March 3, 1931. H. B. OHMER 1,794,795

PRINTING MECHANISM

Filed Sept. 21, 1927

Fig. 3.

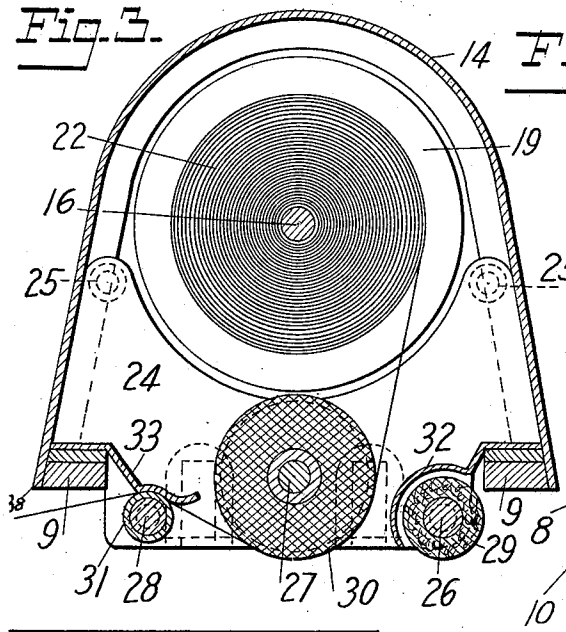
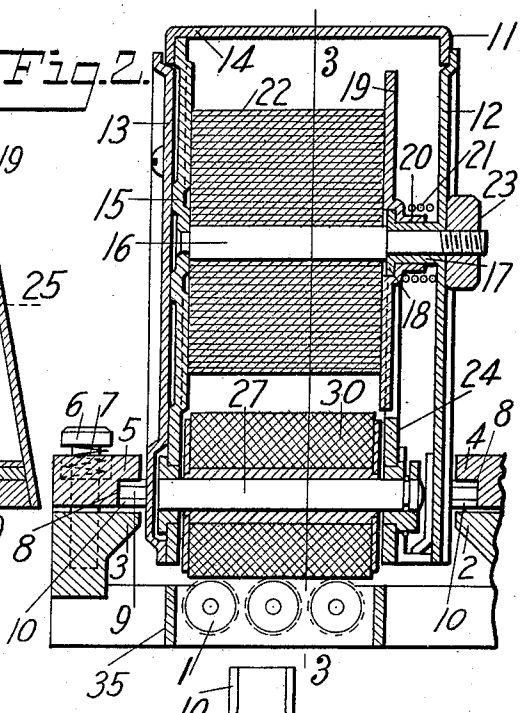


Fig. 2.



3	6572	1809	3242 1
	36	39	42
7	8960	1325	7631 4
	37	40	43
9	8351	2743	8760 1
	38	41	44

Fig. 6.

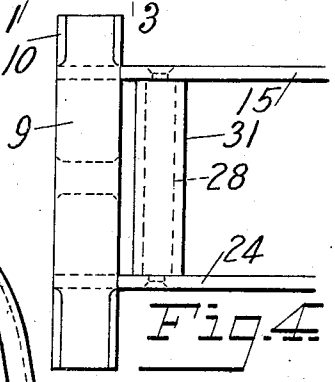


Fig. 4.

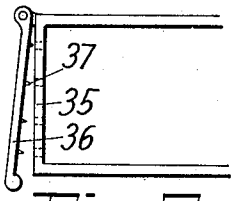


Fig. 5.

Fig. 1.

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UNITED STATES PATENT OFFICE

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PRINTING MECHANISM

Application filed September 21, 1927. Serial No. 220,901.

This invention relates to an improved printing mechanism. One of the principal objects thereof is to provide a printing mechanism to make impressions or records from movable type, such as type wheels.

