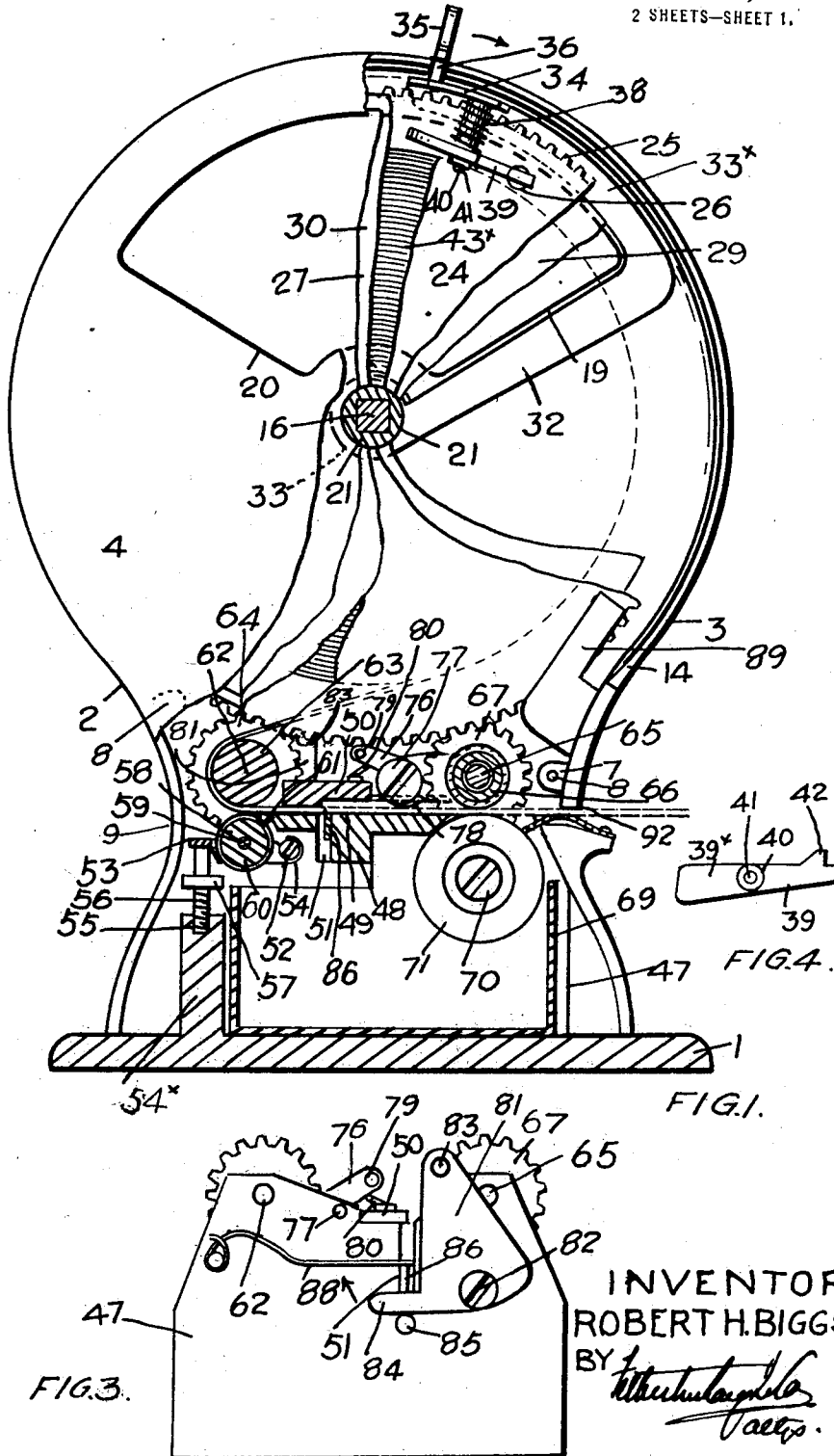


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 APPLICATION FILED AUG. 19, 1921.

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Patented Mar. 14, 1922.

