Sept. 8, 1925 1,552,779

B. C. VAUGHAN

ADHESIVE STRIP FEEDING MACHINE

Filed Feb. 25, 1924

Fig. 1

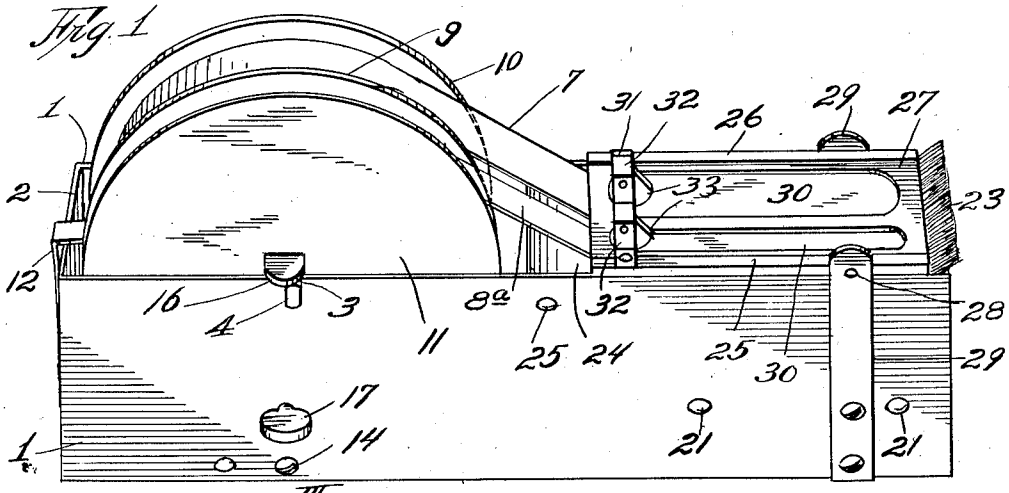


Fig. 2

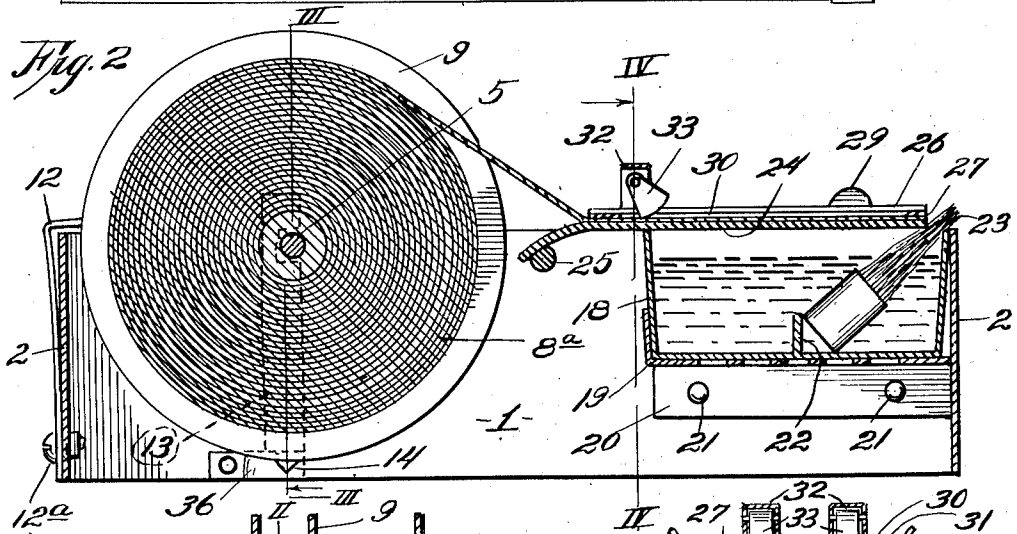


Fig. 3

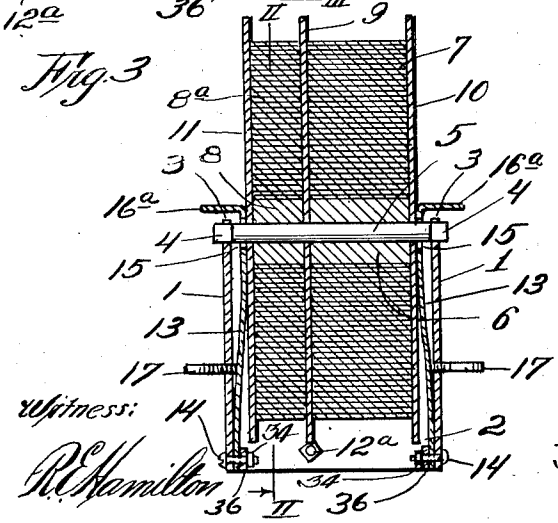
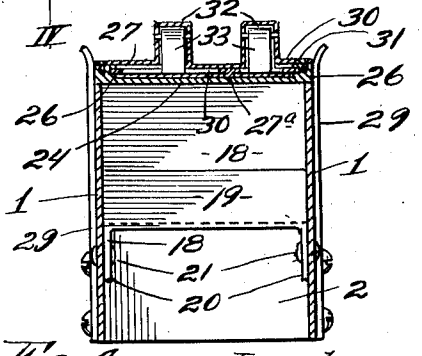


Fig. 4



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UNITED STATES PATENT OFFICE.

