

June 7, 1955

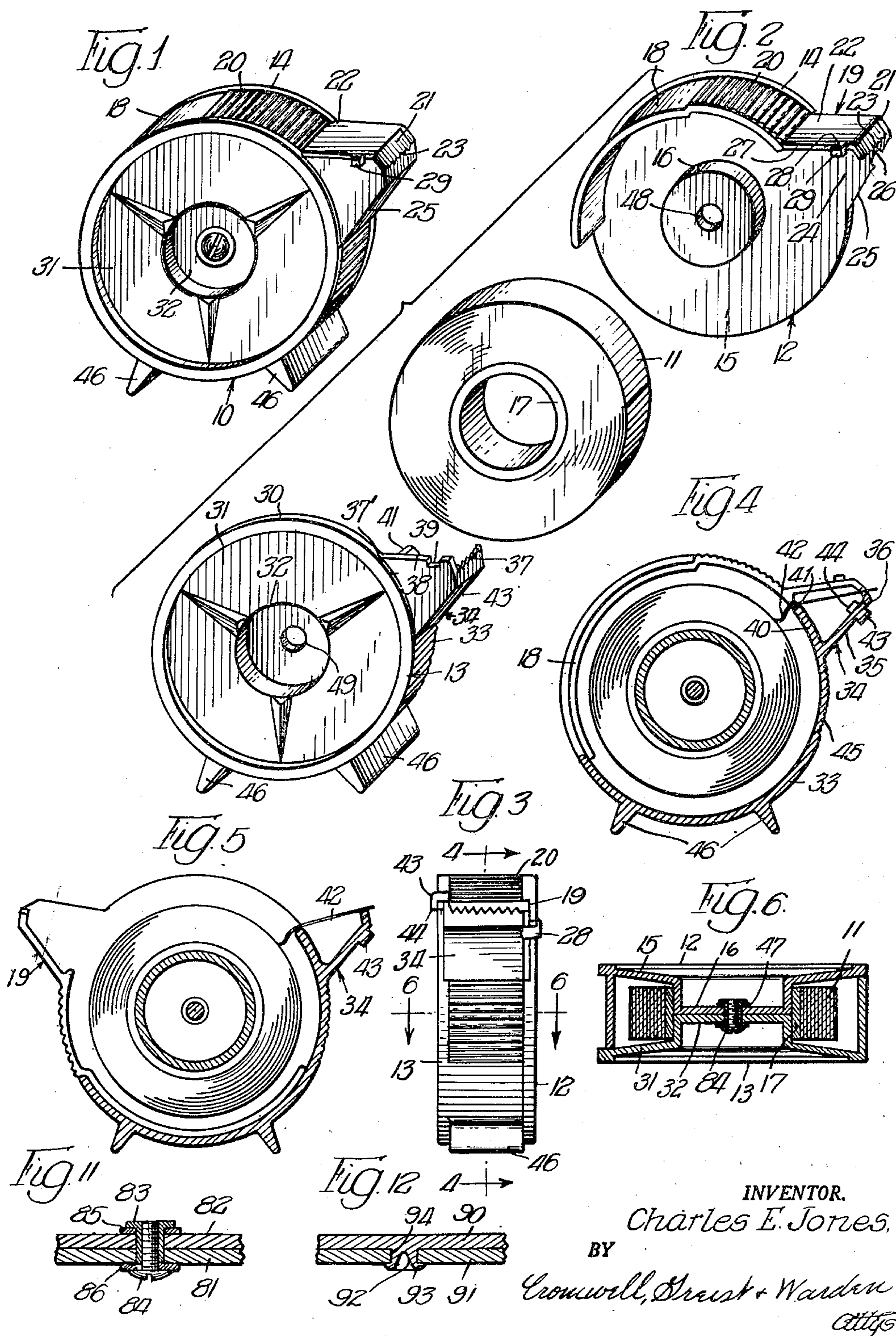
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TAPE DISPENSING CONTAINER

