BDA MUSEUM

Wilton Thew's electric chisel-elevator

By Brian Williams, retired GDP, museum volunteer and Honorary Secretary of the Lindsay Society: the History of Dentistry

In May 1929, the *BDJ* published a paper by Wilton Thew of Upper Wimpole Street, London, entitled *A self contained electric chisel and dental elevator*. Thew had presented his invention at a meeting of the Metropolitan Branch of the British Dental Association (BDA) on 21 March that year. In the paper, he described the development of an electrical device to aid dentists in removing bone and loosening (luxation) teeth prior to their extraction.

The portable machine is contained within a wooden box with a leather carrying handle. On the left side of the box are two electrical sockets for either a 200 or 240 volt input, depending on the current available, to recharge the low voltage nickel-iron battery contained within the box. Prior to the introduction of the National Grid in the 1930s there was no standardised voltage across the nation hence the presence of two sockets to cover most eventualities. To use a mains electrical supply, rather than a battery, was thought too dangerous with the possibility of a spark causing the volatile anaesthetic gases to explode! Two further sockets are found within

the box: one for the foot control cable (not shown) and the other for the mallet cable. Between the two sockets a dial regulates the intensity of the current.

The device produces an interrupted electrical current which causes movement of the solenoid within the handpiece. This produces a 'soft hammer like blow', which depending on the type of tip used, would either remove bone or elevate the tooth. A selection of interchangeable tips were supplied with the apparatus, which were securely attached to the handpiece by means of a locking chuck. To use the device, the elevator tip was slid up the side of the tooth and the foot pedal depressed, causing the vibrating motion which

helped loosen the tooth. If the chisel tip was chosen it was often applied straight through the gum, to penetrate the outer alveolar plate and impinge on the root of the tooth to be extracted. Thew claimed 'never to have had any trouble from the external gum or the alveolar bone' when using this technique. Not surprisingly though, the *BDJ* recorded that most procedures were completed under general anaesthetic, and it had only been 'used twice under local anaesthetic'.