

# THE MACHIN STAMPS OF GREAT BRITAIN 1967-2022

## **INTRODUCTION**

Machin (pronounced MAY-chin) stamps are named after Arnold Machin O.B.E, the sculptor of the plaster bas-relief portrait of Queen Elizabeth II that appears on the stamps.

The Machin stamp came into existence because of a requirement to simplify the identification of British postage stamps. Whilst the design may appear simple, there have in fact been more than a thousand varieties of different colours and values.

Initially the stamps were produced by Harrison & Sons using photogravure, with the high-value designs being larger and engraved. Starting around 1980, The House of Questa and Waddington's Security Print also took up Machin printing in order to keep up with demand, producing their versions via lithography.

An estimated 200 billion Machin stamps have been produced since The Stamp Advisory Committee chose Arnold Machin's stamp design featuring a plaster cast of The Queen wearing a tiara to be the standard United Kingdom postage stamp.

## **SCOPE**

This Exhibition only illustrates the different printings and characteristics of the Machins from 5<sup>th</sup> June 1967 to 4 April 2022.

## **PURPOSE**

A study of the Machin stamps issues and characteristics, of Great Britain from the first issue in 1967 until 4 April 2022. The death of Queen Elizabeth II on 8 September 2022 led to the termination of the Machin stamp.

## **TREATMENT**

Showing the changes and multiple colors of the stamp issues and the different printing methods to curb forgeries as well as the booklet and coil stamps.

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## **BIBLIOGRAPHY**

Introduction to the Machin issues of Great Britain – Bob Kotanchick – 20 October 2020

Basic Machins – Robin Harris 2022

Simplifying the Machins aka 101 - Robin Harris 2023

The Delta fact finder No 10 – The oversized Machin Head Horizontal Labels

## STAMP ISSUES

### PRE – DECIMAL VALUE MACHINS

The first four values of the pre-decimal stamps were issued on 5 June 1967.

Concerning the original colours, Machin encouraged the use of a clearer effigy on a single-coloured background. But the Post Office did not fully respect Machin's views and in the first years of the series would also issue bi-coloured stamps and clear-to-dark gradated backgrounds.

The 4 pence ("4d") was given a very dark brown, inspired by the Penny Black and requested by the Queen herself.

The initial three Machin stamps issued on 5 June 1967.

4d Olive Sepia, 1s Aconite Violet and 1s9p Olive Brown.



On 8<sup>th</sup> August 1967, a further three Machin stamps were then issued.

3d Spectrum Violet, 9d Winchester Green and 1s6d Garter Blue.



Two types of the 2d were printed.

**Type 1** – The value is spaced away from the edge of the stamp.

**Type 2** – The value is spaced nearer the edge of the stamp.



Type 1



Type 2

Further values of the pre - decimal Machin stamp were in circulation from 1968 and 1969 namely:  
½d Orange Brown, 1d Yellow Olive, 4d Sepia, 6d Reddish Purple, 7d Bright Emerald, 8d Turquoise Blue and  
10d Drab



## PRE – DECIMAL VALUE MACHINS CONTINUE

5 MARCH 1969

In 1969 a second series of pre – decimal were issued. These stamps were larger and squarer than the first issue with perforation is 12 x 12.

A 2s6d stamp in Brown, 5s stamp in Crimson Lake, 10s stamp in Deep Ultramarine and a £1 stamp in bluish black.



## THE DECIMAL VALUE MACHINS

17<sup>th</sup> JUNE 1970

The next significant milestone of these stamps occurred in 1970 to 1972 when the first decimal values were issued. Four values of the Machin stamp were issued.

A 10p stamp in cerise, a 20p stamp in olive green, a 50p stamp in deep ultramarine and a £1 stamp in bluish black.



15 FEBRUARY 1971

The second decimal series were issued from 1971 to 1996.

The size of the stamps were smaller than the first issue. The most striking aspect of this series is the rainbow of colours.

Since the designs are all identical (or nearly so), it was critical that each denomination be produced in an easily distinguished colour.

Phosphor bands, left, centre, right and two band were introduced as a preventative measure to curb forgery.



## THE DECIMAL VALUE MACHINS CONTINUE

### TALL PORTRAIT

A taller portrait format printed by Harrisons & Sons by photogravure printing process on fluorescent coated paper with PVAD with stamp size 41mm x 30mm and perforation 14 x 15 was used for the large £1 Bright yellow green, £2 Light emerald, and £5 Salmon chalky blue, decimal value stamps from 1977.

