R. H. BIGGS.

ADVERTISING DEVICE FOR PAPER TAPE MAGAZINE HOLDERS.

APPLICATION FILED NOV. 22, 1920.

1,377,181. **Patented May 10, 1921.**

4 SHEETS—SHEET 1.

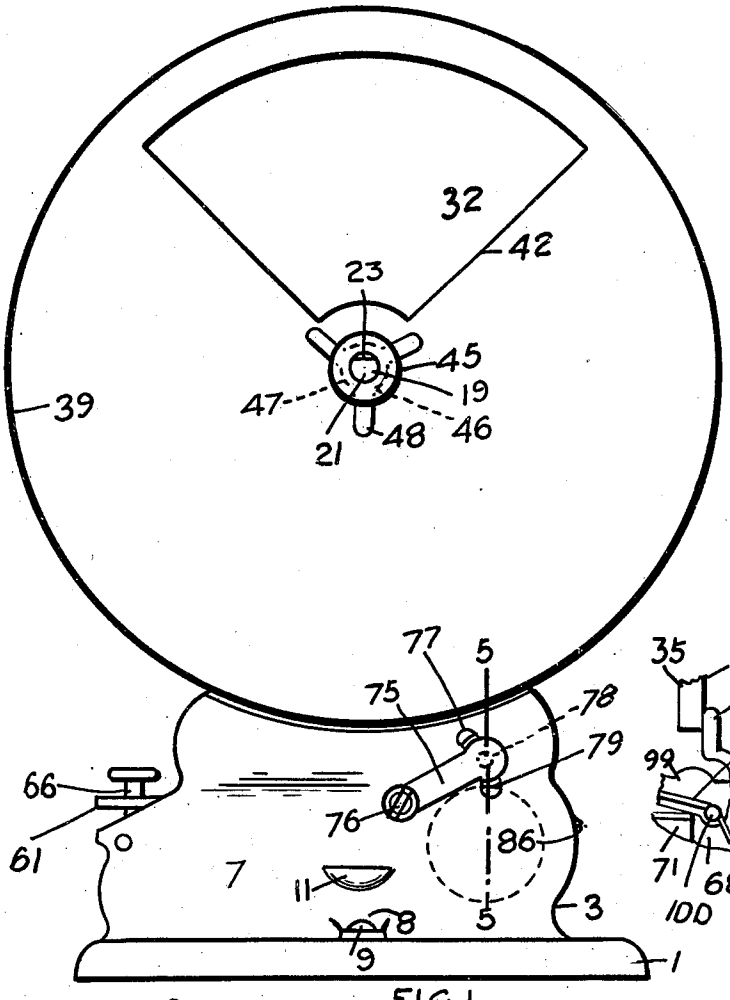


FIG. 1.

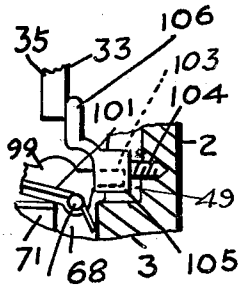


FIG. 10.

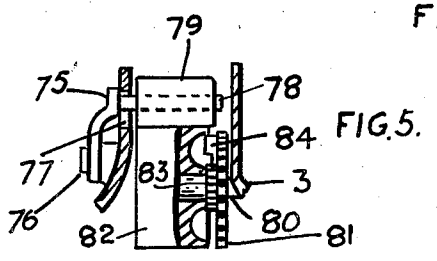


FIG. 5.

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BY

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4 SHEETS—SHEET 2.