Filed April 11, 1952

2 Sheets-Sheet 1



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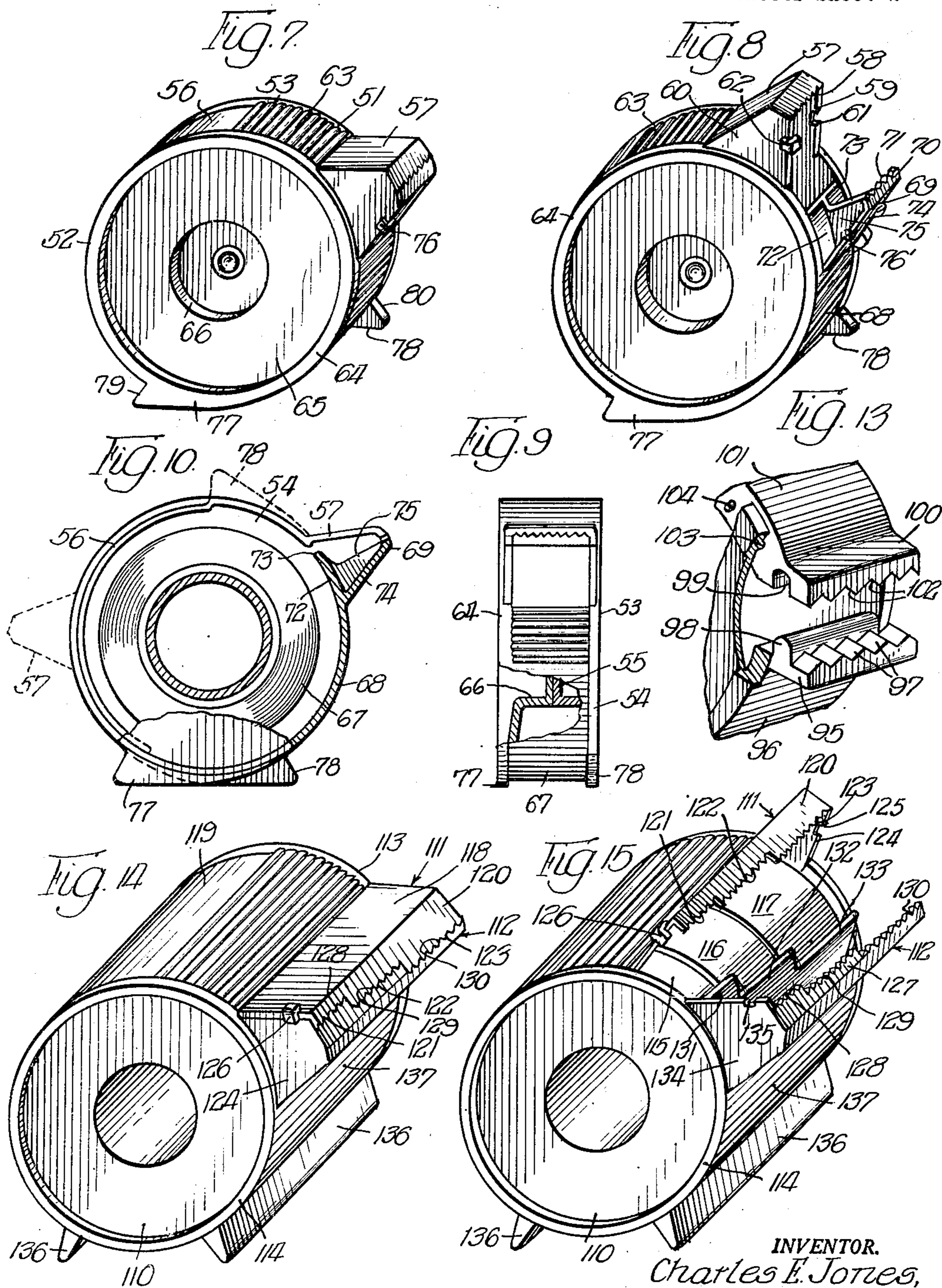
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2 Sheets-Sheet 2



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TAPE DISPENSING CONTAINER

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Application April 11, 1952, Serial No. 281,813

17 Claims. (Cl. 242—55.5)

This invention relates to packages or containers for storing and dispensing rolled or strip material such as adhesive tape and the like, and is more particularly concerned with containers having improved features whereby the tape may be readily pulled from the roll and the desired length severed or torn off in an efficient manner.

It is the general object of the invention to provide an adhesive tape dispensing package wherein the roll of tape is enclosed in a dust and moisture-proof casing which may be opened to permit ready access to the tape roll and which has incorporated therein improved means for gripping the tape securely after the desired length has been pulled from the roll to permit it to be readily torn off for use.

It is a more specific object of the invention to provide a dispensing package which includes a casing for enclosing a roll of tape, which casing comprises two members which are rotatable relative to each other to provide access to the tape and which have cooperating jaw-like gripper forming portions for engaging the tape on opposite faces after it is pulled from the roll and fed out of the casing whereby to facilitate tearing off the end section or length of the tape for use, the remainder of the tape being retained in the casing in completely enclosed and protected condition.

It is a further object of the invention to provide a container for dispensing tape or the like which may be opened in such a manner as to provide ready access to the roll of tape regardless of the amount left on the roll whereby a lost end may be readily retrieved.