2 SHEETS—SHEET 1.

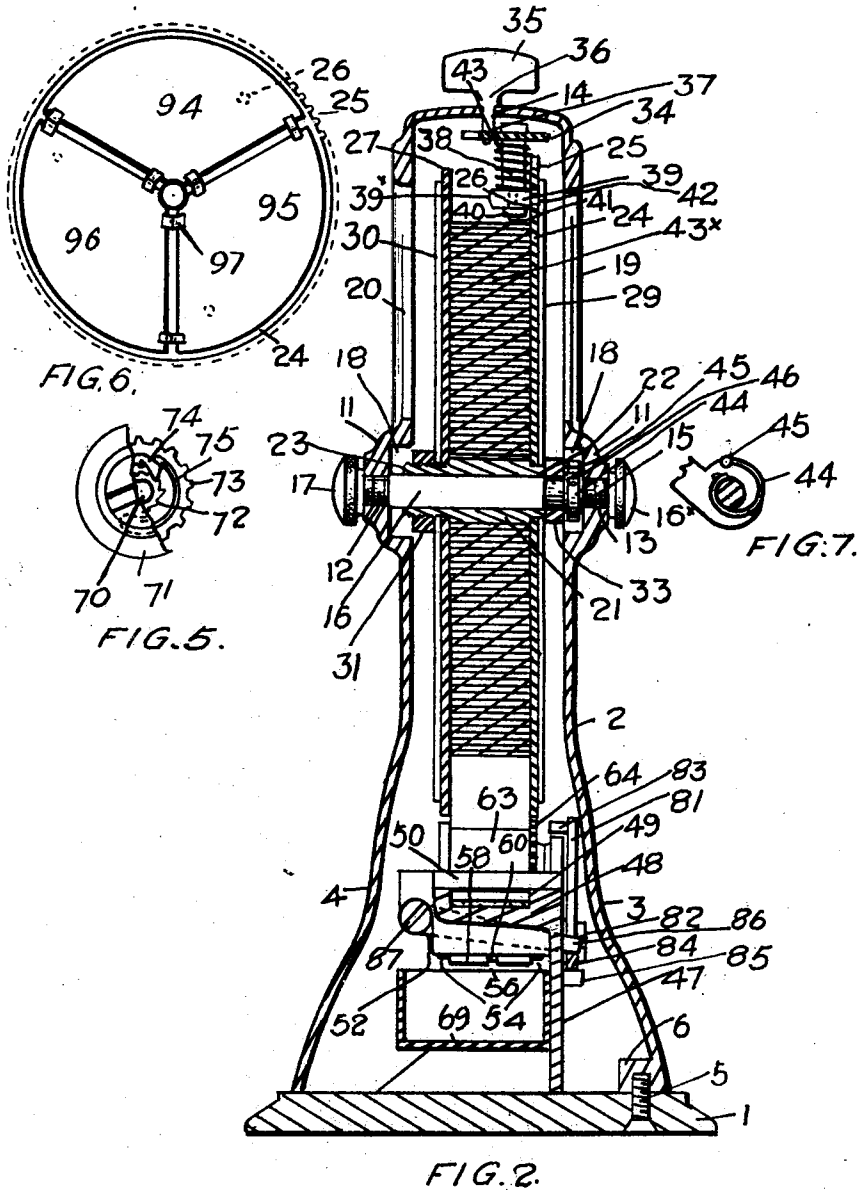


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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ROBERT HOWARD BIGGS, OF ST. CATHARINES, ONTARIO, CANADA.

ADVERTISING DEVICE FOR PAPER-TAPE MAGAZINE HOLDERS.

1,409,654.

Specification of Letters Patent.

Patented Mar. 14, 1922.

Application filed August 19, 1921. Serial No. 493,707.

To all whom it may concern:

Be it known that I, ROBERT HOWARD BIGGS, of the city of St. Catharines, in the county of Lincoln, Province of Ontario, Canada, have invented certain new and useful Improvements in Advertising Devices for Paper-Tape Magazine Holders, of which the following is the specification.

My invention relates to improvements in advertising devices for paper tape magazine holders of the type disclosed in my United States Patent No. 1,377,180, dated May 10th, 1921, and the object of the present invention is to devise a machine of this class in which the mechanism is entirely enclosed by a stationary casing on which the advertising paper tape feed mechanism and mechanism whereby the paper strip is cut and the feed mechanism locked stationary during the cutting operation is located and independently operated and consists essentially of the arrangement and construction of parts as hereinafter more particularly described.

Fig. 1 is a front elevation mostly broken away and in section to exhibit the interior construction thereof.

Fig. 2 is a cross sectional view through my machine.

Fig. 3 is a detail in elevation of the feed mechanism looking from the reverse side to that shown in Fig. 1.

Fig. 4 is a detail of the feed pawl.

Fig. 5 is a detail view of the moistening roller broken away to exhibit the ratchet mechanism thereof.