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ADHESIVE-STRIP-FEEDING MACHINE.

Application filed February 25, 1924. Serial No. 695,076.

To all whom it may concern:

Be it known that I, BENJAMIN C. VAUGHAN, a citizen of the United States, and a resident of Kansas City, county of Jackson, State of Missouri, have invented a certain new and useful Improvement in Adhesive-Strip-Feeding Machines, of which the following is a complete specification.

This invention relates to adhesive strip holding, moistening and cutting devices, and is designed for use primarily in shops and stores and the like where articles sold are wrapped in paper for securement around the articles by means of the adhesive strip. The general object of the invention is to produce a simple, strong, inexpensive, durable and efficient device of this character, in which means are provided for preventing accidental back feed of the strip or strips or such movement thereof as will produce unnecessary slack in such strip or strips. A further object is to produce a device of the character described, which will accomodate one or a pair of independent strips, and which will permit of one of the strips being used without affecting or interfering with the remaining strip.

With these general objects in view and others as will hereinafter appear, the invention consists in certain novel and useful features of construction and combinations of parts as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawing, in which:—

Figure 1 is a perspective view of a device embodying the invention, as equipped, with a pair of adhesive strips.

Figure 2 is a vertical longitudinal section taken on line II—II of Figure 3.

Figure 3 is a vertical transverse section taken on the line III—III of Figure 2.

Figure 4 is a vertical transverse section taken on the line IV—IV of Figure 2.

Referring to the drawing in detail, a frame or support is of hollow rectangular form, consisting of sides 1 and ends 2, the former at a suitable point being provided with opposite notches 3 for receiving the flat ends 4 of a transverse shaft 5, and said shaft in conjunction with a circular partition and a pair of side disks, forms reels as hereinafter explained. As shown there are two reels, one consisting of a wood or equivalent core 6 journaled on shaft 5 and forming the mount for a roll 7 of adhesive paper. the other consists of a similar core 8 journaled on shaft 5 and forming a mount for a roll 8^a of adhesive paper. Journaled on the shaft and interposed between the cores and rolls mentioned, is a partition or disk 9, which with a pair of similar disks 10 and 11 at the opposite sides respectively of the rolls of paper and journaled on the shaft, form the reels hereinbefore mentioned. To prevent accidental turning movement of one roll when the other is being unwound, a friction brake 12 bears against the partition 9, and is secured as at 12^a to the adjacent end wall of the frame or support. With this brake applied, either roll of adhesive strip or tape can be unwound without in any way disturbing or affecting the companion roll.

A pair of spring plates 13 are pivoted as at 14 to and within the frame or support and bear upon and at the opposite sides of the double reel described, or the single reel if one only is employed, as may be the case where adhesive tape of greater width than that shown, is desired, it being noted that said spring plates are provided near their upper ends with notches 15 engaging the shaft 5 near its ends so as to retain the same against dislocation from notches 3, and that the upper ends of the said spring plates are provided with outwardly projecting ears or handles 16^a for convenience of manipulation To centralize the reel or reels as the case may be on shaft 5, with respect to other elements of the device hereinafter mentioned, set screws 17 are mounted in the side walls and bear against the outer sides of the spring plates. By means of these set screws the reel or reels can readily be centralized as explained, and the spring plates can be caused to exert sufficient pressure on the reels to prevent too great freedom of rotation of either and insure the instant checking of such rotation when effected by means of a pull on the respective tape or strip.

Located in the space near the front end of the frame, is a liquid receptacle or water pan 18, the same being supported on a tray 19 provided with depending side flanges 20 secured by screws 21 or the like to the sides of the frame, the liquid receptacle or water pan 18, coming preferably flush with the upper edge of the frame. The said receptacle is preferably provided with a central transverse rib 22, as a rest for a brush or moistening device 23 for conducting water

by capillary attraction to and above the top of the receptacle at the front end thereof, and through an opening provided between such end and the front end or margin of a cover 24 pivoted as at 25 to and within the frame adjacent the reel or reels. The cover 24 is provided at its side margins with upwardly projecting grooved ribs 26 for slidingly receiving a cutter bar or plate 27 adapted to hold the free end of the strip or tab down flatly on the cover strip so that as the said strip is drawn forward beyond the said cover and cutter, its adhesive face, which is its under face, will be moistened by contact with the brush. To insure proper operation of the device the cover strip should be clamped firmly in place, and this is accomplished by providing it with a pair of laterally projecting pins 28 for engagement with perforations in a pair of spring catches 29 secured to opposite sides of the base or frame, the upper ends of the catches being flared as shown most clearly by Figure 4, so that the cover plate will always pass between them when swung down to operative position.

