

The 'Castles' High Values

R.F. ALLEN

Part I

THE first "permanent series" postage stamps to bear the portrait of Her Majesty, Queen Elizabeth the Second, were placed on sale in Britain's post offices on the 5th December, 1952, just six months before her Coronation. Despite this early start to the definitives of the present reign, the higher denomination stamps which were to complete the series had only reached the "first attempt" stage of their design by the time the Queen was crowned on 2nd June, 1953. It was another month before selected designers were invited to submit further drawings for them, working to a Post Office brief which already contained the principal elements of what later became the popular "Castles" series of high values. Two further years were to elapse, during which time the designs were finalised, dies engraved, plates produced and printing started, before the stamps were eventually issued in September 1955.

It will be clear from the foregoing, that the Post Office were not to be hurried over so important an issue. Presumably, their tardiness was only permitted by the existence of sufficient stocks of the preceding set of high values, coupled with a demand considerably less than that for most of the lower denominations. However, whatever the reason for the protracted period of preparation, the resultant distinctive series of "Castles" stamps would seem to have justified it. Furthermore, the International Philatelic Art Society, when awarding its first gold medal for a stamp in current production, selected the "Windsor Castle" £1 value for the honour; a rather nice tribute to the Post Office, and to the late Lynton Lamb who designed the series.

Perhaps the intrinsic quality of an engraving, imparted to stamps when they are reproduced by recess printing, contributes something to the appeal of the "Castles". Certainly, they appear to be attracting as keen a generation of followers as did the "Seahorses" of an earlier reign and, in a remarkable way, they have an almost parallel history of printers. This, together with the different watermarks, papers and sheet markings to be found on the various printings, provides a wealth of interesting material for study. The introduction of Plate Numbers on the sheets produced by Bradbury, Wilkinson & Co., printers of the stamps during the latter half of their 14 years of issue, has proved to be yet another incentive to philatelists, and the earlier Plate Blocks are much sought after.

It is the intention of this series of articles, which are based on a proposed monograph dealing with the "Castles," to provide not only a comprehensive account of the design and production of these, the first of Britain's Elizabethan high value stamps, but also a more detailed coverage of each printing group than that appearing in the basic listing given in most stamp catalogues. For example, the initial printings, by Waterlow, although usually catalogued as a single set of four values, will be found to have a fair range of papers, colour shades and re-entries, when looked

Originally intended for publications in book form, R.F. Allen's long awaited work on the G.B. 'Castle' high values is to be serialised in STAMP COLLECTING in several instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The first parts will deal with the design; succeeding sections will cover printing, paper and watermarks and will build-up into the most complete record on the subject to date.

at more closely. Then again, the work of the various printers has a diversity of sheet markings, many of which will help to identify a plate, pane or printing, and where this information is available, it has been included in the text.

Unfortunately, quite a lot of interesting detail will go unrecorded, both because of the "cloak of security" with which the Post Office and the printers seem to have surrounded high value stamps in the past, and because the appropriate records were probably not always kept. Their very nature makes the need for security understandable, but where a peculiarity of an issued stamp could be shown to exist, it seems incredible that, in many cases, no official acknowledgement, or explanation, was forthcoming. Due to this attitude, certain developments in the type of paper used, and some aspects of printing technique, may never be recorded.

Happily, and for well over a decade now, the Post Office has realised that philatelists take a genuine interest in the way in which the stamps they collect are produced, and it is to be hoped that those who wish to make a study of the "High Values", of the future, will not have their efforts frustrated by a similar lack of information.

ACKNOWLEDGEMENTS

Purchasing a stamp, either from a Post Office counter, or from a dealer, only gives one the "end product" to study and write about. In order to cover adequately the design and production of these stamps, it is necessary to seek the help of the postal authorities and the printers. Therefore, much of the information, and a large number of illustrations in the articles which follow, are the result of the kind co-operation and assistance given to the author by people in various sections of our Post

(continued on page 1139)



The original designs for the first high value series produced by De La Rue (from the Phillips collection).



The 'Castles' High Values

(continued from page 1137)

Office Corporation, and the stamp printers. Protocol precludes the naming of individuals, but appreciation of aid in the past prompts mention of the following:

The National Postal Museum, who supplied material for the section on the design of the "Castles" stamps.

The Post Office Corporation, for permission to reproduce many of the illustrations.

The Postal Services Department of the Post Office, for certain production and issue details.

The printers of the high value stamps, and especially Messrs. **Bradbury, Wilkinson & Co.**, who were most helpful with the final phase of the "Castles" series.

Many stamp dealers and philatelists have additionally provided information, and thanks are also extended to the Editor of *STAMP COLLECTING*, to the printers, and in particular, to the Editor of *The Woodstock Catalogue* without whose cajoling, and encouragement, the "Castles" monograph would have remained uncompleted indefinitely.

* * *

The acceptance of Rowland Hill's design for the very first adhesive postage stamps, more or less determined for the future what a stamp should look like. Most of the succeeding Victorian, and Edwardian, stamps were certainly based on similar principles, achieving significant variety only in respect of their border design, and size.

The first stamp belonging to the generally recognised high values range of 2/6d., and above, was issued over a hundred years ago. This was the surface printed 5/- pale rose of 1867, and by far the greater proportion of its design was taken up by the framework, which included a circular border of classical Greek pattern, surrounding the portrait of Queen Victoria. Printed by Thomas De La Rue & Co., who were responsible for producing all the Victorian surface printed stamps, it was followed 11 years later by 10/-, and £1 values, in colour greenish-grey and brown-lilac respectively, and eventually by a £5 stamp in orange.

During 1883, and 1884, a new series of high values to £1 was introduced, including for the first time a 2/6d. denomination. This latter bore recognition of the financial transaction purposes of such stamps, as was shown by its inscription which read "Postage & Revenue". The series, again surface printed, continued in use until the end of the reign. The range of values consisted of a 2/6d. stamp in lilac, a 5/- stamp in rose, 10/- in blue and the £1, initially in brown-lilac but changed in 1891 to dark green. Subsequently, and with a portrait of the new monarch,

The Postal Union Congress £1 value, recess-printed in black by Bradbury Wilkinson and Co., from the design by Harold Nelson.



adaptations of the designs were issued as the Edwardian high values of 1902. All the Edward VII stamps were surface printed, the first high values being by Thomas De La Rue & Co., and the last by Somerset House.

The reign of George V saw the introduction of the "Seahorses", the first of the recess-printed high values. These splendid stamps, horizontal in format and depicting Britannia riding the waves astride three horses, were designed by Sir Bertram MacKennal. Initially they were printed by Waterlow Brothers and Layton, who produced the first issue of four values in 1913, the denominations and basic colours being 2/6d. brown, 5/- red, 10/- blue and £1 green. Later on, Thomas De La Rue & Co. and later still, Bradbury Wilkinson & Co., made printings of the 2/6d., 5/- and 10/- values only.

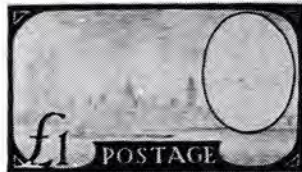
Bradbury Wilkinson & Co. were also the printers of the only other high value stamp issued during the reign of George V, the magnificent P.U.C. £1. Recess printed in black and depicting St. George and the Dragon, it was designed by Harold Nelson for the set commemorating the Postal Union Congress of 1929. By all accounts, this stamp was available at post offices for quite some time after this date.

Versions of the Seahorses, having a modified background to the King's portrait, were issued in 1934 and were printed by Waterlow & Sons Ltd.

With the accession of George VI came a group of high value stamps featuring the Royal Coat of Arms (2/6d. and 5/-), and with a larger, centred portrait, the national emblems (10/- and £1). Their somewhat square upright format was similar in size to the very first high values, but, as with the re-engraved "Seahorses" before them, they were recess-printed by Waterlow & Sons Ltd. The designs were the work of Edmund Dulac and the Hon. George R. Bellew, M.V.O. The 2/6d., 5/- and 10/- values appeared in 1939 with the colours of the 2/6d. (brown) and the

(continued on page 1141)

Design for the £1 Q. E. II definition submitted by Mary Adshead.



Four designs submitted in the first competition. (Artist unknown).



The 'Castles' High Values

(continued from page 1139)

10/- (dark blue) subsequently being changed in 1942 to green (2/6d.) and ultramarine (10/-). The 5/- stamp continued to be printed in red. The £1 value, recess printed in brown, was not released until October 1948. As a consequence of this delay, the first £1 value of the reign was the photogravure printed Royal Silver Wedding commemorative issued in April of the same year, and designed by Joan Hassall and G. T. Knipe. Harrison and Sons Ltd. were the printers of this stamp, which is in a dark blue colour.

In 1951, there appeared, along with the Festival of Britain commemoratives, a new set of definitive high values. Recess-printed by Waterlow as before, and in more or less the same colours as the stamps they superseded, the new series had reverted to the size and horizontal format of the George V high values.

The 10/-, and £1 stamps designed by Percy Metcalfe, C.V.O., were still rather conventional in their subject matter of St. George and the Dragon, and the Royal Coat of Arms respectively, but the 2/6d. and 5/- values designed by Mary Adshead were more pictorial in nature. Though somewhat symbolic, the 2/6d. featured Nelson's flagship, H.M.S. *Victory*, in an oval frame, surrounded by a ropework background. The 5/- value was of the same basic design, but with a view of the White Cliffs of Dover, surmounted by Dover Castle. In fact, this 5/- stamp can be considered the forerunner of the "Castles", stamps of the following reign, for there is no doubt that it influenced some of the artists invited to submit designs for the first series of Elizabethan high value stamps.

Obtaining the Designs

The initial move towards the eventual issuing of the first definitive 2/6d., 5/-, 10/- and £1 stamps for the present reign took the form of a competition, with fourteen artists and four stamp-printing firms being invited to submit designs.

Artists were instructed that the shape of the stamps could be:
Upright, 1.54 in. deep by 0.90 in. wide.
Horizontal, 0.90 in. deep by 1.54 in. wide.
Or square, 1.18 in. by 1.18 in.

H.W. Bird's unsolicited designs for the 2/6d and £1 values which were submitted for adjudication by the design committee. It is easy to see from these previously unpublished designs why the Post Office chose to include them in the competition.



Original drawing prepared by De La Rue for the £1 value (reduced) together with (inset) photo of submitted finished drawing.

It was also stipulated that the value should appear once only, in clear figures of a size suitable to the design, and that a space should be left blank for the portrait of the Queen to be inserted by the Post Office, unless the artist wished to draw in the effigy from the specimen portrait supplied. The choice of design rested entirely with the artists, who were requested to furnish their designs as rough drawings four times larger than the intended size of the stamps. Those invited were allowed to submit as

(continued on page 1143)

ROUYN, QUE., TO HAILEYBURY, ONT.

FLIGHT BY

Glyn R. Burge
PILOT.

Semi-Official Air Stamps of Canada

(Continued from page 1141)

or No. C11b, depending on the direction, in blue or violet ink. The pilot was Glyn R. Burge and most covers were signed by him. Outbound covers were cancelled at Haileybury on 11th August and were received at Rouyn on 12th August.

- 32 1926, 20th October — Haileybury to Rouyn and return. This flight was the first on which covers bore the stamp No. 11A. A special cachet was also applied and depending on direction No. C12a or No. C12b was used and applied in blue or violet ink. Once again the pilot was Glyn R. Burge and most covers were signed. 500 covers were carried on the outbound journey and 517 on the return. Two of the covers were serviced with tête-bêche blocks of four stamps and seven bore tête-bêche pairs.

Fairchild Air Transport, Limited
FIRST FLIGHT
Haileybury, Ont. to Rouyn, Que.

Glyn R. Burge PILOT

Cachets: Left — 11b; Above — 12a; Below — 12b.

Fairchild Air Transport, Limited
FIRST FLIGHT
Rouyn, Que. to Haileybury, Ont.

Glyn R. Burge PILOT

- 33 1926, 27th October — Rouyn to Haileybury. A number of covers are known cancelled at Rouyn on 27th October and bearing stamps No. 10. It is also interesting to note that on this occasion surplus Elliot-Fairchild Air Service envelopes were used.

The 'Castles' High Values

(Continued from page 1141)

many as four designs, where a related series was intended, otherwise, they were told, two alternatives would be sufficient.

Thirteen artists and three firms responded, producing altogether some sixty designs. An additional seven designs were received from Mr. H. W. Bird, who had not been amongst those originally invited to enter the competition, but whose unsolicited work was included for adjudication.

Various members of the P.M.G.'s Advisory Panel on Postage Stamp Designs made a preliminary examination of the sixty-seven designs submitted, and selected twenty-three for further consideration.

On the 17th June, 1953, the Postmaster-General, Earl De La Warr, met the full Advisory Panel at the House of Lords and expressed his disappointment at the low standard of the designs received. He felt that it would be very difficult to select four adequate designs from those submitted, and almost impossible to find a related set. In the circumstances, he was considering the possibility of pictorial designs, and thought that, subject to the Queen's approval, historic buildings associated with the Royal Family, such as Windsor Castle and Edinburgh Castle, should be featured on the stamps. The P.M.G. invited the Panel to express its views about this suggestion and, in general, they favoured the proposal. It was agreed that a fresh competition should be held involving Waterlow & Sons Ltd., and a limited number of artists to be selected by the Council for Industrial Design.

After obtaining the approval of Her Majesty the Queen to the proposal for a pictorial issue showing famous castles, there followed consultation with the Home Secretary and the Secretary of State for Scotland. It was decided that the nominated artists should be invited to submit designs for the stamps showing Windsor Castle, Edinburgh Castle, Caernarvon Castle and Carrickfergus Castle, representing England, Scotland, Wales and Northern Ireland respectively. The stamps were to be horizontal in format, with the castles appearing in vignettes, and with sufficient space left in the design to allow for the inclusion of the approved threequarter face portrait of the Queen. This



Portrait of Queen Elizabeth II engraved by Messrs. Waterlow & Sons from the photograph by Dorothy Wilding and used for the first higher denomination, recess printed postage stamps of the present reign.

portrait, which Messrs. Waterlow were commissioned to engrave, was based on the Dorothy Wilding photograph of the Queen used for the low value denomination stamps. Virtually finished by July 1953, the engraved portrait received approval the following month, after a number of minor improvements had been carried out, in readiness for the frame designs it was hoped would be obtained in the second competition.

The 'Castles' High Values

R.F. ALLEN

Part II

INSTRUCTIONS given to Messrs. Waterlow and to the seven artists invited to submit designs indicated that it was in mind to recess print each stamp in two colours. The Queen's portrait and the surround would be in one colour and the Castle vignette in a suitable contrasting colour. A dominant colour had been decided upon for each denomination, and these colours and the castles specified for the four values were:

- £1, Black (tone as the £1 U.P.U. stamp of 1929), Windsor Castle
- 10/-, Blue, Edinburgh Castle
- 5/-, Red, Caernarvon Castle
- 2/6d., Brown, Carrickfergus Castle

Working instructions to the artists stipulated that their designs were to be black and white wash drawings 3.6 ins. deep by 6.16 ins. wide. They were to allow for the Queen's portrait to reproduce at least as large as that appearing on the 2½d. definitive stamp when the submitted designs were reduced to finished stamp size, and the numerals for each value were also to be as large as on the 2½d. stamp, but not larger than those of the previous high values. Apart from the value, no lettering other than the word POSTAGE was to appear. For their guidance, each artist was provided with reference photographs of the castle for the particular value on which they would be working, and they were also told that their designs would be photographically reduced to stamp size by Messrs. Waterlow, the printers.

The artists invited to participate in the second competition to obtain designs for the first series of Elizabeth II high value

Originally intended for publication in book form, R.F. Allen's long awaited work on the G.B. 'Castle' high values is now being serialised in **STAMP COLLECTING** in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The first part, which includes this instalment, deals with the design, succeeding sections will cover printing, paper and watermarks and will build-up into the most complete record on the subject to date.

stamps, together with the castles they were allocated, are as follows:

Waterlow & Sons Ltd.

Mr. Stephen Gooden, R.A. — Windsor Castle (£1 stamp)

Sir Muirhead Bone

Mr. Reynolds Stone — Edinburgh Castle (10/- stamp)

Mr. Lynton Lamb

Mr. B. S. Biro — Caernarvon Castle (5/- stamp)

Miss Mary Adshead

Miss Joan Hassall — Carrickfergus Castle (2/6d. stamp)

Notification of the stamp they were invited to design was given to the respective artists in July 1953 and the closing date for submitting their drawings to the Post Office was September of that year.

Messrs. Waterlow were asked to co-operate with the artists regarding any printing difficulty that might be foreseen, and they

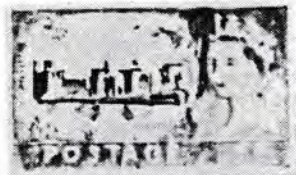
(continued on page 1261)



The design by L.D. Fryer of Waterlows.



Left and above: The two designs for the 10/- value by Reynolds Stone.



Above left: The design by Sir Muirhead Bone. Below left: Original design by Lynton Lamb, together with original colour sketch (left) and photo reduction (right) and revised drawing (below right) for the 5/- value.



The "Castles" High Values

(continued from page 1259)

were also requested to prepare stamp size photo-litho printings of each design showing:

- The Queen's head and surround in the specified dominant colour, with the vignette in a second colour.
- The vignette in the dominant colour and the Queen's head and surround in the second colour, as agreed between the artist and Waterlows.
- The whole of the design printed in the specified dominant colour.

Right: Alternative drawing by Lynton Lamb, with colour sketch and photo reduction.



In actual fact, only Messrs. Waterlow submitted designs for the £1 value featuring Windsor Castle, due to Mr. Gooden declining the invitation to design this stamp.

Including the design (illustrated above) by Mr. L. D. Fryer of Waterlow & Sons Ltd., a total of fifteen drawings were received from the artists, and bi-colour and single-colour litho-printed essays exist as listed below:

Messrs. Waterlow (Mr. Fryer) — One design for the £1 stamp in six different single and bi-colour combinations of brown, grey-black and two shades of green.

Sir Muirhead Bone — One design for the 10s. stamp in two combinations of blue and olive-brown, and blue only.

Mr. Reynolds Stone — Two designs for the 10s. stamp in two combinations of blue and olive-brown, and blue only.

Mr. Lynton Lamb — Two designs for the 5s. stamp in two combinations of red and deep grey, and red only.

Mr. B. S. Biro — Two designs for the 5s. stamp in two combinations of red and grey, and red only (individual shades for each).

Miss Mary Adshead — Six designs for the 2s. 6d. stamp, each in two combinations of green and sepia-brown, and green only.

Miss Joan Hassall — One design for the 2s. 6d. stamp in two combinations of green and sepia-brown, and green only.

The colours used for the £1 and the 2s. 6d. stamp essays seem to suggest thoughts of a possible continuation of the colour scheme used for the preceding high values set of 1951, and Joan Hassall's design is particularly reminiscent of the 2s. 6d. stamp of that issue.

