

RESPONSE

Dear Editor: (with apologies for the length)

Your St. John's, Newfoundland, irregular correspondent has blessed you with another of his interesting and provocative speculations about the printing methods of the Perkins Bacon firm (see May/June 1990 TOPICS, pp. 8-10). With one exception, his latest formulation, is plausible but not probable. If Perkins Bacon had used the procedure he has offered, the resulting coloured, perforated devices would not adhere to an envelope or other material, as the stamp paper was never shown to be gummed.

John Walsh has secured an interesting segment of watermarked paper, evidently prepared for Newfoundland stamps, unmarked except for a date (22 JUN 1932), some black right angle lines and a remark *Cut new working sheet 22 inches x 26 5/8 inches*. It is a segment with 400 Newfoundland Coat of Arms as the watermark, arranged in a rectangle of four groups, with 100 watermarks in a group. The date seems to have no significant meaning, as the paper had been in use since 1929 and continued to be used into the 40's. This piece is the basis for his most recent venture into creating a situation around which his imaginative postulation could flourish.

Mr. Walsh reports that there were several black lines, that appear in the form of a street intersection, on his piece. He calls them positioning lines. He also states that these lines are there in order to *set up* the four panes of watermarks, by the papermaker. There is no way that the *dandy roll*, which impresses the watermark into the paper slurry during its manufacture, could be made to adapt to these *street crossings*. The reverse might be true, provided the indicator marks were removed from the sheet prior to Mr. Walsh obtaining it. His marks are there to furnish cut lines, first to separate the larger paper into four individual sheets (the cut is made in the middle of the sheet), probably after gumming and before printing in the *dry* process, so that each sheet will accommodate a plate of 100 stamps, and finally for trimming the perforated sheet of stamps to delivery size.

An interesting article in the *London Philatelist* of March 1964, Vol 73, #855 Page 44 included a reference to the paper used by Perkins Bacon. *The size of the 1¢ stamp (including margins) is 30mm x 24 mm - say 1 3/16" x 31/32" - the 4¢ being about 1/8" shorter than the others, 28mm x 22 mm - ie 1 3/32" x*

7/8". Our Croxley Special Postage Paper is 26" x 34" (stretch 34" way) and cuts six out of either of both sizes.

If the sheet Mr. Walsh secured, came from the Perkins Bacon, it is possible that it was cut from the Croxley sheet or one like it, as it is approximately 2/3 of the 34" dimension. This would verify the instructions to *cut new working sheet*. If on the other hand, the paper came from the Mill supplying the paper, it would be an instruction on how to set the *sheeter* which would cut the sheets for the printer from the mill roll. There is no indication as to why the instruction was given. It may relate to the gumming process or the printing process. The sheet might also have been kept by the firm of John Dickinson & Co., the agents for both the Mill and Perkins Bacon, and the source of the paper for Perkins Bacon.

This same article also states that *Plates: 17/6/29 1¢, (110 on); 17/6/29 2¢, (scrapped); 20/6/29 3¢ (100 on); 24/6/29 replacement of 2¢, (100 on); 9/7/29 4¢ (100 on); 20/8/29 5¢, (100 on)*. Thus the printing plates in 1929, which used this same watermarked paper, contained only 100 stamps per plate. A separate note states that the Post Office in Newfoundland *deals with about 4,000,000 letters and post-cards and about 4,000,000 newspapers and parcels a year*. Another figure in the letter gives a quantity of 3,000,000 1¢ stamps as the base for a quotation. This probably is a years supply, as tenders were normally expressed in that manner. Based on this data, orders probably would be placed twice a year and stamps would be normally secured in increments of 50,000 to 1 million depending on the need and the value of the stamp. A million stamps will result from 10,000 *pulls* from a plate of 100, a figure well within the life of a printing plate.