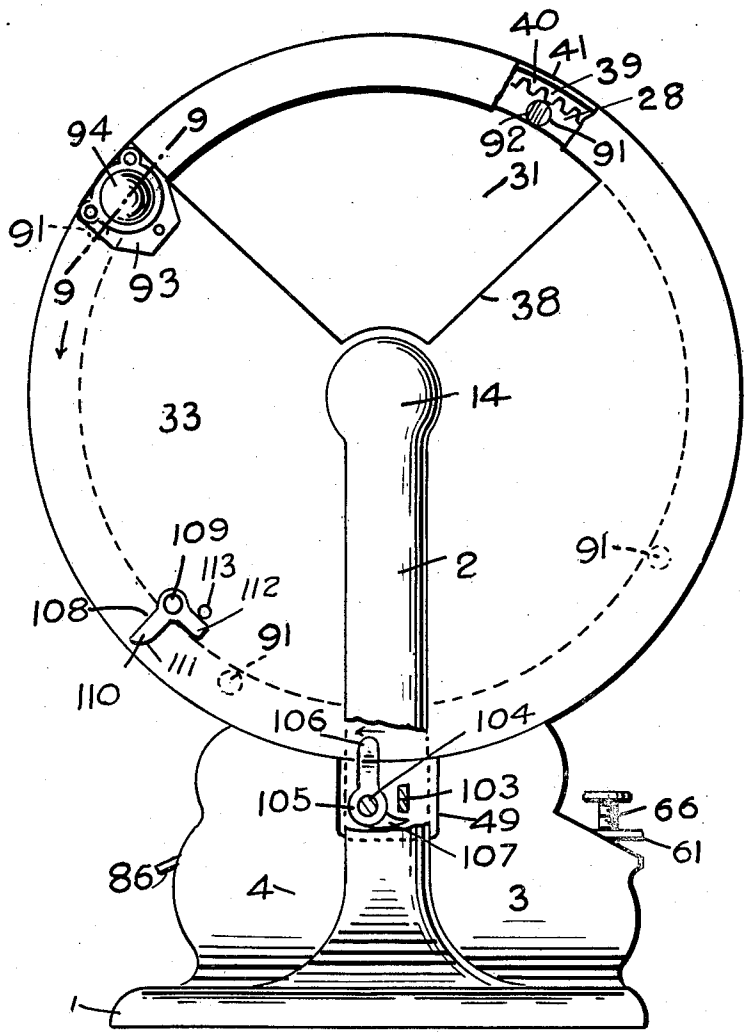


FIG. 2

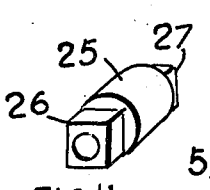


FIG. 11.

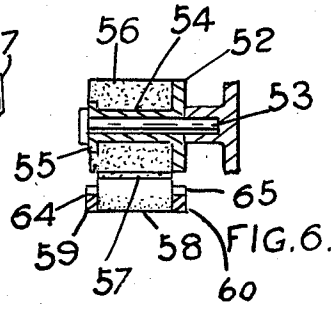


FIG. 6.

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4 SHEETS—SHEET 3.

