

J. W. JONES.
 COUPON PRINTING AND DELIVERING APPARATUS.
 APPLICATION FILED MAY 22, 1909.

938,243.

Patented Oct. 26, 1909.
 2 SHEETS—SHEET 1.

Fig. 1.

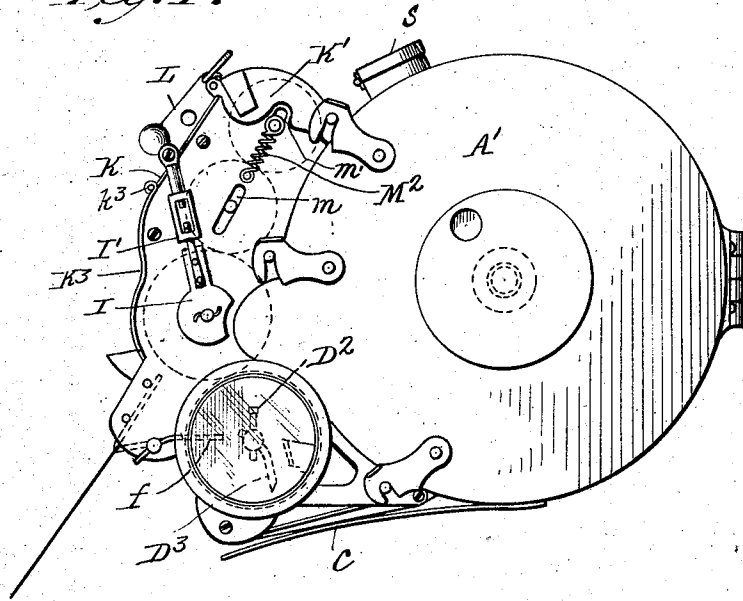
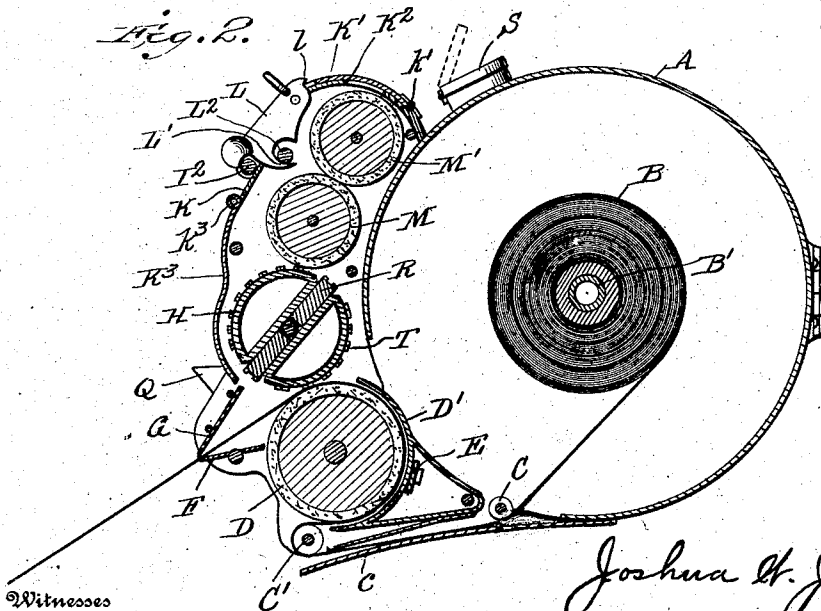


Fig. 2.



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Fig. 3.

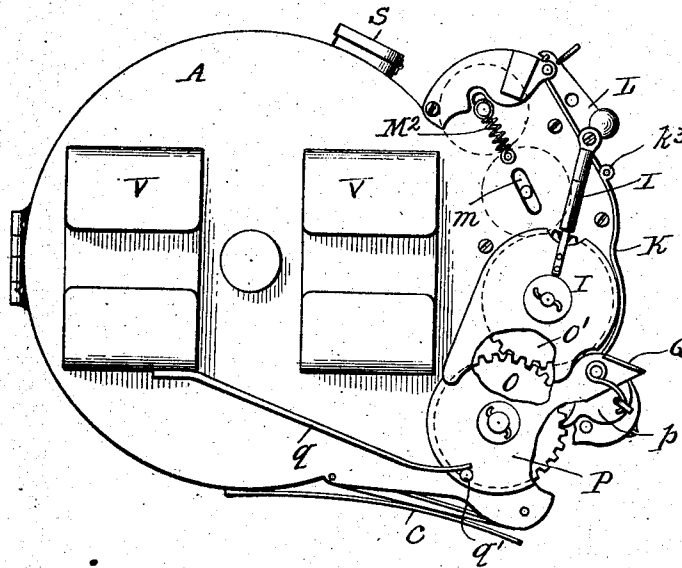


Fig. 4.

