March 8, 1938. W. P. HARRIS 2,110,797

TICKET CANCELING MACHINE

Filed Oct. 10, 1936 2 Sheets-Sheet 1

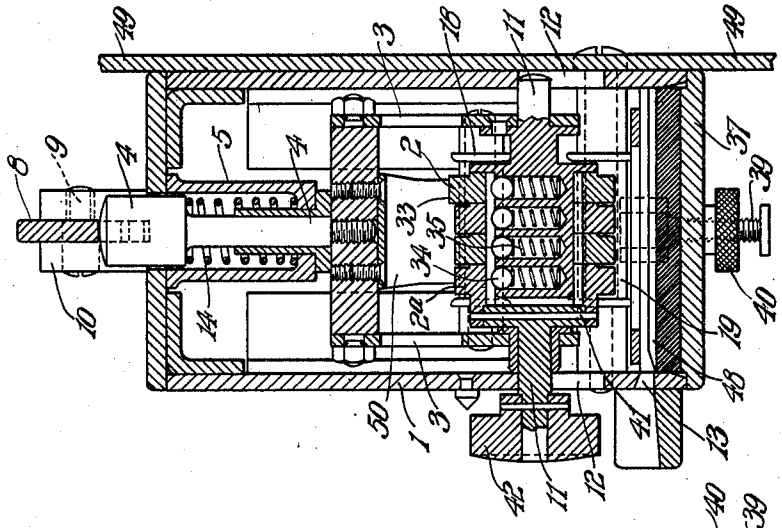


Fig. 2.

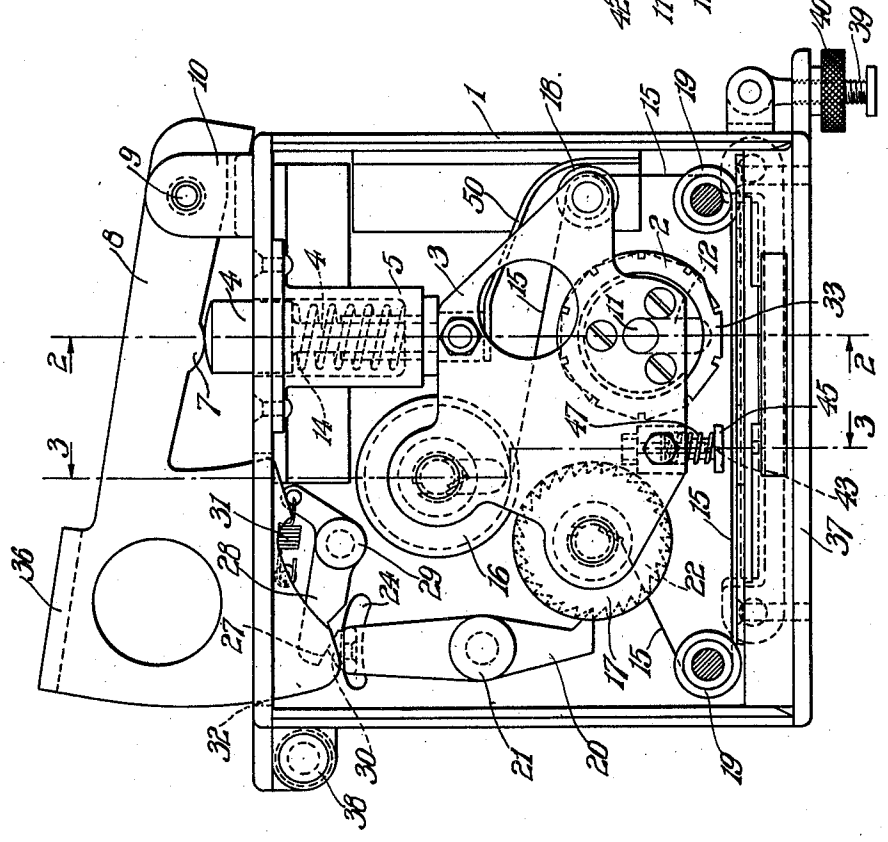


Fig. 1.