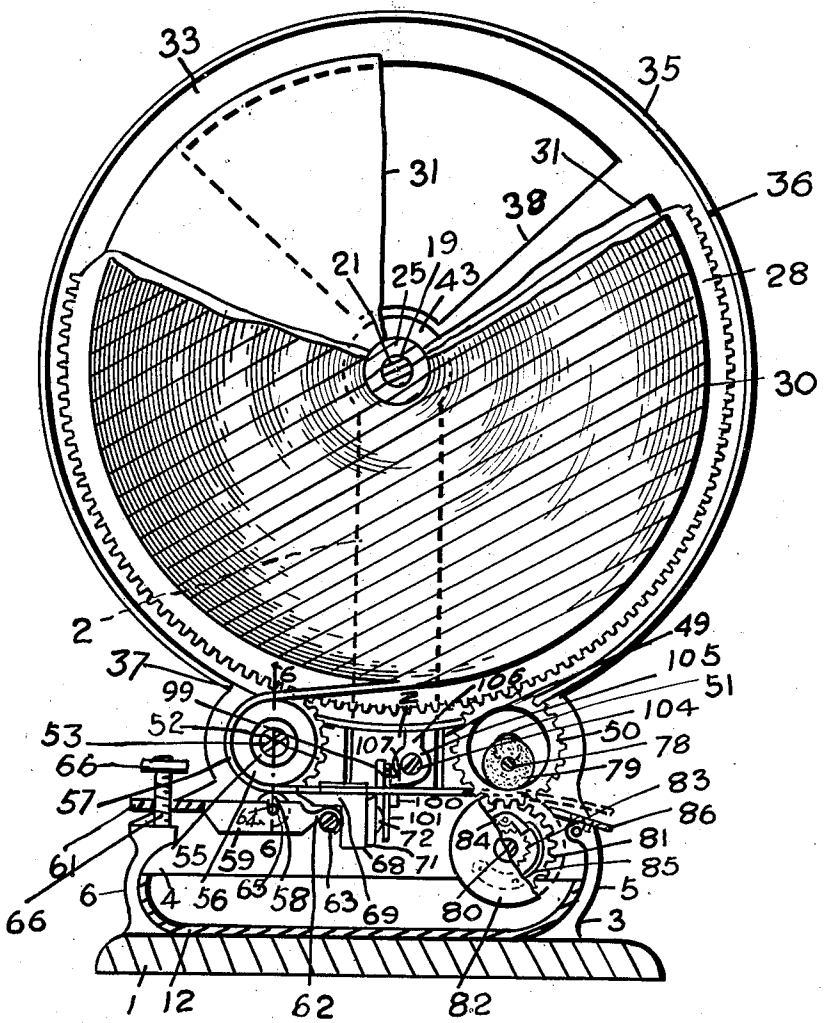


FIG. 3.

INVENTOR

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BY

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Attys.

R. H. BIGGS.

ADVERTISING DEVICE FOR PAPER TAPE MAGAZINE HOLDERS.

APPLICATION FILED NOV. 22, 1920.

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4 SHEETS—SHEET 4.

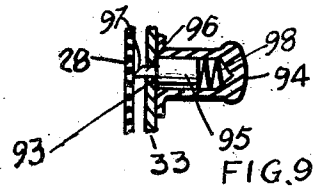


FIG. 9.

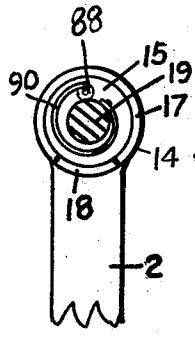


FIG. 7.

