John Sherrard

Eastcote 1943 - 1945. Stanmore 1945 - 1946. RAF Bombe maintainer and instructor. A memoir of his wartime service, provided by his wife, Mary Sherrard née Stiven, at interview 17 April 2017.

In the many books which I have read about the Enigma I have never discovered one in which credit is given to the one thing which made it possible – a one inch, 19 strand, brush. But I suppose it would be better to begin at the beginning.

In 1940 I trained as an electrician in the RAF in Hereford before being posted to RAF Station Hornchurch. After some months spent servicing the Spitfires I was sent for an interview in an office in the Foreign Ministry. I was asked whether I got on well with women, well enough to work with them, and if I were prepared to work in a situation where there would be no promotion and I would not be able to tell folk what I was about.

At this point my memory fails me, but I think it was about four weeks later I was called on to report to Bletchley Park from whence I was sent with some dozen others to Letchworth BTM works where we were given a week's training on the machines we were to service. These were the so-called Bombes, operated by Wrens, but looked after and faults corrected by RAF. We were told the Wrens were chosen for their intelligence, the RAF for their electrical knowledge.

From thence I was sent to Eastcote, a specially built 'Outstation', just being brought into operation. There was accommodation for some 200 Wrens and 50 RAF, housed of course in separate quarters and cut off from one another by a high wall. The Wrens worked on a four watch system. The work station consisted of eight bays each containing ten machines, a checkers' room, a room for the mechanics and a room containing the mercury arc transformer. One of the bays was set aside for the Post Office engineers operating a decoding machine working on different principles. A central bay contained the officers' offices, the teleprinter room and, for the want of a better word, the 'menu' room, where the information received from the teleprinter was turned into menus for the machines and given to the operators. Each operational bay was named after a Commonwealth country, the machines after a city in that country.

Each machine used 21 miles of wire, three banks of 30 drums, each drum containing 104 brushes containing 19 strands. These rotated 50 times a minute on Bakelite commutators, containing four rows of brass inserts. Inside

the machine was an electric motor which drove the necessary mechanism. Inside the back 'gate' were six rows of relays, each with eight points, and with porcelain resistors for each relay. The outside of the 'gate' provided the necessary equipment for plugging up the menus. (Be patient, I hope all will become clear.)

The outer gate consisted of six upright bars, arranged in pairs. At the top of the first of a pair was the insert socket. This supplied the current in the decided position for searching the menu. The socket consisted of 26 contacts. The remaining spaces on the bar were filled with the sockets from each of the ten rows of operating drums, the first socket supplying the power in the other by means of two 26 brass contact plugs, each plug joined by some three feet of carefully plaited wire. You can, I hope, begin to realise the number of soldered joints and possibility of errors each machine contained.

On the side of the machine there were three vertical rows of 26 switches, one for each letter of the alphabet. These were for choosing which letter should be used for searching the menu. Above the switches were placed a row of levers. If during a search the possible answer were found the appropriate lever would fall.

I almost forgot, at the other end of the machine were the *Umkehrwalze*[1], this was the turnaround for the search and never changed.

1 German term for the Enigma reflector, literally 'reversing drum'.