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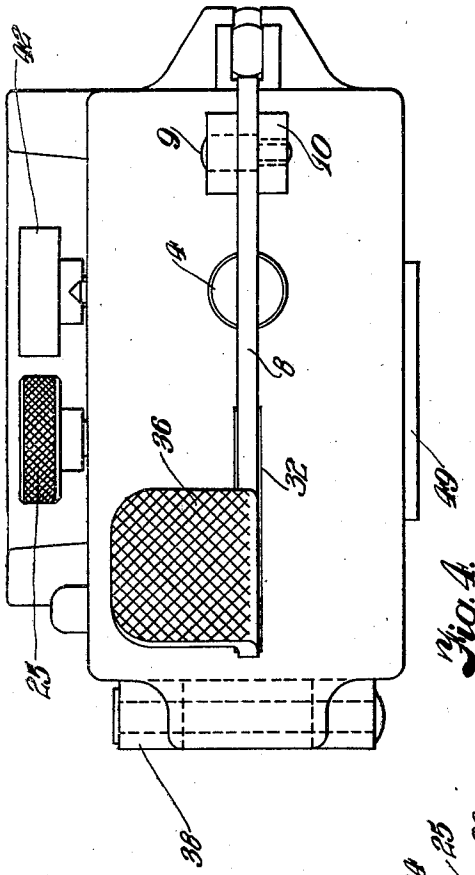


Fig. 4.

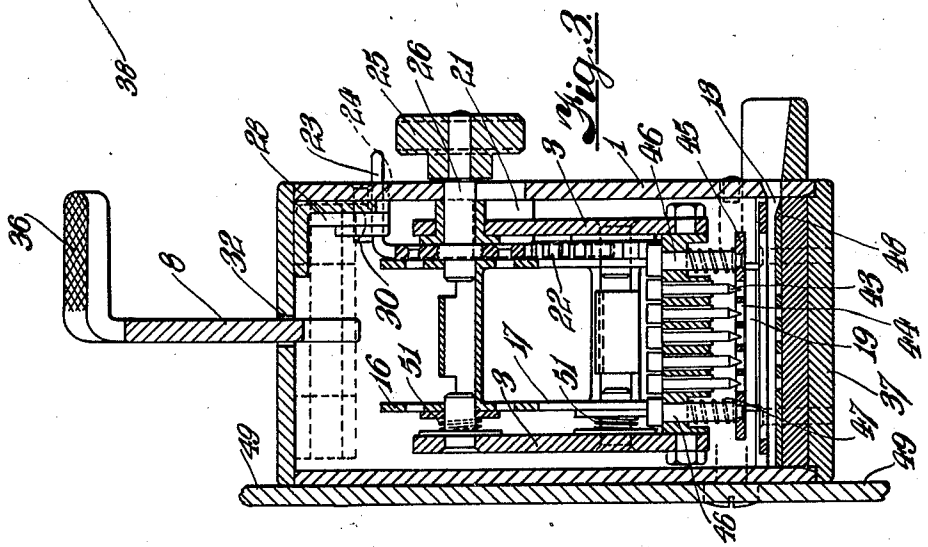


Fig. 3.

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TICKET CANCELING MACHINE

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Application October 10, 1936, Serial No. 105,118
In Great Britain September 2, 1935

3 Claims. (Cl. 101—20)

This invention relates to a machine for applying cancellation marks to tickets and the like and has for its object to provide a new or improved portable machine by which return tickets or the like can be readily marked by the conductor of a vehicle so as to prevent their improper use.

According to the invention a cancellation marking machine is provided comprising a casing provided with an opening to receive the ticket to be marked and adjustable marking mechanism adapted to be operated to mark the ticket by means of an external handle or lever.