From the foregoing it will be apparent that regardless of the character or strength of the pull on a tape, the friction plates 13 will prevent the respective reel from rotating too freely and thus pay out slack between the reel and the cover. It is also essential however, that the strip shall not be accidentally drawn back between the cover and the cutter plate, as, should this occur, the moistened surface of the adhesive strip would engage the cover and thus make it necessary to refrain from the use of the machine until the cover could be cleaned and dried and the parts reassembled. It will also be noted that the cutter plate is provided with a longitudinal slot 30 for access to each strip. This is to enable the operator to properly position the tape and feed the same forward beyond the front end of the cutter to a position to where it can be readily gripped by hand preliminary to such further feed as shall be necessary to produce a strip of proper length for the work in hand, it being obvious that the strip being moistened as it is drawn forward, can be readily severed by the front end of the cutter plate by drawing the strip backward and laterally against such end.

The cutter plate is provided with a longitudinal rib 27^a positioned to form a guide between the paper strips or tapes upon the cover, and the said plate, when the device is adapted for use with a single reel for a wide strip or tape, is inverted so that the rib is out of the way and therefore functionless.

Across the rear end of the cutter plate and secured to the cover, is a transverse bar 31 formed at suitable points with upwardly projecting keepers 32 wherein are pivoted gravity catches 33, such catches extending downwardly and forwardly in such manner that paper can be readily fed forward over the cover, the catches yielding to such movement. Because of their angular relation however with respect to the cover, it is impossible for the paper to be drawn rearwardly, as the catches are unyielding as regards such movement of the paper.

When it is necessary to replenish the liquid in the receptacle 18, the cover can be swung upwardly in an obvious manner, after first pressing the catches 29 outward slightly. The cover is returned to its original position by pressing downwardly upon its front end until the pins 28 snap in to the openings in said catches.

To guard against pivotal movement of the spring plates 13 due to the loosening of the nuts 34 on retaining devices or screws 14, short bars 36 are secured to the inner sides of the frame and interposed between the spring plates 13 and the said nuts, as shown most clearly by Figure 3.

From the above description it will be apparent that a device of the character set forth is shown and described as embodying the features of advantage enumerated in the statement of the object of the invention, and it will be understood that changes in form, proportion, detail, construction and the like, may be resorted to without departing from the principle of construction and mode of operation involved, and from the spirit and scope of the appended claims.

I claim:

1. In a device of the character described, the combination of a support, a reel thereon for a roll of adhesive paper or tape, a tank for holding a liquid, a cover for but terminating short of the front end of the tank, a moistener extending from the liquid in the tank to the front end of the cover, a plate on the cover, for holding the free end of the adhesive strip leading from the roll, flatly upon the cover; and means pressing the paper or tape upon the cover but yieldable to forward movement only of the strip.

2. In a device of the character described, the combination of a support, a reel thereon for a roll or adhesive paper or tape, a tank for holding a liquid, a cover for the tank, pivoted to the support and leaving part of the tank uncovered, a moistener extending from the tank at the uncovered point thereof, a plate carried by the cover to hold the end of the paper or tape flatly upon the cover, and one or more catches for applying pressure down upon the paper or tape, to permit forward but not rearward movement thereof.

3. The combination of a support, a cross shaft thereon, a pair of disks journaled on the shaft, an intermediate partition journaled on the shaft, a pair of rolls of flexible

material journaled on the shaft between said partition and the pair of disks, and means engaging the partition to prevent rotation of one roll through turning movement imparted to the other.

4. The combination of a support, a cross shaft thereon, a pair of disks journaled on the shaft, an intermediate partition journaled on the shaft, a pair of rolls of flexible material journaled on the shaft between said partition and the pair or disks, means engaging the partition to prevent rotation of one roll through turning movement imparted to the other, cooperating elements for guiding the free ends of the paper of the rolls, one of the elements having openings giving access to each of said ends of the paper, and affording a cutting edge therefor, means to moisten the paper as fed beyond said cutting edge, and means to prevent backward feeding movement of the paper.

5. In a device of the character described, the combination of a support, a reel thereon for a roll of adhesive paper or tape, a tank for holding a liquid, a cover for a portion of said tank, a moistener extending from the tank at the uncovered portion thereof, a plate carried by the cover to hold the end of the paper or tape flatly upon the cover, and one or more catches for applying pressure down upon the paper or tape, to permit forward but not rearward movement thereof.

6. The combination of a support, a cross shaft thereon, an intermediate partition journaled on the shaft, a pair of reels on the shaft for rolls of paper or tape, means for frictionally resisting rotation of each reel, and means engaging the partition to prevent rotation of one roll through turning movement imparted to the other.

7. The combination of a support, a cross shaft thereon, a pair of reels on the shaft for rolls of paper or tape, an intermediate partition journaled on the shaft, means for frictionally resisting rotation of each reel, means engaging the partition to prevent rotation of one roll through turning movement imparted to the other, and means for shifting the reels laterally relative to the support.

In witness whereof I hereunto affix my signature.

BENJAMIN C. VAUGHAN.