There is a further note in this article that in 1933 certain of the dies were recut so as to make them better adapted to *machine* - rotary press - printing. The printing plates for intaglio rotary press work were all made in an initial flat state and then curved to fit the press cylinder. Large plates in any dimension would be difficult to handle, and depending on the diameter of the cylinder, might be too large to be precisely curved to fit the machine. If the work were not precise, some stamps would be dark (overinked) and others not recognizable. One should remember that when the initial flat plate, prepared from the original die roller, was curved to

fit the rotary press printing cylinder, the lines in the direction of the curvature would be lengthened. The percent elongation can be easily calculated from the formula $((Dcy'' + 2 (ht. plate'')/Dcy'') - 1) \times 100 = el \%$. Simplified this appears as $((2 \times Ht.P1'')/Dcy'') \times 100 = E1\%$. Rotary press stamps were not laid down from a new die. *Make ready* could save some of the misprints, but this was a detailed and time consuming job, and most expensive as a master printer would be needed.

While this all relates to 1929, there would not be a significant difference between 1929 and the early thirties. Some small increase in quantity would be indicated.

Mr. Walsh has not mentioned how he would print the stamps. Two methods were in use in the early 30's - the older, the *wet* method, and the more modern the *dry* method. In the first case the paper was haphazardly moistened by the printer or his *devil* to an undefined moisture content, never predictable or constant or measured, suitable for the printing ink to be transferred from plate to paper. It is obvious that gumming of the paper could not take place until after the printing ink dried. Thus another unregulated infusion of moisture during gumming could cause expansion or *stretch* of the paper and contraction or *shrink* as the paper dried. In Paragraph 4 it was shown that the *stretch* ran in the direction of the 34" side. This would be the axis of the grain of the paper and would have the maximum *stretch*. Cross grain *stretch* would be at a minimum. Perforation took place after gumming was complete. There was no indication of the resultant moisture in the paper at perforation time and as it dried further, the perforation gauge would change. This variable *stretch* is the basis for the numerous reported variations in perforations for the 1929 series stamps. There were only two or three machines of fixed gauge used by Perkins Bacon, but the variable moisture content of the paper at perforation time and the incident shrink, falsely indicated that many machines may have been involved. In the case of the dry printing there would not be excess moisture in the paper and gumming would have been accomplished prior to printing. The final perforation would conform to the machine used, with minimal shrink caused only by storage conditions. It is important to know which type of printing took place. The flat bed press was preferred for the *wet* printing, but could also be used for *dry* printing.

Having established some of the necessary criteria, consideration of time-cost and the

economics of printing is indicated. A flat bed press probably ran at a speed of 30 printed sheets per minute. An order for 1,000,000 stamps from a plate containing 100 stamps (100 up) would therefore be run off the press in 333 1/3 minutes. This is 5 Hrs 33 Min. Set up time on the press and *make ready* probably consumed another 1 Hr and 30 Min, and take down and clean up at the end of the run, the same time. The total *overhead* was 3 Hrs. which must be added to the press time for total time needed. In this case 8 Hrs 33 min - a little over a days work. A rotary press, a type introduced in the mid 30's, on the other hand would produce printed sheets at a faster rate, probably 60 sheets per minute. Speeds are estimated, based on operations I have observed and are for sheet fed as opposed to web fed presses. Numbers could vary according to operator desire, plant experience, press condition, weather and other factors. Those chosen were selected only for comparison, but are within normal speeds. The overhead for the set up and take down should be the same for both presses, but press time is one half for the rotary press, or 166 2/3 min - 2 Hrs 47 min. Total time involved for 1,000,000 stamps would be 5 Hrs 47 min. as opposed to 8 Hrs 33 min. a saving of 2 Hrs 46 min. Note that the overhead and press time on the rotary press are about equal, which is acceptable. However if the press time became shorter than the overhead time, it would not pay to use the rotary press. Think what would happen if, as Mr. Walsh suggests, the plate was 400 up instead of 100 up the press times would be cut to 1/4 of that shown, namely approx. 83 Min. for the flat bed and 41.5 Min for the rotary. If the overhead remained at 180 Min., which because of the size of the plate is problematical and might be larger, it now takes more of the press time than printing the stamps and would be considered too burdensome.