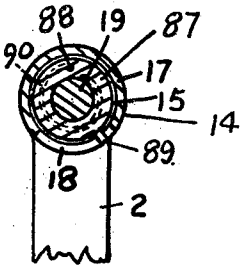


FIG 8

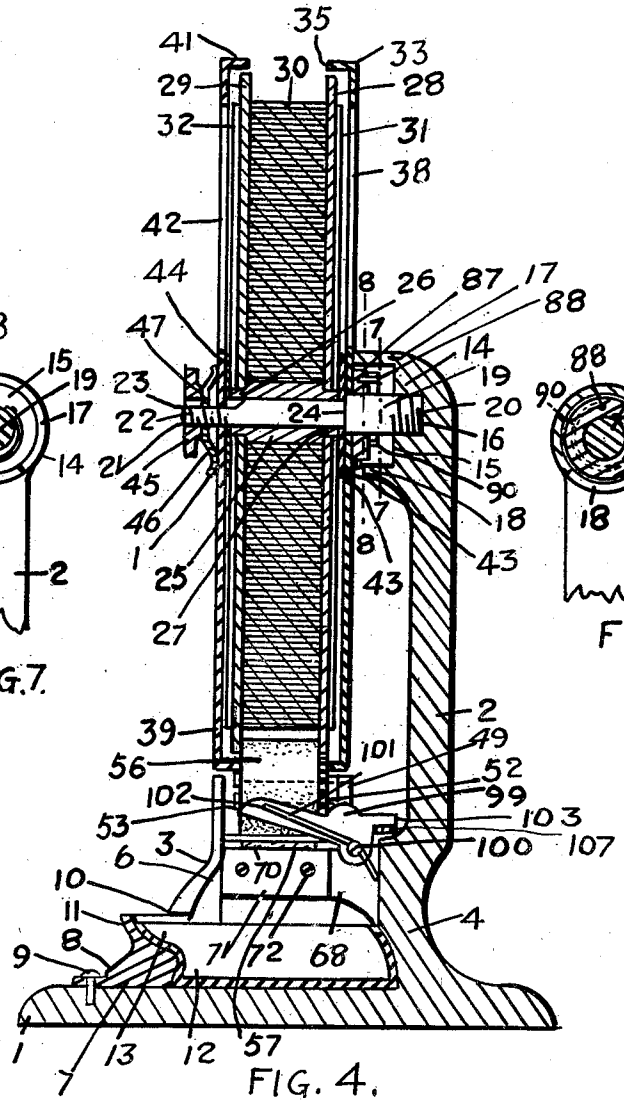


FIG. 4.

INVENTOR

ROBERT H BIGGS.

BY Fillmore Lacey & Co ATTYS

UNITED STATES PATENT OFFICE.

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

ADVERTISING DEVICE FOR PAPER-TAPE-MAGAZINE HOLDERS.

1,377,181. Specification of Letters Patent. Patented May 10, 1921.

Application filed November 22, 1920. Serial No. 425,786.

To all whom it may concern:

Be it known that I, ROBERT HOWARD BIGGS, a subject of the King of Great Britain, residing at 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, and the object of the invention is to devise an advertising apparatus which is automatically operated as each length of paper strip is discharged from the holder to exhibit a new advertisement after each operation as hereinafter more particularly described by the following specification.

Figure 1 is a front elevation of my paper tape magazine holder and advertising apparatus coacting therewith.

Fig. 2 is a rear elevation of the apparatus as shown in Fig. 1.

Fig. 3 is a face sectional view through the center of the magazine roll showing the feed rolls and mechanism coacting therewith in full.

Fig. 4 is a cross sectional view taken through the center of my apparatus.

Fig. 5 is a sectional detail on line 5—5 Fig. 1 and showing the rollers for the most part in full.

Fig. 6 is a sectional view on line 6—6 Fig. 3.

Fig. 7 is a sectional view on line 7—7 Fig. 4.

Fig. 8 is a sectional view on line 8—8 Fig. 4.

Fig. 9 is a sectional view on line 9—9 Fig. 2.

Fig. 10 is a detail view of the mechanism for operating the shearing knife.

Fig. 11 is a perspective detail of the central bearing sleeve of my device.

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

1 indicates the base of my paper tape magazine holder. 2 indicates a standard which extends upward from the base in proximity to one longitudinal edge. 3 indicates a housing, one portion 4 of which is formed integral with the base 1 and with the standard 2. The housing portion 4 extends laterally from each side of the standard 2 and is provided with end walls 5 and 6 which extend upward from the base at right angles to the housing portion 4. 7 indicates a removable portion of the housing. The portion 7 is provided with a base lug 8 which is connected by a screw or bolt 9 to the base 1 of the paper tape holder. 10 indicates an opening formed in the center of the portion 7, and 11 indicates a spout lip extending outward from the bottom of such opening for a purpose which will hereinafter appear. 12 indicates a water containing pan which fits within the lower portion of the housing 3 between the portions 4 and 7 and end walls 5 and 6. The water pan is provided with a lip 13 which extends through the opening 10 of the housing so as to fit the spout lip 11 of such housing as clearly indicated in Fig. 4 of the drawing. 14 indicates a bearing boss which extends inward from the upper end of the standard 2. 15 indicates a circular recess which is formed in the inner face of the boss 14. 16 indicates an internally threaded recess formed in the center of the recess 15. 17 indicates the wall of the recess 15. 18 indicates a cutaway portion formed in the lower portion of the wall 17 for a purpose which will hereinafter appear. 19 indicates a stud which is provided at its inner end with a threaded portion 20 which is screwed into the internally threaded recess 16. The stud 19 projects horizontally and is provided with a reduced extension 21 provided at its outer end with a threaded portion 22 and also with a flattened face 23 for a purpose which will hereinafter appear. It will of course be understood that an annular shoulder is formed at 24 between the reduced portion 21 and the main portion of the stud 19. 25 indicates a sleeve which is freely mounted upon the reduced portion 21 of the stud 19. The sleeve 25 is provided with squared end portions 26 and 27. 28 indicates a large gear wheel which fits upon the squared end 27 of the sleeve 25 so as to shoulder against the corresponding end of the major portion of the sleeve 25. 29 indicates a disk which fits upon the squared end 26 of the sleeve 25 so as to shoulder against the opposite end of the sleeve and oppose the gear 28. By this means a winding space is formed between the disk 29 and gear 28 for containing a roll 30 formed of a strip of adhesive paper such as is used for