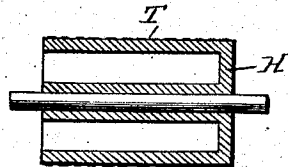
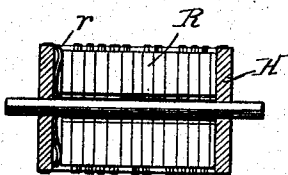


Fig. 5.



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COUPON PRINTING AND DELIVERING APPARATUS.

938,243.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed May 22, 1908. Serial No. 497,655.

To all whom it may concern:

Be it known that I, JOSHUA W. JONES, of Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented a certain new and useful Improvement in Coupon Printing and Delivering Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

The present invention relates to the class of coupon printing and delivering apparatus illustrated and described in my prior patent No. 907,369, dated December 22, 1908.

The object of the present invention is to improve the construction of the mechanism for printing and delivering the coupons, whereby, if desired, the entire body of printed matter may be applied to each coupon, as it is advanced for delivery to a passenger.

A further object of the invention is to provide a means whereby the strip will be advanced regularly and with certainty so as to register accurately with the printed matter on the individual coupons such as numbers, etc., previously printed or marked on the strip.

Referring to the accompanying drawings; Figure 1 is a side elevation of a coupon holding, printing and delivering apparatus embodying the present invention; Fig. 2 is a vertical section through the same showing the feeding and printing mechanism for the strip. Fig. 3 is an elevation looking at the opposite side of the apparatus from Fig. 1 and with portions broken away to illustrate underlying parts. Fig. 4 is a detail section through the printing roller showing the preferred construction. Fig. 5 is a section showing the removable printing type and means for retaining them in position in the roller.

Similar letters of reference in the several figures indicate the same parts.

The device illustrated herein conforms in general outline and construction to the device illustrated in the before-mentioned patent; that is to say, there is a substantially cylindrical casing A having a hinged cover A' to facilitate the placing of the roll of

coupons B within the casing. The coupons are conveniently held between rotary disks, as in said prior device, but not illustrated herein, and journaled on a center spindle B'.

The roll of coupons is in the form of a strip upon which, if desired, suitable printed matter may be placed and each coupon is given a distinctive number. From the roll the free end of the strip passes beneath a guide pin or roller C, thence forwardly in a guide-way formed by protecting walls *c* and around a second guide roller *c'*, the guide roller *c'* being exposed to facilitate threading the strip into and through the apparatus. After passing around the guide roller *c'* the end of the strip is passed inwardly around the feed and platen roller D, being guided in its passage by the curved shield or guide surface D' by which the end of the strip will be again directed forwardly so as to pass out of the apparatus between the gripping edges of the jaws F and G which jaws correspond to the similarly lettered jaws in the apparatus of the prior patent. The jaw F is a pivoted jaw and at one end carries an arm or projection *f*, (Fig. 1) with which an adjustable projection D² on the shaft of the feeding and platen roll D² is adapted to engage for holding the jaw tightly in its closed position when the roller has advanced a distance corresponding to the length of one coupon.

During the rotation of the feeding and platen roll and immediately preceding the engagement of the projection D² with the arm *f* a second projection D³ on the shaft of roller D operates an alarm device for indicating that a coupon has been advanced for delivery. In the present apparatus this alarm device consists of a reed or flat spring E which is adapted to be put under tension by the projection D³, and to be released by the continued rotation of the roll. When released it will snap against or strike the wall of the tubular guide D' making a distinctive noise which will with certainty attract the attention of both the conductor and passengers.