A certain degree of independent development seems to have occurred with the Waterlow frame design. Besides the listed litho-printed essays for the £1 stamp, there exist hand-painted, two-colour stamp suggestions. These have the frame of L. D. Fryer's design for the £1 stamp in blue-grey, and incorporate representations of Edinburgh Castle, and Carrickfergus Castle in emerald green, both castles having been drawn from more or less the same viewpoints as those selected for the finally approved designs.

Messrs. Waterlow also prepared a set of designs showing their framework adapted for all four high values, each in two colours and with the appropriate Castle positioned high enough in the vignette area to allow for what is the most important feature of



Above left: Upright designs submitted by Mary Adshead, showing alternative version. Differences include the addition of floral emblems for Wales and Scotland. Top right, and right: Two designs for the 5/- value by B. S. Biro.

this series when related to all the other designs submitted, the inclusion of the name of the respective Castle on each stamp.

A similar line of thought may have been taken by Lynton Lamb, in that his alternative initial design for the 5/- stamp also has the Castle positioned fairly high within the framework, leaving a clear area below the Castle.

Developing the Series

In discussions with the Council of Industrial Design's nominee, Sir Francis Meynell, the decision was reached that, of the submitted designs, Lynton Lamb's surround of weathered stonework framing the vignetted Castle was the most pleasing and promising. Consequently, at a conference held in January 1954 at Post Office Headquarters, Lynton Lamb was invited to prepare adaptations of his design for use with the other three high value denominations. The officially approved photographic views of Windsor, Edinburgh, and Carrickfergus Castles were provided for the purpose.

During the month that followed, Lynton Lamb produced drawings for each Castle and these were then fitted into the framework of his accepted design, together with panels for the alternative values. The base panel of this design, as originally prepared, had the word "POSTAGE" placed centrally under the Castle, and the value positioned in the panel below the portrait. Before submitting his adaptations for the 2/6d., 10/- and £1

(continued on page 1263)



Four horizontal designs by Mary Adshead, including one (above) with an interesting triptych format. Left: Joan Hassall's only submitted design. Below: The original version of the £1 value by Lynton Lamb; The revised drawing used for the actual stamp; and the final alternative drawing submitted.



The "Castles" High Values (continued from page 1261)

stamps. Lynton Lamb took the opportunity to strengthen the lettering and value figures. Photographic reductions were made of the four adaptations, which were then inspected by members of the Council of Industrial Design.

It was decided that there was a certain lack of uniformity in the series of stamp designs, due mainly to the variation of the scale and aspect of each Castle. Not that too much blame could be placed on the artist for this result, since, right from the onset, the officially approved views had been supplied with the directive that they "might provide guidance as to the angle from which the castle can best be drawn". Windsor Castle, in particular, had almost disappeared behind the mass of foreground detail, and the drawing, being too photographic in character, would have been almost impossible to reproduce at stamp size.

Lynton Lamb made new drawings for the Castles, with those of Edinburgh and Windsor showing the most radical change of viewpoints. In fact, he visited these castles in September 1954 and prepared drawings "on site" in an attempt to reconcile the variation that existed in the aspect of each Castle. Besides the accepted cassettes of Caernarvon Castle and Carrickfergus Castle, drawings were submitted of Windsor Castle, as seen from the north-east and the north-west, and Edinburgh Castle as viewed from Castle Hill, and from Princes Street.

Welcoming the chances to slightly modify his design, Lynton Lamb redrew the whole frame, making the perspective of the stonework more compatible with the eye-level viewpoint of each Castle. Some reduction was made in the tufts of foliage, which were originally introduced to soften the corners of the "weathered opening", also the hard line of the upper edge of the base panel was broken by the "weathering" of the individual blocks of stone. In the base panel itself, the lettering and values were redrawn and brought more closely together to be centred within its width. The head of the Queen was also positioned more centrally in the portrait area.

With the various drawings of the Castles that Lynton Lamb had prepared, which included the alternative views for Windsor and Edinburgh, and using his modified basic design for the frame surround, final versions of the four values were made up. From these, stamp size photographic reproductions were made

STAMP COLLECTING, 1st February, 1979



Final made-up artwork for the 2/6 value, from which the engraving was produced.

followed by litho-printed essays. Judging from the bi-colour essays that were produced there was already an element of restraint creeping into the colour scheme visualised for the series.

The selected dominant colours were retained but black was used for the second colour. The following essays are known to exist:

- £1 stamp — Single colour essay in black only.
- 10/- stamp — Portrait and frame surround in blue with Castle in black. Portrait and frame surround in black with Castle in blue. Also a single colour combination in deep blue.
- 5/- stamp — As the above two combinations but in bright scarlet and black. Also a single colour combination in the bright scarlet only.
- 2/6d. stamp — As the above two combinations but in sepia and black. Also a single colour combination in the sepia only.

The use of two contrasting colours for the 'Castles' series was adjudged to be unsatisfactory, mainly because of the difficulty in

(continued on page 1277)

The "Castles" High Values

(continued from page 1263)

ensuring really accurate colour registration, and it was decided that the idea of having two-colour recess printed high value stamps would have to be abandoned. After some minor amendments to the design Messrs. Waterlow, who had already made the very fine engraving of the Queen's portrait for use with the high values, prepared an engraved die of the basic frame surround. Their engraver, Mr. Bard, produced skilfully executed engravings of the four castles and, combined with the portrait surround for each denomination, they were used to make up the set of "master" dies for the series. From the dies, single-colour proofs were taken and the 2/6d. stamp exists printed in brown, blue, black, and the 5/- stamp on bright scarlet.

The proofing of the 2/6d. value in blue and black may have been carried out in order to avoid holding up the colour trials.

The shade of colour for each stamp: Sepia for the 2/6d. value, Carmine-red for the 5/-, Ultramarine for the 10/- and Indigo-black for the £1, was finally selected, and proofs submitted to the Queen, in June, 1955, for her approval. This was received and with the Post Office having approved the stamps for colour and design in August 1955, the printers were told that it was hoped to have the stamps on sale by September the 1st. Due to printing and other difficulties, it was found impracticable in the time available to issue all four high values on this date. Consequently, the 10/- and £1 stamps were issued on 1st September, 1955, and the 2/6 and 5/- stamps on the 23rd of the month.

The 'Castles' High Values

R. F. ALLEN

Part III

Announcing the Double "First Day of Issue"

IN late November, 1952, a press conference was held at Post Office Headquarters to release the designs and details of the first issue of British Elizabeth II postage stamps. The only firm news that the Postmaster General, Earl De La Warr, could give about the high value stamps of the definitive series was that they would be line engraved, as were the then current £1 to 2/6d. stamps of George VI's reign.

Apart from the Deputy Director-General of the Post Office commenting at a philatelic function in 1954 that he felt sure that the forthcoming high value definitives would prove popular; and the P.M.G. in his reply to a question in the House of Lords on the 9th February, 1955, stating that "historic buildings" would be featured on the high values, the Post Office maintained a complete silence so far as these stamps were concerned. Of course, a fair amount of speculation about their design and possible date of issue appeared in the philatelic press. Even the *Financial Times*, in an article that appeared around the middle of 1955 and which dealt with the sales of the higher denomination stamps, could publish no news regarding the release date of the seemingly long-overdue high values of the present reign.

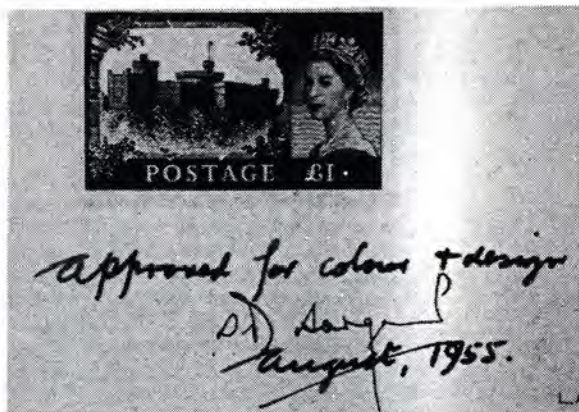
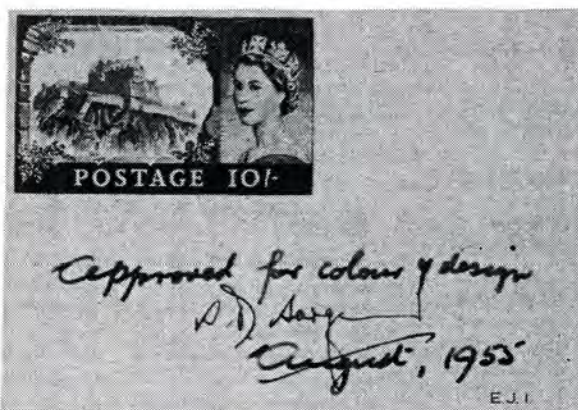
It was not until the very day before they were due to be issued that the Postmaster General, who at this time was Dr. Charles

Originally intended for publication in book form, R.F. Allen's long awaited work on the G.B. 'Castle' high values is now being serialised in STAMP COLLECTING in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The first part, which includes this instalment, deals with the design, succeeding sections will cover printing, paper and watermarks and will build-up into the most complete record on the subject to date.

Hill, held a conference to release the designs of the first series of Elizabeth II high value stamps and provide the press with information to be published on 1st September 1955. The main details about the issue occupied the first page of the Post Office's press release (this is reprinted on the following page) and some biographical notes about the artist who designed the stamps, plus a list of the P.M.G.'s advisory panel took up the other pages. A photographic print of the full set of four stamps was also provided, although the 5/- and 2/6 values were to be released three weeks after the £1, and 10/-.

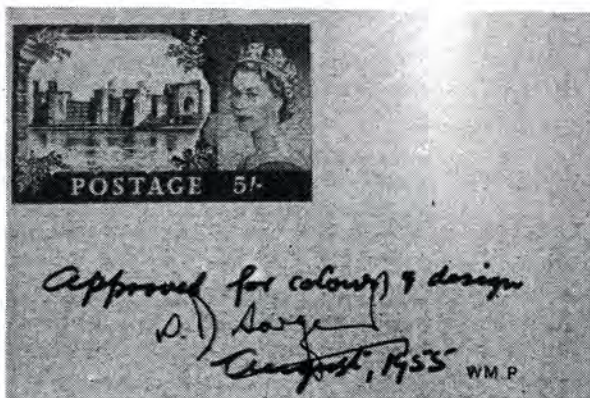
The sudden appearance of the four "Castles" stamps seems to have confused at least two national newspapers, who reported

(Continued on page 1395)



Final colour proofs of stamps issued 1st September, 1955

Final colour proofs of stamps issued 23rd September, 1955



The 'Castles' High Values (Continued from page 1393)

incorrectly that all four values of the series would be issued on 1st September. Not that they could be blamed for assuming this, for in normal circumstances, a unified set of pictorial stamps would have a single "first day of issue". Perhaps the "playing down" of the fact that the 5/- and 2/6 stamps couldn't be issued until 23rd September because of production difficulties led to some people's failure to notice that the Post Office had announced not just one "first day of issue", but two!

The Press Release, as shown on this page, was handed to people invited to attend the Postmaster General's press conference held at Post Office Headquarters on the 31st August, 1955.

Pages 2 and 3 of this Press Release provided additional 'Notes to Editors', the first of which stated that:-

"The stamps are printed on paper embodying an all-over watermark consisting of an outline of the St. Edward's Crown and the Royal Cypher".

This was followed by the "Biographical details of the Artist", which follows below. Finally, the editorial notes listed the "Members of the Postmaster General's Advisory Panel" thus:

"The Lady Sempill, A.R.C.A., Vice-President of the Design and Industries Association; Sir Francis Meynell, R.D.I.; Sir Leigh Ashton, Director of the Victoria and Albert Museum; all of whom were nominated by the Council of Industrial Design, with Sir Gordon Russell, C.B.E., M.C., R.D.I., Director of the Council. Sir Kenneth Clark, K.C.B., Royal Fine Arts Commission and Arts Council of Great Britain; Sir John Wilson, Bt., C.V.O., Keeper of the Royal Stamp Collection, and the Hon. Sir George Bellew, K.C.V.O., F.S.A., Garter King of Arms, also served on the Advisory Panel.

The Designer

The following biographical details concerning Lynton Lamb, designer of the "Castles" high values, are those given to the press on the 31st August, 1955.

"Born in India in 1907. Educated at Kingswood School, Bath, and the L.C.C. Central School of Arts and Crafts.

Fellow of Royal Society of Arts, 1953; Fellow of Society of Industrial Artists, President, 1951-53; Member of the London Group, 1939; Exhibitor, Royal Academy of Arts; Adjudicator, National Book League's Exhibition of Book Design, 1953; Member of the Art's Council's Art Panel, 1951-54; Member of the Council of Industrial Design, 1952-55; on staff of Salde School of Fine Art since 1950; Official Visitor, West of England College of Art, Bristol, 1950-55; Advisor on production to the Publisher, Oxford University Press since 1945.

Painter in oil and water-colour, designer, and illustrator in wood engraving, lithography, and pen and ink; one of the 60 painters invited to exhibit at the Festival of Britain, 1951; has illustrated over 20 books since the war including one for the Limited Editions Club, New York; has executed architectural decorating in various media for ships of the Orient Line.

Designed binding of the lectern Bible, St. Giles Cathedral, Edinburgh, to commemorate the wedding of T.R.H.H. Princess Elizabeth and Prince Philip, 1948; also designed the binding of the Bible used at the Coronation, Westminster Abbey, 1953.

Designed the Coronation Greetings Telegram form, 1953.

Author of *The Purpose of Painting*, 1936; *County Town*, 1950, and *Preparation for Painting*, 1954.

Married; two sons. Served in Royal Engineers, 1940-45; Captain, Camouflage Staff Officer, 8th Corps, B.L.A." Needless to say, Lynton Lamb contributed much to the art of

(Continued on page 1397)



Lynton Lamb, designer of the "Castles" stamps

Below: The Press Release

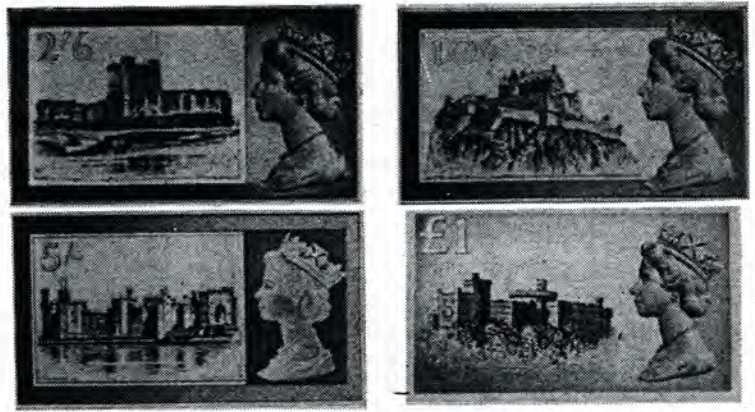
With the compliments of Sidney R. Compton, Principal Information Officer, General Post Office Headquarters, St. Martin's-le-Grand, London, E.C.1. TEL: CENTRAL 1170.

NOT FOR PUBLICATION, BROADCAST OR USE ON
CLUB PAPERS EXCEPT ON (B.S.P.) ON
1st SEPTEMBER, 1955.

ISSUE OF NEW HIGH VALUE POSTAGE STAMPS OF THE PERMANENT
SERIES OF THE REIGN OF HER MAJESTY QUEEN ELIZABETH II

1. The Postmaster General announces that £1 and 10/- pictorial stamps of the present reign are to be put on sale at all Post Offices on Thursday, the 1st September, 1955 and 5/- and 2/6d stamps on Friday the 23rd September, 1955.
2. The designs are by Mr. Lynton Lamb. They depict, in addition to a portrait of Her Majesty the Queen, four castles representative of England, Scotland, Wales and Northern Ireland. The stamps are of the same size and shape as the current King George VI high-value stamps. The colours and castles are :-

| | | | |
|------|-------|---|----------------------|
| £1 | Black | - | Windsor Castle |
| 10/- | Blue | - | Edinburgh Castle |
| 5/- | Red | - | Caernarvon Castle |
| 2/6d | Brown | - | Carrickfergus Castle |
3. The engraved three-quarter face portrait of Her Majesty shown in each design is based on the photograph by Dorothy Wilding Portraits Ltd., 7, Old Bond Street, London, W.1. which was used in the low-value (½d. to 1s.6d.) stamps of the present reign.
4. The stamps are produced by the line-engraved (intaglio) process by Messrs Waterlow & Sons Ltd., London, who have printed the high-value stamps for the Post Office for many years.
5. In making his selection of the designs the Postmaster General had the valuable help of his Advisory Panel of experts, including nominees of the Council of Industrial Design.
6. The high-value stamps of the old designs will continue on sale concurrently with those of the new designs until stocks of the former are exhausted.



Left: Essay for a definitive stamp prepared by David Gentleman. Above: The Castle series adapted by Michael Goaman to incorporate the Machin head.

The 'Castles' High Values
(Continued from page 1395)

book illustration and graphic design for many years after these biographical details appeared. He died in September, 1977.

The Introduction of the "Machin" Head

The appointment of the Rt. Hon. Anthony Wedgwood Benn, M.P. to the office of Postmaster General in 1964 promoted a "wind of change" in the Post Office that was to blow the cobwebs from the policies governing the issuing of new postage stamps. A marked increase in the number of commemorative stamps being issued soon became apparent, even to the point of excess when one considers that the stamps making up the set commemorating the 900th anniversary of the Battle of Hastings took up an area equivalent to seventeen normal size definitives of the corresponding denominations. Extending beyond the field of commemorative stamp issues, this change of policy led to the taking of a fresh look at the "permanent series" of stamps and, ultimately, the passing into obsolescence of the "Castles" series of high value stamps.

It would seem that a prime motivation for the updating of the "permanent series" was the strong desire to establish a unified and more simple stamp design than those then current, and in the spring of 1965, Her Majesty the Queen gave her consent to the use of a new profile portrait for Britain's stamps. David Gentleman, the artist who prepared an album of stamp designs for the Post Office and whose work undoubtedly set a style for future issues, produced an essay for a definitive which featured the Queen's profile and just the word "postage" with the figure of value.

The portrait he used, basically one from a series of photographs taken by Lord Snowdon, was not very satisfactory and it is thought that the Post Office may have had in mind an effect similar to that achieved on the definitive stamps of the Netherlands. Accordingly, Arnold Machin, O.B.E., R.A., was approached with a request to produce a design for the definitive series, using a sculptured profile portrait as a basis. The result of his work is to be seen on every one of the present-day 'permanent series' postage stamps of this country.

Bringing the design of the high value stamps into line with the lower denomination series featuring the "Machin" Head appears, at first sight, to have been a rather abrupt change from the pictorial issue preceding them. In actual fact, the original idea for the new high values was to retain the "Castles" series, but with the word "POSTAGE" eliminated and the general design modernised. There was even a possibility of the stamps

Below: Value figures and emblems prepared for use with "Machin Castle" series.



being printed in two colours, both recess. Although, ultimately, the "Castles" were abandoned, it was not before a serious attempt had been made to integrate the Machin head with the existing designs.