The construction described herein is capable of being used in connection with many and varied types of machines but is particularly designed to transfer the records on movable counting wheels to a record strip which may be used by the auditor in checking accounts. In the particular construction shown in this application there are revoluble counting wheels which record the number of tickets sold to various destinations. It is necessary that records be made from these counting wheels for the auditor's office and this invention relates to the particular machine for accomplishing this purpose. It is obvious, however, that it may be used for many other purposes and I, therefore, do not limit myself to the particular use described above but desire to claim the printing mechanism broadly regardless of what kind of record it may take.

In the drawings, Fig. 1 is a side elevational view of the machine showing it in position on tracks to guide it and press it against the type wheels.

Fig. 2 is a cross sectional elevational view on the line 2—2 of Fig. 1.

Fig. 3 is a cross sectional elevational view on the line 3—3 of Fig. 2.

Fig. 4 is a bottom plan view of the left-hand portion of the carrier shown in Fig. 1.

Fig. 5 is a fragmentary plan view of the means to hold the record paper at the end of the trackway, and

Fig. 6 is a representation of a fragment of the record taken by the machine.

Referring more particularly to the drawings, there are groups of type wheels 1 which are connected to the machine which issues tickets to various destinations. Each time a ticket is issued the group of counting wheels 1 corresponding to the station of destination is actuated one unit. If, for instance, New York is station No. 39 the number of tickets sold in any particular interval of time to such destination can be readily ascertained by subtracting the number appearing on the type wheels 1 corresponding to such station when the agent went on duty from the number appearing on the same group of type wheels when he went off duty. It is convenient, however, for the auditor to have the numbers appearing on the various groups of type wheels transferred to a paper record instead of reading the record directly from the type wheels. By having such a record, it can be filed and referred to whenever necessary but if it were necessary for him to read this data from the type wheels the record would be destroyed as soon as the machine was again actuated. The method of actuating these type wheels and what they may register forms no part of this invention. The above statements are made by way of explanation of the mechanism with which this invention is related.

On each side of the type wheels 1 are trackways 2 and 3 and above these trackways are upper trackways 4 and 5. If desirable, the trackways may be adjustable toward and from each other by means of set screws 6, there being a spring 7 interposed between the set screws 6 and the upper rail. Channels 8 are provided between the upper and lower trackways, which channels receive bars 9 which are beveled as indicated by the reference character 10. These bars extend across the bottom of the carrier 11 and serve to guide and press the platen hereinafter described against the type wheels so as to make a printed record. The carrier 11 consists of sidewalls 12 and 13 and a cover 14, which cover 14 extends up one side, over the top and down the other side of the carrier, as clearly shown in Fig. 1. Within the carrier is a plate 15 which carries a shaft 16. The sidewall 12 is formed integral with a hub 17 having a head 18. A circular plate 19 is provided with a journal 20 surrounding the hub 17 and a spring 21 resiliently presses the plate 19 against a roll of paper 22 journaled on the shaft 16. The head 18 holds the plate 19 so that it will not fall off when the paper is being replenished. The sidewall 12 is held in position by means of a thumb nut 23 which

screws on the outer threaded portion of the shaft 16.

At the bottom of the carrier a wall 24 is secured to the plate 15 by means of studs 25. Shafts 26, 27 and 28 are mounted in the wall 24 and plate 15. The shaft 26 carries an inking roller 29. The shaft 27 carries a resilient platen such as a rubber roller 30. If desired, a roller 31 may be inserted on the shaft 28. This latter roller, however, has not been found to be essential. A guard 32 may be provided to keep the paper strip on the roll 22 from coming into contact with the ink roller 29 and a guard 33 may be provided to act as a brake on the roller 31 to prevent the paper being withdrawn into the carrier. For convenience sake, the handle 34 is attached to the carrier by which it may be moved. The ends of the trackways 2 and 3 are provided with a cross bar 35 to which is pivoted a holding member 36 provided with teeth 37.