Fig. 6 is a diminutive view of one of the side discs between which the paper tape roll is held and showing an alternative construction of advertising cards.

Fig. 7 is a sectional detail showing the spring 44.

In the drawings like characters of reference indicate corresponding parts in each figure.

1 indicates the base of my machine, 2 is a housing or casing in which my mechanism is contained and which is formed by two portions 3 and 4 which about each other intermediate of the width of the machine to form a complete casing. The portion 3 of the casing 2 is secured to the base 1 by screws 5 extending through the base into lugs 6 forming part of the portion 3. The portion 3 is provided with inwardly extending lugs 7 into which extend screws 8 which pass

through the portion 4 of the casing holding the portions 3 and 4 together. The portions 3 and 4 form a casing the upper portion of which is circular the lower portion having a neck 9 which is gradually curved outward towards the base 1 as clearly indicated in Figs. 1 and 2. In the centre of the circular part of the casing is formed in each portion 3 and 4 a boss 11. In the bosses 11 are formed orifices 12 and 13. The portion 3 is provided in its edge with a recess 14 forming together with the opposing edge of the portion 4 a circumferential slot through which the main operating lever passes as hereinafter described.

15 is a bolt the centre portion of which is square as indicated at 16 and in cross section as particularly shown in Fig. 1. The ends of the bolt 15 are cylindrical so as to extend through the orifices 12 and 13. 16 and 17 are securing nuts which are secured on the ends of the bolt 15 against the outer face of the bosses 11 of the main casing. The bosses 11 of the main casing are recessed as indicated at 18. 19 and 20 are segmental shaped exhibiting orifices formed in the upper part of the main casing 2.

21 is a sleeve which fits on the squared portion 16 of the bolt 15. The outer face of the sleeve 21 is cylindrical and is provided with reduced extensions 22 and 23, the extension 23 being externally threaded. 24 is a disc which fits upon the reduced portion 22 of the sleeve 21 and is provided with an annular gear 25 formed in its outer edge. 26 are a plurality of orifices formed in the disc 24 in proximity to its outer edge. 27 is a disc which fits upon the reduced portion 23 of the sleeve 21 so as to be spaced apart from the disc 24 by the main portion of the sleeve 21. 29 and 30 are discs of card or other suitable material upon which is printed or otherwise inscribed any desired advertising matter, these advertisements being arranged in a circumferential series so as to be brought successfully opposite to the orifices 19 and 20.

31 is a nut which is screwed on to the reduced portion 23 against the central portion of the disc 30 so as to secure such disc in place. 32 is an operating lever provided with an enlarged inner end 33 having an orifice adapted to fit upon the bolt 15. The operating lever 32 extends radially outward and is provided at its outer end with an

arm 33*, the outer edge of which is concentric to the centre of the bolt 15. The end of the arm 33 is provided with a flanged portion 34 extending inwardly over the disc 24 and upon which is carried the operating handle 35. The handle 35 is provided with a stem 36 having a reduced portion 37 extending through the slot of the main casing formed by the recess 14. The lower end of the stem 37 is riveted or otherwise suitably secured in the flange 34.

38 is a stud which depends from the flange 34, the lower end being reduced as indicated by dotted lines in Fig. 2. 39 is a feed pawl provided centrally of its length with a sleeve boss 40 turnably mounted upon the reduced portion of the stud 38, the lower end of the stud being provided with a head 41. 42 is a tooth like projection extending from the pawl 39 and adapted to enter the orifices 26. 43 is a spiral spring which encircles the stud 38 being secured at the ends so as exert an inward pressure upon the pawl 39 to force the tooth 42 into engagement with the disc 24 to enter one of the orifices 26. 43* is a roll of adhesive paper tape such as is commonly used for the securing of parcels and which is adapted to be fed from my machine in suitable lengths as required.

44 is a helical spring which is secured at one end to the bolt 15 and at the opposite end to the pin 45 extending from the inner end of the operating lever 32. The bolt 15 is preferably provided with an enlargement 46 against which the outer face of the inner portion of the operating lever 32 bears. 47 is a casting which is suitably secured to, or forms part of, the base 1. 48 is a portion which projects from the back wall of the casting 47 so as to extend crosswise of the machine beneath the roll of paper tape 43*. 49 is a guiding groove recess formed in the upper face of the projection 48, such groove being located directly beneath the roll of paper tape 43* and through which the strip as it is unwound from the roll passes. 50 is a bridging piece which extends across the groove recess 49 to form a cover therefor. Intermediately of the length of the groove 49 is located a vertical slit 51 formed in the back wall of the casting 47.