Between 1983 and 1987 the taller portrait format was used for the odd values of £1.30 Pale drab, £1.33 Pale mauve, £1.41 Pale drab, £1.50 Pale mauve and £1.60 Pale drab.



## THE NON VALUE INDICATOR MACHINS

22 AUGUST 1989

22<sup>nd</sup> August 1989 marked the first appearance of non-denominated Machin stamps which carried the 1<sup>st</sup> Black, 1<sup>st</sup> Orange, 2<sup>nd</sup> Dark Blue and 2<sup>nd</sup> Bright Blue indicators denoting the class of service that was paid for.



## THE 150<sup>TH</sup> ANNIVERSARY OF THE PENNY BLACK MACHINS

10 JANUARY 1990

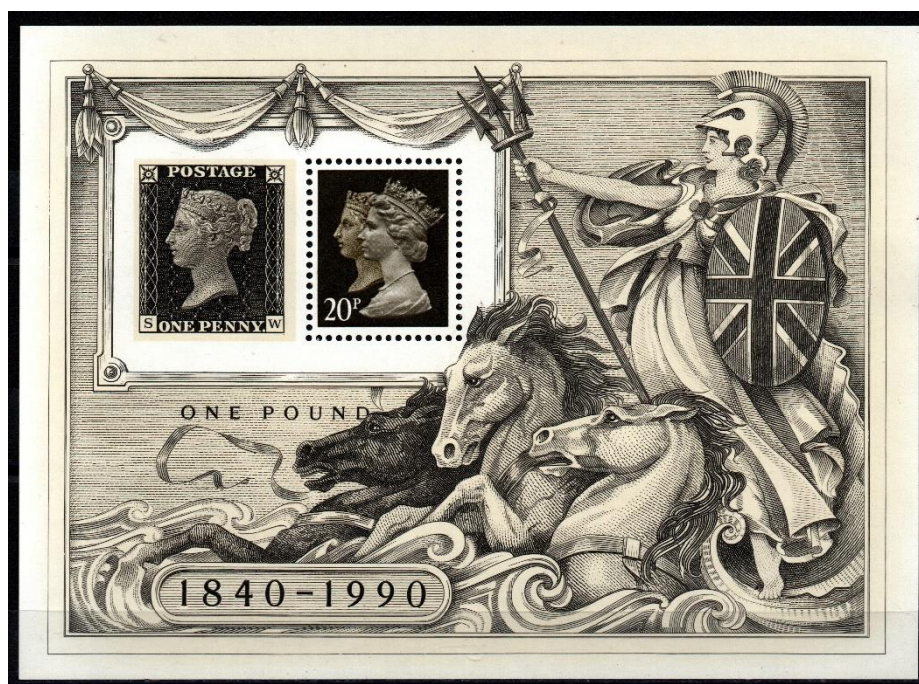
The 10<sup>th</sup> January 1990 saw the 150<sup>th</sup> anniversary of the Penny Black stamp. Special Machin designs were issued showing Queen Victoria, from the Penny Black, placed behind the familiar Queen Elizabeth Machin portrait. 15p Bright Blue, 20p Black, 29p Deep Mauve, 34p Blue Grey and 37p Rosine.



## THE 150<sup>TH</sup> ANNIVERSARY OF THE PENNY BLACK MACHINS CONTINUE

3 MAY 1990

Issued by the Royal Mail on 3 May 1990. This miniature sheet was originally sold at the 'Stamp World London 90' International Stamp exhibition. Only the example of the 20p is perforated.



## ELLIPTICAL PERFORATION NON VALUE INDICATOR MACHIN

6 APRIL 1993

Introduced to the Machin series in 1993. The ellipses help to deter any attempts of forgery. The elliptical holes are on both vertical sides of the stamp.

These are stamps that have no set value in an attempt to negate the need to keep issuing new stamps after each postal rate change. They are marked *1st* Orange Red, Gold and *2nd* Bright Blue for the two classes of post in the United Kingdom.



## THE E – BLUE NON VALUE INDICATOR STAMP

6 APRIL 1993

The letter 'E', Deep Blue, printed photogravure by Walsall on gummed paper is a new non-denominated stamp issued to pay the letter rate to the rest of Europe.



