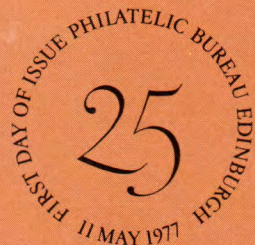
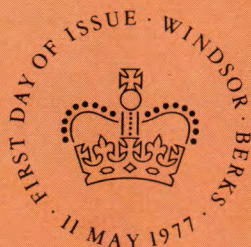


Philatelic Bulletin

Volume 14 Number 8 April 1977



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Editorial

We are taking this opportunity to give our many readers a little advance information about the content of the May Bulletin. We are to produce a special Silver Jubilee edition, to complement the stamps to be issued for this Royal occasion.

The souvenir Bulletin will be full of special features relating to the Jubilee from a philatelic viewpoint. In addition to our usual contributors who have turned their thoughts to the 25 years of the Queen's reign we have asked other notable folk for articles. We cannot promise to publish Bulletins of such quality each month, but this issue is one which all collectors will want, and now is the time for our readers to bring the Bulletin to the notice of their fellow GB collectors who as yet do not subscribe.

Silver Jubilee Display

The Post Office and the Crown Agents are co-operating in a joint display of Silver Jubilee philatelic material at the Gibbons Gallery, Romano House, Strand, London WC2 between 4 May and 30 June. Admission is free.

New Scottish Pictorial Air Letter

A new Scottish pictorial air letter, costing 12p of which 10½p is postage, will be issued on 4 May 1977 to commemorate the Gathering of the Clans. Designed by Rauri McLean Associates, it will contain three illustrations: 'Scottish Highland Family' painted by David Allan in 1795: Kisimul Castle, Isle of Barra and the Wallace Monument, Aberdeen.

The air letter is printed by McCorquodale & Co. Ltd. in six colours.

Philatelic Cruise

Colin Narbeth of Stanley Gibbons Ltd, former editor of Stamp Weekly, will be on board Cunards liner Queen Elizabeth 2 during the ship's round voyage to New York 15-25 May. He will lecture on both stamp and bank-note collecting. The Post Office has provided special thematic display material which will be shown during the lectures.

XLVI. The 1894 Reply Stamp Essays

One of the innovations agreed at the 1894 Vienna Congress of the Universal Postal Union was the introduction of reply-paid postcards. The British GPO rather favoured in addition the idea of reply paid stamps to prepay return postage (at the overseas $2\frac{1}{2}d$ rate) on letters.

The proposal was passed through the Controller of Stamps, Inland Revenue, to Messrs De La Rue who were asked to produce specimens, based on a rough design (which cannot now be traced) produced by the Post Office.

Essays for the double stamps (of which one half was detached by the original addressee and stuck on his reply back to the United Kingdom) were submitted to the Inland Revenue by De La Rue on 20 November 1894. In their accompanying letter they stated that they proposed to produce such stamps from the 'Jubilee' $1\frac{1}{2}d$ stamp, by making a 20 set plate from the die and cutting away all the engraving except the head in its oval frame. File copies of the specimens sent on 20 November were sold by auction in London in December 1976.

The two blocks of stamps illustrated as this month's Gem are examples of later essays based on a modification of the actual $1\frac{1}{2}d$ 'Jubilee' design and probably submitted some time between November 1894 and March 1895. It will be seen that two versions of the 'head' plate of the $1\frac{1}{2}d$ are included in the block of four, with and without a moiré security background. The same distinction is observed in the block of 8 complete essays where the lower 4 essays are overprinted on the $1\frac{1}{2}d$ with the security background. The R.M. Phillips collection also includes other essays for these Reply-paid stamps.

The proposal was probably abandoned in 1895 but ultimately led to the invention of the reply-paid international letter coupon.

A G RIGO DE RIGHI



New 'To Pay' Labels Presentation Pack

A new 'To Pay' labels presentation pack became available from the Philatelic Bureau and Philatelic Sales Counters from 30 March 1977, price £2.23½ each. The pack contains one each of the following:- ½p, 1p, 2p, 3p, 4p, 5p, 7p, 10p, 11p, 20p, 50p and £1.