fastening the wrapping around packages. The inner end of the paper strip is suitably mounted on the sleeve 25. 31 indicates a card disk which also fits upon the squared end 27 of the sleeve 25 and against the outer face of the gear 28. On the outer face of the card disk 31 are printed a series of advertisements arranged around the disk at suitable distances apart. 32 indicates a disk similar to the disk 31. The disk 32 fits upon the squared end 26 of the sleeve 25 and against the outer face of the disk 29. 33 indicates a cover member which is in the form of a disk having an inwardly extending annular surrounding flange 35 which extends inward over the outer edge of the gear wheel 28. The flange 35 is partially cut away from the point 36 to the point 37. (See Fig. 3). The disk forming the major portion of the cover member 33 is provided with an exhibiting orifice 38 the sides of which extend radially and the inner and outer edges concentrically with the center of the supporting stud 19. Through the exhibiting orifice 38 is successively exposed the advertisements which are printed upon a disk 31. 39 indicates a cover member opposing the cover member 33. The cover member 39 is formed of a disk portion which fits upon the reduced extension 21 of the stud 19 and against the flattened face 23 thereof so as to be held stationary from turning upon the stud 19. The cover member is also provided with an annular inwardly extending flange 41 and an exhibiting orifice 42 similar in form to the exhibiting orifice 38 so as to successively expose the advertisements printed upon the disk 32. 43 is a washer mounted upon the reduced portion 21 of the stud 19 so as to be interposed between the shoulder 24 of such stud and the opposing end of the sleeve 25, and also to be interposed between the center portions of the cover member 33 and the disk 31. 44 indicates a washer mounted freely upon the reduced portion 21 of the stud 19 so as to be turnable thereon. The washer 44 is interposed between the cover member 39 and the opposing end 26 of the sleeve 25 and also between the cover member 39 and the disk 32. 45 indicates a thumb screw screwed onto the outer end of the threaded portion 22 of the stud extension 21. 46 indicates a spring member comprising a central annular portion 47 surrounding the stud extension 21, and spring fingers 48 extending radially from the annular portion 47 and bearing in proximity to their ends against the outer face of the cover member 39. It will thus be seen that by turning the thumb screw 45 upon the threaded portion 22 of the stud extension 21 that the desired tension can be exerted against the outer cover member 39. It will be noted upon referring to Figs. 1 and 2 that the upper edges of the housing 3 are formed concentric to the center of the stud 19 so as to form convex portions into which the peripheral portions of the cover members 33 and 39 formed by the flanges 35 and 41 fit. It will also be noted that the portion 4 of the housing is provided with a central notch 49 for a purpose which will hereinafter appear. 50 indicates a small gear mounted upon the stud 51 extending from the portion 4 of the housing 3. 52 indicates a similar gear mounted upon a stud 53 also extending from the portion 4 of the housing 3. The gears 50 and 52 mesh with the large gear 28 hereinbefore described. 54 indicates a metal sleeve which is formed integral with the gear 52 and is provided at its outer end with an annular flange 55 against the outer face of which the head of the screw 53 bears. 56 is a rubber roller which is mounted upon the sleeve 54 so as to rotate therewith and around which the paper strip 57 forming the roll 30 extends. 58 is a tension roller supported in the side arms 59 and 60 which are connected together at their outer ends by a cross piece 61 and provided at their inner ends with hooks 62 supported upon a screw pin 63 extending into the portion of the housing 3. The arms 59 and 60 are provided with bearing recesses 64 in which pintles 65 of the roller 58 extend. 66 is an adjusting screw extending through an internally threaded orifice 67 formed in the cross piece 61 and bearing at its lower end upon the upper end of the end wall 6 of the housing. By adjusting the screw 66 the required tension may be given to the paper strip as it passes around the rubber roller 56. 68 is an arm extending inwardly from the portion 4 of the housing 3 crosswise of the interior of the housing, the upper portion of the arm being extended at 69 to form a table over which the paper strip passes. As will be seen upon referring to Fig. 4 this table is provided with a cross groove 70 of the same width as the paper strip and serves as a guide for such strip. 71 is a stationary cutting blade which is secured by screws 72 to the arm 68. 75 is an arm swung upon the outside of the housing 3 on the stud screw 76. 77 indicates an arc-shaped slot formed in the housing 3. 78 indicates a stud shaft extending from the free end of the arm 75 through the slot 77. 79 indicates a roller mounted upon stud shaft 78. 80 indicates a stud pin extending inwardly from the portion 4 of the housing 3 and on which is freely mounted a gear 81 which meshes with the gear 50 hereinbefore described. 82 indicates a roller which is also mounted upon the stud pin 80 and is provided with a ratchet wheel 83 secured to or formed integrally therewith. 84 indicates a dog which is carried by the gear