## DECIMAL ELLIPTICAL PERFORATION

27 APRIL 1993

In 1993, syncopated perforations appeared. Two large, elliptical perforations, one on each side, were added to the Machins. These were to deter counterfeiting and have become standard on all British definitives. To try and prevent the former problem a series of security features – elliptical perforations, optical brightener free paper and fluorescent additives to the fluor in phosphor bands – were added to definitive issues in 1993. They succeeded in slowing down the forgery problem.



## DECIMAL ELLIPTICAL PERFORATION ENGRAVED

9 MARCH 1999

£1,50 Terracotta, £2 Deep Grey Blue, £3 Dull Purple and £5 Brown

A further change to their high value range in early 1999, reducing the stamp size down to the traditional low value definitive dimensions of 20.5 x 24mm, commissioned Czeslaw Slania. These stamps had a very **short life-span** and must have been printed in relatively modest quantities. £2 and £3 are particularly awkward to come across, having found their way into circulation in only a very limited number of areas up and down the country.



## THE SELF-ADHESIVE MACHINS

19 OCTOBER 1993

A further notable landmark for Machin stamps occurred on 19<sup>th</sup> October 1993 when the first self-adhesive Machin stamp, 1<sup>st</sup> Orange Red with small 1<sup>st</sup>, was made available. It was initially sold for 24p which was increased to 25p from November 1993. The stamps was only issued in booklets containing 20 stamps each surrounded by die - cut perforations.



18 MARCH 1997

The self-adhesive stamps of 1997 were sold for 20p and 26p respectively in rolls of 100 with the stamps separate on the backing paper. The stamps, 2<sup>nd</sup> Bright Blue with Large 2<sup>nd</sup> and 1<sup>st</sup> Orange Red with large 1<sup>st</sup> with elliptical holes on each side with perforation 14 x 15.



## THE EMBOSSED NON VALUE INDICATOR VALUES

16 FEBRUARY 1999

Three Embossed class services were issued in 1999 namely 1<sup>st</sup> in Grey with phosphor background, Grey Black with 2 phosphor bands and Black with 2 phosphor bands. These stamps were issued without elliptical holes.



## THE MILLENNIUM MACHIN

6 JANUARY 2000

The design of the Millennium Machin, 1<sup>st</sup> Olive Brown was adapted by the Chase design Group, notably the designer was Richard Scholey, who did a magnificent job in the transformation. It was issued from post offices across Britain and used for one year in the millennium year 2000 AD.



## 2000 ANNIVERSARY OF PENNY BLACK

15 FEBRUARY 2000

The 150<sup>th</sup> anniversary of the Penny Black stamp was redrawn with 1<sup>st</sup> and 20p face value Black and Cream. It was only issued in the 7.50 "Special by Design" booklet No. DX24.



## THE OVERSEAS BOOKLET STAMPS

27 MARCH 2003

For over 40 years Machin stamps have almost always appeared in a single colour. A notable exception to this was in 2003 when non-denominated airmail Machins were released for Europe and Worldwide destinations. It was only available in separate booklets of four, 43p postcard rate to foreign destination, 52p postage paid for mail up to 40g to Europe, £1.12 postage 40g to foreign destinations paid for mail up to 40g.



## PRICING IN PROPORTION

1<sup>ST</sup> AUGUST 2006

In 2006, Royal Mail introduced Pricing in Proportion, a new pricing method that divides letters into two categories, standard, 1<sup>st</sup> Gold and 2<sup>nd</sup> Bright Blue and large, 1<sup>st</sup> Gold and 2<sup>nd</sup> Bright Blue.

The existing first-class and second-class services remained the same, but now there were separate rates for standard letters and large letters.

Royal Mail redesigned the NVI's. Stamps that simply inscribed "1<sup>st</sup>" or "2<sup>nd</sup>" were for use on standard letters, and stamps with the addition of the word "Large" were for use on large letters.



## THE 40<sup>TH</sup> ANNIVERSARY OF THE FIRST MACHIN DEFINITIVE

5<sup>TH</sup> JUNE 2007

The 40th Anniversary of the First Machin Definitive Sheet with Arnold Machin and Queen Elizabeth II containing two £1 Machin stamps, Dull Violet and Magenta.

The stamps were designed by Jeffery Mathews and Together Design and printed by De La Rue Security Print, photogravure, on gum PVA paper

It was only available in the £7.66 "The Machin – The Making of a Masterpiece" booklet.