Printed Phosphor and Phosphor-coated Stamp Paper

There may have been some confusion over methods of applying luminescent materials to stamps and also types of materials used. This article is intended to clarify certain basic concepts and describe the present state of the art.

Luminescence

It will not be necessary to remind philatelists that two types of luminescent materials are used on stamps; fluorescent, as pioneered by W Germany, and phosphorescent as used by the British PO, and other administrations. The former has no significant afterglow such as exists with phosphor. The British Post Office after extensive trials, chose phosphorescence as the preferred method for identifying the position and type of stamps, owing to its comparative freedom from interference from paper whitening chemicals and accidental contamination. Recent trends have justified this choice.

Types of Phosphor

Two distinct classes of phosphorescent materials are used on postage stamps;

- i Organic resins used by the British Post Office.
- ii Inorganic metallic compounds such as zinc sulphide, calcium silicate, etc, used by overseas administrations including USA.



Filtration of phosphor coating mix through very fine mesh.

Both classes require traces of other materials to be present which impart the property of phosphorescence. These additives have become known as activators and control the colour and duration of afterglow and also the wavelength of irradiation required to stimulate light-emission.

The afterglow of *inorganic* phosphors is also affected by grain-size; in general the brighter longer-glowing ones requiring coarser granular particles quite unsuitable for compounding into printing inks. Some, particularly the silicate type, are also hard and abrasive, rubbing off stamps quite easily and causing wear on printing cylinders and perforators.

Resin Phosphors

In view of the difficulty of obtaining any existing inorganic phosphors in a form suitable for incorporation in a gravure printing ink, British Post Office Chemists developed and patented the synthetic amino-resin phosphors which have been in use since 1959. These have been manufactured by hot melt techniques



Modern high quality coating and gumming machine. Used for phosphor and other coatings.

whereby the solid ingredients are heated to the molten condition and then reacted together to form a solid phosphor. Initially looking much like volcanic lava, the product is first granulated, then ground and milled extremely finely, producing a soft-textured material easily converted into a printing ink which does not settle out unduly, does not damage printing cylinders, and has little or no abrasive effect on perforators.

Nevertheless, the system has its drawbacks. The synthetic process itself is not easily automated and is labour-intensive, requiring considerable expertise for success. Gravure print-

ing cylinders are not cheap, their production is time consuming, requiring precision control of the etching process and having a limited usage before cleaning or re-etching is necessary.

The printing process itself needs precise control, not an easy task with a print which is nearly invisible. Care is needed to avoid doctor blade flaws and quality control of the final product is complicated.

As all high quality stamp paper is pre-treated with a water-based white pigmented coating to improve print quality, chemists in the Post Office laboratories as well as the Printers laboratories agreed that it would be a great advantage to incorporate the phosphor in the coating process, except of course for second class tariff stamps requiring one single bar.

Although this is simple with inorganic metal phosphors, these suffer from high cost and other disadvantages already described, and the dispersion of fine organic powder phosphors in water-mixes destroys their optical properties.

Phosphorescent Coatings

The foregoing may cause readers to wonder about more recent Special Issues which have been described as over-all-phosphor. These have been gravure-printed with phosphor over the whole stamp area for aesthetic reasons, as many designers feel that the presence of phosphor bars, though barely visible, still detracts from the intended appearance of the design.

It was obvious that to take advantage of the many benefits of building an amino-resin phosphor into the paper coating, it would be necessary to invent and develop a process fundamentally different from the hot-melt synthesis described earlier.

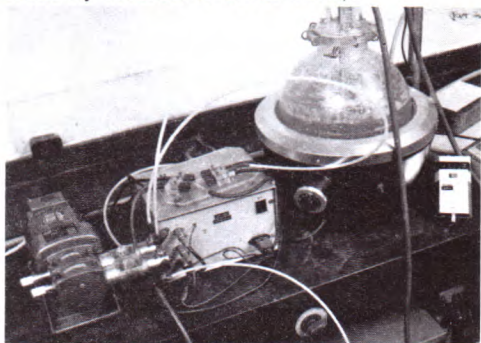
After numerous laboratory experiments, the method adopted was to react together in solution, under closely controlled conditions, the ingredients for the phosphorescent resin, but only to a part-way stage, and then mix the partly polymerised material with the coating composition. The optical properties and resis-

tance to impairment of afterglow by atmospheric moisture are subsequently developed by heat treatment of the coated paper on the web.