Arranged above the feeding and platen roll is the printing roll H having printing characters thereon adapted to bear against the surface of the platen and feeding roll or against the coupon strip passing over the

same, said printing roll, however, being capable of a movement toward and from the platen and feeding roll. To permit of this movement it is journaled in movable bearings I preferably in the form of disks on each side of the main casing and connected by adjustable rods I' with a transverse shaft I² mounted on the movable front K of the casing. The front K of the casing is at its upper edge pivotally connected with a swinging section K', the latter being, in turn, pivotally connected or hinged to the main casing at k'. To hold these parts down in proper position with the printing roller bearing against the platen roller a hook or catch lever L having a shoulder l is mounted on the pintle connecting the sections K and K' of the casing and in position to have its hook N—L' to pass under a fixed cross-bar L². When the catch is disengaged from the cross-bar L² and moved outwardly and upwardly, the shoulder l engaging the section K' of the casing front will arrest its further independent movement and further upward movement can only take place by lifting the entire front wall of the casing together with the printing roller.

Mounted within the front of the casing and bearing on the printing roller is an ink-feeding roller M, said roller being journaled in slot bearings m (Fig. 1) and being adapted to be pressed downwardly against the printing roller by an ink distributing roller M' mounted in slot bearings m' and held down by springs M² one at each side. For giving access to the ink distributing roller M' a movable cover K² is mounted on the section K' of the casing and for giving access to the printing roller the lower end of the front wall of the casing is in the form of a door K³ hinged at k³ to the lower edge of the section K of said front wall.

By providing adjustable connections between the printing roller and its support whereby it is held in contact with the platen roller, any desired pressure of the type faces against the coupon strip may be secured and at the same time the ink rollers will be held up in operative relation to each other and to the printing roller by a substantially uniform yielding pressure which is quite independent of the adjustment of the printing roller itself. With such an arrangement it is very necessary that the platen and printing rollers should invariably rotate in unison and to secure this end said rollers are provided at one end with intermeshing gear wheels O—O' (Fig. 3). The teeth of these gears may, however, be disengaged by lifting the printing roller, as hereinbefore described, for instance, when a strip is being inserted or when it becomes desirable for any reason to adjust the relation of the strip to the printing roller so as to secure proper

registry of the type faces with the indications on the coupon strip.

In the operation of the device it is designed that the edges of the gripping jaws G and F shall serve as severing or tearing edges for the projected coupon, thus normally leaving no projecting edge which can be grasped and, in order to project the next succeeding coupon or the end of the same so that it may be withdrawn, partial rotation is imparted to the platen and feeding roller, thereby opening or releasing the jaws F and G and rotating the printing roller through the engagement of the intermeshing gears O—O'. Having projected the end of the coupon strip said end is grasped by the conductor and a coupon drawn outwardly until the jaws are again automatically closed through the engagement of the projection D² with the arm f when the movement of the strip will be arrested and the coupon is detached as before described.

In order to impart the initial movement to the feed roller in a convenient manner with the same hand which is to grasp the projected end of the coupon, a reciprocatory feed lever P is journaled on one end of the shaft of the feed roller and provided with a spring pressed pawl p adapted to engage the teeth of the gear wheel O. A finger piece Q on the lever P serves as a convenient means whereby it may be depressed so as to advance the feed roller a sufficient distance to release the jaws and project the end of the coupon far enough to enable it to be readily grasped, after which the coupon itself may be drawn out to complete the operation, yet, if so desired, the feed lever may be itself operated a succession of times sufficient in number to advance the coupon the desired distance at the proper instant the alarm sounds as a warning that one coupon has been projected. The feed lever P is returned to normal position by a spring q secured to the casing and bearing on a stud q' on the lever. The disk I and feed lever itself form a casing for inclosing the gear wheels O—O' which gear wheels may, as a consequence, be conveniently located on the outside of the main casing.

The printing roller is conveniently made with a stereotype metal body portion indicated by the letter H but having in opposite faces thereof recesses or chambers extending longitudinally of the axis for the reception of movable and interchangeable type R adapted to be held in place by springs r at the ends or the recesses or chambers. These type are adapted to print the changeable data on the coupons and those types not in use for the time being may be held in a receptacle S at the top of the apparatus. The permanent data to be printed on the coupons is preferably contained on the stereotype

faces T, said faces being curved to conform to the cylindrical surface of the roller.