52 is a screw stud secured in the back wall of the casting 47. 53 is a U-frame the arms of which are provided with hooked portions 54 swung upon the screw 52. 54* is a portion extending upwardly from the base 1. The upper end of the portion 54* is provided with an internally threaded orifice 55. 56 is an adjusting stem the lower portion of which is threaded so as to engage the internal thread of the recess 55, the intermediate portion of which is provided

with a thumb nut 57 by which the stem may be turned and the upper portion of which bears against the lower face of the U-frame 53.

58 is a roller journalled on a spindle 59 carried by the side arms of the U-frame 53. The roller 58 is provided with an annular groove 60 into which extends a stationary projection 61 such projection being carried by any suitable portion of the machine. 62 is a stud shaft carried by the back wall of the casting 47. 63 is a guiding roller carried upon the stud 62 and around which passes the strip of paper tape as it is drawn from the roll 43*. 64 is a gear secured to the roller 63 so as to revolve therewith, the gear 64 meshing with the gear 25 of the disc 24. 65 is a stud also carried by the back wall of the casting 47. 66 is a roller mounted upon the stud 65 for a purpose which will hereinafter appear.

67 is a gear secured to the roller 66 so as to revolve therewith, the gear 67 also meshes with the gear 25 of the disc 24. 69 is a water pan located within the casing upon the base 1. 70 is a stud extending from the back wall of the casting 47. 71 is a moistening roller which is turnably mounted upon the stud 70 so that the lower peripheral portion is immersed in the water contained in the pan 69. 72 is a ratchet gear secured to the stud 70. 73 is a gear mounted freely upon the stud 70 so as to mesh with the gear 67.

74 is a pawl carried upon the gear 73 so as to engage a ratchet gear 72. 75 is a spring by which the pawl 74 is held in engagement to the teeth of the ratchet gear 72. By mounting the roller 66 freely upon the stud 65 the weight of the roller bears downward upon the upper peripheral portion of the moistening roller 71 and upon the upper face of the paper strip interposed therebetween as it is fed from the roll 43*. 76 is a locking lever pivoted upon the screw pin 77 provided with a tooth 78 adapted to engage the teeth to the gear 67 so as to lock it in a stationary position during the cutting of the paper strip.

79 is a pin which extends laterally from the upper portion of the lever 76 crosswise of the machine and in the path of the outer edge portion of the arm 33* of the operating lever 32. 80 is a spring bearing against the lower edge portion of the lever 76 so as to normally hold the tooth 78 out of engagement with the teeth of the gear 67. 81 is a rocking member mounted upon a pin 82 carried by the casting 47 and provided at its upper end with a pin 83 extending laterally from such member crosswise of the machine and also in the path of the outer edge portion of the arm 33 of the main

operating lever 32. A lower portion of the member 81 is provided with a finger 84 which normally rests upon a pin 85.

86 is a cutting knife provided with a sharpened upper edge extending through the slit 51 beneath the strip of adhesive paper tape. One end of the knife 86 is pivotally secured at 87 to a suitable portion of the structure, the opposite end of the knife bearing upon the finger 84. 88 is a spring which bears downward upon the outer end of the knife 86 holding it in its normal position. 89 is a finger which is carried by the main casing for a purpose which will hereinafter appear.

It will be noticed on referring to Fig. 4 that the edge of the pawl 39 farthest from the disc 24 inclines outward away from such disc so as to form an enlarged end 39* which coacts with the finger 89 as will hereinafter appear.

Having described the principal parts involved in my invention I will briefly describe the operation of the same. When it is desired to obtain a strip of paper tape from the machine for the purpose of securing a package, all that is necessary to do is, to force the lever 32 in the direction of arrow, see Fig. 1, as the lever is swung downward the tooth 42 of the pawl 39 being in engagement with one of the orifices 26 carries the disc 24, paper tape roll 43*, disc 27, cards 29 and 30 which are all mounted upon the sleeve 21 in the same direction, thereby bringing new advertising matter printed upon the discs 29 and 30 opposite each orifice 19 and 20, and at the same time by reason of the gear 25 meshing with the gears 64 and 67 feeding the strip of paper from the roll through the guiding groove 49 and discharge slot 92 and also revolving the moistening roller 71 by means of the gear 67 intermeshing with the gears 25 and 73, thereby carrying moisture upward from the water pan on to the adhesive surface of the upper tape.

