Another view Douglas Myall turns his mind to security printing

Above: the world's first adhesive stamps relied upon intricate line engraving to deter forgers.

Below: optically variable ink was employed on the Castles high values of 1992 and the 1993 £10 Britannia stamp

A SPECIALISED BRANCH of the printing industry deals with valuable documents, such as passports, share certificates, banknotes and, of course, postage stamps. As far as postage stamps are concerned, security was borne in mind from the very beginning and the world's first adhesive stamps contained several special features to make forgery difficult. The stamps were printed by the intaglio process, with the background covered by an engine-turned white line engraving, as used on banknotes of the time.

The main feature of the first UK stamp designs was an intricate portrait of the monarch. It would need an expert engraver to reproduce this without detection, as even a slight alteration of such a familiar image would be obvious. Security letters were added to the bottom corners in a variable pattern. Used stamps were cancelled. The Mulready envelope also received attention and was printed on a special paper containing silk threads. Many of these security features are still in use today but have been augmented in response to greater sophistication on the part of would-be forgers and the availability of new methods to deter them. In this article I will take a brief look such methods.

Anti-forgery printing Although intaglio is still used occasionally, usually for the higher values, the normal printing method in use today is rotogravure, with cylinders engraved under computer control. The presses are large and expensive and forgers cannot afford them. All their efforts have been produced on cheaper lithographic presses. Although some modern definitives have been produced by this means, they have one feature which no forger has been able to emulate; they are overprinted with bars in a phosphor ink which can be read by the mail sorting machines. Forged stamps are revealed when the machines reject the envelopes as unfranked. This level of security makes it unnecessary to use watermarks, something that is much to the specialist printers' liking, as watermarks weaken the paper and make high quality work difficult.

That is not to say that phosphor inks are the only security measure taken – far from it. Multi-cylinder printing provides the opportunity to use special inks even on monochrome stamps and several kinds have been used in recent years, although the fugitive inks of Victorian times have not featured. Optically variable ink (OVI) contains tiny flakes of a special film which changes colour as the viewing angle is varied. It is expensive and is not in everyday use but was used for The Queen's head on the Castles high values from 1992. The £10 Britannia stamp of 1993 also had it, and several other security features beside, including the numeral 10 in braille, with part of the design in a fluorescent green ink and with fibres in the paper which glow red, blue and green under short wave ultraviolet irradiation.

Iridescent ink, sometimes called pearlescent ink, was used to overprint the background of the £1 Machin definitive in 1995. This gave it a metallic sheen and appears as silver on the cylinder block. It was introduced to the standard unified issues (an official name for the definitives) in 2009, where it overprinted the words ROYAL MAIL in a wave pattern over the face of the stamp. It incorporated a code to enable the source of the stamps to be identified. The same technique, with hidden source codes, was used to overprint the words DIAMOND JUBILEE on the 1st-class NVI this year.

In the early 1980s, Royal Mail issued promotional books of stamps sold at less than their face value. To help detect their being detached from the book and sold without the discount, they carried a printed device over the gum. The ink used was always blue and was harmless, even edible. Four different papers were used. There were two differently shaped stars, the second of which appeared either once per stamp or as an 'all-over' pattern, and a letter 'D', probably standing for 'discount'.

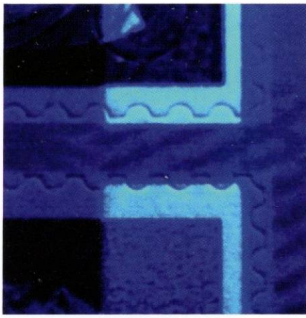
An interesting development to prevent or detect theft of stamps occurred in 1869. In those days postmasters would buy mint stamps at face value. On 1 March 1869 the following notice appeared in the Postmasters' edition of the Postal Official Circular: "In consequence of representations made to the Post Office by various Firms that there is reason to believe that their postage stamps are purloined by persons in their employ, the Department has recommended that the name or initials of Firms, &c. be either printed on the back of stamps or perforated through the stamps by means of a machine devised for the purpose, so that, inasmuch as the sale of such stamps would be thereby rendered difficult, the temptation to steal them might be lessened or altogether removed. Postmasters will take care not to purchase any postage stamps thus marked which may be offered to them for sale."

These perforated stamps are known to collectors as 'Perfins' (Perforated with initials). The scheme is still used by some firms and official bodies today. More than a thousand different perfin patterns can be found on Machin definitives.

Elliptical strategies The introduction of elliptical perforations was another means of making life difficult for forgers. They were first seen on the high value Castle stamps of 24 March 1992. The £10 Britannia definitive of 2 March 1993 also had them. They were extended to all small format Machin definitives on 6 April 1993. Self-adhesive stamps are surrounded by an unprinted matrix and appear as singles without the need for individual separation. However, they are given simulated 'perforations' complete with 'ellipses' as a security measure as well as making them look like stamps rather than mere labels.

Microprinting was used to include a 2001 symbol in some Northern Ireland pictorial definitives. Other techniques exist, such as holograms, thermochromic inks and unsoakable gums, some of which have been used on GB stamps.

As you can see, security printing is a large subject and I have not even touched on forgeries where the intended victim is the collector; there have been quite a few of these. Room for another article maybe – after a look at the colour palette changes for 2013 Machins in a forthcoming *Bulletin* ●



Above: phosphor bands, current pearlescent printing on definitives and 1957 'Perfins'. Below: two stars and the 'D' once used to deter reselling of stamps from discounted books