## SECURITY MACHINS

17 FEBRUARY 2009

On 17 February 2009 a new form of Machin definitive appeared with a non - water soluble layer of gum between the paper and the self - adhesive gum with U shaped slits. This was done to prevent the re - use of un - cancelled stamps, preventing them being soaked off envelopes for re - use.



17 FEBRUARY 2009

From 17 February 2009 the Machin stamp began to include security features that include U shaped slits and with overall iridescent multiple "Royal Mail" overprint into the design from here on.



## ROYAL MAIL

### PREPRINTED HORIZON STAMPS/LABELS FOR SPECIAL DELIVERY

Trials of a Pre-printed Horizon Stamps/Labels for Special Delivery postal items (£4.95) started on 8th June 2009 and was conducted out of the Camden Town Post Office in North West London.

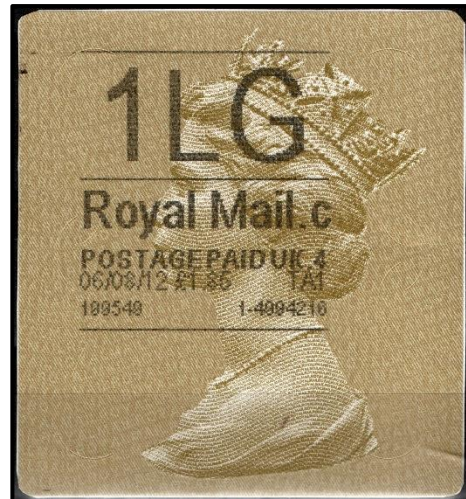
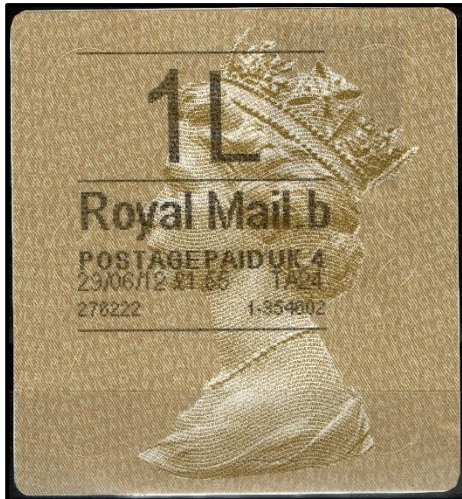
These Stamps/Labels were oversized Machins measuring 58.5mm x 65mm and printed in pale 'gold' with full bleed (no white frame around design). **1LG – 1<sup>st</sup> Class large letter and A- Airmail.**

The Queens Head itself was produced using the wavy line 'ROYAL MAIL' pattern printed in micro text pale 'gold'. The background was also a pale gold colour, albeit this was a near solid colour. Perforations were die cut and have no ellipses. Within the design area itself, additional die cuts consisting of curves and straight lines surround the Queens portrait. **1L – 1<sup>st</sup> Class letter and 1LG – 1<sup>st</sup> Class large letter.**

The stamps/labels were not printed with phosphor lines and were printed on self - adhesive paper.



## ROYAL MAIL CONTINUE



## NON VALUE SERVICE INDICATOR MACHINS

17 NOVEMBER 2009

The service indicator machin were printed by De La Rue with two phosphor bands, two u shaped slits, and iridescent overprint on gum self-adhesive paper.  
Die cut perforation 14 and 14½ x 14 with one elliptical hole in each vertical side.

### RECORDED SIGNED FOR

1<sup>st</sup> Bright Orange and 1<sup>st</sup> Large Bright Orange



### ROYAL MAIL SIGNED FOR

1<sup>st</sup> Bright Orange and 1<sup>st</sup> Large Bright Orange



### SPECIAL DELIVERY

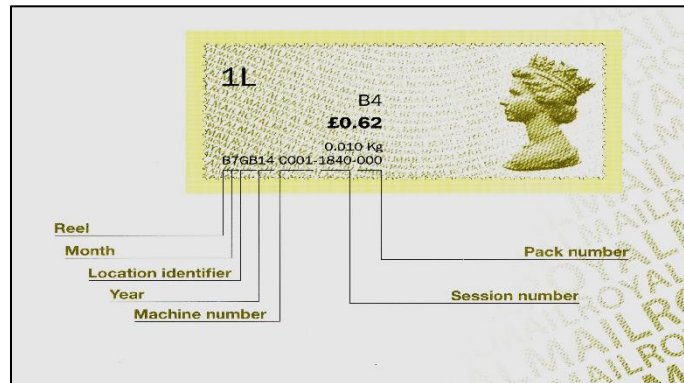
100g Blue and Silver 500g Blue and Silver. The two new stamps are for items up to 100g (price £5.05) and for items up to 500g (price £5.50).