The whole apparatus is of such size and form that it may be conveniently worn on a belt and for this purpose belt clips V are mounted on the rear face of the casing through which the belt may be passed, although, if so desired, an additional strap or harness may be extended around the neck or over the shoulders of the wearer.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:

1. In a device such as described for delivering and automatically printing consecutively numbered coupons from a coupon strip, the combination with a casing having coupon roll supporting means, gripping jaws for gripping the strip in rear of the projected coupon and feeding and printing rolls between which the strip passes to said jaws, of means for initially moving said feeding roll to simultaneously release and advance the strip, embodying an operating lever having a projecting finger piece and a clutch intermediate said lever and feeding roll; substantially as described.

2. In a coupon holding and delivering device, the combination with a casing having means for holding a coupon roll, gripping jaws for gripping the strip in rear of the projected coupon, a feeding roll for said strip and cooperating projections on one of said jaws and feeding roll whereby the jaw is moved into its closed position when the feeding roll is at rest and is released by a movement of the feeding roll in a direction to advance the strip, of a feeding roll operating mechanism embodying a lever pivotally mounted on the axis of the feeding roll and having a projecting finger piece and a pawl on said lever for advancing the feeding roll when the lever is depressed.

3. In a coupon holding and delivering device, the combination with a casing having means for holding a coupon roll, gripping jaws for gripping the strip in rear of the projected coupon, feeding and printing rolls between which the coupon is fed and gear wheels on said rolls whereby one is driven from the other, of an operating lever, a pawl on said lever cooperating with one of the gear wheels and a finger piece carried by said lever in proximity to the gripping jaws, whereby said lever may be depressed to release said jaws and inaugurate the movement of the coupon strip.

4. In a coupon feeding and delivering device, the combination with the casing having means for supporting a roll of coupons and gripping jaws for gripping the strip in rear of the projected coupon, of cooperating feeding and printing rolls engaging said strip in advance of the gripping jaws, intermesh-

ing gears connecting said feed and printing rolls, a feed lever for inaugurating the rotation of said rolls embodying a finger piece projecting in proximity to the gripping jaws, means whereby the gripping jaws may be closed when the feeding roller is at rest and released when said feeding roller is advanced by the lever and means whereby said intermeshing gears may be disengaged for adjusting the position of the coupon with relation to the printing roller.

5. In a coupon holding and delivering device, the combination with the casing having means for supporting a roll of coupons, gripping jaws for gripping the strip in rear of the projected coupon, and printing and feeding rolls engaging the strip in advance of said gripping jaws, of a reciprocatory feed lever for inaugurating the advance of the feeding roll and releasing the gripping jaws from the strip, a finger piece on said lever projecting in proximity to the gripping jaws, intermeshing gears between the feed and printing rolls and an adjustable support for advancing the printing roll toward the feeding roll, whereby the pressure of the printing surface against the coupon strip may be regulated.

6. In a coupon holding and delivering device, the combination with a casing having means for supporting a roll of coupons, gripping jaws for gripping the strip in rear of the projected coupon, printing and feeding rollers cooperating with the strip in advance of the gripping jaws and means for inaugurating the feeding movement of the feeding roll and temporarily releasing the gripping jaws, embodying an operating lever having a finger piece projecting in proximity to said jaws, of spring pressed inking and ink distributing rollers located above and cooperating with the printing roll, substantially as described.

7. In a coupon holding and delivering device, the combination with a casing having means for supporting a roll of coupons, gripping jaws for gripping the strip in rear of the projected coupon, feeding and printing rolls cooperating with the strip in advance of the gripping jaws, and means whereby the movement of said feeding roll may be inaugurated and the gripping jaws temporarily released, of movable bearings for the printing roll, adjustable supports for said bearings, a locking lever for holding said bearings in position with the roll in engagement with the feeding roll, said lever constituting a means whereby the printing roll may be lifted out of engagement with the feeding roll to facilitate the adjustment of the strip.

8. In a coupon holding and delivering device, the combination with a casing having means for supporting a roll of coupons,

gripping jaws for gripping the strip in rear of the projected coupons and feeding, printing and inking rolls such as described, of a means whereby the movement of the rolls may be inaugurated and the gripping jaws temporarily released, embodying a reciprocatory lever having a finger piece projecting in proximity to the gripping jaws, a locking lever for holding the printing roll in engagement with the feeding roll and 10 hinged covers on said casing for giving access to the printing and inking rolls, substantially as described.

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