Our invention relates to an improvement in tape roll support and deals particularly with a means of holding a roll of tape or similar material from radial movement during shipment and storage.

Tape of the pressure sensitive type is often contained in rectangular cartons during transportation and storage. It is desirable that the periphery of the tape roll remain out of contact with the walls of the carton during this time. If pressure is exerted against the roll of tape for an extended period of time, difficulty is often experienced in unrolling the tape evenly. As such tape is usually wound about a hollow core, it is desirable to provide some support which will extend into this hollow core and which will extend beyond the periphery of the tape roll so as to hold the peripheral surface out of contact with the carton walls.

An object of the present invention resides in the provision of a pad having a plurality of angularly spaced ears connected to the pad along generally radial lines emanating from the center of the pad. These ears are provided with arcuate outer surfaces, the center of arcuation being offset from the center of the pad. The hinged portions of the ears are entirely within the radius of the inner core diameter. However, the arcuate outer surface extends beyond the radius of the core. When these ears are hinged upwardly from the plane of the pad they may engage snugly against the inner surface of the hollow core to hold the tape from lateral movement on the pad.

A feature of the present invention lies in the fact that the pads thus formed are hingedly connected to the pad along generally radial lines emanating from the center of the pad. When the tabs thus connected are hinged out of the plane of the pad, the tabs are extremely resistant to radial movement throughout their length.

A feature of the present invention resides in the provision of a pad capable of holding a roll of tape from radial movement which may be made of a minimum of stock and at extremely low cost. The pad which we employ is preferably but slightly wider than the diameter of the tape roll and is formed of a single thickness of material with the tabs cut from the body of the pad. Such pads may be produced at low cost.

A feature of the present invention resides in the provision of a pad for supporting a roll of tape provided with tabs cut from the body of the pad in such a way that the tabs cannot fold down into the plane of the pad when once engaged with the core of the tape roll. As the tabs extend beyond the diameter of the tape core interior, they may not accidentally swing down into the plane of the pad. Furthermore, if the tabs swing upwardly toward right angular relation to the pad, they will still effectively hold the tape roll from movement.

These and other objects and novel features of our invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of our specification: Figure 1 is a perspective view of a tape carton showing in general the type of carton sometimes used to contain a roll of tape.
corners 33 and 34 arranged at one end of the sheet body 35. The rounded corners are arranged to simplify the insertion of the pad and tape roll into an enclosing carton. The pad body 35 is provided with four tabs 36, 37, 39 and 40. These tabs are hingedly connected to the pad body along fold lines which emanate from a common center point 41. The tabs 36 and 39 are connected to the pad along diametrically opposed aligned fold lines 42 and 43. However, the tab 36 extends in one direction from the fold line 42, while the tab 39 extends in the opposite direction of the aligned fold line 43. Similarly the tabs 37 and 40 are connected to the pad along diametrically opposed and aligned fold lines 44 and 45. The tabs, however, extend on opposite sides of the fold lines, the tab 37 being arranged on one side of the fold line 44 and the tab 40 being arranged on the opposite side of the fold line 45. The outer surfaces 46 of the various tabs are arcuate in form, but the centers of arcuation are off-set slightly from the center point 41 so that the ends of the tabs are outside of a circle extending through the opposite end of the arcuate edges. The tab ends 47 are all outside of a circle through the outer extremities of the fold lines 42, 43, 44 and 45. Thus when the tabs hinge upwardly along their respective fold lines, the outer edges 46 of the tab engage snugly along the cylindrical inner surface of the tape roll core 30.

The operation of the pad D is similar to the operation of the pad C. However, it will be noted that the tabs are stronger from a structural standpoint because of the increased length of the tabs along their respective hinge lines. Furthermore, it will be noted that the hinge lines extend diagonally of the pad so that the individual tabs are stronger than they might otherwise be regardless of whether the grain of the paperboard extends longitudinally or transversely. The paperboard will usually withstand greater strain from a compression standpoint in a direction with the grain than in a direction transversely of the grain. By arranging the tabs with their fold lines diagonal, the grain of the paper strengthens all of the tabs regardless of whether the grain extends longitudinally or laterally of the pad.

It will be noted that the tabs normally extend beyond the inner diameter of the tape roll core and therefore cannot fold down into the plane of the pad when once engaged with the tape roll core. At the same time if the tabs should be folded upwardly toward right angular relation to the pad, they would still engage the core sufficiently to hold the core from any substantial lateral movement. Thus when the tape roll is mounted upon the pad it is firmly held from engagement with the side walls of the carton B.

In accordance with the patent statutes, we have described the principles of construction and operation of our tape roll support, and while we have endeavored to set forth the best embodiments thereof, we desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of our invention.

We claim:
1. A pad in combination with a tape roll having a hollow core, the pad including a flat paperboard pad body having a series of tabs cut therefrom, said paperboard pad body having a grain direction, said tabs being generally triangular in shape and being hingedly connected to the pad along diametrically aligned fold lines, two such tabs being arranged on fold lines at right angles to the fold lines connecting a second pair of tabs to the pad, the tabs extending upwardly from and at an acute angle with the plane of the pad, the outer edges of the tabs contacting the inner surface of the core.
2. The structure described in claim 1 and in which the fold lines connecting the tabs to the pad extend diagonally with respect to the grain of the pad.
3. A tape roll support in combination with a member having a hollow cylindrical core, the support comprising a pad having a series of angularly spaced tabs therein, said tabs being hingedly connected to the pad along generally radial lines leaving openings in the pad, and outer edges of said tabs extending helically along the core, said outer edges of the openings extending beyond the confines of the inner surface of the core.
4. A tape roll support for a roll of tape having a hollow cylindrical core having a predetermined internal diameter, the support including a pad upon which the tape roll may rest, an axis normal to the pad defining the center of a predetermined circle, a series of similar tabs cut from the pad in angularly spaced relation about said circle and foldable about substantially a radius of said circle, each of the tabs having a curved outer edge extending from its generally radial fold line to a point outside said circle, the diameter of the circle being substantially equal to the internal diameter of the core, whereby when said tabs are bent out of the plane of the pad, said curved outer edges may extend from the said lines of fold to points directly above said circle.

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