Feb. 18, 1930. A. C. HUMMEL 1,747,441

STRIP SERVING DEVICE

Filed Feb. 13, 1926 2 Sheets-Sheet 1

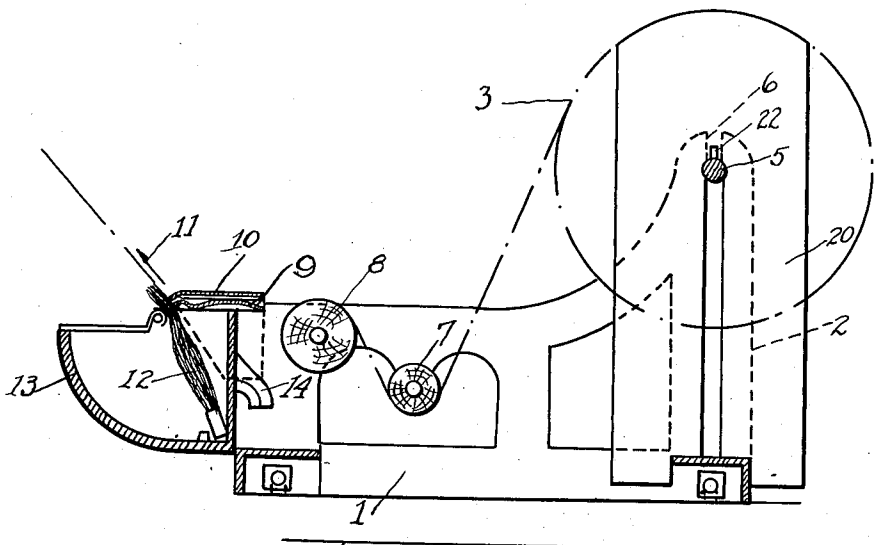


FIG 1

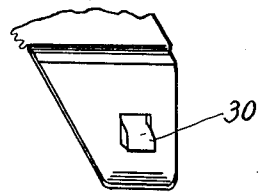


FIG 3

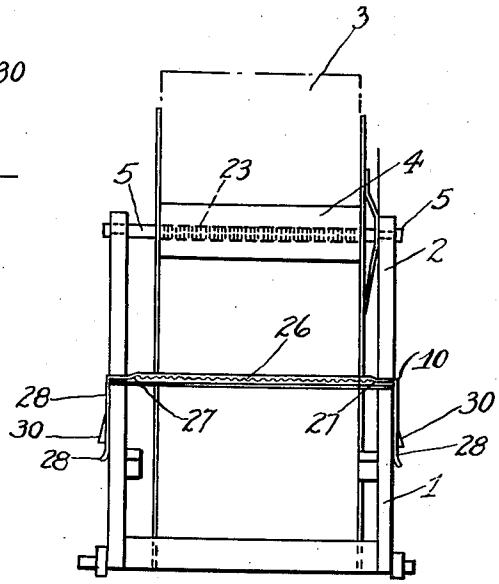


FIG 2

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STRIP SERVING DEVICE

Filed Feb. 13. 1926 2 Sheets-Sheet 2

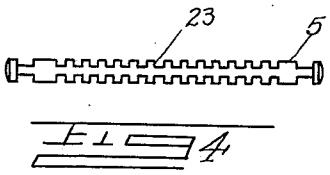


FIG 4

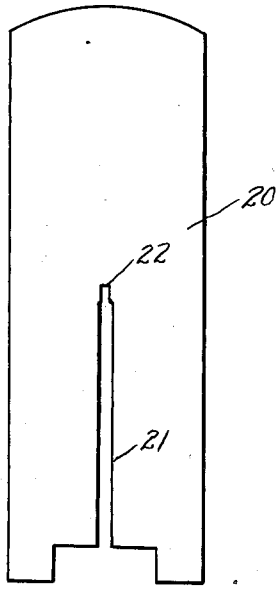


FIG 7

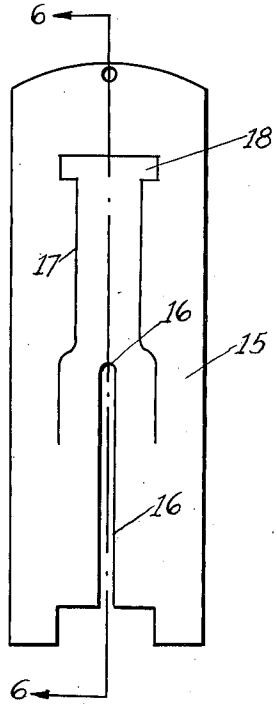


FIG 5

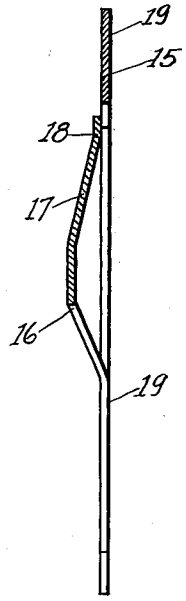


FIG 6

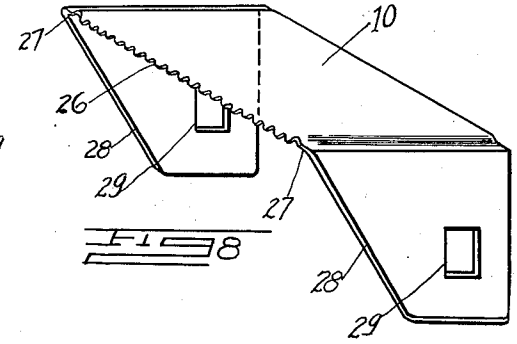


FIG 8

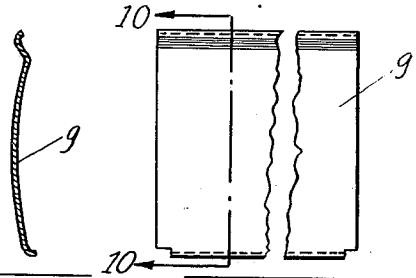


FIG 10 FIG 9

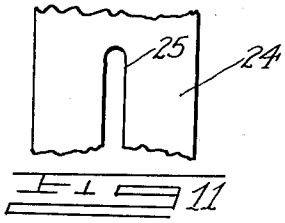


FIG 11

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Patented Feb. 18, 1930 1,747,441

UNITED STATES PATENT OFFICE

AUGUST C. HUMMEL, OF CINCINNATI, OHIO

STRIP-SERVING DEVICE

Application filed February 13, 1926. Serial No. 88.128.

My invention relates to strip serving devices and particularly to improvements in the strip supply mounting means, in the strip cutting means, and in the strip moistening means.

In the art the use of strip serving devices having a core mounting for a roll of tape, and having rollers over which the tape passes to a cut-off knife is old. Further in my copending application Serial Number 75,269, filed December 14, 1925, I have disclosed the use of an inverted bristle brush disposed in a liquid reservoir with which the adhesive face of the tape is moistened. The mechanical principle of operation of my strip serving device is broadly old.