In 1967, at the Post Office's request, rough designs were originated in which the Castles vignettes taken from the stamps designed by Lynton Lamb were given new frames incorporating the Machin head of the Queen. These designs, which were prepared by Michael Goaman, each have the castle positioned low within the frame so as to allow room at the top for the value figures. As can be seen from the illustration of the £1 design in particular, there is a fair amount of space available above the castle. For this area, designs were made of national emblems, in the form of rather nicely drawn symbolic flowers associated with each of the four regions. However, this idea of the 2/6 with the Shamrock, 5/- with the Daffodil, 10/- with the Thistle, and the £1 with the Rose was not proceeded with.

First Use of Engraved Machin Head

The 5/- value of the designs illustrated shows the first use of an engraved version of the Machin head. Working from photographs of the original plaster bas-relief head, Bradbury, Wilkinson's two top portrait engravers each produced a small portrait of the Queen for use with the "Castles" designs. While engaged in this task, both engravers worked closely with Arnold Machin and after the small engraved heads had been incorporated into the roughs of the proposed "Castles" adaptations, the designs were submitted for consideration. Arnold Machin was not wholly satisfied with the result and decided that the "Castles vignettes with the sculptured profile head of the Queen" did not make for a very happy compromise. Consequently, the project involving the castles of the first series of Elizabethan high value stamps was dropped.

The 'Castles' High Values

R. F. ALLEN

Part IV

Direct Plate (Recess) Printing and the 'Castles' Stamps.

LINE ENGRAVING

HAVING, up till now, been primarily concerned with the origination and development of the 'Castles' high values as a series of individual stamp design, the approval of these designs, in printed form, introduces a change of emphasis. Instead of thinking in terms of just four stamps, consideration must be given to the production of the stamps by the million.

Long before the 'Castles' designs had been formulated, the decision was made that the Elizabeth II high value definitives would be printed by the same traditional line engraved (recess) method that was used for the higher denomination stamps of the previous two reigns. But why 'line engraved'? Perhaps it might be worthwhile to take a very brief look at the principal methods of reproduction. There are three main processes in general use at the present time.

1. **Letterpress printing**, which has the design in the form of a relief on the printing surface, allows only the raised parts to make an image when the inked printing plate comes into contact with the paper. The simplest, and certainly one of the oldest methods of printing known, letterpress is mainly used in conjunction with moveable type, or type casting machinery.

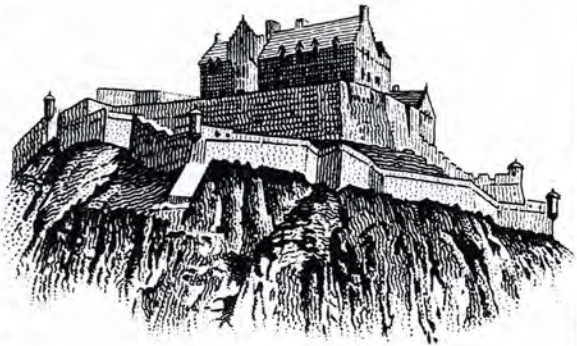
2. **Lithographic printing**, a method dependent upon the principle that grease and water do not mix, makes use of a porous printing surface to absorb water in the parts of the design that are to remain unprinted, thus enabling an image of the design to be formed by the application of a greasy ink to the printing plate. The image can then be transferred to paper, although these days, it is more normal practice to offset this ink image on to a rubber blanket which in turn transfers it to the paper - hence 'offset litho' printing.

3. **Intaglio printing**, which is based on the fact that a design engraved or etched into a smooth printing surface will hold ink after the surface level has been wiped clean, produces an image when the paper is pressed into contact with the ink remaining in the recesses of the printing plate. This method of printing direct from a plate or cylinder is also referred to as 'Recess' (design reproduced as a line engraving) and 'Gravure' (design reproduced photomechanically).

With most printing methods, the reproduction of tone drawings and photographs involves the use of special screens to break up photomechanically the original design into minute dots or cells. The dots vary in size, and the cells in depth, according to whether the camera sees a particular point on the original design as being of a light, dark, or medium tone.

In the Intaglio (Recess) method of printing from a line engraving, the basic shapes and graduations in the tones of the original design have been converted, by hand, into individual lines and dots of varying width and spacing. This interpretation of the original design into a line engraving calls for considerable skill, since the rendering of tone rests entirely in the hands of the engraver. There are certain advantages to this method of reproduction, one being that the contours and modelling of the design's main features can be emphasised by the direction or flow of the lines of shading. Another, is that the engraver can clearly define the true shape of any fine detail by means of line work. (Mechanical screens break up the design regardless of where fine detail may occur.)

There is, however, a particular attribute of direct plate (recess) printing, that readily distinguishes it from other forms of



One of Lynton Lamb's wash drawings of Edinburgh Castle, together with engraved version for the 10/- stamp, and photo-reduction of original drawing.

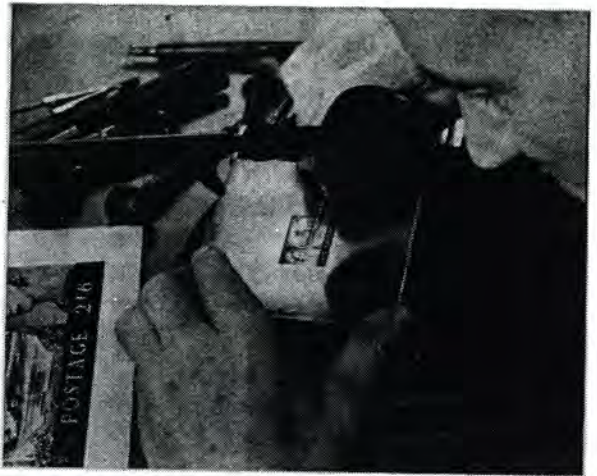
printing, and gives the process its chief characteristic. This is its ability to reproduce the actual depth of the lines and dots of which the engraving is composed. The result is a printed image

(Continued on page 1825)

The 'Castles' High Values
(Continued from page 1820)

that has the stronger lines of solid colour appearing in relief on the surface of the paper, and the finer lines and dots reproducing as a tint of the colour. Much the same principle is employed in photogravure printing. Here, the cells making up the image, though constant in size as determined by the halftone screen used, vary in depth according to the tone they are to reproduce. With photogravure printing, though, the solid colour cells are nowhere near of such a high relief on the paper as the image produced from a line engraving.

It is precisely this high relief to the lines of solid colour on a recess-printed stamp that gives it the 'feel' of a real engraving, which, basically, it is. Though reproduced in millions, each stamp is a faithful reproduction of the skill and craftsmanship that went into the production of the original engraved die. The quality and constancy of the printed image obtained by recess printing has long been recognised by security printers, so there may even be some satisfaction in knowing that a expensive high denomination postage stamp was printed by the same process as used in the production of the currency notes paying for it!



Engraver at work on the 'master' die for the 2/6 value of the 'Castles' series.

Production of the 'Master' Die.

Following acceptance of the design for a stamp which it is proposed to print recess, the original artwork is photographed and a transparency made to the intended size of the printed stamp. At one time, the preparation of the design image on transparent material was always carried out from a carefully made, stamp size, water colour drawing, but today the original drawings are usually four times the area of the stamp when printed. Working on the reverse side of the transparency, the design's detail are traced into the celluloid by means of a sharp steel point, and this scratched out impression of the original design is then filled in with graphite or yellow ochre powder.

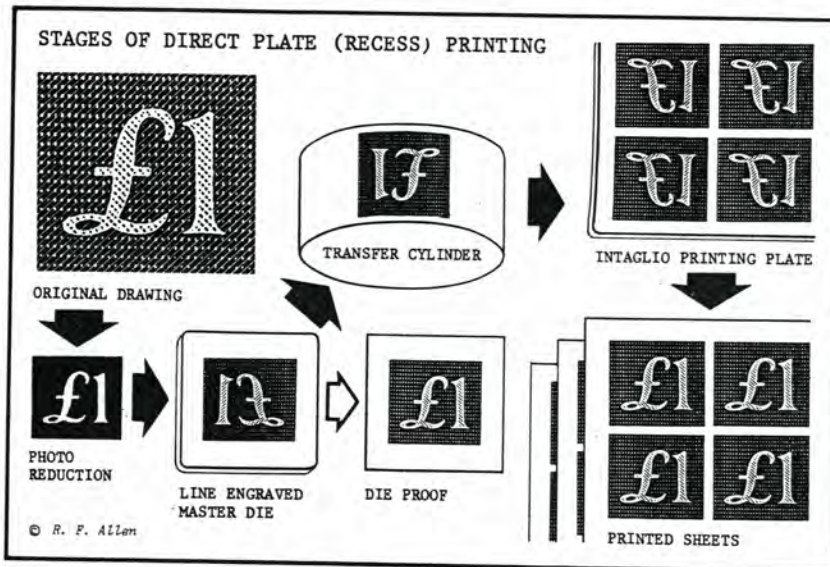
To transfer the basic details of the stamp design on to the steel block that is to become the 'master die, the transparency bearing the outline features of the stamp is laid on the surface of the block, so that the graphite or ochre filled tracing comes into

contact with the working surface of the steel. An acid-resistant coating will have already been applied to this surface. Gentle burnishing of the transparency leaves the powdered graphite or ochre image on the coated surface of the block. Using a steel point, the engraver marks through the acid-resistant coating and traces the exact details of the deposited image. Then, after wiping off any pigment remaining on the surface, the steel block is covered with acid for a very short while. Where the ground of the coating has been broken in outlining the design details, the acid is able to attack the metal. Though slight, this etching action by the acid is sufficient to show, after removal of the coating, the main features of the stamp's design.

It is at this stage that the engraver begins the actual work of cutting the steel with a burrin or 'graver'. Since this work is done by hand, much skill and patience is required while translating the original design into lines and dots on the steel block. As the

(Continued on page 1827)

Left, below: Diagram showing the stages of the recess process. Right, top: Specimen photograph of the approved portrait supplied to Waterlow's in April, 1953. Bottom: Photograph of the Head die as it appeared before July, 1953.



The 'Castles' High Values

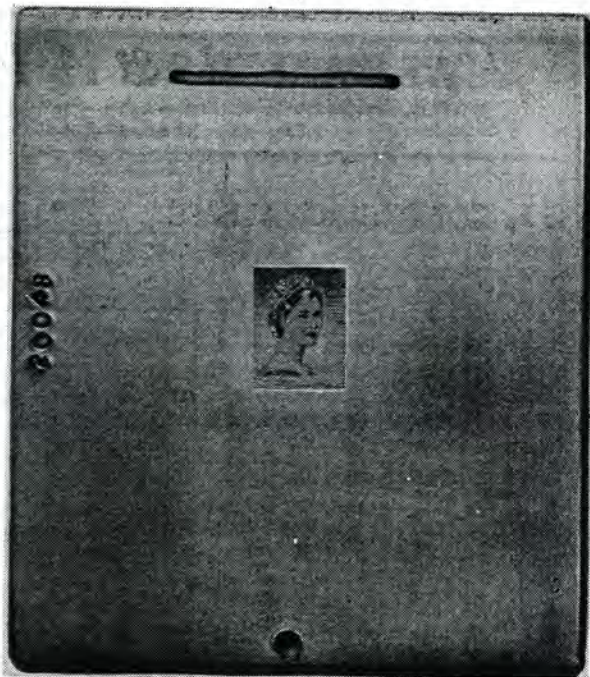
(Continued from page 1825)

engraver gradually cuts and etches in the full detail of the design for the stamp, a task that may take up to four or five weeks to complete, working proofs are made by covering the face of the steel block with a stiff ink, wiping the excess from the surface, and then 'pulling' the remaining ink image from the worked surface by pressing paper on to the block. These proofs, pulled as the engraving of the steel die progresses, indicate how the various details of the stamp will appear when printed. (It should be remembered that the die is being engraved in reverse.) Die proofs also allow the engraver to check whether the right amount of ink will be taken up by the printing paper, so as to correctly reproduce the tonal effect of the original design.

Producing the steel 'master' die is very exacting work, and the engraver has to bear in mind such considerations as the colour or colours intended for the stamp, the type of paper upon which it will be printed, and, if part of a set, whether it matches the rest in weight of impression and engraving technique. There is also the question of plate curvature to be held in mind, which although only fractionally distorting a single stamp impression, could increase the overall dimension of the printed sheet by some two or three millimetres.

Quite often, a line engraved stamp is made up from two or more elements, sometimes representing the work of different engravers. The 'Castles' high value series is an example of this, the portrait, the framework, and each of the four castles, having been prepared as separate stages. Production of the individual 'master' dies for the four high values has brought together the engraving work of these stages. Such dies usually have some sort of serial or registration number engraved upon them, and the 'Castles' high values bear the following numerals:- 20771 (2/6), 20776 (5/-), 20777 (10/-) and 20764 (£1).

If the engraving of the steel master die is considered to have



'Master' head die for the 'Castles' series. It bears the registration number 20048.

been completed, a final proof is pulled for submitting to the postal authorities concerned. If approved, the 'master' die is hardened in a cyanide furnace, after which, the production of a transfer cylinder can take place.

The 'Castles' High Values

R. F. ALLEN

Part V

The Transfer Cylinder

TO produce the transfer cylinder, or roller, that will make the necessary stamp impressions on the printing plates, the hardened steel 'master' die is placed face-uppermost on the bed of the transfer press. Then, under very great pressure, a cylinder of soft metal is rolled over the engraving in the die. Being softer than the 'master' die, the surface metal of the cylinder is forced into the recesses of the engraving and, as the prospective transfer cylinder continues to be rolled backwards and forwards over the die in a 'rocking' motion, the cylinder gradually takes up the stamp impression in a relief form. When rolled completely, this relief image is the exact reverse of the original engraving for the stamp.

In fact, the cylinder now has on its curved surface a replica, in metal, of the stamp as it should appear when printed. Because it is in the form of raised lines and dots of metal, extra care must be taken not to damage it in any way. Since removal of part of the design is not too difficult at this stage, adaptations and alterations to a line engraved stamp are sometimes effected on the transfer cylinder. Such work can be carried out for laying down part of a design which is to be common to a series of stamps. For example, modifying the Head die of the 'Castles' series to remove the diagonally lined background to the portrait would have been a comparatively simple operation on the transfer cylinder.

Very often, more than one relief image is taken up from the 'master' die when producing a transfer cylinder. In the case of the 'Castles' stamps there are two on the periphery of each cylinder, numbered 1 and 2 on the sides. Finally, if the transfer cylinder is satisfactory, it is hardened, ready for use.

Making the Printing Plate

For the printing plates that are to produce the issued sheets of stamps, a large panel of polished steel or copper is marked out to the specified sheet layout, which for all the 'Castles' plates was two panes of 10 rows x 4 stamps, and placed in the transfer

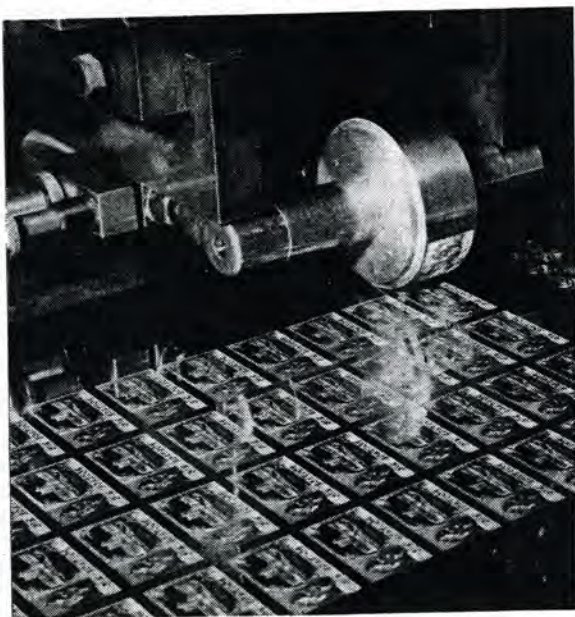
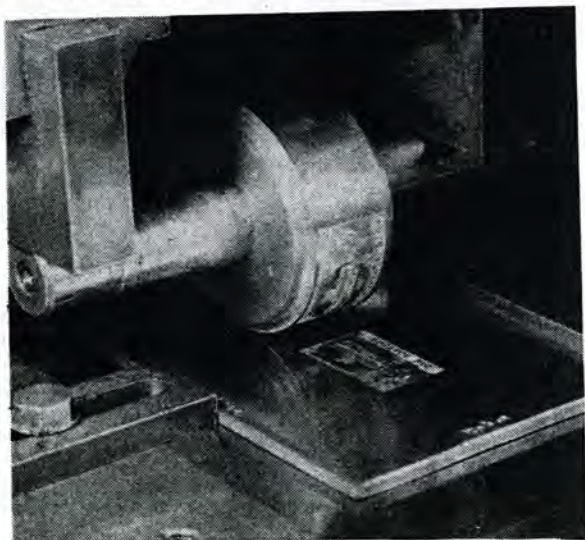
Originally intended for publication in book form, R.F. Allen's long awaited work on the G.B. 'Castle' high values is now being serialised in **STAMP COLLECTING** in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The second section, which includes this instalment, deals with the printing. Succeeding sections will cover paper and watermarks and will build up into the most complete record on the subject to date. Previous parts were published in the issues of 25th January, 1st February, 8th February and 1st March.

press. The hardened transfer cylinder is then rolled, under great pressure, over and over again on the polished metal plate, perhaps making up to 100 passes over a single stamp impression, until it has 'rocked in' the number of impressions required. Theoretically, all the stamp impressions on a completed flat plate should finish up as exact reproductions of the original engraved die, but variations in the basic metal of the plate, if present, could cause problems. No doubt, the panels of geometric lathwork which are to be seen on the 'Castles' plates provided some sort of indication of the quality of the metal.

During the process of transferring the stamp image to the printing plate, metal displacement occurs, forming ridges between the impressions. These ridges are removed from the gutters between each stamp by scraping and burnishing the metal until the surface of the plate is level and absolutely smooth and free of unwanted marks. Failure to flatten the stamp gutters sufficiently can cause the ink to gather in adjoining deeply recessed areas during printing. Similarly, the surface of the plate must be very carefully checked near the more deeply recessed parts of the stamp's design to make sure that no burrs

(Continued on page 2073)

Below: Transfer Cylinder taking up an image from the 'Master' Die. Right: 'Rocking-in' the stamp impressions on to the Printing Plate.



The 'Castles' High Values (Continued from page 2071)

of metal have been left behind. If they are not removed, a thin veiling of ink may remain on the surface and be deposited on the printed sheets. Again, if layout marks and scratches are not properly polished away at this stage, they can reproduce on the sheets of stamps.