Photocell monitoring to control chemical process of organic resin phosphor synthesis.

Early experimental issues using this type of paper were the 1/6 experimental definitive in 1969 and the 10p High Value stamps in 1971. (The 50p printed on this paper was simply an economy measure to avoid waste).



Laboratory preparation of experimental phosphor pre-polymer for use in stamp-paper coatings.

The particular formula used, a urea-based resin activated with a trace of TPA (terephthalic acid) failed to meet the high standards required.

Further experiments in the Post Office laboratories resulted in a change to an improved melamine-based resin activated with PABA (para-amino-benzoic acid). This formula was first used for the 4½p definitive issue of 13

November 1974, with a restricted sale area, followed by modifications to the technique and a further experimental issue, the 8½p of 24 March 1976.

The former were overprinted with gravure phosphor bars to afford a direct comparison between the two types.

Both the Post Office and the printer (Harrison & Sons, High Wycombe) felt the need for one further trial on a larger scale to gain experience and remove any possible flaws in the operation. Thus the "Rackets Sports" issue was printed on paper precoated with organic phosphor as described. A few teething problems were indeed experienced and solved by co-operation between chemists from the Post Office and Harrisons, aided by others of the printer's staff.

The phosphor used for this latest issue is described by the Post Office as "PABA(S)" and by the printers as "HS4-B4".

Stamps printed on phosphor coated paper may be distinguished from "over-all-printed" ones by the absence of a phosphor gravure screen on the former and also the absence of any phosphor-free strip in margins.

Further Development

More recent work in Post Office laboratories has been carried out to produce phosphor coatings having characteristics optically similar to inorganic phosphors used by overseas administrations, but with improved printing properties. The latest development gives a bright yellow-green emission, identical in colour with the most commonly used inorganic phosphor, (copper-activated zinc sulphide) used by a number of postal administrations including South Africa and Switzerland.

The Post Office organic version is considerably brighter than the inorganic product, the materials are less expensive and a whiter paper results. A number of UK paper manufacturers or converters are at present collaborating with the Post Office on the future commercial exploitation of the product overseas. The process has been protected by a Patent Application.

AUBREY WALKER

Commonwealth Heads of Government Meeting 1977 Commemorative Issue 8 June 1977

The design of this special postage stamp symbolises the meeting, in the United Kingdom, of the Commonwealth Heads of State during June of this Jubilee Year. The cost of the stamp will be 13p.

First Day Cover Services

The following first day cover services will be offered by the Philatelic Bureau, Edinburgh.

Service A

This consists of the official post office cover, addressed to the correct postal address of the destination required, and bearing the stamp. The cover will be cancelled, 'Philatelic Bureau, Edinburgh' or 'London S.W.1.' and despatched for a charge of 31p. For deposit account customers the charge will be 26½p.

Service B

Customers own pre-addressed covers will be given the stamp, cancelled and despatched for a charge of 21p each.

Service C

For bulk orders of 50 or more covers, all to the same address, under the conditions of Service A, the charge is 28½p per item.

Two pictorial handstamps will be available. The usual first day of issue facilities will be available at offices with philatelic posting boxes.

Application forms, obtainable from the Philatelic Bureau, Edinburgh, and at all Head Post Offices, should be returned not later than 30 May 1977.

Presentation packs, containing the new stamp and costing 23p each, will be available from the Bureau and all Head Offices from 8 June 1977.

The Great Britain Philatelic Society

From modest beginnings in November 1955, and with a founder membership of twenty eight, the Great Britain Philatelic Society has grown and developed until, in 1976, with a membership of over seven hundred, it celebrated its twenty-first birthday.

The membership is drawn from all parts of the United Kingdom, but it is not limited only to this country, there being a sizeable contingent from such countries as France, Switzerland and Australia among others.

Although there is plenty of opportunity for specialisation and deep study, it would be a misconception to assume that this Society caters only for specialists. Anyone at all, who is over the age of sixteen and who has any interest whatsoever in the collection of British stamps or Postal History, is a welcome member, subject to the provision of suitable references, and because the range covered by study circles, not to mention the displays given at meetings throughout the year is so varied, it would be hard for him or her not to find something of absorbing interest.

