Aug. 20, 1935. A. SIMON 2,011,657

COUPON TICKET PRINTING MACHINE

Filed Oct. 23, 1934

Fig. 1

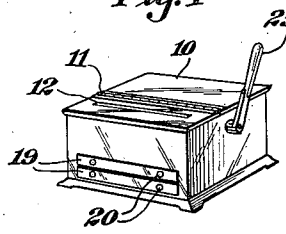


Fig. 2

Fig. 3

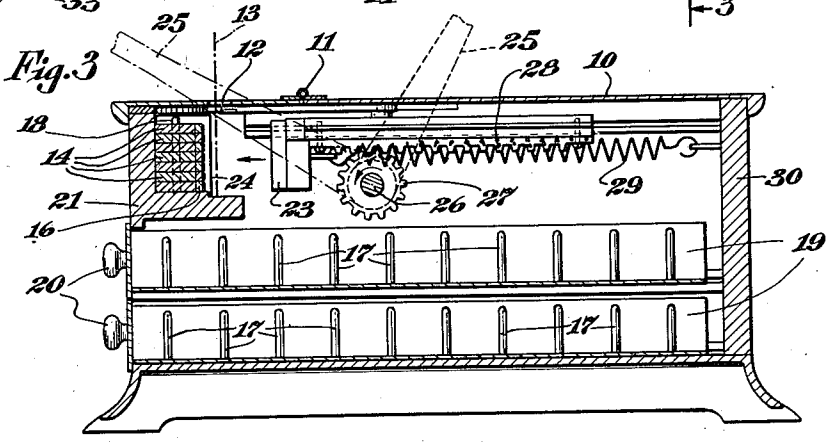
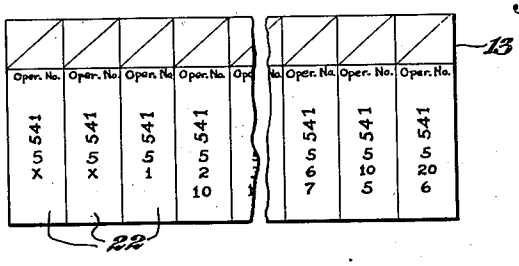


Fig. 4



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COUPON TICKET PRINTING MACHINE

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7 Claims. (Cl. 101—287)

This invention comprises an improved form of coupon printing machine.

In manufacturing establishments wherein piece work operators are employed, it is customary to provide a ticket which accompanies the article to be constructed, which ticket is made up of a number of detachable coupons, one for each operator who performs a particular task upon the article. The ticket accompanies the article throughout its process of manufacture and the data for each operation is printed upon each coupon, including the amounts to be paid the worker. These coupons are removed by the operator upon completion of the work assigned to him and retained by him as a receipt or check. The usual form of ticket now used has the coupons arranged along each side edge of the ticket, there being two rows of coupons. Heretofore the printing machine employed for printing the data on the coupons has consisted of a complicated assemblage of mechanism which required many different operations to print the various lines of information on the coupons, with a consequent great loss of time and labor.

The present invention overcomes the foregoing disadvantages and provides a machine which enables the complete printing of a ticket by a single operation. For effecting this result there is employed a ticket which has only a single row of coupons.

A feature of the present invention comprises the series of easily removable relatively long typebars which when disposed one above the other permit the complete printing of a ticket as a result of a single operation.

Another feature lies in the gearing arrangement of the printing machine on both sides of the platen which ensures an even pressure on the coupons when the platen is pressed against the typebars for making an impression on the ticket.

A further feature resides in the novel type of movable ribbon mechanism which enables constant change of position of the ribbon upon the printing of each ticket.

Other features and advantages will appear in the subsequent detailed description which is accompanied by the drawing, wherein Figure 1 illustrates a perspective view of the exterior of the printing machine of the invention. Figure 2 is a plan view of the machine, partly cut away to show the interior mechanism. Figure 3 is a side section view taken along the line 3—3 of Figure 2, and Figure 4 shows a preferred form of coupon ticket printed by the machine of the invention.

In the drawing wherein like reference numerals indicate like parts, the machine illustrated is either of rectangular or square shape and includes a top 10 divided into two parts hinged together at 11 and having a narrow slit 12 for the insertion of the coupon ticket 13. Hinge 11 enables the front part of top 10 to open and provide access to the interior where the rows of typebars 14 are stacked one above the other on a metallic support 21, each bar providing a single line of type for all the coupons 22. Each typebar in its preferred form consists of a strip of wood 15 to which is attached a thin line of metallic type 16. The typebars are maintained in their desired position in the machine by means of pins 17 which are insertable in holes 18, 18 at the ends of the wooden strips 15. Spare bars and those which are not immediately needed in the printing of the tickets are stored in drawers 19 which may be opened and closed by means of knobs 20. From these drawers the desired typebars may be removed and placed into position in the machine ready for printing. These bars are placed in position through the front portion of hinged top 10, where they lie stacked up on one another, as shown in Figure 3. When the machine is used for printing, four or five of these bars are used.