With the burnishing and polishing of the printing plate completed and any necessary guide markings or plate numbers engraved upon it, a proof sheet is pulled. If the plate proof reveals the presence of minor defects, they will probably be removed by retouching the printing plate by hand. A major defect, such as an impression made out of alignment with the rest, may necessitate the complete removal of the offending entry by beating it out from the back of the plate and polishing the surface perfectly smooth again. The plate is then returned to the transfer press so that the transfer cylinder, in its corrected position, can re-enter the stamp impression and thus 'make good' the plate.

Where an engraved stamp's design is intended to be in use for many years, or it has a very big printing run scheduled, it may be considered worthwhile to use the conventional printing plate as a 'master' from which a matrix can be produced in order to electro-form new working plates as and when required. However, all the 'Castles' stamps were printed from individual two-pane plates.

After the printing plate has been passed as satisfactory, it is hardened and then curved to fit the rotary press. The plate, which is bent to shape on a special jig, must be fairly accurately curved, otherwise movement will occur between the plate and the press cylinder to which it is affixed. Since any slight movement would take place with each revolution of the cylinder, it is quite easy to see how metal fatigue might develop and so produce plate cracks.

All that now remains to be done in the preparation of the plate, before handing it over to the printing machine operators, is to face the plate's printing surface with chromium to prolong its working life.

Printing the Stamps

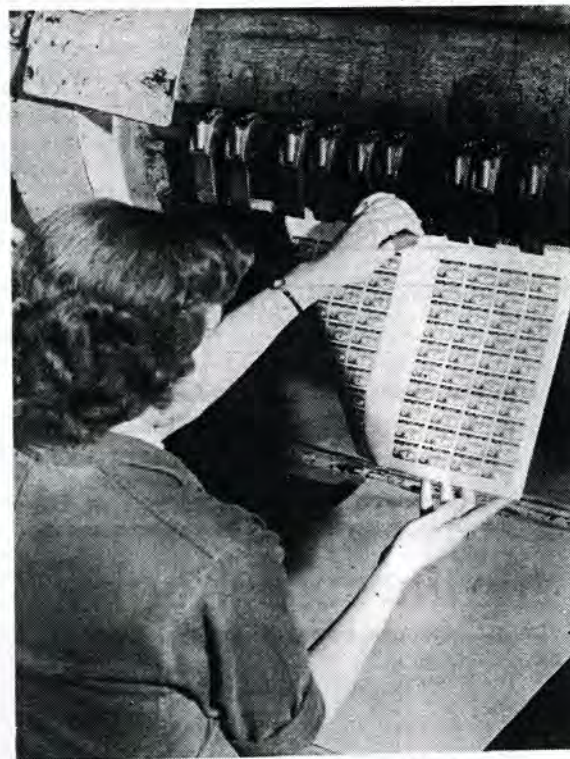
Once the plate has been affixed to the printing cylinder of the rotary intaglio press, continuous printing of sheets of stamps can begin. Very often, a pair of plates will be used at the same time, as was the case with much of the printing of the 'Castles' stamps. The printings of the 2/6 value by Bradbury, Wilkinson were certainly carried out using two double pane plates together e.g. 1/1A and 2/2A.

As the printing cylinder revolves, ink is liberally applied to the face of the plate to ensure that all the recesses of the stamp impressions are filled with pigment. The bulk of the excess ink is scraped off into a returned ink trough attached to the machine, and the surface ink is taken from the plate by means of mechanically oscillating wipers. Care must be taken with the final polishing of the printing surface of the plate when removing unwanted traces of ink. If this action is too vigorous, some of the pigment remaining in plate's recessed impressions may be scooped out, resulting in breaks in the lines of the printed stamps.

A sheet of pre-gummed paper is taken from the stack at the feed end of the press (at one time, the printing surface was dampened before use, as with the 'Castles' stamps produced by Waterlow) and fed into the machinery, where considerable pressure is exerted on the paper by the impression cylinder. The compression of the blanket round this cylinder forces the paper into contact with the ink that remained in all the recessed lines and dots of the stamp impressions after the plate had been wiped and polished. The still wet ink adheres to the surface of the



'Feed' end of the rotary intaglio press.



Taking off a sheet of the De La Rue printed 2/6 stamps.

paper and is pulled from the stamp impressions as the paper leaves the printing plate, finally to emerge as a sheet of recess printed stamps.

Waxed paper is used to interleave the sheets of stamps as they come off the press so that the still wet ink is prevented from being smudged or 'set-off' on to the back of the next sheet during stacking. The freshly printed stamps remain loosely stacked until the ink has dried sufficiently enough for handing over to the perforating section.

Perforating the Sheets

After the ink has dried, the printed sheets of stamps are ready to be perforated. Depending upon whether a single or a double

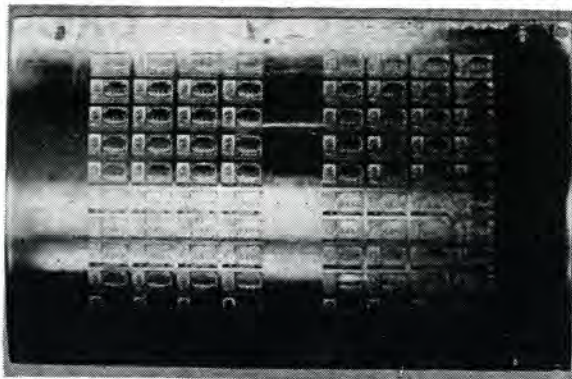
(Continued on page 2081)

The 'Castles' High Values (Continued from page 2073)

comb head of perforating pins is used, the perforating machine is set to take-up one horizontal row of stamps at a time, or two, as the sheets pass through it. They are fed into the machine 5 or 6, and sometimes up to 8 sheets at a time, and the operator has to make sure that each sheet of stamps is correctly positioned on the register pins. The Waterlow, and De La Rue printed sheets of the 'Castles' had a register mark in the selvedge for the register pins to pierce through, but Bradbury, Wilkinson made use of register holes punched out of the selvedge at the time of printing. This ensured accurate perforation for most of the sheets, although a slight adjustment would have been necessary in cases of paper stretch and shrinkage.

Perforation of the gutters separating each stamp is achieved when the steel pins of the comb, arranged as a line of stalls (single row) or boxes and stalls (double row), punch through the sheets and enter the receiving bed of corresponding holes. Withdrawal of the comb head, ready to make the next strike, leaves the stamps perforated lengthwise across the width of the sheet for one row, or two, and along the sides of each stamp up to the next imperforate gutter. Succeeding strikes of the comb head repeat the process, each strike completing the perforations of the one before, until the whole sheet is perforated. Thus, eleven strikes of a single row comb would be needed to perforate a sheet of the 'Castles' stamps, the last strike being the one which completes the top row and which also perforates the top selvedge. Encroachment of perforation on to the bottom selvedge is probably caused by the operator being in too much of a hurry with the next batch of sheets. The stack of perforated sheets is then guillotined into single pane sheets of stamps, and trimmed.

Both before, and after these last stages of production,



Printing Plate of the 5/- stamp produced by Waterlow. (the plate number is 46726).

stringent checks of the sheets are made so that any defective stamps can be withdrawn for destruction. Following certification of paper usage (the supply of stamp paper for the 'Castles' series was always the responsibility of the Post Office), the finished sheets of stamps are finally delivered to the Post Office supplies department, who in turn, make a quality check before despatching them to Post Offices throughout the country.

NOTE: It was at this stage that the later sheets of stamps of the Bradbury, Wilkinson printings acquired the small numbers within a circle found stamped on the selvedge of the topmost sheet of a lift of stamps. This system of checking was introduced by the Post Office supplies department early in 1967, and the numbers (two different numeral impressions on the sheet) occur in black or violet ink. They indicate an internal double check by supplies department who, upon receipt of the stamps from the printer, had strung the sheets into lifts of 25, then over-strung them into lifts of 100 sheets.

To be continued

The 'Castles' High Values

Part VI

Watermarks and Papers Used for the 'Castles' Stamps

ONLY two basic watermark patterns have been employed in the production of the paper upon which the 'Castles' stamps were printed. For the first issue, printed by Waterlow from 1955 until De La Rue took over the contract in 1958, paper watermarked with a multiple 'Crown E 2 R' was used. Similar paper was then used by De La Rue for their initial printings of the stamps, but in less than eighteen months, the 'Castles' began to appear on paper watermarked with a multiple 'Crown' only. From 1959, De La Rue continued to make printings on 'Crowns' watermarked paper until 1963, when the contract to print the high value stamps was gained by Bradbury, Wilkinson. They, in turn, carried on printing the series on 'Crowns' watermarked papers right up to the time that the watermarked, originally a security device, was dispensed with. The first definitive high value stamps printed on non-watermarked paper were issued in December 1967, though a release of the 'Castle' 2/6d stamp on Coated 'Crowns' watermarked paper was made in June of the following year. This printing was mainly to use up remainders of coated watermarked paper.

With regard to the actual paper of the 'Castles' stamps, there was considerable variation in this, and several different textures exist within the wide range of cream to white papers used for the printings of the series. By virtue of Post Office policy in respect of the quality of

the paper, they can conveniently be divided into two broad groups.

Early printings, which consist of those on 'Crown E 2 R' watermarked paper and the initial printing on 'Crowns' watermark paper, are classed as being of the 'Cream' papers group. Then, in May 1962, it was announced that "British postage stamps are now being printed on a whiter paper than hitherto". Thereafter, the Post Office made a

By
R. F. ALLEN

point of separating the new printings from the old to the extent of listing the stamps under the headings of 'Cream Paper' and 'White Paper' when the Philatelic Bureau was set up in the following year. Thus, by far the greater proportion of the 'Crowns' watermarked paper printings, and all the non-watermark printings, are of the 'White' papers group.

Lastly, within these divisions there are paper variations that, in some cases, discernibly affect the general appearance of the issued stamps. For example, some of the paper in the 'Cream' papers range looks relatively white, whereas papers with a definite creamy tinge are to be found amongst the so called 'White'.

It should also be mentioned that a change of printer does not necessarily bring about a change in the paper, and it is possible to find some of the first De

Originally intended for publication in book form, R. F. Allen's long awaited work on the G.B. 'Castles' high values is now being serialised in STAMP COLLECTING in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The third section, which includes this instalment, deals with the papers and watermarks. Succeeding sections will cover errors and will build up into the most complete record on the subject to date. Previous parts were published in the issues of 25th January, 1st February, 8th February, 1st March and 15th March.

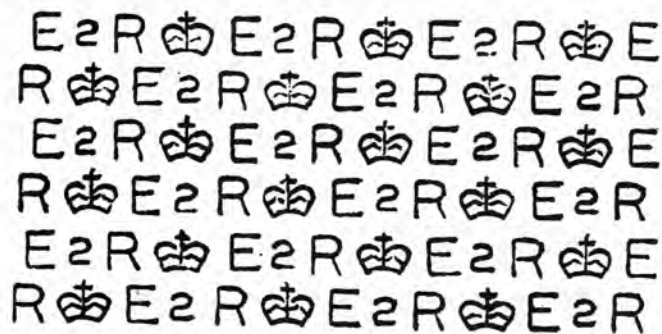
La Rue printed stamps on the same type of paper as that used for the last Waterlow printing.

Fortunately, there are a sufficient number of differences in the actual stamps to be able to separate the work of one printer from another, including a change in the character of the Crowns watermarked paper used by Bradbury, Wilkinson. Furthermore, under Ultra-violet light the 'white papers' possess degrees of fluorescence that will also help to distinguish the printings.

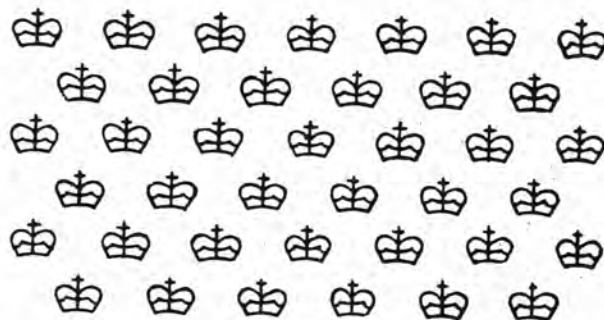
Production of the Stamp Paper

Very briefly, paper is manufactured by breaking down mainly natural materials into a liquid pulp, feeding the mixture on to machinery where agitation and draining converts the pulp

(Continued on page 62)



1. Multiple Crown E2R watermark.



2. Multiple Crown watermark.

The 'Castles' High Values

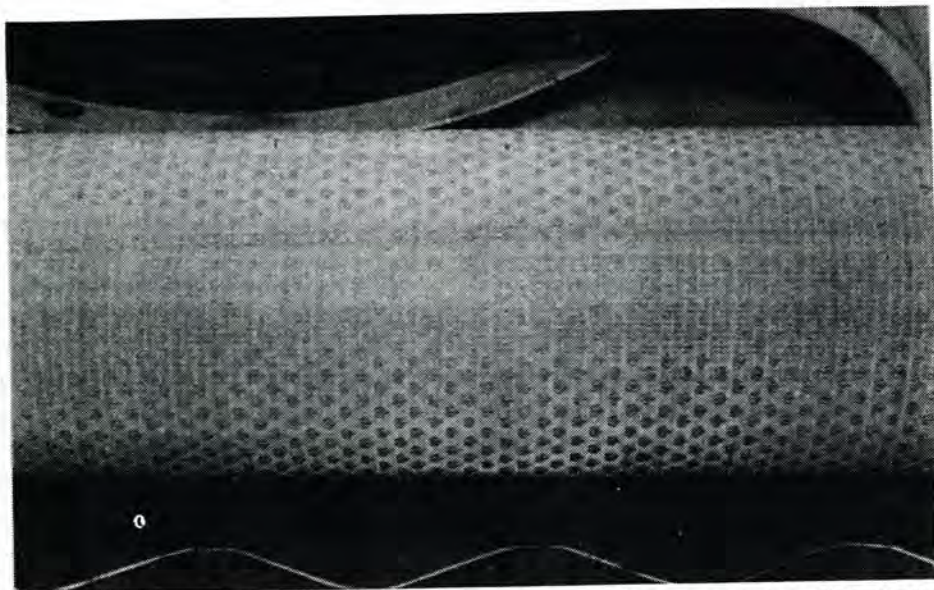
(Continued from page 61)

to a fibrous felt, and then processing it through various rollers until it eventually becomes the finished paper. The basic raw material of most of today's paper is wood pulp. Better quality papers, such as stamp paper, also include such materials as rag waste, and sometimes esparto grass. These are pulped in water and then china clay is added as a filler, together with sizing matter. The pulp mixture consists almost wholly of water, often over 95% and it is the draining and drying out of the suspended fibrous mass that finally produces the paper.

After having been washed free of impurities, the pulp is emptied into the 'stuff chests' of the paper-making machine, where it is constantly stirred to prevent the clay from settling. The pulp is then filtered and allowed to flow, subject to control by sluice gates, on to the machine's moving wire bed. Oscillation of this causes interlacing of the fibres in the pulp, which gradually settles on to the wire mesh to form a sort of felting. In the texture of this felting, the individual fibres mostly lie in the direction of its flow through the machine, with the particles of clay filling-in the spaces between the fibres.

While still in a fairly wet state, the fibrous felt passes under a dandy roll, and this watermarks the paper. The dandy roll is a wire mesh cylinder, about seven feet long, upon which the copper electrotypes, or 'bits', that make up the watermark pattern are fixed. Being slightly raised, the 'bits' restrict the fibres in the felting, thus reducing its thickness at the points of contact and leaving a design in the paper web. After further draining, pressing, sizing and drying, the paper, travelling around numerous rollers, is calendered and given its finished surface.

The whiteness, or tone of the paper, besides depending upon the material used, is also affected by the washing of the pulp. Much of the 'cream paper'



The dandy roll used for the Crowns watermark paper for the De La Rue printings of the Castles stamps.

arose from the practice of using brackish moor water for this purpose and being very often discoloured, the water left a stain in the paper. Realizing that keeping the paper white would facilitate the printing of multi-coloured commemorative stamps, the Post Office subsequently instructed the manufacturers to use clean water in the production of stamp paper.

With regard to the actual weight of the paper for the high values, it was originally specified that it should be 200,000 sheets to the ton, probably 63.5 gsm, but no doubt this has changed over the years due to the variations in paper used.

When studying the paper texture of stamps, it will be found that the Waterlow, and De La Rue issues have been printed along the machine direction of the paper, whereas Bradbury, Wilkinson stamps of the 'Castles' issue are printed across the machine direction. Close examination of the torn edges of the perforations of a High Values stamp will reveal that most of the longer individual fibres stick out in a particular direction, i.e. that of the paper web or reel.

A further test lies in the 'curl' tendency of the paper. Waterlow and

De La Rue printed stamps will be found to curl round their length bringing the top and bottom edges together. Bradbury Wilkinson printed stamps curl round their depth so that the sides come together. After leaving the paper-makers, the watermarked and, later, unwatermarked paper used for the 'Castles' high values was gummed and, where required, coated, before being delivered to the printers.

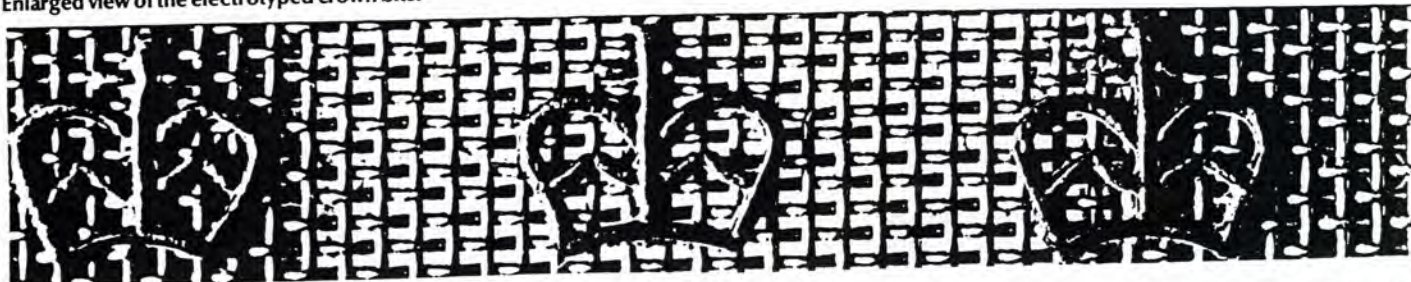
Present-day British stamps are printed on coated papers introduced not only to make it difficult for anyone to remove cancellation marks without destroying the printed image, but also to obtain an improved quality of reproduction.