The majority of meetings are held in London but the Society makes a point of arranging a certain amount of provincial meetings each year.

With such a Society, it is understandable that many members find it impossible to attend all the meetings, of which there are approximately sixteen a year, and therefore a large amount of its resources are devoted to the publication of the G.B. Journal and various pamphlets, books and a monthly Newsletter. By means of the latter many collectors have been put in touch with one another, individual difficulties have been solved and queries answered.

The study circles cover every reign from Queen Victoria to Queen Elizabeth, the latter evoking more and more interest with each new issue. Postal History, Postal Stationery and Booklets are catered for by further circles, and members in several counties have benefitted by the formation of local groups.

The Society possesses a library from which

books may be borrowed upon the payment of a charge to cover post and packing and small fee to the Society, and an exchange packet operates among those members resident in the United Kingdom.

There are opportunities for every member to display to the rest of the Society, and talks are given on the art of displaying at all levels. Requests are frequently made to provide speakers for local philatelic clubs and societies, and included in the events during 1976 was an invitation to celebrate the twenty-first anniversary with a combined display by members at the Royal Philatelic Society, London, and another given at the British Philatelic Exhibition in September.

The annual subscription, which entitles members to receive the G.B. Journals and Newsletters and to participate in all the activities of the Society is £8.00. Any further details of membership can be obtained from:- Mrs K F Goodman, "Ingledene", 5, Oakwood Road, Highcliffe, Christchurch, Dorset. BH23 5NY.

Other queries, such as requests for speakers, should be made to:-

The Hon Secretary, Richard C A Payne, The Shielling, Sibley's Green, Thaxted, Dunmow, Essex. CM6 2NU

Chelmsford and District Philatelic Society

The Chelmsford and District Philatelic Society has completed another successful philatelic week-end at Wansfeil College, Epping. The emphasis was on Thematics and the preparation of International competition entries. Lectures were given on the Zeppelin story, South African Postal history and philatelic aids for detecting phosphors, watermarks and forgeries. The course was arranged by the Secretary of the C&DPS and chaired by the President. A further course will take place during April 1978 and details will be announced nearer the time.

Silver Jubilee

First Day Cover



Souvenir Pack and Presentation Pack



Souvenir Covers



As mentioned in last month's Bulletin, four Souvenir Covers, one for each country within the United Kingdom, will be issued to coincide with the Queen's Silver Jubilee Tour.

Souvenir covers bearing all four stamps will be sold in the areas to be visited during the tour. Special posting boxes will be set up at local offices to enable customers to obtain the special postmarks which were listed in the March Bulletin. The covers will cost 80p each.

The covers can also be ordered through the Philatelic Bureau, Edinburgh, and in addition, for those customers who wish to purchase all 24 covers, a special price of £18.50 is offered.

An order form giving full details of these services accompanies this issue of the Bulletin, and is also obtainable from all Main Post Offices.

Souvenir Pack

A souvenir pack in booklet form and incorporating all four stamps in a slip-in mount on the front cover, contains 16 pages of information on notable events which have taken place during the Queen's reign. It is liberally illustrated with photographs and stamp reproductions.

The pack is available at all Main Post Offices from 11 May price £1.20.

Special Jubilee Exhibition

As its contribution to Jubilee Year, the National Postal Museum is mounting three special exhibitions, one to be held at the Museum in London and the other two to be held in Edinburgh and Cardiff. All will include original stamp designs (accepted and preliminary) essays.

The display in the Museum will be confined to Royal commemorative issues—the Silver Jubilees of 1935 and 1977 and the Queen's Coronation in 1953. It will be opened on 21 April by The Right Hon The Lord Mayor of London, Commander Sir Robin Gillett Bt, GBE, RD, DSc, RNR, and will remain on view for several months.