As the lever 32 approaches the end of its stroke the enlarged end 39* of the pawl 39 engages with the inner face of the finger 89 so as to force the tooth 42 of such pawl out of engagement with the orifice 26 of the disc 24. As the lever 32 completes its stroke the outer edge of the arm engages with, first, the cross pin 79 forcing the tooth 78 into engagement with the gear 67 to lock it stationary to positively prevent any further feeding of the upper strip and then with the pin 83 so as to swing the finger 84 upward in the direction of arrow against the pressure of the spring 88 thereby forcing the cutting edge of the knife 86 into contact with the paper strip to sever the portion thereof.

When the operating lever 32 is returned the pin 83 is released from contact therewith allowing of the knife 86 being carried in the

opposite direction back to its normal position by the spring 88 and also passing out of contact with the pin 79 to permit of the unlocking of the feed mechanism by the spring 80 which carries the tooth 78 out of engagement with the teeth of the gear 67.

It will of course be understood that the lever 32 is carried back to its normal position by means of the spring 44 and that the orifices 26 are so arranged as to permit of the tooth 42 engaging with another orifice 26 when brought to its normal position. In order to adjust the tension on the feed roller all that is necessary to do is, to turn the screw stem 56 so as to raise or lower the U-frame 53 and carry the roller 58 towards or away from the roller 64 and thereby exert a greater or less pressure upon the upper strip fed from the roll 43.

From this description it will be seen that I have devised a very simple means for operating my paper tape machine which is absolutely independent of the casing, such casing being a stationary enclosing casing no part of which is movable and therefore presents a neat appearance, and a simpler and smoother running machine and at the same time provided with simple means for operating the severing knife and simultaneously locking the feeding paper mechanism during the operation of severing the strip.

In Fig. 6 I have shown an alternative construction of advertising card. In this form the circular card is divided into segmental portions as indicated at 94, 95 and 96 which are secured to the disc 24 by means of any suitable form of spring clips 97. By this means it will be readily seen that each separate advertisement can be individually interchanged so as to either vary the order of the advertisements or to replace one or more advertisements with a new advertisement.

What I claim as my invention is:

1. In a paper magazine holder, a paper tape roll holder, a mounting upon which the holder is turnably carried, an operating lever swung upon the mounting, and means carried by the lever adapted when swung in one direction or during its downstroke to directly engage the holder independently of the tape and to release the holder during its return or upward stroke.

2. In a paper magazine holder, a strip roll holder mounted to turn, an operating lever adapted to turn the holder by a step by step movement at each stroke to feed the paper from the holder, a paper strip guide, a severing knife pivotally mounted at one end with its severing edge extending crosswise of the strip, a member pivotally mounted at its lower end on a suitable support, a pin extending from the upper end of the member into the path of the operating lever, a finger extending from the lower end of the member beneath the free end of the severing

knife, and means for freely supporting the member in its normal position.

3. In a paper magazine holder, the combination with the main casing having a paper discharge slot, a paper tape roll holder mounted in the casing, means for feeding the strip therefrom through the slot, means for severing the strip, and means for locking the feeding means during the severing operation.

4. In a paper magazine holder, the combination with the main casing having a paper discharge slot, a paper roll holder mounted within the casing, an annular gear carried by such holder, a pair of gears mounted in the casing in mesh with the aforesaid annular gear, paper feeding rollers rotating in unison with such gears, a severing knife, a paper strip guide coacting with the knife, means for operating the feed rollers to feed the paper through the guide, means for operating the knife simultaneously at the end of each turning movement of the paper tape holder, and means for locking the feed rollers during such severing operation.

5. In a paper magazine holder, the combination with the main casing having a

paper discharge slot, a paper roll holder carried by the casing, an operating lever for turning the roll holder, feed rollers mounted within the casing, gears connected to the feed rollers, an annular gear carried by the holder in mesh with the gears of the feed rollers, a severing knife, means coacting with the lever for operating the severing knife, a gear locking member provided with a tooth, and means carried by such member extending into the path of the operating lever for throwing such tooth into engagement with the gear of the feed roller.

6. In a paper magazine holder, the combination with the main casing having a paper strip discharge slot, a paper roll holder mounted within the casing having a series of orifices formed in the face thereof, an operating lever, a spring press pawl carried by the lever and provided with a tooth adapted to enter the orifices to form an engagement between the lever and the paper roll holder, and means operated by the turning of the paper roll holder for feeding the strip therefrom through the discharge orifice of the casing.

ROBERT HOWARD BIGGS.