A platen 23 which is movable in a horizontal position towards and away from the metallic line of type 16 is employed for causing an inked ribbon 24 to make an impression upon the ticket. Platen 23 moves in response to movement of handle 25 by virtue of shaft 26 extending across the machine. At both ends of shaft 26 and attached thereto are gears 27 which mesh with racks 28 extending along the sides of the platen support. A pair of springs 29 attached to the platen and the back 30 of the machine, as shown, serve to return the platen to its normal position. Ticket 13 is normally positioned between the ribbon and the platen when inserted in slot 12.

Ribbon 24 is wound upon a spool 30 located on one side of the machine and extends across the machine in front of the typebars to the other side of the machine where it is collected upon another spool 31. A metallic leaf spring 32 bears down upon spool 30 and keeps the ribbon taut. Attached to collecting spool 31 there is a ratchet mechanism 33 and a pawl 34 engaging therewith, the latter being forced by bell crank lever 35 to turn ratchet 33 one step each time handle 25 causes platen 23 to approach ribbon 24. A stop 36 prevents ratchet 33 from returning to its original position. In this manner, fresh ribbon is continuously provided as the machine is used.

In Figure 4 which illustrates in part a ticket printed with the machine of the invention, Number 541 indicates the lot number of the article, numeral 5 the number of dozen in the lot, the next numerals 1, 2, 3, 6, 20 etc., the operation numbers to be performed by the piece work operators, and the bottom numerals the prices for the performance of the particular operation set forth immediately above it.

In the operation of the machine, the required typebars are removed from the drawers 19 and stacked up on support 21 so that the lines of type of the individual bars face the ribbon. The front part of hinged top 10 is lowered and the coupon ticket 13 inserted sideways in slot 12 so as to rest upon the upper surface of metallic support 21, whereupon handle 25 is turned toward the operator to force platen 23 into engagement with the ticket thereby causing the type characters to make impressions on the ticket through the ribbon 24. The handle may then be turned away from the operator and the ticket removed, thus enabling the printing of a coupon ticket with merely a single operation of the machine.

What is claimed is:

1. A printing machine for tickets having a single row of parallel coupons, comprising a single support for said typebars and tickets, a horizontal plurality of typebars arranged to be stacked horizontally one above the other, a moveable inked ribbon arranged in a vertical plane in front of said typebars, a platen, and means for moving said platen horizontally towards and away from said ribbon and typebars.

2. A printing machine for tickets having a single row of parallel coupons, comprising a plurality of typebars stacked horizontally one above the other, each of said typebars having means for enabling said typebars to be aligned relative to one another, a horizontally moveable inked ribbon in a vertical plane in front of said typebars, a platen extending across the length of said typebars, racks on each side of said platen, gears meshing with said racks for causing horizontal motion of said platen, a common shaft for said gears, and a handle attached to said shaft.

3. A printing machine for tickets having a single row of parallel coupons, comprising a plurality of typebars stacked horizontally one above the other, each of said typebars having means for enabling said typebars to be aligned relative to one another, a horizontally moveable inked ribbon in a vertical plane in front of said bars, a platen extending across the length of said typebars, racks on each side of said platen, gears meshing with said racks for causing horizontal motion of said platen, a common shaft for said gears, a handle attached to said shaft, and resilient means secured to said machine and platen for returning said platen to normal position.

4. A printing machine for tickets having a single row of parallel coupons, comprising a plurality of typebars stacked horizontally one above the other, each of said typebars having means for enabling said typebars to be aligned relative to one another, an inked horizontally movable ribbon extending in a vertical plane in front of said bars from a storage spool on one side of said machine to a collecting spool on the other side of said machine, a ratchet wheel connected to said last spool, a platen moveable towards and away from said ribbon, a pawl linked to said platen and cooperating with said ratchet for moving said ratchet and collecting spool once each time said platen approaches said bars, and a stop for preventing return movement of said ratchet.

5. A printing machine for tickets having a single row of parallel coupons, comprising a plurality of individual typebars arranged to be placed adjacent one another with their lines of type forming a column of print, each of said typebars having means for enabling said typebars to be aligned relative to one another, an inked horizontally moveable ribbon extending in a vertical plane in front of said typebars from a storage spool on one side of said machine to a collecting spool on the other side of said machine, a ratchet wheel connected to said collecting spool, a platen movable toward and away from said ribbon, a pawl linked to said platen and cooperating with said ratchet for causing said ratchet and collecting spool to move once each time said platen approaches said typebars, a stop for preventing return movement of said ratchet, and means associated with said storage spool for keeping said ribbon taut.

6. A printing machine for tickets characterized by a single row of parallel coupons having, in combination, a drawer containing a plurality of thin rectangular typebars stacked horizontally therein one above the other, said typebars having holes spaced along the length thereof, and a plurality of pins of a diameter not larger than that of the holes in said bars secured to said drawer in the same spaced relation as and adapted to fit into said holes for maintaining said typebars in position in said drawer.

7. A printing machine for tickets having a single row of parallel coupons, comprising a plurality of typebars arranged to be stacked horizontally one above the other, means for enabling said bars to be aligned relative to one another, a moveable inked ribbon arranged in a vertical plane in front of said typebars, a platen, and means for moving said platen horizontally towards and away from said ribbon and typebars.

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