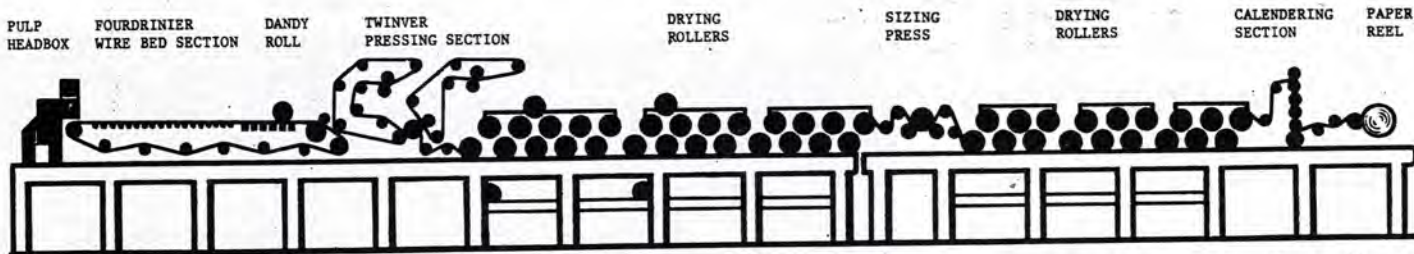
The coating process consists of, basically, applying a kaolin clay or chalk wash to the paper's surface and then drying it off, originally by hanging up the paper in a series of long loops, or festoons, but more recently with the assistance of warm air jets, followed by a final finish through heated rollers.

A similar process is used in applying the gum to stamp papers but, in this case, after drying the paper it is passed over diagonally positioned knife edges in order to fracture the gum and so prevent paper curl when viewed under

(Continued on page 67)

Enlarged view of the electrotyped crown bits.





The 'Castles' High Values

(Continued from page 62)

a magnifying glass, the gummed surface will be seen to have a crazed surface. This fractured surface is absent from modern stamp papers where polyvinyl alcohol is used as the adhesive.

The traditional adhesive, used for the papers of the 'Castles' series, was gum arabic. This is a sticky resin obtained from the bark of the Acacia tree, which grows in the Sudan area, and a considerable amount of cleaning and filtration is necessary before it is ready for use. Because of variation in the quality of the gum arabic resin and difficulties in obtaining a regular supply, alternative gums suitable for stamps, which have to be licked before being stuck on to mail, were developed.

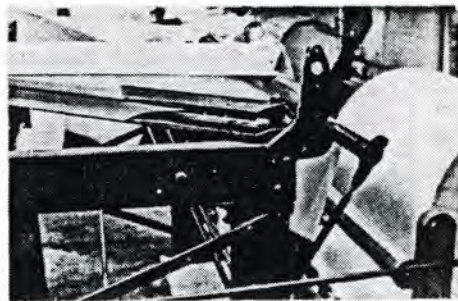
The multiple 'Crown E 2 R' watermark

Known philatelically as the 'Edward' or 'E' wmk., the multiple 'Crown E 2 R' watermark, 'introduced' in 1955 with the first high value stamps of the present reign, is a revised version of the original watermark that had been used for all Elizabethan stamps since their commencement in 1952. In compliance with the wishes of the Queen, who had expressed a preference for the use of the St. Edward's crown, the earlier watermark, featuring a 'Tudor' crown with the royal cipher, was changed. Accord-

ingly, the multiple 'St. Edward's crown E 2 R' watermark came into being and the 'Castles' high values were the first sheets of stamps to be issued with this watermark, which was used for the entire Waterlow printing, and the first De La Rue printing. Minor variations of spacing exist with the 'Crown E 2 R' watermark, but most of this can be put down to paper stretch and shrinkage. Normal spacings of the elements that make up the watermark pattern are:-

Vertical 1.45cm-1.5cm.
Horizontal 2.55cm-2.65cm.

The lesser measurements are more usually met with on the thinner, later papers. It could be that a new dandy roll was used to watermark some of the later supplies of 'Crown E 2 R' wmk. paper, since this would explain the difference in texture, but in the majority of instances where the watermark looks to be different it will be due to slight changes in the quality of the paper



Fracturing machine showing knives.

Diagram of typical paper-making machinery.



Gumming the stamp paper.

itself. On the coarser, textured paper the watermark seems poorly defined, whereas the paper of late Waterlow printings in particular generally shows a clear, thinner watermark. At the same time, some early thickish paper also has a fairly thin well defined watermark. No doubt the state of the pulp during paper manufacture has a lot to do with the final appearance of the watermark in the finished stamp paper.

The multiple 'Crown E2R' watermark was replaced by the 'Crowns only' watermark in 1958, after having been in use for just over three years.

(To be continued)

The 'Castles' High Values

Part VII

The multiple 'Crown' watermark

POSSIBLY it was anticipation of problems in connection with the issuing of regional stamps that made it desirable to omit the Royal Cipher from the existing watermark. The 'regionals' were certainly amongst the first stamps to be printed on the resulting multiple 'Crown' only watermark paper when it appeared in 1958. 'Castles' high value stamps with the 'Crowns' watermark were issued in June/July 1959, and the presence of certain small dots printed on the sheets no doubt helped to ensure that stocks of the outgoing 'E' watermark were used up first.

Initial supplies of multiple 'Crown' watermark paper were of much the same quality as the 'Crown E2R' watermarked paper immediately preceding it, and are therefore, of the 'Cream papers' group. Issues of 'Crowns' watermarked high value stamps from 1962 onwards were printed on 'White paper', but the



This coarse-line conversion of an enlarged section of the Dandy Roll previously illustrated, shows very well some of the wire mark textures to be found in the basic paper of the 'Castles' stamps. The apparent changes in the wire mesh pattern, brought about by variations in the lighting and curvature of the dandy roll, illustrate how variations in the pulp of the paper web, and its drying, might give rise to differences in the basic paper texture. Ignoring the fact that it is not the 'Crowns E2R' dandy roll which is shown, the mesh pattern on the right hand side is similar to that seen with the Waterlow printings, whereas the lower left area is typical of the De La Rue printings.

watermark pattern remained the same. The spacing of the crowns in the watermark varies more with some printings than others, being remarkably constant for the first issue (with corner dots) on cream paper, but less so in later cream paper printings. First issue 'Crowns' watermark spacings are:- Vertical 1.35 cm - 1.4 cm. Horizontal 1.2 cm.

Later cream papers 'Crowns' watermark spacings are the same vertically, but range horizontally from 1.2 cm to 1.24 cm. 'White paper' printings by De La Rue are again fairly constant in their 'Crowns' watermark spacing, being the same as the previous paper vertically, but with horizontal spacings of 1.15 cm to 1.17 cm. Occasionally, the watermark of the paper used by De La Rue is a little indistinct. Early printings of the 'Castles' stamps by Bradbury, Wilkinson are

By
R. F. ALLEN

reasonably constant in the spacing of their 'Crowns' watermark (vertically 1.35 cm. horizontally 1.15 cm.) but as further printings were made, so the incidence of variation in the watermarks' spacing increased. In particular, there exists a printing of the 5/- stamp that has an extreme of 1.45 cm vertical spacing between the crowns in its watermark. Failing any other explanation, this can only be attributed to a considerable degree of paper stretch during manufacture. Even when there is a fair difference in watermark spacings it is most difficult to take an accurate measurement between individual crowns. Where possible, measurements are best taken between the base of one crown and the base of the fourth crown above or below it, in which case, the figures given should be multiplied x 3 when checking.

Despite some similar spacing of the 'Crowns' watermark in papers upon which the De La Rue and the Bradbury, Wilkinson printings were made, there are two basic paper characteristics that differ with each printer's stamps. The crowns in the paper of the De La Rue printings appear smaller and flatter in shape than those of the Bradbury,

Originally intended for publication in book form, R. F. Allen's long awaited work on the G.B. 'Castles' high values is now being serialised in STAMP COLLECTING in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The third section, which includes this instalment, deals with the papers and watermarks. Succeeding sections will cover errors and will build up into the most complete record on the subject to date. Previous parts were published in the issues of 25th January, 1st February, 8th February, 1st March, 15th March and 5th April.

Wilkinson printings, also, throughout the De La Rue printings the paper of the individual stamps possesses a laid texture of vertical ribbing.

With the Bradbury, Wilkinson printings of the 'Castles' the crowns of the watermark appear to be better shaped, and the paper texture of each stamp has horizontally ribbed effect.

This variation in the shape of the crowns and the change in the ribbed texture is explained by the use of a special dandy roll for watermarking the paper of the high values printed by De La Rue. The dandy roll differed from that which watermarked the paper for the Bradbury, Wilkinson printings and the photogravure printed low value stamps in that the crowns were aligned round the circumference of the cylinder, not along its length. With the Waterlow, as well as the De La Rue printings, the stamps were reproduced so that each pane lay across the machine direction of the paper. Printed this way, the sheets of stamps would have a greater tendency to shrink or stretch within their depth rather than their width, thus presenting less of a problem if any compensation was required at the perforating stage.

The facility of being able to adjust the perforating within the depth of the sheet would also have applied with the multiple 'Crown E 2 R' watermarked paper. In order to print the sheets across the machine direction (or grain) of the

(Continued on page 187)

The 'Castles' High Values

(Continued from page 185)

paper, but still retain the watermark in an upright position on the high value stamps, it would again be necessary to use a dandy roll with the watermark pattern reading upright across the width of the cylinder.

Changes in paper quality and printing technique no doubt enabled Bradbury, Wilkinson to make use of the same type of multiple 'Crown' watermarked paper as that employed for the low value stamps. Changes in postage stamps themselves, including the use of phosphor as an aid to sorting, made it no longer necessary to incorporate with the paper a watermark to act as a security device. Consequently, when a new permanent series of definitives, featuring the 'Machin' head of the Queen, was introduced in 1967, the stamps were printed on unwatermarked coated paper. Although the high values of the 'Machin' series were due to appear soon after the issuing of the lower denominations, the policy of abandoning the watermark had been so firmly established that an interim printing of the then obsolescent 'Castles' stamps was made on non-watermarked uncoated paper.

No longer used for Britain's stamps, the multiple 'Crown' was the last of a long and varied line of watermarks that had begun in 1840 with the simple 'Small Crown' of the 1d. black and 2d. blue.

The 'Cream papers'

Initially, stamps of the 'Castles' series were printed on a similar quality paper to that used for the recess-printed high values of previous reigns, and it was typically thicker and softer than more recent papers. Since the Post Office had made no precise stipulations regarding the 'whiteness' of the paper most of it had a slightly creamy tone. With the Waterlow printings of the 'Castles' stamps the basic type of cream paper has quite a coarse texture and shows a fairly strong wove mesh wire mark, often with a diagonal weave. However, the first printing issued in 1955, seems to have been carried out upon a somewhat denser version of this paper, with the stamps having quite a rich colour of heavy inking. A further variety of cream paper occurs when its wove mesh wire mark is in combination with a vertically ribbed 'laid' effect in the paper, giving it an appearance of being more finely



Single dot added to the plate for the last printing of the 2/6d value on Multiple Crown E2R watermark paper.



The two plate dots of the initial printings of the Castles stamps on Multiple Crown watermark paper (on the 10/- value, the dots were slightly more spaced apart).

textured. Stamps on this paper tend to have an overall evenly printed colour. Other variations, such as thickish cream paper, can be found with the 2/6d value, but since postal demands require that a greater quantity of this stamp be printed than of the other high values, it is only natural that a wider range of papers could exist with the 2/6d.

At this point, a cautionary note should

be introduced about examining postally used copies of the cream paper printings. Whilst a study of postmark dated stamps is very useful for allocating certain papers and printings to a particular period of time, used stamps often show differences in the density and tone of the paper that can only be

(Continued on page 189)

The 'Castles' High Values

(Continued from page 187)

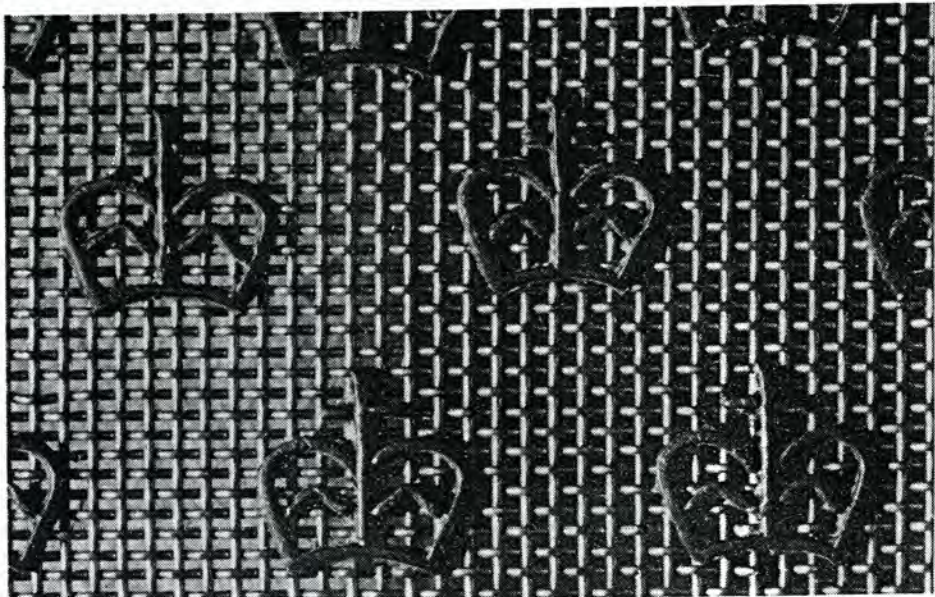
attributable to the way in which they were soaked off paper, or to their subsequent handling. The stamp paper, perhaps due to its thickness, has a tendency to retain much of the gum during soaking off. If all of the original gum has not been washed from the back of the stamp, it could dry into the paper and affect the texture or tone. Similarly, excessive washing can also bring about a slight change in the appearance of the paper, but not so seriously as the gum staining brought about by careless soaking off and drying.

By 1957, supplies of all four values of the 'Castles' series were, in the main, printed on a whitish cream paper. Though similar to some previous papers the texture of the whitish cream paper has a much stronger vertically ribbed wire mark, which gives it the appearance of being finer. Very often, the texture is rather indistinct and in some cases the paper looks to be granular in its composition. Being on a paper generally whiter than before, the printed stamps seem brighter than those of previous printings.

For the final printing made by Waterlow prior to the high values contract passing to De La Rue, a distinctly thinner paper was used. With this thinnish white cream paper the vertically ribbed wire mark predominates in the texture. Waterlow printed 'Castles' high values on the thinnish white cream paper have finely reproduced lines and look so much lighter than their predecessors that they are often confused with the De La Rue printing on this paper. So far, only the 2/6d. 5/-, and 10/- values are known to have been printed by Waterlow on thinnish white cream paper.

Having taken over the production of the 'Castles' stamps in 1958, De La Rue made printings on the same type of multiple 'Crown E2R' watermarked paper as that used for the last Waterlow printing. However, within eighteen months of De La Rue printing the high values, they were being issued on the 'Crowns only' watermark paper.

The early 'Crowns' watermarked paper, which falls within the 'Cream papers' group, is basically of the same quality as the thinnish white cream paper of the previous watermark. It is often fractionally thicker and sometimes a little more creamy looking.



Photographic enlargement of the copper electrotype crown "bits" on the dandy roll used for watermarking the paper of the De La Rue printings. Paper shrinkage of this paper web's width causes the crown in the issued stamps to appear flatter.

Slight variations of this paper exist, but most of them are found in printings other than the first. Although the vertically ribbed texture is still present, some of the 'Crowns' watermark paper shows a slight diagonal wove mesh wire mark as well, and indistinctly textured paper with a poorish watermark can also be met with. It is believed that these

paper variations, though relatively slight, tie-in with specific printings identifiable by certain plate marks.

Note: It must be emphasised that any reference to 'cream' or 'creamy' paper relates to the comparative tone of the paper, which is supplied to the printers as 'white paper', and does not imply that a cream tinted paper has been used.

The 'Castles' High Values

Part VIII

The 'White papers'

THE results of a positive attempt to make the paper used for Britain's postage stamps much whiter than before were seen in 1962. The Post Office at that time made an official announcement to this effect and even went as far as to issue press notices carrying information about releases of stamps printed on the new white paper.

'Castles' high values printed by De La Rue on 'Crowns' watermarked white paper have a brighter, fresher appearance than the cream paper printings they replaced. The texture characteristics of this introductory white paper are the same as those of the cream paper it superseded, but there is most definitely a whiter look to the paper. This cannot be said of the 'Crowns' watermarked white paper used by Bradbury, Wilkinson after they, in 1963, had gained the contract to print the high values. Besides the horizontally lined wire mark (the stamps are printed across the grain of the papermaking machine direction) and the apparent difference in the crowns of the watermark, much of the paper is distinctly less than white in appearance. This may be partly due to a feint veiling of ink carried over the surface of the paper by the printing plate, but even from the gummed side the paper sometimes looks creamy.

Just before the watermark went out of use a very slightly whiter and somewhat thinner paper was used for the 'Castles' stamps. During the Bradbury, Wilkinson printings at least three separate batches of 'Crowns' watermarked paper were given a surface coating of chalk, and two of these coated papers were employed for printing commemorative 2/6d stamps. Subsequently, all three coated papers produced were used up for an issue of the 'Castle' 2/6d definitive, which was released in 1968.

Introduced in 1967 by the £1 value, the non-watermark uncoated paper printings of the 'Castles' high values appear to be brighter than previous Bradbury, Wilkinson printed stamps. Non-watermark uncoated paper usually has a very high finish to its surface and most of it seems tougher than earlier

papers. Judging from the variations of this paper, which includes translucency, several types of non-watermark uncoated paper were tried out for the printing.

The 2/6d value is found on at least four varieties of the paper (creamy white, dense white, thinnish white, and medium white) and each of the other values occur on two or three of these. As regards the texture of the non-watermark uncoated paper, throughout which the fine horizontal ribbing is still present, this is more or less the same for each variety of the paper. Additionally, some of it shows the diagonal weave of the wove mesh wire mark fairly clearly.

Last of 'Castles' high values, the 2/6d definitive printed on non-watermark uncoated paper was held back pending the release of the previously mentioned 'Castle' 2/6d stamp on 'Crowns' water-

Originally intended for publication in book form, R. F. Allen's long awaited work on the G.B. 'Castles' high values is now being serialised in STAMP COLLECTING in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The third section, which includes this instalment, deals with the papers and watermarks. Succeeding sections will cover errors and will build up into the most complete record on the subject to date. Previous parts were published in the issues of 25th January, 1st February, 8th February, 1st March, 15th March, 5th April and 12th April.

By
R. F. ALLEN

mark coated paper. This coated paper issue is particularly interesting because the three types of paper used for the printing can be identified not only from the gummed side's surface appearance, but by its reaction under ultra-violet light.

Paper fluorescence

The question of fluorescence seems first to have become relevant with the introduction of the 'white paper' printings, since it was thought, at one time, that an artificial whitener had been specifically added to the paper to achieve the whiteness. However, a check with a U.V. lamp will show that

(Continued on page 791)



The difference between coated and uncoated paper. Left - printed on coated paper; right - on uncoated.

The 'Castles' High Values

(Continued from page 789)

this was not so, for the De La Rue first white paper printing is virtually non-fluorescent.