The displays in Edinburgh and Cardiff will virtually duplicate the 1977 Silver Jubilee coverage of the main exhibition in London, but with a smaller representation of 1935 Silver Jubilee and 1953 Coronation issues. Each will also cover in depth, however, the respective 'country' definitive issues since 1958 and, additionally, display a quantity of stamp designs with Scottish or Welsh themes. The display in Edinburgh will be held at the Royal Scottish Museum and will probably open on 3 May. The display in Cardiff will be held in the Marble Hall, City Hall, and is expected to open on either 10 or 11 May. Both will also remain on view for several months.

The King's Stamps 1910-35—Part 6a

Half Tone Essays These appear to have been printed singly from half-tone blocks and show a very noticeable screen under magnification. Somerset House may well have had several blocks made of each of the four types of which examples exist as, included in the material sent to the Post Office on 14 December 1910 (in reply to their request of 3 November) are a number of strips with several essays on each. According to the accompanying letter these essays were printed "from blocks supplied by Messrs Heutschel and Co"; notwithstanding, these half-tone essays are not those usually referred to as "Heutschel essays" (see below). The four types of half-tone essays are illustrated as figures 6, 7, 13 and 14 on page 76 of the Stanley Gibbons Specialized GB Catalogue volume 2. The essays sent to the Post Office on 14 December were exclusively of both types of the 3d value (SG figs 6 and 7) and the small size 7d value (SG fig 13). Though examples of the large size 7d (with solid background to head, SG fig 14) certainly exist, none were ever submitted as colour essays to the Post Office. The half-tone blocks were made, photographically, from the original Eve 'Wreath' and 'Pillar' frame designs (which had been approved by the King) into which a suitable size enlargement of the Downey head photograph had been pasted. These actual designs as photographed, date from August 1910 and are now in the collection of HM The Queen. One of these is reproduced here (fig 2) by gracious permission of Her Majesty.



Fig 2

No further half-tone colour essays were used after 14 December.

Heutschel Zinc-Block Essays These were printed from zinc line-blocks supplied by Messrs Heutschel and Co to Somerset House probably between the end of December 1910 and early February 1911. Since there exist, as well as the normal single impressions, proofs of four impressions arranged as a block on a single piece of paper, they may have been supplied as multiples and subsequently cut apart. The Heutschel line blocks were produced in the normal way from photographs of original Eve and Mackennal designs combined with the Stage 2 proof of the engraved Downey head die (completed 14.11.1910). Included in a 'proof' set (at the National Postal Museum) of black impressions from the Heutschel blocks are essays for the $\frac{1}{2}d$, 1d, $1\frac{1}{2}d$, 2d and 3d values, the blocks for which were made from earlier versions of the Mackennal designs in these values (see figs 3-5). The originals from



Fig 3



Fig 4



Fig 5

which they derive do not seem to have survived, but they were probably made in December 1910, whereas the later designs from which further blocks actually used for colour essays were made date from a few weeks later and are in HM The Queen's Collection.

Master (head and frame) dies were completed during February and March 1911 for the approved Mackennal Dolphin ($\frac{1}{2}d$ and $1\frac{1}{2}d$), Lion ($1d$ and $2\frac{1}{2}d$) and Wreath ($2d$ and $3d$) designs; individual dies for most of these values were completed by early August. Since die proofs, when available, were preferred as colour essays, the Heutschel blocks up to $3d$ ceased to be used from the Autumn of 1911. A long series of modifications were carried out by Eve on his 'Pillar' and 'Wreath' designs for the values from $4d$ up to $1/-$, to meet technical difficulties in matching the frames and the new profile (Mackennal) head dies. These problems were not resolved until early in 1913 so Heutschel colour essays continued to be used for values from $4d$ upwards until superseded early in 1912 by Motley essays.

Motley (Printex) Essays A H Motley and C A Miller, both manufacturers, in conjunction with H M Pilkington, an engineer, took out patents in 1911 for 'An Improved Method for Multiple Photographic printing in register on Sensitized Surfaces' and 'Improvements in or relating to Multiple Photographic Frames'. These processes and others, including a primitive 'step and repeat' camera invented by Motley, were incorporated in a photo-mechanical multiplying-etching process for plate making called 'PRINTEX'. The Printex Company claimed that the process could be used to manufacture multi-image plates (such as are used for postage stamps) for printing either by lithography or recess. The 'Ideal' stamp essays produced by the company at the London International Stamp Exhibition of 1912 were in fact printed in an early version of photogravure and the same process was used for the Motley/Printex colour essays supplied by Somerset House to the Post Office between January 1912 and June 1913. Under a magni-

fying glass Motley essays are seen to have a fine 'screen', somewhat similar to modern photogravure issues. Motley essays were made in $4d$, $7d$, and $8d$ values only, in singles and in blocks of four (see fig 6) and all had the profile