The marking mechanism may be adapted to be adjusted by hand to print a date, number or other mark to identify a particular vehicle or journey for which the ticket is available or to show the day or hour when the ticket was canceled. For this purpose the marking mechanism may comprise a number of printing wheels certain of which are accessible for adjustment only when the casing is opened whilst certain of the printing wheels may be adjustable by means of an external handle so that the conductor can adjust these wheels from time to time whilst the machine is in use.

Reference will now be made to the accompanying drawings which illustrate by way of example constructions according to the invention and in which:—

Fig. 1 is an elevation with one side of the casing removed.

Fig. 2 is a cross sectional elevation taken on the line 2—2 of Fig. 1.

Fig. 3 is a cross-sectional elevation taken on the line 3—3 of Fig. 1.

Fig. 4 is a plan of Fig. 1.

In the construction illustrated in Figs. 1–4 the ticket marking device consists of a casing 1 having within it a number of printing wheels 2 located between frame plates 3 which form a sliding carriage, this carriage being attached to the base of a plunger 4 which is slidable in a sleeve 5 depending from the underside of the top of the casing 1. The plunger 4 projects through the top of the casing and upon its upper end bears against a projection 7 on an operating lever 8 pivoted at 9 to brackets 10 on the casing and formed with a plate 36 by which it can be depressed to operate the device as hereinafter described.

The free end of the lever 8 is guided in a slot 32 in the top of the casing. The sliding carriage constituted by the plates 3 is supported partly by the plunger 4 and partly by the ends of a shaft 11 carrying the printing wheels 2 which shaft ends engage in slots 12 formed in the front and rear walls of the casing to hold the carriage against rotation.

At the base of the casing is a slot 13 through which the ticket to be cancelled can be inserted into the machine in a position to be printed upon when the plunger 4 is depressed, a return spring 14 being disposed around the plunger within the sleeve 5 for the purpose of retracting the carriage after each printing operation and permitting the printed ticket to be withdrawn.

Printing is effected by means of an inked ribbon 15 carried on two spools 16 and 17 mounted in the sliding carriage 3 which also carries guide rods or rollers 18 for the said ribbon. The horizontal stretch of the ribbon 15 which lies between the printing wheels 2 and the surface to be printed extends between two guide rods or rollers 19 which are secured in the casing 1 so that when the parts are at rest this portion of the ribbon is supported out of contact with the printing wheels and out of contact with the printing surface. The ribbon feed is effected by a pawl 20 pivotally mounted at 21 in the main casing 1 and engaging a ratchet wheel 22 mounted co-axially with the ribbon spool 17. The upper end of the pawl 20 is formed or provided with a tail piece 23 which projects through an arcuate slot 24 in the casing 1 to enable the pawl to be rocked to an inoperative position when the ribbon is to be rewound which is effected by turning a knob 25 fixed to an end of the spindle 26 of spool 16 which spindle projects through a vertical slot in the wall of casing 1. The pawl 20 is held in either of its two positions by means of notches 27 formed on a latch member 28 pivoted at 29 to the casing 1 and held in engagement with the head 30 of pawl 20 by a spring 31. The head 30 on the pawl and the notches 27 are shaped to permit of limited movement against the action of the spring 31, so that when the pawl 20 is moved to the operative position it can ride over the teeth of the ratchet wheel 22 without displacing the head 30 from the notch 27, the spring 31 being effective to return the head 30 to a central position in the notch and thereby move the pawl 20 into position to engage the next tooth of the ratchet wheel 22.