## ROYAL MAIL POST & GO SERVICE INDICATOR MACHINS

The Royal Mail Post & Go stamps was available from machines in the form of rolls with the design and background pre – printed in Olive Brown.

A two line service indicator and a four part code that presents the branch in which the machine is sited, the machine number within the branch, session and transaction numbers.



## ROYAL MAIL POST & GO SERVICE INDICATOR MACHINS

These six numbers identify the location where a Post & Go stamp was issued.

The number following the location identifier (1 in the above example) is the machine number (sometimes referred to as Kiosk). Some Post & Go locations have multiple machines and this part of the code enables collectors to identify the specific machine that issued a stamp.

The next number between the hyphens (12405 in the above example) is called the session number.

This number increases over time and represents the machine usage sessions by customers (regardless of the number of items they purchase within a specific session).

The last number can reach a maximum of 99 and represents the item number vended during a specific user session.

In the above example the number is 14 meaning it was the 14th stamp issued in the user session.

### 8 OCTOBER 2008

Type 1 – Large bold service indicators, 62d, and four part code in numerals - Left. Type 2 – Small service indicators, 93d, with lines 4mm apart code in numerals - Right



### 20 FEBRUARY 2013

The 2013 Royal Mail Post & Go stamps was available from machines at Spring Stampax 2013 in Blue, 2<sup>nd</sup> Class up to 100g and 2<sup>nd</sup> Large up to 100g. Service indicator and code that presents the branch in which the machine is sited, the machine number within the branch, session and transaction numbers is printed on the stamp.



## ROYAL MAIL POST & GO SERVICE INDICATOR MACHINS CONTINUE

1<sup>ST</sup> JULY 2014

Five stamps featuring the new service overprints were issued – 1L – 1<sup>st</sup> Class letter, A - Airmail, 1LG – 1<sup>st</sup> Class large letter, 2L – 2<sup>nd</sup> Class letter and 2LG – 2<sup>nd</sup> Class large letter.



## 50<sup>TH</sup> ANNIVERSARY

Issued on 5<sup>th</sup> June 2017. to mark the day the Machin was first issued. The Machin image appeared on more than 200 billion stamps,

This 1£ stamp is based on the high value stamps of 1969 and was printed in gold foil.



## DATA MATRIX BARCODED MACHINS

1<sup>ST</sup> FEBRUARY 2022.

The self-adhesive stamps was printed by Cartor Security Print by rotogravure with a size of 39mm x 30mm, 50 stamps per sheet. The Machin design with a barcode printed in matching colour on the side of the stamp with a perforation line.

The stamps are inscribed 1<sup>st</sup> for domestic first class, 85 pence, 2<sup>nd</sup> for the domestic second class letter rate, 66 pence. Large 1<sup>st</sup> for the large first class letter rate, 1.29 and Large 2<sup>nd</sup> class for the large second class letter rate, 96 pence.



## DATA MATRIX BARCODED MACHINS CONTINUE



4<sup>th</sup> APRIL 2022

The barcoded low value self-adhesive stamps was printed by Cartor Security Print by rotogravure with a size of 39mm x 30mm, 50 stamps per sheet. The Machin design with a barcode printed in matching colour on the side of the stamp with a perforation line.

All six new barcoded low value stamps ranging from 1p to 50p, typically used to make up remaining postage fees.



## MACHIN PRINTING CHARACTERISTICS

### PRINTING METHOD

Most of the Machins are printed using photogravure. The second most popular printing method is lithography. This is followed by engraved printing.

### LITHOGRAPH PRINTING

Lithographed plates don't have recesses and thus, usually result in "flat" looking images. The easiest place to tell the difference between photogravure and lithographed stamps is in the value. Lithographed stamps produce a very clean edge to the value.