wheel 81 and is held in contact with the ratchet wheel 83 by a spring 85. 86 indicates a scraper plate which is secured at the top of the end wall 5 of the housing, the inner end coming into close contact with the roller 82. The paper strip 57 passes from the roller 56 over the roller 82, the lower portion of which is submerged under water contained in the pan 12. It will be understood that one surface of the paper strip is provided with adhesive material which when moistened would serve to secure the paper strip to the part desired. This adhesive surface as the paper strip is drawn off the roll passes in contact with the roller 82 and is moistened thereby, the roller 82 picking up a certain amount of water as it revolves. 87 indicates an annular member which is secured to the cover plate 33. 88 indicates a pin extending from such annular member into the recess 15. 89 indicates a limiting pin extending into the cutaway portion 18. 90 indicates a spring connected at one end to the stud 19 and at the opposite end to the pin 88. 91 indicates projections extending from the outer face of the gear 28 in proximity to its outer edge, such projection being provided with an inclined face 92. The cover plate 33 is provided with an orifice 93. 94 indicates a hollow handle provided with a plunger 95 provided with a pin projection 96 having an inclined face 97. 98 indicates a spring located in the hollow handle and bearing at one end against the inner end of the hollow handle and at the opposite end against the plunger 95. In order to sever that portion of the paper strip which has been fed outward from the rest of the strip I provide the following mechanism which coacts with the stationary blade 71. 99 indicates a movable blade which is pivoted on a screw pin 100 which is screwed into the arm 68. The blade 99 extends upward from its pivot point in an inclined direction over that portion of the paper strip located over the stationary blade 71. The movable blade is held in this position by means of a spring 101 which is wound around the screw pin 100 intermediately of its length and bears at one end against a portion of the housing 3 at the base of the arm 68 and extends at its opposite end into a perforation located at 102 in the movable blade 99. The blade 99 is provided with a tail piece 103. 104 indicates a screw pin which is screwed into the standard 2 and extends through the notch 49 of the housing 3. 105 indicates a cam arm provided with finger 106 extending upward, being located at its upper end adjacent to the face of the cover member 33. The cam member 105 is provided with a prong 107 which extends beneath a tail piece 103 of the movable blade 99. 108 is a tripping piece which is pivoted at 109 upon the cover member 33. The tripping piece 108 is provided with a radially extending arm 110 having a curved edge portion 111 and a circumferentially extending arm 112 which when the parts are in their normal position bears against the pin 113 which is also carried by the cover member 33.

