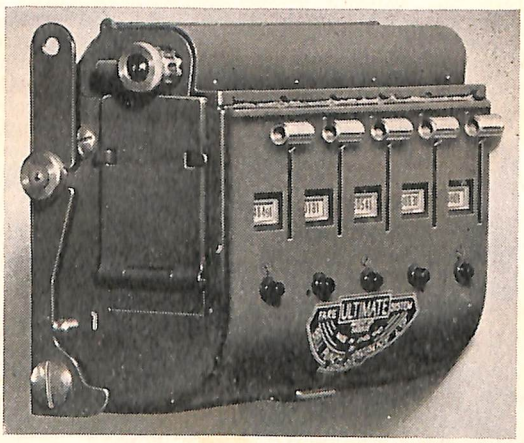
# NEW FARE COLLECTION SYSTEM

## *Ultimate in Production by Bell Punch*

CASH collection and control facilities have long been synonymous with the name of the Bell Punch Co., Limited, and the company has now produced the Ultimate fare collection system as an alternative to the Bell Punch and pre-printed ticket system which has maintained its popularity in passenger transport fare collection for the last 70 years. This latest system, using coloured preprinted tickets and incorporating a partial self-printing device, has been placed in production only after prolonged experiment.

The original mock-up of the machine and a précis of its system was submitted to a selected number of municipal transport operators and re-received their approbation in principle as long ago as late in 1942. Two years later the first prototype




**The Ultimate ticket-issuing machine**

was submitted to the same operators and others by way of demonstration before the ticket check committee of the Municipal Passenger Transport Association. As a result of practical tests carried out by corporations from July, 1945 onwards with six specially constructed prototypes; the council of the M.P.T.A. gave its recommendation of the system to all members in March, 1947. It is worthy of note that, while this committee has for the last 20 years been investigating improved methods of fare control it was the first time any considerable degree of unanimity was recorded.

### Full Production

Eighteen months later full-scale production commenced at the Bell Punch factory at Uxbridge, and now the rate has been stepped up to 150 per week. The development of the machine has been very greatly assisted through the co-operation of the larger municipal undertakings and the traffic committee of the M.P.T.A. All of the suggestions which have been forthcoming have been incorporated, and the final design provides a suitable alternative to the original Bell Punch system.

The machine consists of five compartments, in each there is storage space for a roll of 500 pre-printed and distinctively coloured unit tickets measuring 1¼ in. square, with unit ejection

**Depression of both lever and button to issue a double-length of unit ticket**

mechanism and operating lever, which in the case of four compartments is automatically converted to double ejection by the simultaneous depression of an operating button. Finally, there is a self-printing device and numerator mechanism. Depression of any of the operating levers will issue a ticket of the basic fare value, which is torn off by pulling it upwards against the serrated edge of the upper lip of the ticket aperture. Simultaneous depression of the appropriate operating

lever and button will issue a double length of unit ticket, representing a single ticket worth double the basic fare. The operation of the printing device to impress the appropriate stage number upon the ticket is automatic upon the depression of the ejection lever, and the stage number is advanced by rotating the knurled knob situated at the right-hand top of the machine.

Each ticket of fare value can be issued in any of three classes, i.e. single, child, workman's return, or other heading to suit the particular requirements of individual undertakings. The identification of any one of these classes is effected by the position of the stage number impression upon the face of the ticket; this, in turn, depends upon the position of the stage printing mechanism, which must be preset by a sliding movement of the same knurled knob which sets the stage number.

The machine thus has a capacity range of nine fares: five of single tickets and four of double tickets representing a single value. These double values or double-length tickets are recorded by the numerator appropriate to the compartment, whilst the fifth records the total number of units. It is possible from this information to obtain full statistical data of tickets issued of each fare value by reason of the serial number of the tickets and of the number of passengers carried by reason of the numerator recording the double issues. Since each of the nine tickets can be divided into three classes, as already mentioned, there is a total range of 27 different types of tickets.

### Small and Light

The machine is 8½ in. by 4 in. by 6 in., and the weight, carried on a shoulder-slung strap, is comparable with that of other ticket-issuing machines.

The reloading of ticket rolls is a simple and quick operation for the conductor, in that fixed to the last ticket of each roll is a specially perforated adhesive tab so that the next roll of tickets to be used can be joined to the current roll before the latter is completely exhausted.

The equipment of the Ultimate provides for a carrying case for the storage of spare rolls of tickets as well as for the machine itself when not in use, and a small hand-punch cancelling device can be provided to cancel return tickets on the second journey. The inked ribbon providing the printing impression for the ticket is easily accessible and requires momentary attention each day and replacement every week.

### Robust Construction

Whilst providing for the very large range of tickets as described and incorporating the dual principle of preprinted tickets and self-printing device, the machine employs mechanical principles with which Bell Punch Company has had long experience, and it is considered to be sufficiently robust to give many years trouble-free service. Should the mechanism require attention at any time, however, this can be obtained at any one of the many service depots of the company located throughout the country.

The committee of the M.P.T.A. was seeking two essential features in any improved system: a more rapid means of ticket issue and greater economy in its application, in particular to ensure some considerable reduction in office staff associated with fare control. It is claimed that both these goals have been achieved in practice, confirming the recommendation of operators such as Glasgow, Leeds, Manchester, Nottingham, Southampton and Wolverhampton among many.

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