It is my object to provide an improved roll core mounting which will frictionally retard the dispensing of the tape and at the same time keep the tape in aligned position on the dispensing roller. It is further my object to provide a frictionally retained plate bearing against the bristles of the moistening brush, which is readily accessible for adjustment. It is a still further object of my invention to provide a readily demountable knife, which makes the sharpening of the knife much more simple than has heretofore been possible in tape dispensing machines.

Referring to the drawings in which I have illustrated a preferred embodiment of a tape dispensing machine, in which my improvements are incorporated:

Figure 1 is a longitudinal sectional view of the tape dispensing machine.

Figure 2 is a front elevation with the liquid reservoir removed.

Figure 3 is a perspective view of a portion of the side of the casing showing the means for supporting the cut-off knife.

Figure 4 is a side elevation of the core mounting rod.

Figure 5 is a front elevation of the tape roll tension plate.

Figure 6 is a section of the tension plate shown in Figure 5, taken on the lines 6, 6.

Figure 7 is a front elevation of the retaining plate which is mounted on the opposite side of the tape roll from the tension plate.

Figure 8 is a perspective view of the cut-off knife.

Figure 9 is a plan view of the brush moisture regulating plate.

Figure 10 is a section of the brush plate taken along the lines 10—10 in Figure 9.

Figure 11 is a front elevation of a portion of a separating plate which may be used on the device when more than one roll of tape is mounted on the core mounting rod.