In operation, the carrier is placed at the end of the rails so that the bars 9 are directed into the channels 8. The paper passes down from the roll 22 beneath the rubber roller 30 and over the roller 31. The projecting end is placed on the cross bar 35 and the holding member 36 is moved against it so that the teeth 37 push through the paper and hold it. The carrier is now pulled forward either by grasping the carrier as a unit or by pulling it by its handle 34 and as it moves forward the paper is unwound from the roll 22 and is pressed against the type wheels 1 by means of the rubber roller 30, the type wheels having been inked by the ink roller 29. The paper is then lifted from the type wheels by means of the roller 31 from whence it passes out of the carrier. When the carrier has been moved to the end of the rails the paper now extends for the entire length thereof and over all of the type wheels. The paper is now brought against a knife edge 38 which may be serrated if desired to facilitate the detachment of the paper. The paper strip such as shown in Fig. 6, having the record impressed thereon, may now be lifted from between the trackways and when the holding member 36 is moved outwardly disengaging the teeth 37 the record strip may be turned over to the auditor.

The record strip shown in Fig. 6 indicates that 6,572 tickets have been sold to station No. 36 and that 8,960 have been sold to station No. 37, etc. for the remaining numbers appearing thereon. Obviously, many changes may be made in the machine without departing from the spirit or scope of this invention. For instance, the thumb screws 6 and spring 7 may be dispensed with. Similarly, the guard 33 is not absolutely required nor is a roller 31 really necessary as there is very slight tendency of the paper to draw backwards into the carrier. I, therefore, desire to claim the invention broadly except as I may limit myself in the appended claims.

I claim:

1. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper, an inking member and a platen carried by said carrier, and means whereby said carrier is guided so as to cause the paper from said roll to be pressed resiliently against said type members after said inking member has inked said type members.

2. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper carried thereby, means whereby said type members are inked, means whereby an impression from said type members is thereafter made on the paper from said roll, and means to direct the travel of said carrier and to force said second mentioned means into resilient contact with said type members.

3. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper carried thereby, means whereby said type members are inked, means whereby an impression from said type members is thereafter made on the paper from said roll, and means whereby said paper after being printed is lifted out of contact with the type members.

4. In combination with type members, a movable printing carrier, guide rails each having a channel, means carried by said carrier adapted to be received in the channels of said guide rails, means for supporting a supply roll of paper carried by said printing carrier, means whereby said type members are inked, and a platen whereby an impression from said type members is made on the paper from said roll, said guide rails serving as a means to direct the travel of said carrier and to force said platen into resilient contact with said type members.

5. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper carried thereby, means whereby said type members are inked, means whereby an impression from said type members is thereafter made on the paper from said roll, and means whereby a part of the paper which has been printed is held against movement so as to eliminate any smearing action.

6. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper carried thereby, means whereby said type members are inked, means whereby an impression from said type members is thereafter made on the paper from said roll, a knife carried by said carrier to facilitate the severance of the paper after it has been printed and means to direct the travel of said carrier and to force said second

mentioned means into resilient contact with said type members.

7. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper carried in the upper portion of said carrier, a platen positioned below said supply roll of paper, an inking member positioned forwardly of said platen, and means whereby said inking member and platen are guided into resilient contact with said type members so that as said paper unwinds from said supply roll and passes beneath said platen and above said type members a printed record will be transferred from the type members to the paper.

8. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper and an impression roller carried thereby, two pairs of guide rails adjacent said type members, means to resiliently press one of said guide rails forming a pair towards the other of said pair, means carried by said carrier to engage said guide rails and thereby cause said impression roller to press resiliently the paper from said paper roll against said type members.

9. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper carried thereby, means whereby said type members are inked, and means including upper and lower guides whereby an impression from said type members is made on the paper from said roll, and means to resiliently press the upper of said guides toward the lower guide.

10. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper and an impression roller carried thereby, means whereby said impression roller is resiliently pressed against said type members, whereby an impression from said type members is made on said roll.

11. In combination with type members, a movable printing carrier, means for supporting a supply roll of paper, an inking member and a platen carried by said carrier, means whereby said carrier is guided so as to cause the paper from said roll to be pressed against said type members after said inking member has inked said type members, and a guard adjacent said inking member to prevent the paper from said roll coming in contact with the ink on said inking member.

In testimony whereof I affix my signature.

HENRY B. OHMER.