Having described the principal parts involved in my invention, I will briefly describe the operation of the same. When it is desired to withdraw a length of the paper strip or tape from the roll, all that is necessary to do is for the operator to grip the handle 94, drawing it downward in the direction of arrow. (See Fig. 2.) By this movement the pin projection 96 engages one of the pin projections 91 extending from the gear wheel 28. The engaged projection 91 is indicated by dotted lines adjacent to the handle 94 in Fig. 2. As this projection 91 is carried downward the gear 28 is turned revolving in mesh with the gears 50 and 52 turning these gears in the direction of arrow (see Fig. 3) and feeding the paper strip outward over the table formed by the arm 68 and over the scraper plate 86 which prevents the paper strip from passing around with the roller 82. As the handle 94 is drawn downward to feed the paper strip outward from between the rollers 82 and 79 the spring 90 is wound into tension. By the same operation the tripping member 108 is carried toward the cam arm 106 and the arm 110 engages with such cam arm swinging the tripping member 108 so that the arm 112 thereof is carried away from the pin 113, allowing the tripping member to pass the arm 106 without having any operative effect thereon. When the handle 94 has reached its final position the movement of which is limited by the pin 89 engaging the opposite end of the cutaway portion 18, the handle 94 is released and the spring 90 which has been wound into tension as hereinbefore described returns the parts back to their normal position, that is to say reverses the movement of the handle and the cover member so that the tripping member 108 is carried in the reverse direction toward the cam arm 106. As the arm 110 when moving in this direction engages the cam arm, it is held rigid by means of the arm 112 engaging the pin 113. The cam arm 106 is then swung in the direction of arrow, the prong projection 107 thereof engaging the tail piece 103 of the movable blade 99. The movable blade 99 is then carried downward by this means against the paper strip coacting with the stationary blade 71 to sever the paper.

It will also be seen that by the same operation, the card disks 31 and 32 are carried around a determined distance revolving with the gear 28 and disk 29 carried by the

squared portions of the sleeve 25. When the handle 94 is released to return it to its normal position by means of the spring 90, the cover member 33 revolves back independently of the card disks 31 and 32 and the gear 28 and disk 29, and therefore the exhibiting orifice 38 is carried opposite to another portion of each disk 31 and 32 so as to exhibit another advertisement through the orifice. The washers 43 and 44 serve to allow of the cover members revolving on their return movement free of the disks 31 and 32.

It will of course be understood that as the handle is carried back, that the inclined face of the pin projection engages the inclined face of the next successive projection 91 so that the plunger pin springs past such projection into engagement with the next successive projection 91. It will also be seen that after the fed portion of the paper has been severed, the inner end of such portion still remains between the moistening roller 82 and the tension roller 79. In order to allow this portion being withdrawn it is necessary that the moistening roller turn freely. For this purpose, I have provided the ratchet and dog connection 83 and 84 enabling the moistening roller to turn independently of the gear 81.

From this description it will be seen that I have devised simple means which coacts with an adhesive paper tape machine for exhibiting a new advertisement at each operation.

What I claim as my invention is:

In a paper magazine holder, a supporting structure provided with a standard, a horizontal stud extending from the standard, a roll of paper turnably mounted upon the stud, opposing disk members spring pressed toward each other, one of such disk members being geared, feed rollers driven from the aforesaid gear, a cover member turnably mounted upon the stud, a handle extending from the cover member, means for engaging the handle and geared disk during the forward movement of the handle adapted to allow of the free return movement of the cover member, resilient means for returning the cover member and handle to their normal position, means for limiting the forward and return movement of the cover member, a stationary shearing knife located below the fed portion of the paper, a pivoted shearing knife extending over the fed portion of the paper and provided with a tail piece, spring means for holding the pivoted knife in its normal position, a cam arm swung upon the standard and provided with a prong projection extending under the tail piece of the knife, a swinging member carried by the cover member having an arm adapted to engage the cam arm as the cover member is swung circumferentially, and means for allowing the swinging arm to yield during its downward movement toward the cam arm and to be held rigid during its return movement.

ROBERT HOWARD BIGGS.