With the increasing use of highly fluorescent artificial whiteners, there was a gradual build-up of fluorescing agents left in the materials used for papermaking. For example, the use of optical brightening agents (O.B.A.'s) in washing powders resulted in the presence of fluorescent fibres in the paper, and these must have come from the rags incorporated with the pulp. Consequently, it is not surprising to find that as further printings were made, so the 'Crowns' watermarked paper became more and more fluorescent. The difference in the degree of fluorescence, being reasonably distinct from one batch of paper to another, is very useful for determining the separate printings. A scale of fluorescence ratings has been evolved from the reaction of the various 'White papers' to ultra-violet light.

There are six basic ratings:-

- ZF - Zero Fluorescent
 - WF - Weakly Fluorescent
 - SF - Slightly Fluorescent
 - MF - Moderately Fluorescent
- (10% total brightness)
(30% total brightness)
(40% total brightness)
(50% total brightness)

HF - Highly Fluorescent

(70% total brightness)

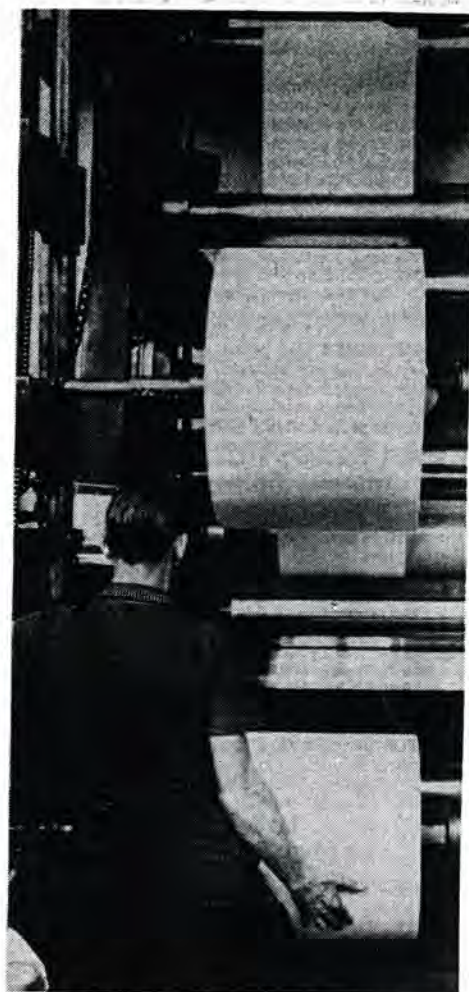
EF - Extremely Fluorescent

(90% total brightness)

The De La Rue 'Crowns' watermarked cream paper printings and the multiple 'Crown E2R' watermark printing both Waterlow, and De La Rue can be classed as non-fluorescent. Under a U.V. lamp, stamps of these printings all appear dull in flat shades of pale buff or greyish white. Although the first of De La Rue's printings on white paper shows 'zero' or practically no fluorescence at all, a second part of this printing has a fractionally lighter look to it under the lamp and is therefore considered to be 'Weakly Fluorescent'. The same 'Weakly Fluorescent' reaction occurs with some of the paper used for early printings of the 'Castles' high values by Bradbury, Wilkinson, but their earlier printings also exist on paper possessing a more positive reaction to U.V. light and these stamps have a rating of 'Slightly Fluorescent'. Strangely enough, this 'Slightly Fluorescent' reaction is first met with in a late printing by De La Rue of the 2/6d and 5/- values.

For the bulk of the Bradbury, Wilkinson printings a 'Crowns' watermarked paper that can be regarded as being 'Moderately Fluorescent' was employed. Included with this paper are several variations in the texture and degree of fluorescence, but most of these are peculiar to the 2/6d and 5/- stamps and are no doubt due to the larger numbers required.

The final supply of watermarked high values printed on uncoated paper will be found to have a 'Highly Fluorescent'

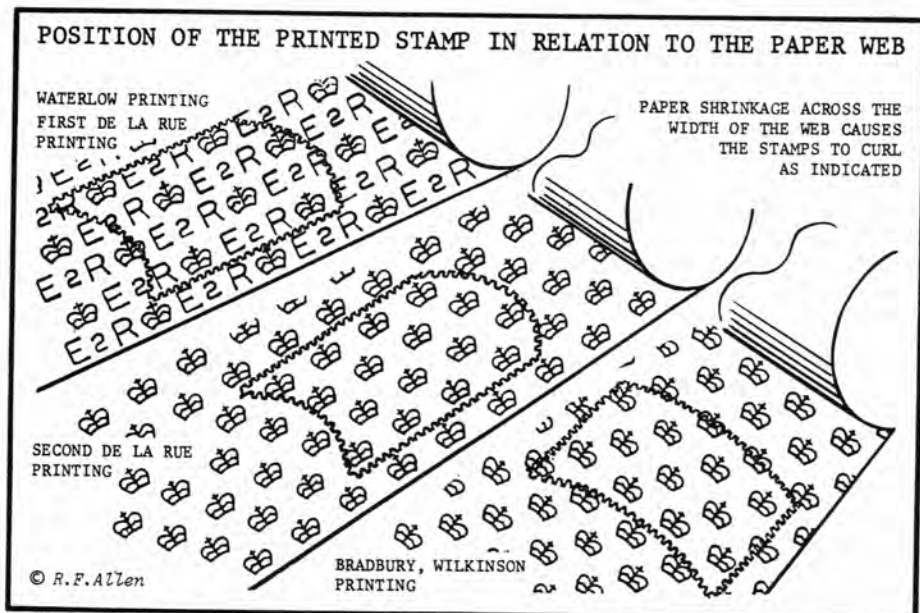


The final stages; the paper receives a final polish after coating.

reaction to ultra violet light.

Only a very small printing was made on this 'Highly Fluorescent' paper, which seems to be very slightly thinner than previous papers, and it is believed that the rest of this particular batch of paper provided the base for the coated paper printing of the 2/6d stamp with the same fluorescence rating.

Apart from the 'Crowns' watermarked 'Highly Fluorescent' coated paper, there exists a 'Moderately Fluorescent' coated paper, used for the 1964 'Shakespeare Festival' 2/6d stamp, and a 'Slightly Fluorescent' coated paper, used for the 1966 'Westminster Abbey' 2/6d stamp. 'Shakespeare' 2/6d stamps with the 'Slightly Fluorescent' reaction are probably from a trial printing, and it is known that this paper was also used for a trial printing of all four high values. A residuum of both coated papers from the commemorative 2/6d stamp printings, together with the more latterly produced 'Highly Fluorescent' coated paper was used for an issue of the 'Castle' 2/6d definitive.



The 'Castles' High Values

(Continued from page 791)

Once the three types of 'Crowns' watermarked coated paper have been identified, this issue of the 2/6d stamp is very useful for cross checking the fluorescence ratings of other high value printings. It should be borne in mind that the paper fluorescence reading must be taken from the back, or gummed side, of coated papers and not from the printed surface, which will only show the same high fluorescence of the coating common to each type of this paper. In the lists of stamp printings, a small 'c' in brackets next to the fluorescence rating, e.g. SF(c), denotes a coated paper, and that the rating applies to the gummed side alone.

In fact, when checking paper fluorescence under a U.V. lamp, it is often more desirable to view the gummed side of stamps and so avoid the false reading that a thin veiling of ink over the printed side might give. As a final consideration, when a cross check is being made between coated and uncoated papers, the fluorescence showing through to the

gummed side of the paper from the coating on the front should be allowed for. This effect accounts for the way in which the crowns of the watermark, the thinnest parts of the paper, show up on some coated paper printings.

Non-watermark uncoated paper, despite its very highly finished surface and fresh, clear printing of the 'Castles' stamps, is, nevertheless, not coated. Viewed under ultra-violet light, this paper is 'Extremely Fluorescent', and has an even brighter reaction than the chalky surface of the watermarked highly fluorescent coated paper. Although there are a number of varieties of non-watermark uncoated paper, they all have the 'Extremely Fluorescent' rating. Incidentally, this is the same degree of fluorescence possessed by the base paper of the 'Machin' high values that followed.

The descriptions given to the fluorescence ratings that classify 'White paper' printings of 'Castle' high value stamps incorporate in their key letters (i.e. EF, HF, MF, SF, WF, ZF.) an instant guide to the approximate degree of fluorescence. Should the exact terminology that the key letters represent be forgotten, or not known, then the further down the alphabetical scale the initial letter, the less intense the fluorescent

reaction. The accompanying table records the fluorescence ratings of the various white papers, also the values and plates with which they were used.

Fluorescence ratings recorded on 'White papers' used for printings of the 'Castles' high values.

| Printer | Rating | Printing |
|---------|--------|---|
| D.L.R. | Z F | Initial printing on white paper of the 2/6, 5/-, 10/- and £1. This paper is almost non-fluorescent and is classed as 'Zero'. |
| D.L.R. | W F | Subsequent white paper printing of the 2/6, 5/-, 10/- and £1. |
| B.W. | W F | Early printing of 2/6d (5/5A, 6/6A) 5/(1/1A, 2/2A) 10/(1/1A) £1 (1/1A). |
| D.L.R. | S F | Late white paper printing of 2/6 and 5/- values. |
| B.W. | S F | Early printings of 2/6 (1/1A, 2/2A, 3/3A, 4/4A, 5/5A, 6/6A) 5/(1/1A, 2/2A) 10/(1/1A) £1 (1/1A). |
| B.W. | S F(c) | Residium paper printing of the 2/6 (9/9A). This paper was originally used for a printing of the Shakespeare Festival 2/6 stamp, and the entire printing of the Westminster Abbey 2/6 stamp. (A trial printing of all four high values was made on this paper). |
| B.W. | M F | Bulk of the Bradbury, Wilkinson printings 2/6 (1/1A, 2/2A, 3/3A, 5/5A, 6/6A, 7/7A, 8/8A, 9/9A) 5/(1/1A, 3/3A, 4/4A) 10/(1/1A, 2/2A) £1 (1/1A). The 2/6 value from plate 3/3A exists on paper slightly more fluorescent (MF+) and on a paper showing specks and fibres. (Also plate 6/6A exists on MF+). |
| B.W. | M F(c) | The 2/6 (6/6A) and 5/(3/3A) occur on a paper that has an appearance of being made up of fluorescent granules. Residium paper printing of the 2/6 (9/9A). Originally, this paper was used for practically the whole of the Shakespeare Festival 2/6 stamp printings. |
| B.W. | H F | Small printing carried out just before the introduction of non-watermark paper. 5/(3/3A) 10/(2/2A) £1 (1/1A). |
| B.W. | H F(c) | Used for most of the coated paper printing of the 2/6(9/9A). |
| B.W. | E F | Non-watermark uncoated paper printings 2/6 (10/10A, 11/11A, 12/12A, 13/13A) 5/(4/4A, 5/5A, 6/6A) 10/(2/2A) £1 (1/1A). |

NOTE: Despite similarity of fluorescence rating, the papers used by De La Rue are distinctly separate from those of the Bradbury, Wilkinson printings.

The 'Castles' High Values

PART IX

Production Faults and Errors in the 'Castles' Stamps

RECESS printed sheets of stamps probably received more individual attention during the printing run, than those by any other form of reproduction. Consequently, the occurrence of defective stamps due to malfunction of the printing machinery, which is nowhere near as sophisticated as some of the gravure presses in use today, must be quite rare. All the production faults so far recorded on the 'Castles' high value stamps, fall into the categories listed below:-

PRINTING PLATE DEFECTS - Weak Entry Impressions, Bur Rubs, Re-entries, Retouches, Guide Dots and Lines. Cracked Plate, Worn Plate, Plate Scratches.

BASIC PAPER FLAWS - Paper Creases, Watermark Defects, Defective Gumming, Coating Faults.

INKING ERRORS - 'Off-set' Impressions, Ink 'Wipe-out', Ink Drag, Ink Bleed, Ink Smudges. Colour Changeling

ADHESION OF FOREIGN MATTER - 'Confetti' Flaws, Miscellaneous-matter Flaws, Loose Fibres.

INCORRECT POSITIONING OF THE PAPER - Printed on the Gummed Side, Inverted Watermark, Paper Folds.

PERFORATING FAULTS - 'Imperf' Stamps, 'Part Imperf' Stamps, Misplaced Perforations, Perforating Pin Defects. Trimming Faults.

Of the above, only the printing plate defects will produce a 'constant variety' on every sheet of stamps from the plate in that particular state. All the other faults are purely accidental, although more than one stamp may be affected, or even a whole sheet or batch of sheets, as in the case of an inverted watermark. It should be stressed, however, that most of these errors are relatively uncommon, and because of the very high standards set by the printers, the incidence of defective stamps in the 'Castles' series was minimal.

Printing Plate Defects

Unless each impression on the printing plate is an exact replica of the original

Weak entry on Row 1/2 of the Waterlow 10/- value (simplified line reproduction to show the effect more clearly).

die engraving, as imparted to the printing plate by the transfer cylinder, it is possible for every stamp printed from a particular impression to differ from its fellows. A variation to the recessed impression can be brought about in a number of ways, and may occur during the production of the printing plate, or while the plate is actually in use. In some instances, the quality of the printing plate, itself may affect the impressions, due, perhaps, to an inconsistency in the metal of which it is made. The outcome of this could also give rise to difficulty in applying the plate's chromium facing, or to its suffering the consequences of 'metal fatigue', in the form of plate cracks.

Weak Entry Impressions

It is not sufficient that the stamp impression on the printing plate faithfully

By
R.F. ALLEN

fully reproduces the design detail from the original die. The correct depth of each line and dot of the 'master' die must also be transferred to the plate. Failure to exert enough pressure on the transfer cylinder during the production of the printing plate may result in a general shallowness of the recessed impression. Because such impressions will not hold the intended amount of ink, the printed stamps will appear weak and lack depth of colour. This effect might be brought about by a variation in the metal of which the plates are

Originally intended for publication in book form, R. F. Allen's long awaited work on the G.B. 'Castles' high values is now being serialised in STAMP COLLECTING in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The fourth section, which includes this instalment, deals with production faults and errors. Succeeding sections will include a catalogue listing and will build up into the most complete record on the subject to date. Previous parts were published in the issues of 25th January, 1st February, 8th February, 1st March, 15th March, 5th April, 12th April and 17th May.

made, and it may even be necessary to return a plate to the transfer press in order to re-enter the stamp impressions. Perhaps this would explain why quite a number of Waterlow printed £1 stamps, from one half of the printing plate in particular, showed signs of re-entry work.

Sometimes, only a very small part of a stamp impression may be weakly entered, in which case the defect could possibly be rectified by retouching the plate. On the other hand, a minor weakness may be ignored completely while the plate is in use, as was the Waterlow printed 10/- stamp with a weak corner to the value panel.

(Continued on page 55)



The 'Castles' High Values

(Continued from page 53)

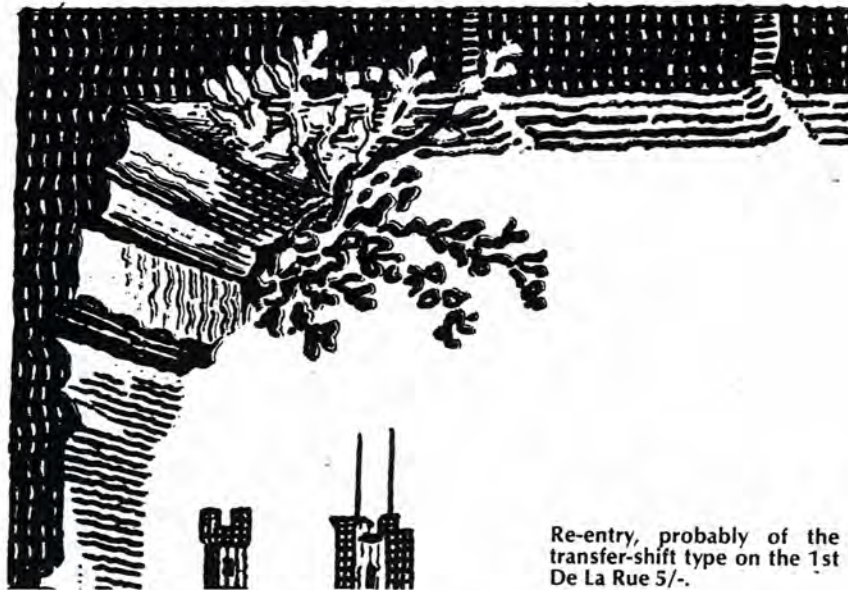
Bur Rubs

There is a tendency for the more heavily recessed areas of an engraved stamp's design to throw up a fair amount of metal when the impression is being rolled (or "rocked-in") from the transfer cylinder. This being so, any adjacent superficial parts of the design, such as the lettering or value figures, may be left with a bur, or slightly raised edge. Unless this bur is removed during the burnishing and polishing of the plate, it can cause a thin film of ink to be retained on the surface of the plate after inking. The printed stamp will then show a slight veiling of colour on a part of its design that should otherwise be free of colour. A bur rub can also arise when a graver has been used to retouch part of the stamp impression.

Re-entries

Though one of the least spectacular of varieties to be found on recess printed stamps, a re-entry is possibly the most important. It is the only truly constant flaw brought about by deliberate action to the printing plate. Re-entries are not readily apparent, and indeed, it is the plate-maker's job to see that they are not, but with a powerful magnifying glass, any doubling of the design can be seen quite clearly.

A re-entry is often the result of an incorrect positioning of the transfer cylinder when making the original impression on the plate. If this incorrect first impression is not entirely elimin-



Re-entry, probably of the transfer-shift type on the 1st De La Rue 5/-.

ated by burnishing and re-polishing the plate, the subsequent rolling of the transfer cylinder, in its corrected position, will result in duplication of the stamps design. The clearest example of this with the 'Castles' series is to be found on the 5/- stamp printed by Waterlow, and it came from the eighth row of the plate.

Minor re-entries, in the form of a very slight doubling of detail on the extreme left or right of the stamp design are, more often than not, the result of a fractional variation between the position of the initial impression from the transfer cylinder at the commencement of 'rocking-in', and that obtained from the subsequent rolling of the cylinder. This plate fault, known as a "transfer shift", can still be regarded as a re-entry, for although it will probably have been caused by distortion of the plate's metal during 'rocking-in', the result is seen as an additional impression of the stamp design. Very occasionally, the transfer cylinder is used to make-good a weak or defective part of a stamp impression on a plate already in use for printing, and this again can lead to duplication of the design. There is no record of this having taken place with the 'Castles' series, but a number of the "transfer shift" type of re-entries are known to exist on stamps printed by Waterlow, and De La Rue.

NOTE: The term 'Re-entry' is considered by some to apply only when a worn or damaged impression on a used plate is made good by a fresh rolling of the transfer cylinder, and that where a mis-positioned impression has been put right by re-rolling, the

Re-entry on 5/- Waterlow.

term 'Fresh Entry' is preferred. Practically all the known re-entries on the high values fall into this last mentioned category, but being a better accepted term, the description 'Re-entry' is retained for them. If a worn or damaged impression is known to have been restored by a further application of the transfer roller, it would best be described as a 'Repair-entry'.

