G. L. RICHARDS.
MACHINE FOR VENDING AND ADVERTISING.
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2 SHEETS—SHEET 1.

Inventor:

Witnesses:

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To all whom it may concern:

Be it known that I, GEORGE LIVINGSTON RICHARDS, a citizen of the United States of America, residing at Bank Buildings, Kingsway, in the county of London, England, have invented certain new and useful Improvements in or Relating to Machines for Vending and Advertising, of which the following is a specification.

This invention relates to coin freed machines for vending and advertising; the object being to provide a machine which, upon the insertion of the necessary coin or coins, is adapted to deliver postage stamps, tickets, and similar articles from a reel or stack and, simultaneously therewith, cards or sheets containing advertisements or other matter, also from a reel or stack.

The posting of letters and similar articles frequently entails considerable trouble and inconvenience when the sender happens to be situated remote from a post office or the latter is closed to business. The present invention is intended to obviate or minimize such inconveniences.

The invention therefore comprises a combined vending and advertising machine whereby the articles such as postage stamps, labels, passenger tickets, or the like may be vended and whereby also a card, booklet sheet of writing paper and envelop, and such like containing advertising matter, may be simultaneously delivered from a stack, the arrangement being such that the stamps or the like are issued with greater facility and in a more reliable manner than by the machines heretofore proposed or used.

To this end the invention consists essentially in issuing stamps, tickets, or such like from a reel by mechanical means rendered operative by the coin or coins representing the denominational value of the stamp, ticket or such like, and at the same time delivering a card, booklet, sheet of writing paper and envelop and such like with advertising matter from a stack, into a pocket.

The chief feature of this machine is the provision of an advertising device in conjunction with a coin freed vending apparatus.

The improved device may be arranged within the ordinary pillar or posting boxes, or in cabinets or other structures such as are ordinarily placed in hotels, public buildings, inclosures and the like.

Any desired number of stamps, tickets or such like may be dealt with by the machine and with the exception of requiring a coin or coins to be inserted the machine acts automatically. The reel of stamps, tickets, or such like, is fed into a device adapted to feed the same automatically toward the knives for severing the individual stamps from the strip which device consists of a number of needle points placed accurately on a roller preferably of five divisions, and provided with a suitable cover. These points engage the perforations of the stamps, tickets, or such like giving an accurate forward movement to the strip the roller containing the needle points being rotated through suitable gearing from the driving shaft. After the strip has been fed forward, a holding device is actuated by a cam and adapted to hold the strip tightly during the process of severing the same. The knives have a positive motion from a cam when cutting the strip at the perforations. After detaching the stamp, ticket, or such like from the strip, the upper knife is caused to assume its inoperative position by a spring or other suitable means. Located between the frames and adjacent to the strip feed gear, is placed the device for feeding the advertising matter and consists of a chute or stacker, mounted so as to contain a number of cards, booklets, sheets of writing paper and envelopes combined, and such like. This chute is provided with a suitable slide so that on the movement of the latter one of said articles is pushed from within the chute into the pocket at the same time as the stamp, ticket or such like is severed from the strip, the operator removing both articles from the pocket at the same time. The slide may be at the upper or the lower end of the chute and it is operated by a lever which is actuated by a cam on the main shaft. The machine is driven by gearing or other means from a separate unit and the whole machine is inclosed in a single casing. The machine can also be adapted to work by hand if necessary.
In order that the said invention may be clearly understood and readily carried into effect, I will proceed to describe the same with reference to the accompanying drawings in which:

5 Figure 1 is a side elevation of mechanism adapted to accomplish the objects hereinafter referred to. Fig. 2 is a front elevation. Fig. 3 is a plan corresponding to Fig. 1. Figs. 4 and 5 are detached views of parts hereinafter particularly referred to.

10 The drawings illustrate an arrangement of the mechanism adapted for the delivery of stamps, tickets, or such like articles singly at each operation. The machine can be adapted to issue one or more stamps or tickets simultaneously if occasion require or the exigencies of the situation demand the same.

20 Referring now to the drawings, the mechanism is arranged on frames 1, 2 mounted upon a base or bed plate 3. On the side frame 2 a reel of stamps, tickets or such like is mounted on the spindle 4 on which the reel is being carried between side plates 4'. The strip 5 from the aforesaid reel 4 is led over the roller 6 and under the roller 7 from which latter roller it passes to the feeding roller 8. This latter roller is provided with teeth or pins 9 arranged at intervals thereon and adapted to engage with the perforations in the strip of stamps, tickets or the like. The said strip is held against a certain portion of the surface of this roller 8 by means of a curved plate 10 of yielding or elastic character, the effect of the said plate being to insure the engagement of the strip by the teeth or pins 9. To this end the said plate is adapted to exert just sufficient pressure to effect the purpose without fear of tearing the strip. The aforesaid plate 10 is formed with slots or apertures which permit of the free passage of the teeth or pins 9 on their projection through the perforations in the strip 5.

30 Indicated by a screw whereby the plate 10 is held in position.

The operation of the roller 8, so as to effect the feeding of the strip 5 to the knives or cutters 18, 19, is effected by means of the gear wheel 12 mounted on the shaft 17 pertaining to the said roller 8. This wheel is formed or provided with stops or flats adapted for engagement with the mutilated wheel 13 which derives its motion from the spur wheels 14, 15 the latter being on the main shaft 16, which receives its motion from any suitable power unit (not shown).