In order to gain a perspective on printing runs it is necessary to refer to the excellent booklet produced by Robson Lowe Ltd., 90 Pall Mall St., London SW1Y 5JZ in 1978. It is titled *The Last Stamps of Newfoundland* and is by John Ayshford. Detailed press runs for all of the various stamps produced for Newfoundland by Waterlow & Sons from 1942 (after the bombing) to 1949 when Newfoundland became absorbed into the Dominion of Canada. The 1c stamp which has already been considered is chosen for comparison. May 1942, 2,000,000 printed; July 1942, 3,000,000 printed (This was the catchup period after the bombing and with



Photo number 1

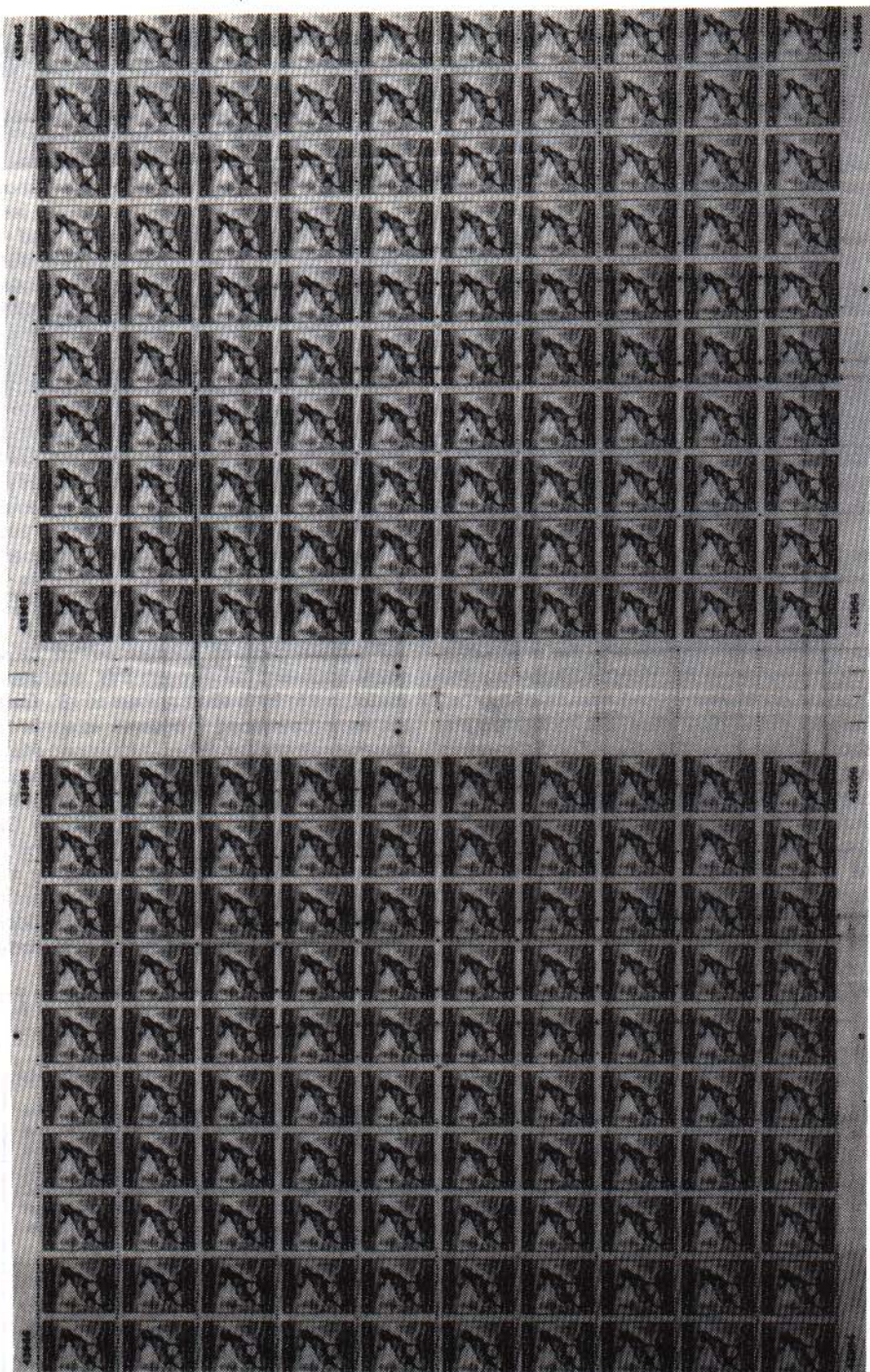


Photo number 2

insecure ocean transport); March 1943, 50,000, (Total Plate # 41711 - 5,500,000 stamps, 55,000 pulls); March 1944, 2,000,000 printed; November 1944, 1,500,000 printed; September 1945, 1,000,000 printed; January 1946, 1,000,000 printed; November 1946, unknown quantity, (Total Plate # 42430 - more than 6,500,000 stamps, 65,000 pulls); August 1948, 3,500,000 stamps printed from a duplex plate, # 43965 (200 up). This ends the printing of 1¢ stamps. The adventure into duplex (200 up) plates ended almost as soon as it began. Newfoundland stamps were replaced by those of Canada in 1949. It was only in the last moments that printing runs became long enough to support the duplex plates. There was no economic advantage in using them prior to that time, as needs were insufficient to support the additional cost of plate preparation and overhead.

Two additional items can be considered and then the lesson will be finished. In 1976 I had the good fortune to observe and to be able to record by inventory and some photographs, the contents of a large portfolio of Newfoundland stamp sheets which came from the effects of a person involved in the Perkins Bacon picture. The first photo reproduced here is of the 1¢, Plate #5, of the 1932 issue. It is an imperforate record sheet from the files. The interesting feature is the note written in the margin of the long side, opposite the Plate