Fig 6

Mackennal head. Mostly they were produced as colour essays but some in the $4d$, $7d$ and $8d$ values, were produced to show the effect of varying backgrounds to the effigy of the monarch. Somerset House had a high opinion of the quality of the Motley essays. In July 1912 there was an urgent need for a new $4d$ stamp (to replace the Edward VII fourpenny) but the prospects of completing plate-making and printing for this value were remote. On the initiative of Somerset House it was suggested to His Majesty that temporary printing plates could be made for the $4d$ value by the Printex process and a trial sheet of the proposed stamp was actually printed and submitted to the King. The King did not consider the process good enough for issued stamps and in fact he insisted that his final approval of the colour and design of each individual value would only be given on the basis of essays made from the actual dies or plates.

30. International Botanical Congress, 1964

The Botanical Congresses are held every five years, alternately in Europe, and on this occasion the setting was Edinburgh where, from 3 to 12 August, some 4,000 visitors, many from overseas, gathered together to talk, listen and exchange views on botany, ecology and horticulture. The King of Sweden, Gustav IV Adolf, was Honorary President of the 1964 Congress.

The combined skills of Michael and Sylvia Goaman were utilised to prepare the four stamp designs—Michael's sixth issue and Sylvia's first—which depicted well-known flowers in their natural colours. With her long

The first of the flowers was the Spring Gentian (3d—a subtle increase in the 'printed matter' rate from $2\frac{1}{2}d$!), *Gentiana verna*, a herbal plant, usually blue-flowered and found in mountainous regions, said to have derived its name from Gentius, King of Illyria, who, according to Pliny, introduced it in medicine in the 2nd century BC. The Dog Rose (6d), *Rosa canina*, is the wild rose of the hedgerows, also the wild brier, familiar both in flower (white and red blooms) and in fruit (hips).

The Honeysuckle (9d), *Lonicera periclymenum*, or woodbine, is a climbing shrub with beautiful cream-coloured flowers, so named



experience and knowledge of botanical art forms, Sylvia provided the drawings while Michael was responsible for the colour-work and layouts. The floral designs filled the horizontal stamps virtually edge-to-edge with the event inscribed at the foot—it was the tenth Congress, but that fact was omitted.

The choice of plant was influenced by its known habitat, ranging from north to south of the country, and botanical sections of the individual flowers and their seed pods were illustrated in the bottom right-hand corner of each stamp, below the Wilding portrait of the Queen.

because honey is readily sucked from the flower by long-tongued insects. The flowers turn yellow after overnight fertilisation by hawk-moths. Lastly, the Fringed Water Lily (1s 3d), *Limnanthemum nymphaeoides*, one of a genus of aquatic plants of the family Nymphaeaceae.

The stamps were multicolour/photogravure-printed by Harrison & Sons in sheets of 120 (6 × 20) on ordinary and phosphor-banded paper, watermark 'multiple crowns'. The 3d is known with 'blue omitted' and the 1s 3d with 'yellow partly omitted, due to a paper fold. Recorded flaws include (3d) a broken petal,

(6d) rose-hip flaw, (9d) green leaves omitted, and a line through 'INTER', and (1s 3d) fruit flaw. The 6d, 9d and 1s 3d are known with watermark inverted. Quantities sold (phosphor in brackets) were: 3d 166,491,720 (6,764,880); 6d 23,361,120 (996,720); 9d 11,896,060

(498,460); and 1s 3d 15,664,600 (650,920). Sales of presentation packs totalled 15,895. A 'CANCELLED' handstamp, applied in black over two denominations, was used by the Post Office on sample first day covers publicising the service. JAMES WATSON

Stamps for Pleasure 4. Perforations

Britain's first officially-perforated stamps appeared in 1854 and, I quote: 'It is strange that the idea of perforation did not occur to Rowland Hill or his colleagues when the first postage stamps were being planned' (John Easton, *Postage Stamps in the Making*). Strange indeed, because Perkins Bacon, printers of the Penny Blacks and Twopence Blues, actually possessed a small perforating machine which was used for perforating the counterfoils of cheque books. It looks, in retrospect, as though the printers did not wish to be involved with the added complication of perforating the stamps!