## MACHIN PRINTING CHARACTERISTICS CONTINUE

### PHOTOGRAVURE PRINTING

Photogravure stamps (two different methods of preparing the plates were employed for Machins, camera and computer) show more tones than those printed by lithography. This is due to the different printing methods. Photogravure plates use recesses of various depths to give different colour tones. Photogravure stamps have a "bumpy" edge to the value (it is actually the colour 'cells' from the printing process that "intrude" into the white space).



### PHOSPHOR BANDS

The phosphor bands on some stamps can be spotted by the naked eye, either by a quick glance at the stamp or by tilting the stamp at an angle towards the light.

However, an ultraviolet light will be required to check the tagging on other stamps.

Four different phosphor bands were positioned at different places on the machin stamps e.g.: 2 x bands at both sides of the stamp, left band at the left side of the stamp, right band at the right side of the stamp and centre band in the middle of the stamp.



Left Band



2 x Bands



Centre



Right Band

### ELECTRO MECHANICALLY ENGRAVED PRINTING

In 1997 a new profile of the Queen was used, due to computerization of the printing process. The new Electro-Mechanically Engraved (EME) image offers better detailing of the Queen.



18p Myrtle green with EME Machin stamp Right



18p Olive Grey with EME Machin stamp Right



### VALUE SETTINGS

For cosmetic reasons, around 1983 the width of the value was narrowed to allow the profile of the Queen to show better as some of the values were getting too wide to fit nicely, such as 20½p.



2p Myrtle Green with narrow 2 numeral Left and wider 2 numeral



3p Magenta with 3 numeral with serif Left and 3 numeral without serif Right.



75p Grey Black with narrow 75 numeral Left and wider 75 numeral



## MACHIN PRINTING CHARACTERISTICS CONTINUE

### ELLIPTICAL PERFORATION

Machin stamps with elliptical perfs began to appear in 1993.

They were instituted as a security feature.

Two types of perforations have been identified. Identifying these two types of elliptical perforations on *single* specimens is rather difficult - pairs or greater make the task easier.



Narrow at the top and bottom, with rounded sides (eR)



Narrow at the top and bottom, with almost straight sides (eS)



### MACHIN BACK PRINTS

Machins have appeared with "back prints".

These stamps indicated that it were sold at a discount. The back print was printed on top of the gum.

As such, you may not find any examples on used Machins since soaking the used stamp from its envelope/cover/piece removes the gum at the same time.

The first booklet released was the Christmas discount booklet in 1982 the Dextrin gum had stars overprinted.

There were three initial designs:

**Type 1** only used on the Christmas booklets,

**Type 2** left-over paper stocks of the single star type 2 were also used for the printing of the 12p values in sheets.

**Type 3** were used on ordinary discount booklets.

Type 1



Type 2



Type 3



### SOURCE AND DATE CODES

In March 2009 the first group of Machins with security features were issued with back ground codes.

The codes may be seen in the words ROYAL MAIL usually at the top right of the stamp and some later issues at the bottom right.

For instance, **MBIL/M11L** means that the stamp came from a Business Sheet in 2011. The source codes are as follows: **MBIL**- From Business Sheets, **MCIL**- From Custom Retail Books with four Machins and two Special or Commemorative Stamps, **MFIL**- From Books of Four, **MPIL**- From Prestige Books, **MRIL**- From Coil Stamps in Rolls, **MSIL**- From Books of Six, **MTIL**- From Books of Twelve, and No source codes at all for Machin Stamps from Counter Sheets, though these do carry year codes.

Starting in 2010, a year-indicator was added to the iridescent overprint. It appears either in the upper left corner of the stamp, in front of the crown, or the Queens forehead or eye.



Source code MSIL



Source code MCIL



Year Indicator 2010 (M10L)



Year Indicator 2014 (M14L)

## MACHIN PRINTING CHARACTERISTICS CONTINUE

### U SHAPED SLITS

Introduced in 2009, certain high-value and Non-Value Indicated Machin stamps began to include security features that include U shaped slits. Four different kinds of slits have now been seen and different letter "coding" in the background text has been introduced.



### BOOKLET STAMPS

Booklet panes contain stamps of single and/or different denominations set – tenant or horizontally with imperforated or straight edges. The photogravure printing process were used mostly for the printing of booklet panes. Non decimal and decimal booklets.



### COIL STRIP STAMPS

Coil strips contain stamps of single and/or different denominations horizontally or vertically. Non decimal and decimal coil strips.