Number. It reads *Order # DB 291, (10,710), 15/2/39, A.S.A. - Total Pulls 42,670*. The figure 10,710 refers to the press run just completed, or 1,071,000 stamps. When retired the plate had produced 4,267,000 stamps. Other data from the picture - the page photo had the approximate dimensions 11 1/4 inches by 12 3/4 inches, which could have been quartered from Walsh's sheet

of 22 inches by 26 5/8 inches. Orders for stamps are thus seen to still be in the 1,000,000 class as late as 1939. The inventory states - 1¢ Grey Codfish - type 1932 - paper, Machine wove, .0035", back printed herring bone Red, bookend material - Plate of 100 - Plate #5 (U.R.) - and then the information shown above.

The second photo is of the 5¢ Caribou, issue of 1948. The remarks in the inventory read - 5¢ Caribou - Violet - sheet of 200 stamps (2 plates of 100) - Plate # 43966 all four corners of each plate - cut (guide) marks at all four corners - Plate # 43966 in middle of gutter top center - offset on gum over entire sheet - imperforate vertically - Identity marks, large double size period and rotated 90 degrees T each plate 5th row in margin left and right and 6th column top and bottom. Dimensions between cut (guide) marks vertically 12 3/4", between edges of paper 13 3/8", between cut marks on double side (bottom) 21 5/8", between edges of paper 22 3/4". There is no indication of number of stamps printed.

In Conclusion

Please accept my condolences for having made you read all through this exercise. It started out to be a short answer to Mr. Walsh, but as it developed I became interested in slaying once and for all this reappearing dragon that intrudes upon rational thought at irregular intervals. Let's put an end to this nonsense about duplex plates from Perkins Bacon. Only a very active mind could dream up the continual excursions into the maybe-never-never land that insists they were prepared. Mr. Grimm did a wonderful job of creating fairy tales for kiddies - I think we have uncovered a new, and modern Mr. Grim.

Robert H. Pratt.

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