food Masticator



Because of a high sugar diet and poor dental hygiene, many patients had rotten teeth or no teeth left at all. Masticators were used to chop up solid food for patients who could not chew. This example stamped 'Masticateur Carrier' was probably made in Belgium. Today elderly people sometimes need their food liquidised in order to eat it, but a food blender is usually used to do this.

In the late nineteenth century a fad for mastication was led by Horace Fletcher (1849-1919), nicknamed 'The Great Masticator'. Fletcher believed that all food must be deliberately masticated and not swallowed until it turned to liquid and that prolonged chewing precluded overeating, led to better systemic and dental health, helped to reduce food intake, and consequently, conserved money. However, if you didn't have any teeth in the first place Fletcher's advice would have been hard to follow.