But when the colonies started clamouring for perforated stamps, the authorities had to 'sit up and take notice', and it was one, Henry Archer, a London businessman of Irish origins, who first pointed out the advantages and ease of separating stamps by perforation, and who invented a type of machine which, after years of experiment and trial, was finally approved and accepted by the Post Office, and by the Commissioners of Stamps and Taxes (later, 'of Inland Revenue').

Archer's first two machines rouletted the stamps (i.e. formed cuts in the paper) and were not satisfactory. His third machine, the first to employ actual perforation, was eventually made to work satisfactorily, and his patents were purchased outright for £4,000 in June, 1853. New machines, perforation gauge 16, were constructed by David Napier & Sons, and duly installed at Somerset House. The perforated stamps were first issued on 28 January 1854.

Stamps used in the early 'Archer' experiments and in the subsequent Government

trials are extremely rare and are eagerly sought, preferably on cover, by collectors. They can be identified by 'Alphabet' and plate characteristics, and for details of these readers are referred to the Gibbons' *Specialised Catalogue Vol 1*. Sheets perforated gauge 16 tended to come apart prematurely with handling, consequently at the end of 1854 the gauge was changed from 16 to 14, though stamps perf 16—we're talking of Penny Reds and Twopence Blues—were issued spasmodically until the end of 1857.

The Napier machines operated on the principle of the 'comb' perforator which has continued to the present day—a horizontal row of perforating pins plus the vertical sides of the stamps below that row—just like an elongated comb. A hand-operated treadle bar lowered the frame of pins so that they punched the paper and slotted into matching holes in the base plate and were then withdrawn, the procedure being repeated for the next row of stamps and so on until the entire sheet was perforated.

In modern times the process of comb perforation has become automated and sophisticated—the hardy 'workhorse' of perforators is the Grover machine which can be adapted to perforate two, three or more rows of stamps at a time on the principle outlined above. Usually from six to eight sheets are perforated at one stroke in the Grover machine, the sheets being 'fed' by the operator. Comb-perforated stamps can be distinguished from 'line'-perforated issues by the evenness of the intersecting holes at the corners of the stamps. Perforations punched in 'single lines' down and across the sheets of stamps never—or

rarely—have perfectly matching intersecting holes.

Now that more and more stamps are being printed on high-speed rotary presses in reels—‘in the web’—a built-in perforator within the printing press has become an economical necessity. For many years now the French ‘Chambon’ photogravure press and the giant US ‘Giori’ presses have employed integral perforators, delivering finished, perforated sheets. Harrison’s new ‘Jumelle’ press, which is electronically monitored and controlled by computers, prints photogravure and/or recess (line engraved) stamps and has an integral rotary perforating cylinder related to the actual speed of the printing.

Important to collectors is the measurement of perforations—a different perforation could distinguish an apparently identical rare stamp from a common one—and the basis of measurement is the number of holes within the span of two centimetres. Purpose-built gauges (such as the Gibbons’ ‘Instanta’) have rows of converging lines which, when matched with the perforation holes on the stamp, enable the precise measurement to be read off from figures at the side of the gauge. Decimal notation provides a more exact measure where this is required.

‘Perf 14’ would indicate that all four sides of the stamp measure ‘14’ on the gauge, but stamps often have a different perforation at the sides—in such cases the top-and-bottom perf is given first. Modern British definitive issues are perf 15 × 14, for example, while the special issues are invariably 15 × 14 for the horizontal designs, 14 × 15 for the vertical.

JAMES WATSON

Letters to the Editor

Dear Sir,

I expect that the interesting article “The Mail Coach Stone” in the January issue will remind you readers of other mail coach stones around the country.

I regret that I have neither a note of the

inscription nor a photograph of the one not too far south of here. It was erected by some society in the 1930’s to record—not an accident—but of devotion to duty.