Retouches

If a minor fault should appear on the printing plate either before, or during the printing run, correction can be effected by hand engraved retouching. Such work is difficult to discover on stamps when carried out on the original plate before printing, but where a weakness has been observed in a particular stamp of a printing, it is possible that later printed sheets will reveal that the defect has been retouched in this way.

For example, it was reported that strengthening of the outer frame lines had been done on some stamps of the 'Castles' issues, but unfortunately, no positive evidence of this has so far come to light. Perhaps it might also be mentioned that indicatory marks are now and then added to printing plates during their period of use, as were the small dots and circles that appeared in the sheet selvage of certain printings of the 'Castles'.

Guide Dots and Lines

Two kinds of guide markings are found on sheets of recess printed stamps, one group appearing intentionally, and the other not. The guide marks

(Continued on page 63)

The 'Castles' High Values

(Continued from page 55)

deliberately engraved on the 'Castles' printing plates, so that they would appear on the sheets of stamps and thus facilitate production or checking in some way, included:-

Trimming lines indicating the corners of sheets, such as appeared on the Waterlow printings.

Short dashes marking the centre vertical and horizontal stamp gutters, as also appeared on Waterlow printed sheets.

Crossed line register marks, present in the side margin on most sheets; together with the circles or dots of solid colour, usually punctured by a register pin, which accompanied them on the Waterlow and De La Rue printings. (Bradbury, Wilkinson printings had a punched hole, often encircled with extraneous ink, in the outer margin of each sheet of stamps.)

Lay check dots, sometimes to be found on the extreme edge of the top margin on certain sheets of 2s6d and 5s. stamps printed by Bradbury, Wilkinson.

The dot, or dots, that appeared under the bottom left corner stamp on some De La Rue printed sheets indicate the change of water-marked paper.

Obviously, all the above sheet marks were easily seen, but a magnifying glass was needed to reveal the guide dot that is present on every stamp of the 'Castles' issue. This 'secret' guide dot appears as a minute spot of colour adjoining the outer left frame line of each stamp, and is in a constant position 7mm. from the top of the design. As the illustration shows, the dot is in line horizontally with the furthest point of the Queen's diadem. It seems probable



Lay check dot on the Bradbury Wilkinson 5/-.

that this dot was used as a guide when producing the 'master' dies, and since the same dies were employed by all three printers of the 'Castles' high value stamps, the 'secret' dot is constant for all printings. However, it is difficult to see on some stamps and did not reproduce too well on the 5s. value.

The guide dots and lines that should not appear on the printed sheets are those used in marking out the virgin metal printing plate, ready to receive the necessary stamp impressions from the transfer cylinder. Normally, these sheet arrangement guide marks disappear during the subsequent burnishing away of displaced metal and polishing of the printing surface. Nevertheless, with the aid of a magnifying glass, it is possible to find small dots and, very occasionally, short thin lines of colour on some sheets of stamps. These guide marks mostly occur at the corners of stamps nearest the outer side margins of

plates, but are sometimes seen in the gutter spaces between the rows of stamps.

The presence of such marks on sheets from a particular plate may indicate that it had been rather hurriedly prepared, perhaps due to a sudden breakdown of the preceding plate. Plate 9/9A of the Bradbury, Wilkinson printed 2/6 value provided a good example of this, and the coated paper printing displayed traces of the laying out marks very well.

BOOKSHELF

(Continued from page 61)

bring a whiff of salt spray as well as a complete illustrated list of the attractive Royal National Lifeboat Institution covers (more than 50 so far) issued since 1974 when it celebrated its 150th anniversary, and details of other non-RNLI covers. 64 pages.

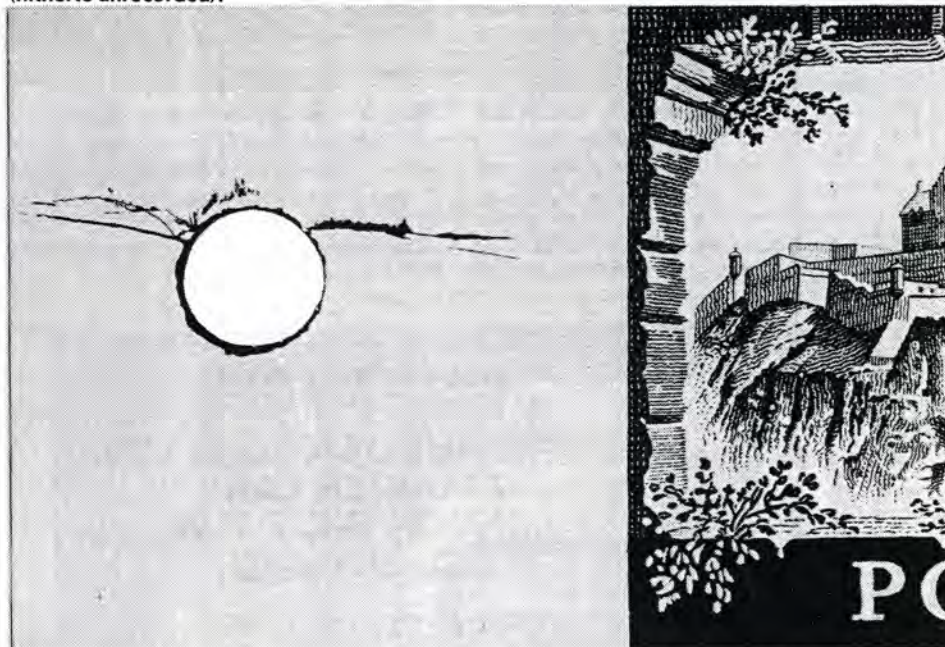
Secret guide dot (on the left) and the battlements re-entry (on all dies).



Cracked Plate

WHILST some variations in the individual impressions on a printing plate, such as those arising from re-entries and retouches, will appear constantly on all sheets of stamps from that plate throughout its use, other forms of plate defect are progressive. The most obvious example of this is a plate crack. It was only on a few plates of the Bradbury, Wilkinson printings of the 'Castles' stamps that cracking became particularly evident, and in all cases it emanated from the punch hole in the outer side margins of the panes of the plates. Initial sheets of stamps from these plates showed no trace of a crack, but on subsequent sheets, thin hairline fractures, usually running horizontally inwards, appeared on the edge of the punch holes. Since, with the recess printing process, any crack on a plate's surface would automatically become charged with ink and be reproduced on the sheets of stamps in the normal course of printing, it was possible to observe the gradual increase in size of a crack as the printing run continued.

In a number of instances, these cracks developed to such a degree that they reproduced as a 1mm thick ragged line of colour, extending from the punch hole in the selvage to the perforations of the nearest stamp. The printers have Plate crack (punch hole position) on plate I of the 10/- value - Bradbury Wilkinson printing (hitherto unrecorded).



stated that, 'It is common practice to print from a cracked plate, provided that the cracked plate does not spoil the finished stamp'. From the incidence of these cracks, the punch hole position would seem to be a weak spot in the plates, which had to withstand quite considerable pressures when printing. Needless to say, once there was any danger of a crack appearing on the finished stamps, the affected plate would have been withdrawn from use.

Worn Plate

Less obvious than a cracked plate, and slower in progression, plate wear affects the recessed impression on the printing plate, resulting in stamps with part of

By
R. F. ALLEN

the design missing or very weak. Only plates which have had a considerable usage, such as those that printed the 2/6d stamps which were required in greater numbers than the other three values, are likely to show any sign of plate wear. Stamps from early printings of these plates will, of course, be

perfectly normal, whereas most of the stamps on sheets printed from the plates in their worn state would show some loss of detail.

With the 'Castles' design, this usually took the form of an absence or weakness in the diagonal lines of shading on the shoulder of the Queen's dress, and a disappearance of detail immediately above the value panel. A possible explanation for this is that the value panel under the Queen's portrait, being heavily recessed, might have tended to cause the surrounding metal of the plate to be very slightly raised, with the consequence that fine detail on this would be worn away first. The degree of wear was not consistent over the whole of each printing plate, and it has been noticed that the stamps showing the maximum of wear were those nearest to the punch hole position on the Bradbury, Wilkinson printing of the 'Castle' 2/6 value from plate 5/5A.



Worn plate with a normal stamp (above) for comparison. (Bradbury Wilkinson printing).

Plate Scratches

Except for the recessed lines and dots that produce the stamp image, the surface of the printing plate must remain highly polished and absolutely free from any blemishes while it is in use for stamp production. If the printing surface suffers a scratch that is capable of retaining ink after wiping, it will reproduce as a thin line of colour on each subsequent sheet of stamps. A printing plate in its unchromed state is particularly vulnerable to the acquisition of scratches, and these can be present without being too noticeable on the surface. If, for some reason, a printing was made from the plate in this condition, it could very well show no blemish other than a feint veiling of ink

(Continued on page 163)

The 'Castles' High Values

(Continued from page 161)

over the sheet. However, after facing the plate with chromium, the scratches may become printable due to the build-up of deposited metal around the marks.

Plate scratches can sometimes evolve from the presence of small particles of grit, or some such substance, in the printing machinery while it is in use. This would explain the sudden appearance of a mark on sheets of stamps from a particular plate, and perhaps, the gradual disappearance of this mark as the scratch is polished away with the continued use of the plate. Plate 13/13A of the 2/6 stamp printed by Bradbury, Wilkinson, the last issued plate of this value in the 'Castles' series suffered quite a number of scratches during the brief period it was current, and most of these ran in the same direction as the plate's rotation when printing.

BASIC PAPER FLAWS

Paper manufacture is so highly developed that a serious defect in the composition of the paper intended for stamp printing is most unlikely. However, factors such as paper stretch and shrinkage may have been responsible for some of the slight variations that were found in the watermark spacing of stamps in the 'Castles' series. Although largely consequent to atmospheric conditions, stretching or shrinking of the paper after printing could also affect the perforating, but apart from these considerations, the quality of the basic paper used for stamp printing does not seem to have been the direct cause of any serious errors. With the use of

individual sheets of paper, instead of the continuous rolls that some forms of printing require, there was not even much risk of any 'Castles' stamps being printed over a paper join.

The only paper flaw that is known to have given rise to obviously defective stamps is the creasing that sometimes occurs during the preparation of the paper. Should the stamp paper become damaged or folded during printing, then strictly speaking, this would come under the category of 'incorrect positioning of the paper'. Other faults that can be classed as basic paper flaws are (a) defects in the watermark or paper texture, (b) defective gumming, although a later application, and (c) any defect that might occur in the coating of the more recent papers.

Paper Creases

The paper on which stamps will be printed, can suffer creasing if some unevenness causes a ridge to form while the paper is passing over a roller under pressure, or during gum fracturing. A paper crease, formed by the flattening of such a ridge, can vary in width from a mere line of treble thickness in the paper where it has folded back on itself, to an overlapping crease of several millimeters width. Since considerable pressure is used when printing from the plates, a crease in the paper may simply show as an irregular line of colour running down the stamps. When opened out flat, a stamp printed over a paper crease would reveal quite a gap in its design. Naturally, such stamps would be the width of the crease gap larger than normal stamps, and examples of the 'Castles' 5/- stamp printed by Bradbury, Wilkinson are known with a gap of at least 3 millimetres in the design.

Watermark Defects

Even though the watermark of a paper is, or used to be, an integral part of its manufacture, it was possible for a defect to arise in the watermark pattern. During the initial stages of production, the stamp paper was pressed by the wire mesh cylinder, or 'dandy roll' as it was more familiarly termed, that had fixed upon its surface the stereo 'bits' making up the watermark pattern. If one of these small metal 'bits' had worked loose or fallen off while the dandy roll was in use, the finished paper would then have shown a misplaced or missing part in its watermark. Alternatively, if an incorrect 'bit' had been fixed to the cylinder mesh, perhaps as a temporary measure, it is most likely that the resulting watermark would have been uneven in some way.

For example, a 'crown' watermark

'bit' which had broken away from the wire mesh of the dandy roll might have been replaced by one of a different size, shape or thickness, in which case it would probably stand out from all the others in the watermark. With the introduction of non-watermark paper, such defects are no longer relevant, although imperfections in the texture of the paper can still occur.

Defective Gumming

Application of the gum to stamp paper, though a process quite separate from the manufacturing of the paper, is obviously an essential part of its preparation prior to stamp printing. Without the gum, a stamp intended to be used for postal purposes hardly complies with the generally accepted requirements of an adhesive label. But being confined to the reverse side of stamps, its presence is taken for granted and a defect in the gumming normally passes unnoticed, although with the advent of P.V.A. gums, much more attention is being paid to the back of the stamp than in the past. In fact, the current vogue for collectors to keep their unused stamps in perfect mint condition, unhinged and 'Post Office fresh', may have been additionally stimulated by the use of various types of gum on British stamps.

For all the printings of the 'Castles' issues, an adhesive based on Gum Arabic was used. It is not known whether the gum breaks, in the form of the 2 to 3 millimetres wide straight lines of ungummed paper which ran down the full depth of some sheets of 'Castles' stamps printed on non-watermark paper, should have been classed as a fault or a production peculiarity. Certainly the gummed side can have its own surface characteristics which will help distinguish one batch of paper from another, as for example, with the 2/6 stamp printed on coated watermarked paper.

Coating Faults

The use of 'chalky paper', or more precisely, paper with a Kaolin-coated printing surface, was a relatively new development in the recess printed stamps of this country. It commenced, so far as the 'high values' were concerned, with the 'Shakespeare Festival' and 'Westminster Abbey' commemorative 2/6 stamps both of which were recess printed by Bradbury, Wilkinson and Co. The residuum of the two different batches of coated paper from these printings, together with a later coated stock of watermarked paper, was

(Continued on page 165)



Watermark "bit".

The 'Castles' High Values

(Continued from page 163)

used for the previously mentioned printing of the 'Castle' 2/6 stamp on coated paper.

Some of the colour shades found with this printing, which was issued in 1968, may have been the result of variations in

the surface coating of each batch of paper. A few sheets of stamps also displayed evidence of a certain amount of difficulty in the reproduction of the deeply recessed value panel portion of the 'Castle' design.

INKING ERRORS

Perhaps the most striking of errors to exist on the high values is an 'off-set' impression. To turn over a perfectly normal looking stamp and see on the gummed side the same stamp printed backwards never fails to surprise. Actually, off-set impressions are brought

about by a mis-handling of the printing paper, but since the result is seen in terms of an image that should not be present, they can be classed as an error of inking. Similarly, imperfectly printed stamps that are the result of faulty wiping of the ink charged plate, also come under this heading. Maybe the only true error of inking would involve the composition of the ink, or use of a wrong colour for issued stamps, but this is not known, except as a colour changing.

(Continued on page 167)

Complete offset (below) with part of a normal sheet for comparison. Courtesy of Bridger & Kay Ltd.



The 'Castles' High Values

(Continued from page 165)

'Off-set' Impressions

Basically, an off-set impression is the result of a transference of the ink image from the printing plate to another surface, from which, it has then been picked up by the stamp paper. There are two known forms of ink off-set, one indirectly from the recessed stamp impressions of the printing plate, and the other directly from the freshly printed sheets of stamps. The latter is more accurately described if it is referred to as being 'ink set-off'. Failure to interleave, with waxed paper, each sheet of stamps as it comes off the printing machine, will allow the still wet ink of a sheet just printed to be set-off on to the sheet in the stack.

A true off-set impression, though accidental, is produced in a very similar way to ordinary offset printing, which is based upon a principle of reproduction not directly from an initially inked plate but from a cylinder that has received its inking as a pre-formed image. With recess printing, off-set inking can occur if the ink printing plate is allowed to come into direct contact with the impression cylinder, perhaps because of an omission or misplacement of the stamp paper while the machine is in use. The absence of paper causes the ink that remained in the recesses of the stamp impressions on the plate after wiping, to be transferred on to the surface of the impression cylinder. This cylinder, which normally would have pressed the stamp paper against the printing plate, now carries a wet ink image of the stamps as if printed.

Resumption of printing at this stage will result in the next sheet of stamps taking up on its gummed side the off-set ink image that had been left on the impression cylinder. As regards printing quality, the off-set impression generally lacks depth of line and colour, also there is sometimes a slight distortion of the 'back-to-front' stamp image.

At least two full sheets, possibly three, of the 'Castle' 2/6 stamp printed by De La Rue on 'Crowns' watermark paper, are known to have existed showing a complete offset image on the back of each stamp.

Ink 'Wipe-out'

When current, 'Castle' stamps would turn up with what appeared to be a

break in the frame line on the right, mostly just above the value panel. Although a weakening of the frame line was known to have been a constant flaw on a particular stamp of one or two plates, a check with other sheets of the batch from which the stamp showing a frame break came invariably proved the break to be non-constant. Very close examination with a high power magnifying glass usually revealed that the frame line was present but in albino form, and that the break was simply due to an absence of ink.

This was the result of the ink being accidentally scooped out of the recessed frame line of the stamp impression during the wiping of the plate after inking. Being fairly continuous, the right side frame line was rather more prone to this fault than other parts of the design, and on some sheets of the De La Rue printing quite a number of stamps were observed to have part of the frame line missing.

Ink Drag

In actual fact, ink 'wipe-out', dealt with in the preceding section, is simply an extreme form of a slight dragging of the ink that occurs while the inked plate is being wiped and polished. Ink drag is mainly confined to the more heavily lined parts of a recessed stamp design, since it is in these areas that a fair amount of ink is gathered. With the 'Castles' design, the lined background to the upper left of the Queen's portrait was somewhat prone to this effect because so many of the recessed lines ran in the same direction as the rotation of the plate when printing, and there was an increased tendency for the ink to be dragged along them.

Evidence of this, in the form of an apparent extending of the vertical lines of shading so that they projected beyond the top edge of the design, was observed on some sheets of the De La Rue printings of the 2/6 stamp and reported to exist on a few early sheets of the same value printed by Bradbury, Wilkinson. It should, however, be pointed out that this flaw was of a very minor nature and may have appeared on only a very small number of stamps of the sheets. The problem itself is not so minor. The printers of the recess printed 'Machin' high value stamps had to guard against ink drag to ensure that the rectangularly lined background of the design was reproduced with an even distribution of ink.

Ink 'Bleed'

Due principally to the condition of the stamp paper at the time of printing, ink 'bleed' was most noticeable on the 'Castles' stamps printed by Waterlow.

Their practice of having the surface of the paper dampened when printing caused the ink to 'bleed' into the texture of the paper, so producing the characteristic 'heavy' look of the bulk of the Waterlow printings. All printings of the 'Castles' high values on uncoated papers tend to show some degree of 'wooliness' to the lines and dots that make up their designs, but with the use of coated papers there was a distinct improvement in the clarity of recess printed stamps.