The printing wheels 2, which are provided with any desired number of printing surfaces 33 arranged around their peripheries so as to be brought selectively into printing positions, may be individually rotatable on their shaft 11 and held in one of a number of adjusted positions by

means of balls 34 pressed into engagement with sockets in the inner peripheries of the wheels by springs 35. To permit of adjustment of the printing wheels, the base 37 and one end of the casing 1 are hinged at 38 so that when this portion is opened the wheels 2 are accessible. The hinged portion of the casing is fastened by means of a pivoted pin 39 adapted to enter a slot in one end of the base 37 and provided with a locknut 40. This fastening may be sealed if it is desired to prevent unauthorized interference with the printing wheels. When it is desired, as in the construction illustrated, to provide for adjustment of one of the printing wheels by the conductor, this printing wheel 2a may be fixed to the shaft 11 by means of a pin 41 and an adjusting knob 42 mounted on the end of the shaft which extends through to the exterior of the casing.

In addition to the printing wheels the sliding carriage also carries a series of perforating elements 43 whose lower ends normally rest within slots 44 in a plate 45 carried at the lower ends of studs 46 projecting downwards from the sliding carriage and normally held in the positions shown in Fig. 3 by springs 47. When the carriage moves downwardly the plate 45 makes contact with the ribbon 15, continued movement of the carriage compressing springs 47 and causing the perforating elements 43 to pass through the ribbon and the ticket which action is permitted by a perforated plate 48 disposed in the base of the slot 13. This operation ensures that the edges of the perforations made in the ticket are coloured by the ribbon 15 and cannot be obliterated thus constituting a safeguard against fraudulent cancellations.

The back plate of casing 1 is preferably provided with upwardly and downwardly projecting arms 49 for attaching the machine to the straps by which the main ticket printing machine is carried on the person of the conductor.

In order to facilitate the insertion of a fresh ribbon into the machine the sliding carriage may be provided with a deflector plate 50 arranged so that when the end of a ribbon is pushed round one of the guide rollers 18 by hand the plate 50 deflects the ribbon round the printing wheels so that the end can be grasped and drawn into position for attachment to the appropriate spool. The spools 16 and 17 are held against free movement by springs 51 mounted around the ends of their spindles and bearing against the plates 3 which form the sliding carriage.

It is to be understood that the perforating means above described are not an essential feature of the machine which can be used to effect various markings on tickets and the like with the printing wheels only.

In the application of the invention to the issue of tickets on public vehicles the printing and perforating arrangements can be utilized to indicate the day and hour of issue and also for canceling return tickets.

I claim:—

1. A machine for applying cancellation marks to tickets and the like comprising a casing provided with an opening to receive the ticket to be marked, adjustable marking mechanism comprising an adjustable printing wheel and a perforating device, an inking ribbon supported for cooperation with said printing wheel and perforating device, and an externally projecting handle for forcing said printing wheel into contact with said ticket and for causing said perforating device to pierce said ribbon and perforate said ticket.

2. A machine for applying cancellation marks to tickets and the like, comprising a casing containing a movable carriage having an adjustable marking mechanism and an inking mechanism mounted therein, an external handle for depressing said carriage to cause markings to be printed upon a ticket inserted in a slot in the base of the machine, said marking mechanism comprising a printing wheel and a perforating device and said inking device comprising a ribbon through which said printing wheel and said perforating device operate upon said ticket, said perforating device comprising a plurality of perforating elements movable with said carriage and a perforated plate adapted to press upon the inked ribbon and ticket while said perforating elements pass through it, springs disposed above said plate, restoring it to normal position relatively to said carriage after operation thereof.

3. A machine for applying cancellation marks to tickets and the like, comprising a casing having grooves in the walls thereof and a ticket receiving slot in its base, a movable carriage mounted in the casing, a shaft supported by said carriage and projecting beyond the sides thereof and slidable in said grooves in the casing, an adjustable marking mechanism comprising a printing wheel mounted on said shaft, an inking mechanism mounted in said carriage, an external spring retracted handle for depressing said carriage to cause markings to be printed by the printing wheel upon a ticket inserted in the slot in the base of the casing, and a plunger attached to said carriage and operable by said external handle against the spring action thereon to effect the printing operation.

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