## ORIGINS OF BRITISH SECURITY ENDORSEMENT <br> PUNCTURES

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## Charles Jennings

Paper perforation was already a well-established process long before its application to postage stamps. Chequebooks, order-books etc., where straightforward perforation was required were already in long use. It was quite an obvious procedure to apply under pressure a number of steel teeth in a row, so arranged to slide into corresponding rows of holes and these two parts quite naturally became known as "male" and "female" parts. Some difficulties arose in keeping the female holes clear of the small discs of paper, which were punched out of the sheets being operated upon. If these holes were allowed to become clogged there was resultant distortion or breakage of the teeth on the male die. A bent tooth, which failed to enter its hole correctly, would, of course, break off on subsequent operations of the machine. If not replaced this would lead to "blind" holes appearing in the work. For this reason most of the "teeth" were made to be easily removed, changed or replaced.

The first modification of the simple perforation machine to be required was one which would perforate both horizontally and vertically at the same operation. This was not a great problem, except as applied to the perforation of postage stamps for the purpose of making them readily separable. The very narrow margins between the stamps and irregularities of spacing, due to distortion of the paper by variations in atmospheric humidity, were an added complication. The first imperforate straps had been separated by means of scissors or razors, or, very commonly, by folding the rows along the margins to form a heavy crease which would tear easily and evenly.

In 1847 Henry Archer submitted his plan for a machine, which would apply rouletted incisions between the stamps. His machine was, however, found to be too effective since it caused too much damage to the table upon which the sheets were laid and the resultant cost of upkeep was too high. In 1848, however, he produced a machine, which perforated the sheets, instead of rouletting them, along the tops and sides of the rows. This machine, ideal in theory, proved impracticable in use because the gum clogged the holes and the irregular spacing of the rows caused many stamps to be perforated through the design instead of through the margins.

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In 1853 new machines were constructed by Messrs. David Napier \& Sons of Lambeth and were brought into use for perforating "Draft" and "Receipt" stamps at Somerset House. The same machines were officially brought into use for postage stamps in 1854. They were steam driven and were capable of perforating 3,000 sheets per day. The gauge first used was 16 but it was found that, the holes being too close together, the sheets parted too readily and a smaller gauge, 14 , was brought into use.

Meanwhile the problem of date-stamping railway tickets, in particular, in such a manner that the endorsement could not be removed had been worrying the railway companies. Joseph Sloper of London, a printer was intrigued by the possibilities of using a perforation machine for this purpose. Instead of merely straight tows of perforations, however, he had to surmount the difficulty of producing a machine capable of punching figures and letters through the tickets, and which could be readily changed with the date.

In 1858, Sloper produced and patented a machine (Patent No. 1985/58), consisting it is believed, of a roller carrying projecting pins which coincided with holes in the bed to which was attached, at one side, a stripper to enable the sheets, which tended to stick at the points of puncture, to be detached from the bed. This machine was intended to be employed as a chequeprotection device in much the some way that postal Orders are perforated today.

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Slopers 1858 Patent curious to note, however, that he was not entirely absorbed in this project for in 1866 we find that he patented a
ventilating system for mines, ships and factories. In fact, 10 years elapsed before his aim of a machine for perforating railway tickets was achieved. This patent (No.2741/68) appeared in 1868 and was modified and improved by a subsequent patent (No.643/69) in 1869. This last machine had interchangeable heads to permit the choice of dates, designs, etc. The stripper plate was attached to the bed at both ends instead of one end only, as in his cheque-protection machine.

There is no doubt that this is the machine which was first employed for the perforation, with endorsements, of postage stamps for it is at this time that Sloper first applied for official recognition of his machine for that purpose. The earliest known examples were probably perforated on his 1868 machine but the majority of his work would be carried out on the 1869 modified version. The earliest example bearing a date in my own extensive collection is dated September 1869. I should be interested to hear of any earlier dated specimens.

Hitherto, as is well known, the endorsement of postage stamps had consisted in the overprinting on either back or front of the stamp and I have seen two examples of the 1d black of 1840 which have been pen-cancelled, both on cover, with the obvious intention of safeguarding the stamps against removal from the cover before being handed to the post-office.

This system had obvious disadvantages since a heavy postmark would obscure any overprint on the face while an endorsement on the back could not be detected without removal of the stamp from the cover. It was only natural, therefore, that the punctured endorsement should quickly receive the blessing of the Post Office. This is proved by the fact that within twelve months of the authorities instituting a service through Perkins Bacon \& Co., for the overprinting of stamps on the reverse, they were advising enquirers to contact Sloper with a view to employing the more efficient method. Furthermore, it is also obvious from dated copies that Somerset House was also using Sloper's machines for fiscal stamps at quite an early date,

Unfortunately no record is available to show which was the first die to be used on postage stamps and, alas, Sloper's records were destroyed in the 1939-45 war by enemy action. It is known, however, that at some date he compiled a record of users in alphabetical order. Hugh Vallancey (late Editor of Stamp Collecting) has noted a few of the better known and more interesting firms and has given their corresponding number in the records,
but there are immense gaps. It will be a colossal task, but one in which I hope to succeed, to reconstruct these records. The obvious difficulty is, of course, in ascertaining the actual year in which they were first compiled.

Since the days of Sloper's early machines many improvements have been made and electricity is now the motive power for many models. Sloper's machine of 1869 was improved in 1872 to employ interchangeable dies, with corresponding "female" parts, and again in 1893 when his son, Edward Sloper, patented a machine bearing a number of dies on a horizontal wheel so that the operator could choose any die he desired. The Sloper perforation machines had not, however, completely superseded the overprinting method, which is still in use today for Receipt stamps, and many stamps of the values currently required for receipt purposes may be found with these overprints. These are mainly privately printed but an interesting exception, which does not seem to have gained very great popularity has come to my notice. This
 consists of a roller, like a photographer's "squeegee" roller, bearing some thirty rubber dies arranged in five horizontal rows around the roller. Above the roller and in contact with it is a second inking roller. This small hand instrument was rolled down the sheet of stamps leaving a violet impression of the die.

The only example I have seen is applied to the back of the stamps and accompanied an advertisement for the machine which was manufactured by Messrs, W. H. Everett \& Son, Ltd., of London at the price of $£ 1$. It is their initials that appear on the only known examples. This invention appeared at the early part of this century but, quite evidently, was not a popular one.

Today, of course, many firms throughout the world make perforation machines and, since the principal is the same as Sloper's in all cases it is almost impossible to differentiate between them.

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By C. Jennings.

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This machine was, however, still a long way from Sloper's main ambition. It is curious to note, however, that he was not entirely absorbed in this project for, in 1866, we find that he patented a ventilating system for mines, ships and factories. In fact, 10 years elapsed before his aim of a machine for perforating railway tickets was achieved. This patent (No.2741/68) appeared in 1868 and was modified and improved by a subsequent patent (No. 643/69) in 1869. This last machine had interchangeable heads to permit the choice of dates, designs, etc. The stripper plate was attached to the bed at both ends instead of one end only, as in his cheque-protection machine.

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