Ink Smudges

The nature of recess printing makes it necessary that the ink used should not be too quick-drying, therefore, freshly printed sheets of stamps have to be handled with a certain amount of care to avoid smudging. Even so, ink streaks and smudges sometimes occur, and a colour rub, in the form of a smear of lighter colour, ran through several stamps of a sheet. Very occasionally, clots of thick semi-dry ink may adhere to the plate during inking, in which case, they will be transferred onto the sheets of stamps if not removed with the wiping.

(To be continued)

The 'Castles' High Values

PART XI

Colour changeling

THIS phenomenon, though nothing to do with printing operations, is nevertheless directly associated with the ink employed in reproducing the stamps. With prolonged exposure to bright sunlight many colours suffer deterioration in some way, and those used for printing stamps are no exception. Under such conditions, the reds and some yellows are rather inclined to fade, and in many cases the basic colour of a stamp undergoes a complete change of colour. With the stamps of Great Britain a common example is the transformation of a number of deep green coloured stamps into shades of bright blue.

Sheets of stamps are not normally subjected to display in broad daylight, but it is reasonable to assume that tests would have been made to check that the inks used for printing were reasonably 'fast'. The only high value definitive stamp that radically changes colour through the action of sunlight is the 'Castle' 2/6 value as printed by De La Rue, and their printings of this stamp on 'E2R' watermarked and on 'Crowns' watermarked paper are both similarly affected. Issued in a sepia brown colour, of which several shades exist, the stamp gradually turns to a greyish green-black colour if left in direct sunlight for a month or more. Even after a few days in the sun there is a visible change in the colour and it would seem that some part of the make-up of the printing ink is

not very stable. A possible clue may exist in the red element of the ink's composition, in that many De La Rue printed 2/6 stamps show this colour to be rather fugitive, resulting in a pink suffusion on the back of the stamp after soaking.

Waterlow printed 2/6 stamps, and those printed by Bradbury, Wilkinson, will turn to a colder shade of colour if exposed to brilliant sunshine for several months, during which time there would also be a noticeable fading of the red in most printings of the 5/- stamp.

The Shakespeare Festival commemorative 2/6 stamp which was recent printed in the same way as the 'Castles', provides a further example of a colour change, though in the main the result is more of a shade variety. As with the 'Castle' 2/6 stamp, the unstable element in the purple black colour of the

By
R. F. ALLEN

Shakespeare 2/6, would seem to be the pink, or red pigment. There are three basic shades of the Shakespeare stamp, more or less corresponding to the three separate printings that were made for this issue, and with each shade, exposure to strong sunlight for any length of time causes the stamp's pinkish hue to

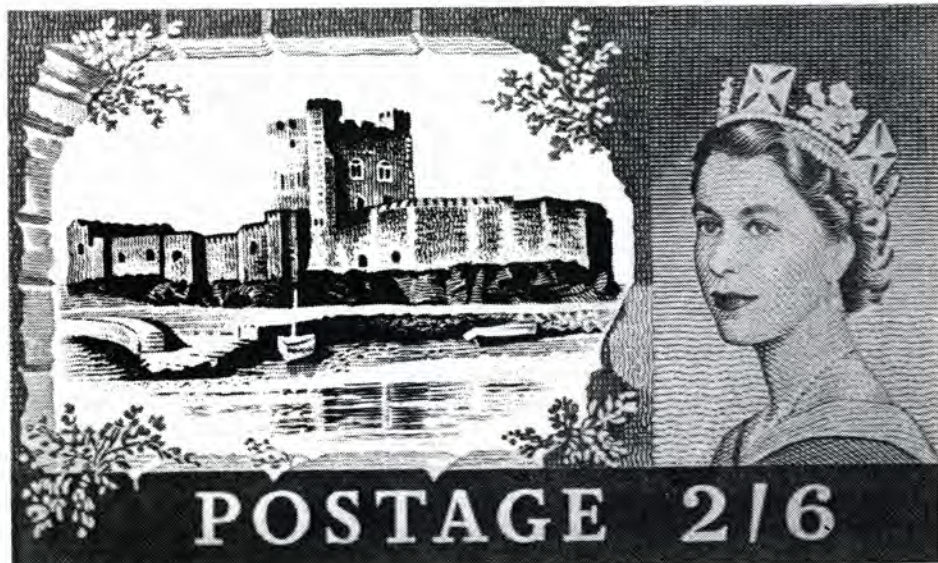
Originally intended for publication in book form, R. F. Allen's long awaited work on the G.B. 'Castles' high values is now being serialised in *STAMP COLLECTING* in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The fourth section, which includes this instalment, deals with production faults and errors. Succeeding sections will include a catalogue listing and will build up into the most complete record on the subject to date. Previous parts were published in the issues of 25th January, 1st February, 8th February, 1st March, 15th March, 5th April, 12th April, 17th May, 5th July and 12th July.

disappear. Stamps that have suffered deterioration through prolonged display in sunlight are to be found in various shades of grey to black. Extreme caution must be exercised when purchasing apparent shades of the Shakespeare 2/6 stamp, especially if there is a chance that they may have been in a shop window for some time. When one considers the difference between the retail price of a 'normal' stamp, and that expected for the 'black' shade of the Shakespeare 2/6, the desirability of knowing the past circumstances of such a stamp becomes obvious.

Poor storage or atmospheric environment can affect the paper upon which a stamp is printed. A printing might appear to be on cream paper simply because the stamp or stamps had been continuously exposed to polluted air, or else the gum has dried out and turned yellow.

All the above mentioned abnormalities, brought about by the past conditions in which a stamp has existed, serve to illustrate the importance of recording colour shades and paper variations of stamps at the time of issue.

(Continued on page 835)



The effect that can be achieved by masking the surrounds of the De La Rue 2/6 stamp and exposing it to bright sunlight for several weeks.

The 'Castles' High Values

(Continued from page 833)

ADHESION OF FOREIGN MATTER

Despite wiping and polishing, a freshly inked plate is still susceptible to any slivers or small bits of paper that may be floating about during stamp production. Consequently, it is not unknown for some of these bits and pieces to find their way on to the printing plate and later reveal their presence on the printed sheets of stamps. The most typical example of this is the 'confetti' flaw, so called because it involves the small circular pieces of paper that come from the punched holes in the selvedge of sheets of stamps having these for perforation register. A small piece of paper such as a punch hole disc can be drawn in between the inked plate and the stamp paper, with the result that part of the stamp design is printed on the piece of 'confetti' instead of on the sheet. Foreign matter doesn't only prevent ink from reaching the stamp paper and thus leave part of a stamp unprinted. In some instances, the stray matter is itself inked. The use of hessian in the printing works is a contributory factor to the presence of extraneous marks on stamps, and inked fibres from this material are often to be found dried onto the sheets of stamps.

'Confetti' Flaws

So far as the 'Castles' stamps are concerned the 'confetti' flaw only occurred with Bradbury, Wilkinson printings, since they alone made use of a punch hole in the paper for production purposes. The existence of 'confetti' flaws on Britain's first photogravure stamps, issued in 1934, shows this error to be no newcomer to stamp printing. With recess printing, a 'confetti' flaw probably escapes detection more easily during the printer's check because with this process the circular piece of paper from the punch hole is much more likely to remain in its transgressed position. When this 5 mm disc of punch hole paper detaches itself from the printed sheet it is then that a stamp with a round patch of its design missing becomes so apparent. Such is the pressure used in recess printing that the stamp design can be seen in albino form where the punch hole paper has masked off the ink from the stamp impression on the plate.



Missing portion of the design caused by the presence of a punched out piece of paper falling between the plate and paper during printing.

The punch hole paper, if it has adhered to the printed sheet, will come away as a disc bearing the portion of design missing from the stamp that had suffered its vagaries. Sometimes, the effect of one of these pieces of punch hole paper falling between the impression cylinder and the gummed side of the paper can be discovered on the back of a sheet of stamps. Where the two thicknesses of paper were forced into the stamp impression on the plate a slight compression of the paper takes place; but apart from a faint circular mark on the gummed side and a fractional translucence where the punch hole disc of paper has been, the printed stamp is of a normal appearance. Both versions of this flaw are known to have occurred with the Bradbury Wilkinson printings of the 'Castles' stamps and several examples of the 2/6 value exist with a circular portion of its design missing.

Miscellaneous-matter Flaws

On rare occasions, a sheet of stamps can slip through the stringent checking of the printers and the Post Office and reveal to the finder the consequence of largish scraps of paper such as sheet trimmings, or even bits of string, getting on to the plate or paper during printing. When this happens it is usual to find that more than one stamp on the sheet has been affected, and that the shape of the offending material is quite clearly seen from the stamp design missing. A sheet of the 'Castle' £1 value with just such a flaw was displayed at a national stamp exhibition some years ago.

Loose Fibres

The most common occurrence of foreign matter adhering to the plate, and the one which most frequently gave rise to speculation about flaws on the printing plate, was to be found in the odd ink marks and irregular lines of colour that often appeared on the 'Castles' high value stamps. The majority of these small marks or 'squiggles' were made by ink soaked hair-like particles and fibres that originated from the hessian, or similar fabric blankets used in the printing presses.* It was not unusual to find the fibre particle still attached to the printed stamp upon which it had left its ink mark.

INCORRECT POSITIONING OF THE PAPER

If the stamp paper is not the correct way round when it is fed into the rotary press two major errors can emanate. The most exciting, from a philatelic point of view, is printing on the gummed side. The other, in some ways not quite so rare, is an inverted watermark. With present-day stamp paper, the latter is no longer possible, but

(Continued overleaf)

*L.N. and M. Williams in "Fundamentals of Philately" (1960) state: The basic principle of printing from all line-engraved printing bases is adhesion of the ink coupled with the distortion of the paper under pressure. By pressing heavily a yielding substance into contact with the whole of one surface of the printing base covered with paper it is forced into the recesses in that surface; and, the recesses containing ink, the paper is pressed into contact with the ink which adheres to the paper and is sucked out of them when the paper is removed. The yielding surface is provided by a blanket of felt or other substance either detached from or covering a metal cylinder forming one of a pair or more by means of which the pressure is applied.

-Editor

The 'Castles' High Values

(Continued from previous page)

there is always a chance, and a very good one with P.V.A., that printing on the gummed side can still happen. Paper that has been badly positioned in the rotary press can also bring about a partial offset printing by virtue of it not having covered the inked plate properly. Similarly, the same thing will happen if the paper becomes folded as it enters the press, but needless to say, the printed sheets, spectacular though they may be, are bound to finish up as printer's waste.

Printing on the Gummed Side

Surprisingly enough, quite a reasonable stamp image is obtainable by printing on the gummed side, which no doubt explains why a sheet of stamps printed this way has actually been sold at a post office counter. A recess stamp printed on the gummed side of the paper has slightly less depth of line and the colour appears a little pale in comparison with a normal stamp. Of course, the reverse side is plain ungummed paper, and in the case of the only known sheet of the error to have been released with the 'Castles' series, this factor was the means of its discovery, since the stamps could not be stuck on the parcels that they were intended for. This particular sheet of stamps, the 5/- value printed by Bradbury Wilkinson, had the plate No. 1A. It is possible for a 'printed on the gum side' stamp to exist postally used, providing that no attempt is made to soak it off the paper upon which it has been glued or pasted. Wetting the printed surface would disturb and eventually disintegrate the stamp image. The question arises – just how



Watermark Inverted. This is the only known copy of the De La Rue printed £1 stamp with 'Crowns' watermark inverted.

does a sheet of stamps come to be printed on its gummed side? In all probability, the simple answer is – because someone didn't stop to think when they replaced the topmost sheet that had got dislodged from a stack of printing paper.

Inverted Watermark

The suggested answer to a question at the end of the previous section could equally well apply to the origination of stamps with their watermark inverted. In most instances, the number of copies of stamps that exist with this error is so small that almost certainly not more than one sheet was involved each time. Only with the last issue of the 'Castles' series is it known that the 5/- value with inverted watermark is from a small batch of sheets printed in this way. This could have been brought about by the placing of a handful of sheets from the paper stack the wrong way round on the feed platform of the rotary press. Because the watermark is not a readily seen feature of a stamp, it is quite possible that sheets of some values and

printings have gone by with their watermark inverted – but unrecorded.

Paper Folds

When individual sheets of paper are used for the production of stamps, there is always a quadrupled risk of a corner being turned back, either under the sheet or over the top of it. Small corner folds that leave the printed stamps unaffected are not uncommon and most of them seem to have occurred just before perforation, or during the trimming of the sheets. Stamps printed on a corner fold, if they do get past the checkers, will either be normal up to the crease where the paper had been folded under the sheet, but unprinted beyond the crease line; or else they will have part of the design missing where it had been masked from the inked plate by a corner folded on to the top of the sheet, and show the missing portion of stamp design as a printing on the gummed side. If the paper fold has crumpled or folded back on to itself in the rotary press, then the printed effect is best left to the imagination.

The 'Castles' High Values

PART XII

PERFORATING FAULTS

ALTHOUGH a final stage in stamp production, the perforating of the sheets of stamps is a very important one, and, if it is not carried out properly, the stamps could be rendered useless. But to collectors it may result in one of the most philatelically desirable of errors, namely, 'imperf' stamps. Again incorrect positioning of the printed sheets can cause the perforation, necessary to facilitate separation of the sheet into individual stamps, to run through the stamps themselves and thus defeat its object.

'Imperf' Stamps

It is extremely doubtful whether a complete sheet of 'Castles' stamps that had not been perforated ever got as far as a post office. Nevertheless, at least one sheet of the 'Castles' high values turned up with incomplete perforating. In this particular case only the top row of the stamps was affected, being imperforate between stamp and margin. Because the printed sheets are positioned on pins as they travel through the perforator there is not much chance of a sheet jumping forward past the perforating comb head. There is also no likelihood of a completely imperforate stamp arising

out of a corner crease, since being folded against the rest of the sheet, the corner stamps would show a superimposed perforation. However, the sheet with the stamps imperf. at top, referred to above, showed traces of two strikes of the perforating comb on the edge of the top margin, which seems to indicate that the sheet might have been pulled away from the perforator too quickly. If this is so, then it illustrates the possibility of sheets being removed from the machine before perforating is completed, and that totally 'imperf' stamps could exist in this way.

Part Imperf Stamps

Unless a stamp is without perforation on all of its sides, from the printed

By
R. F. ALLEN

design to the edge of the sheet margin or furthest side of any adjoining stamps, then it should not be classed as 'imperf'. Anything less than this comes under the category of 'part imperf'. But a 'part imperf' stamp that has all the perforation holes missing from one of its sides can also be described as 'imperf between stamp and margin' or 'imperf between stamps', depending upon the variety. Most of the partially imperforate high value stamps, and they are by no means common, result from a corner fold when perforating. The majority show only a very small part of the corner stamp

Left: Imperf. at top, caused by the sheet being pulled away before perforation completion, but remaining under the comb head for two more strikes; Below: Imperf. at bottom due to a paper fold.

Originally intended for publication in book form, R.F. Allen's long awaited work on the G.B. 'Castles' high values is now being serialised in **STAMP COLLECTING** in a number of instalments. Much of the research and many of the illustrations have remained unpublished hitherto and are very little known and thus of considerable interest to all G.B. collectors. The fourth section, which includes this instalment, deals with production faults and errors. Succeeding sections will include a catalogue listing and will build up into the most complete record on the subject to date. Previous parts were published in the issues of 25th January, 1st February, 8th February, 1st March, 15th March, 5th April, 12th April, 17th May, 5th July, 12th July and 23rd August.

imperf where, at an angle from the crease, the perforations have run off the edge of the sheet margins.

Misplaced Perforations

Recess printed high value stamps are remarkably free from bad perforations, mainly due to the more individual treatment the sheets receive. With the perforator register pin position being either reproduced direct from the printing plate or punched out as the stamps are printed, there is little chance of inaccurate perforating. (There was a reported instance of some sheets of De La Rue printed stamps, which have the register pin position halfway down the printed pane, being perforated from the top instead of from the bottom of the

(Continued on page 949)



The 'Castles' High Values

(Continued from page 947)

sheet, as is normal.) Unfortunately, it is not always possible to control the degree of stretch and shrinkage that might occur in the printing paper, consequently the lateral spacing of the vertical perforation is sometimes a bit out. This was more of a problem with the Bradbury, Wilkinson printings, due to their sheets having a vertical paper grain. If the horizontal rows of perforations do not fall in the correct position on the printed sheets, an adjustment on the perforating machine is all that is required to put them right. Occasionally, this adjusting facility will cause a slight variation in the width of paper between the perforations where one strike of the comb meets another. Most of the stamps printed by De La Rue show a 'narrow perf' at this juncture, but this is a normal distinctive feature of the printings. Drastic misplacement of the perforations, usually the result of a paper fold or creasing, can vary in its effect from a divisioning of the printed stamp to a minimal repeat of the corner perforation through the folded selvedge.

Perforating Pin Defects

With the photogravure printed definitive stamps, the incidence of a missing pin in the perforating seems fairly common and because of the finer gauge of perforation (14¼ x 14) does not present any difficulty in the separation of the stamps. This would not have been the cause with the 'Castles' high value

Misplaced perforation resulting in the value appearing at the top of the stamp.

stamps, which, due to the broad gauge of their perforations (11 x 12) never have been all that easy to separate. In fact, single stamps with neat perforations are the exception, rather than the rule with the 'Castles' issue. So one can imagine the havoc that would be caused by a broken perf. pin leaving breaks of nearly 3mm width in the perforations. This, and the diligence of the printers, probably explains the lack of missing perf. pin errors on the recess printed high values.

Sometimes, the perforations on a batch of sheets can appear ragged and seem to be the result of damaged perf. pins. Further examination of the perforations invariably prove all the pins to be present, but that some of the minute discs of paper from the perforation hole have remained in position. This not very clean perforating could have resulted from the printed sheets of stamps being still slightly damp at the time, which might also explain the appearance of being perforated from the back of many high value sheets. The raised circumstance of each perf. hole

doubtless occurred as the perforating pins withdrew after making a strike. Checking the position of a known misaligned perf. pin (manufacturer's fault) gives confirmation that the sheet has not been perforated from the back. Should the perforating machine or comb head suffer any damage, it can be assumed that the printers would use an alternative perforator, or withhold the stamps for perforating at a later date while repairs were carried out.

The presence of extra extension holes to the perforation on both panes of a printing of plates 5/5A and 6/6A of the 2/6 value by Bradbury, Wilkinson may have been due to a refurbishment of the perforating head. That the additional pins have been inserted into the regularly used perforating head is proved by the closely spaced first two holes of the vertical perforation, a consistent feature of the Bradbury, Wilkinson printings.

Trimming Faults

Since the trimming of the printed and

(Continued on page 953)

Bottom two rows of plate 6 of the Bradbury, Wilkinson printing showing additional extension holes either side.



The 'Castles' High Values

(Continued from page 949)

perforated sheets does not affect the stamps themselves, this aspect of stamp production is not dealt with at any length. The only fault of interest is a corner fold, either before or after perforating, which having remained untrimmed shows how little of each sheet is wasted. Of course, a slip up with the trimming guillotine and the whole lot could be wasted!