Generally indicated at 1 is the frame of the machine, which has bifurcated standards 2 which extend upwardly on each side of the space in which the roll of tape is to be mounted. The roll of tape indicated at 3 is wound about a core 4 through which a rod 5 is inserted so that the roll may be rotatably mounted on the standards. In the illustration I have shown open topped slots 6 in the standards in which each end of the rod may seat. The method of supporting and journaling the ends of the core rod, however, forms no part of my invention, it being old to mount the ends of core rods in slotted bosses and other mechanically equivalent ways. The strip which is being dispensed passes, with its adhesive side toward the roll, under the roller 7 extending laterally across the frame and over the roller 8, which is also extended laterally across the frame. The strip then passes between the moisture regulating plate 9 and the cut-off knife 10. By pulling the tape outwardly in the direction of the arrow 11 the tape may conveniently be torn off in the usual manner. The moisture is supplied to the adhesive side of the tape from the bristles of a brush 12 which is disposed in a liquid reservoir 13 having lugs 14 which mount the reservoir in the end of the casing.

The improvements to which my invention relates are first to the provision of a novel tension plate 15 which may be made from a metal stamping. The tension plate has a slot 16 extending upwardly from the base which allows the plate to slip over the core rod 5. A spring tongue 17 is extended out from the surface of the plate as indicated in Figure 6 the top end of the slot 16 being disposed in that portion of the spring tongue which is furthermost from the plate. The spring clip

has an upper end 18 which moves upwardly and downwardly over the face of the plate and in accordance with the distance it is compressed upwardly provides resilience for the plate which causes the inner face indicated at 19 to bear against the entire side of the roll of tape. The opposite side of the roll of tape is held by a stationary retaining plate 20, which bears against the entire side of the roll and which is provided with a slot 21 having a narrowed upper end 22 which is adapted to seat in notches 23 in the core rod 5. Thus, if a wide roll of tape is taken out of the device and a narrower roll inserted, the only adjustment necessary is the removal of the retaining plate and the insertion of the plate with the narrow upper portion 22 of the slot in a different set of notches 23 in the core rod 5. Further while I have shown one roll of tape mounted in the device, by the use of a separating plate, a portion of which is indicated at 24, two or more rolls of tape may be mounted. The plate 24 is preferably of similar size and shape as the plate 20 excepting that merely for separating two rolls of tape I do not find that it is necessary to have the slot 25 in the separating plate narrowed at its upper end.

The tape is cut off as it is served between the cut-off knife and the moisture regulating plate. The cut-off knife 10 toward the improvement of which another of my objects is directed, has a flat upper portion at one side of which the serrated edge 26 is disposed. The main part of the upper portion is spaced above the side edges 27 which bear downwardly against the moisture regulating plate 9, which is of bowed contour so that when the cut-off knife is moved downwardly the plate 9 is resiliently held against the upper edge of the casing of the device by the side edge 27. Between the side edges, the tape is free to pass toward dispensing position. The knife has downturned sides 28 with slots 29 which are adapted to spring into engagement with lugs 30 which are extended out from the outer side of the casing. By pulling outwardly on the downturned sides of the knife, it may easily be removed and the cutting edge may be sharpened with a file, or the moisture regulating plate 9, which bears against the bristles of the brush, may be moved into any desired bearing position. The successful operation of a strip serving device depends on three conditions, the correct alignment and tension of the tape as dispensed, the cutting off of the tape with a sharp knife, and the correct regulation of moisture on the brush. My improvements in structure which provide for a novel means of aligning and frictionally retarding the dispensing of the tape, and my novel knife and moisture regulating plate mounting are contributions to the art of no small importance. While I have disclosed only one preferred type of construction, it should be noted that I consider changes in size and shape of parts arranged in a similar assembly within the scope of my invention.

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

1. In a strip serving and moistening device in combination with lugs on walls of a casing, a cut-off knife having downturned side portions adapted to engage said lugs, a liquid reservoir detachably secured in said casing, an inverted brush extending from within said reservoir, a plate adapted to bear against bristles of said brush for regulating the capillary distribution of liquid therefrom, said plate having a spring-like structure, and said plate adjustably retained by said cutoff knife.

2. In combination in a strip serving device, a casing, a liquid reservoir, an inverted brush disposed in said reservoir, means of regulating the capillary distribution of liquid from bristles of said inverted brush, and a cut-off knife provided with means for securing said regulating means in adjusted position.

3. In combination in a strip serving device, a casing, a liquid reservoir, an inverted brush disposed in said reservoir, means of regulating the capillary distribution of liquid from bristles of said inverted brush, a cut-off knife provided with means for securing said regulating means in adjusted position, and means for resiliently engaging the sides of tape during the dispensing thereof adapted to frictionally retard and guide said tape toward dispensing position with relation to said cut-off knife.

AUGUST C. HUMMEL.