The stone stands on the moors, about 100/150 yards off the A701 Moffat to Edinburgh road, about 1 mile on the Edinburgh side of Llevil’s Beef Tub.

It records that when the Dumfries to Edinburgh mail coach got stuck in a snow drift, that the driver and guard got down, and attempted to carry the mail on foot through the blizzard and drifts, but lost their lives in the attempt.

It is interesting to note that this stone is only a few miles south(west) of where the Biggar-Tweedsmuir mail bus now turns on its twice daily journey.

I do not use this road now, so I hope some local correspondent will be able to supply the full information. But I may be able to get over that way again soon.

Yours faithfully

Crawford, Biggar, Lanarkshire D C MACLAY

Numbers Issued

After a lapse of over a year we are now able to continue our series of the numbers issued and do so for the 1974 commemorative stamps.

	<i>Issued</i>	<i>Net Issues</i>
British Trees	27 February 1974	
10p		7,245,200
Fire Service	24 April 1974	
3½p		47,526,900
5½p		7,393,600
8p		6,737,600
10p		6,631,300
UPU Centenary	12 June 1964	
3½p		38,880,800
5½p		7,414,300
8p		6,450,000
10p		6,593,800
Great Britons	10 July 1974	
4½p		41,949,300
5½p		9,207,800
8p		7,243,600
10p		7,467,500

Churchill. Centenary 9 October 1974	
4½p	54,000,000
5½p	9,110,900
8p	7,925,000
10p	7,752,800
Christmas 27 November 1974	
3½p	234,783,700
4½p	12,902,200
8p	11,648,400
10p	12,046,000

Special Handstamps

Unless otherwise stated, items for reposting should bear ½p in excess of the normal postage and should be sent to the Head Postmaster of the town where the special posting box is located or the relevant district Postmaster in London, marking the outer cover "Special Handstamp".

27 April 1977 (R)

The News 100 Centenary 27 April 1977 Portsmouth Hampshire. Special posting box at the News Centre, Hillsea, Portsmouth PO2 9SX.

18 May 1977 (P/C)

Rotary Club of Hexham Golden Jubilee 18 May 1977 Hexham Northumberland. Special posting box at the Post Office Hexham Northumberland NE46 1AA.

26-30 July 1977 (P/C)

The 4th Latvian Song Festival in Europe London SW7. Special posting box at the Philatelic Posting Box Imperial College Prince Consort Road London SW17 2AZ.

Postmark Slogans

Unless otherwise stated, items for reposting bearing the appropriate postage rate should be forwarded to the Head Postmaster of the town where the slogan is to be used, marking the outer cover "Postmark Slogan".

14 March-29 October 1977

Its a Great Night Out at King's Lynn Speedway Saturdays—7.45p.m. To be used at King's Lynn. First and Second Class.

14 March-12 September 1977 (P)

Chichester Festival Theatre 1977 Season 10 May-17 September. To be used at Chichester. First and Second Class.

14 March-11 June 1977 (P)

South of England Show Ardingly (Sussex) June 9, 10, 11. To be used at Redhill MLO. First and Second Class.

14-27 March 1977

Turnberry Hotel Golf Course 106th Open Championship 6-9 July 1977. To be used at Ayr.

17 March-11 May 1977

Tradex 77 12-15 May 1977 Southend on Sea. To be used at Southend on Sea. First or Second Class.

21 March-10 April 1977 (P)

Radio Controlled Model Exhibition Northampton Airport (Sywell) Easter Sunday and Monday 10, 11 April 1977. To be used at Northampton. First and Second Class.

1-30 April 1977

The News 100 Centenary 1877-1977. To be used at Portsmouth. First and Second Class.

1-31 May 1977

Mail 100 Hartlepool 1877-1977. To be used at Cleveland. First and Second Class.

Repeat Campaigns

28 March-26 April 1977

23 May-19 June 1977

4 July-11 September 1977

Chessington Zoo Surrey Open Every Day of the Year. To be reused at the following offices:-

WCDO WDO SWDO SEDO

5 December-18 December 1977

To be reused at Kingston only.

P denotes Pictorial

C denotes Circular

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