Referring to the detail views Figs. 4 and 5, the wheel 12 is shown as formed with teeth 12' and intermediate smooth surfaces 12". The wheel 13 is formed with teeth 13' and a smooth periphery 13". When a feeding of the strip takes place, the wheel 13, by means of the teeth 13' engaging with one of the sections of teeth 12' moves the wheel 12 through an angular distance equivalent to such section of the teeth. Having moved the wheel 12 the wheel 13 by means of the plane part of its periphery slips past the wheel 12 by means of the respective smooth parts 12" and 13". In the present illustration, a chain or sprocket wheel 16' is shown mounted on the shaft 16. The strip 5 having been fed forward the desired amount, the knife 18 is caused to descend on to the knife 19 and thereby effect the severance of the stamp which has been fed forward by means of the mechanism just previously described, the severed stamp falling into the pocket 20. The knife 18 is operated by means of a lever 21 which is in turn actuated by a cam 22 on the aforesaid main shaft 16. The lever 21 is pivoted at 23 and engages at one end with the cam 22 and at the other end with a reciprocating slide or rod 24 having a connection at 25 with the knife 18. The end of the rod 24 adjacent to the lever 21 is provided with an anti-friction roller 26. A spring or other suitable means 27 effects the return of the knife 18 to its original position after effecting the cutting. A pad 28 descends just previously to the knife 18 so as to hold the strip 5 tightly in position during the process of severing the stamp therefrom; this pad is operated by means of the cam 29, on the main shaft 16, through a lever 30 and link 31, springs 32 on the guide rods 33 serving to lift the pad clear of the strip and allow the further feeding of the latter.

The aforesaid cards or the like containing the advertising matter are arranged in a rectangular chute or stacker 34 which may, for convenience, be mounted on the side frame 1 or attached on the underside of the frame for feeding upward. This chute or stacker may be of any suitable or convenient size adapted to contain the cards, booklets, or other articles in sufficient number, say, up to 1,000, and the lower end thereof is arranged adjacent to the pocket 20, the latter being adapted to receive the said articles as well as the stamps. The card or other article is delivered from the chute or stacker by means of a slide 35 adapted to work in guides 36, 37, the actuation of the said slide being effected by a lever 38 which is pivoted at 39 and which is operated by the cam 40 mounted on the main shaft 16. The arrangement is such that, at the operation of the machine for the purpose of obtaining a stamp the slide 35 is caused to move under or above the chute or stacker 34 and in so doing drives a card or other article which has previously arrived in its path, out of the chute or stacker 34, the said card or article falling into the pocket 20. The slide 35 is returned to its original position by means of the spring 41.
The chute or stacker is preferably constructed to contain as many cards, booklets, or other articles as there are stamps, tickets, or the like on the reel. Should a smaller number of cards or booklets be placed in the chute or stacker than there are stamps or tickets, the latter will continue to be issued even after the first mentioned articles have been exhausted, the issue of the stamps continuing until the reel thereof is exhausted.

The machine may be automatically closed at the coin slot by a slide or other suitable device actuated by an arrangement of levers which are set in operation directly the last stamp, ticket or similar article leaves the feed roll, thereby preventing coins being inserted when the machine is empty. A counter of the Veeder type for registering the amount of stamps, tickets or similar articles issued may be affixed to the machine and adapted for being worked from the main driving shaft 16.

In preparing the machine for working, the reel 4 is placed upon the spindle 4' between the plates 4'' and the strip is passed about the rollers as hereinbefore described the pins or projections on the roller 8 engaging with the perforations in the said strip and which latter is then led under the holding pad up to the edge of the knives 18. 19. The cover plate is then adjusted with sufficient pressure to keep the strip on the pins 9. The strip is now ready for having the stamps cut off one by one or more as the case may be, until the reel is exhausted.

The chute or stacker is filled with cards, booklets, or combined sheet of writing paper and envelop or such like containing advertisements which are issued singly, or being placed at the top of the stack. By inserting the predetermined coin or coins, which go through a suitable or usual testing mechanism and thereafter reach the starting lever of the power unit, the stamp, ticket or similar article, and the card, booklet, combined sheet of writing paper and envelop, or such like are delivered into the pocket together as hereinbefore described, and can be taken out by the operator. The power unit is preferably arranged so as to travel one revolution only each time a coin or coins is or are inserted.

What I claim and desire to secure by Letters Patent of the United States is:

1. In a vending machine, the combination of a feed roller for a strip of stamps, a gear wheel adjacent to said feed roller, said wheel having groups of teeth and intermediate smooth surfaces on its periphery, a mutilated wheel for imparting intermittent movement to said gear wheel and feed roller, a cam shaft geared to said mutilated wheel, a plurality of knives for severing single stamps from said strip, means for holding said strip during the severing operation, and mechanism pertaining to the cam shaft for operating said feeding, severing and holding means.

2. In a vending machine the combination of a feed roller for a strip of stamps, a gear wheel adjacent to said feed roller, said wheel having groups of teeth and intermediate smooth surfaces on its periphery, a mutilated wheel for imparting intermittent movement to said gear wheel and feed roller, a cam shaft geared to said mutilated wheel, a plurality of knives for severing single stamps from said strip, means for holding said strip during the severing operation, and lever mechanism for effecting the operation of the knives and holding means.

3. In a vending machine the combination of a feed roller for a strip of stamps, a gear wheel adjacent to said feed roller, said wheel having groups of teeth and intermediate smooth surfaces on its periphery, a mutilated wheel for imparting intermittent movement to said gear wheel and feed roller, a main driving shaft geared to said mutilated wheel, cams on said shaft and a plurality of levers which are actuated by said cams and which serve to operate the knives and holding means.

In testimony whereof I affix my signature in presence of two witnesses.

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Witnesses:

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