It is another object of the invention to provide a tape dispensing container having movable portions provided with clamping elements for engaging the tape in clamping relation while the leading end thereof is torn off, and in which provision is made for retaining the end of the remaining portion of the tape in a position where it is readily accessible so that successive lengths may be moved between the clamping elements and readily severed for immediate use.

Another object of the invention is to provide a dispensing package of the character described having an improved form of severing structure including a support for a substantial length of the tape immediately following the portion which is to be severed whereby the end of the tape is retained after the severing operation in a position where it is readily accessible for the next succeeding movement of the strip.

Another object of the invention is to provide a tape dispensing container of generally circular shape having cooperating end wall forming sections which are rotatable relative to each other to provide a peripheral opening and which have inwardly extending cooperating portions for supporting the roll of tape within the container with the end walls tapered to a wider opening for easier access to the tape to facilitate retrieving a loose end.

It is a further object of the invention to provide a tape dispensing container which is so constructed that it keeps

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the tape in a sanitary manner, free from dust, dirt, and possible deterioration and which is adapted to dispense the tape in a convenient and easy manner while retaining the balance of the roll fully protected within the enclosed interior thereof.

A further object of the invention is to provide a dispensing container for a roll of tape or similar material having the general form of the roll of material and provided with supporting feet permitting it to be positioned in a cabinet or other storage space in upright position so that it does not take up substantially more space than the roll itself and so that it is not liable to roll out of the cabinet.

Another object of the invention is to provide a tape dispensing container of the type described which is provided with feet for supporting it in an upright position and wherein the feet are so arranged that they may be moved toward each other to open the container and provide access to the tape.

Another object of the invention is to provide a dispensing container of the type described having movable sections for opening and closing the same which incorporate cooperating gripper jaws for engaging the tape and firmly gripping the same during the tearing operation and which also incorporate a perch or support on which the tape rests in a position convenient for the next withdrawal.

It is another object of the invention to provide a tape dispensing container of the type described which includes movable sections permitting opening and closing of the container and snap action latch elements for retaining the container sections in normally closed relation.

It is still another object of the invention to provide a tape dispensing container which is adapted to receive a plurality of rolls of tape of the same or different widths and which has incorporated therein gripper members permitting any desired length of tape to be withdrawn and severed from any one of the individual rolls.

These and other objects of the invention will be apparent from a consideration of the tape dispensing containers which are shown, by way of illustration, in the accompanying drawings, wherein:

Fig. 1 is a perspective of a dispensing container for a single roll of tape which embodies therein the principal features of the invention;

Fig. 2 is a perspective view of the container members and a roll of tape, in exploded relation;

Fig. 3 is an end elevation of the container;

Fig. 4 is a cross section taken on the line 4—4 of Fig. 3;

Fig. 5 is a cross section similar to that of Fig. 4 but with the container members or sections in open condition;

Fig. 6 is a cross section taken on the line 6—6 of Fig. 3;

Fig. 7 is a perspective view of a modified form of the container;

Fig. 8 is a perspective view similar to Fig. 7 with the container members or sections in partially open position;

Fig. 9 is an end elevation of the container of Fig. 7, with portions broken away;

Fig. 10 is a side elevation of the container, with portions broken away;

Fig. 11 is a detail section, to an enlarged scale, showing the manner of connecting the two portions of the container;

Fig. 12 is a detail section similar to Fig. 11 showing an alternative form of connecting means for the two container members;

Fig. 13 is a fragmentary perspective view showing a further modification of the container;

Fig. 14 is a perspective view of a modification of the

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container adapted to dispense a plurality of different sizes of tape; and

Fig. 15 is a view similar to Fig. 14 with the container members in partially open condition.

Referring to Figs. 1 to 6 of the drawings there is illustrated a two part plastic container 10 which is adapted to dispense a roll 11 of adhesive tape or similar material and which incorporates the principal features of the invention.

The container 10 is preferably formed of a resin molding material such as, for example, polystyrene plastic and is cast or molded into cylindrical shape. It comprises two cooperating case parts or sections 12 and 13 which are adapted to be assembled to provide a complete enclosure for the roll of tape 11. The case section 12 comprises a disk-like side wall formation consisting of an outer annular rim portion 14 and an inner wall or side portion 15 which has a slight inward taper and which has a central inwardly directed hub forming portion 16. The hub forming portion 16 is slightly less in diameter than the core 17 of the tape roll 11 and is slightly more in depth than half the width of the tape roll 11. A peripheral wall formation or flange 18 extends around approximately half of the periphery of the rim 14 and terminates at one end in a radially outwardly directed gripper or clamp formation 19 which projects beyond the periphery of the side wall 15. The major portion of the peripheral flange or side wall 18 is positioned a slight distance inwardly of the margin of the rim 14 to which it is joined along one edge. The portion of the flange 18 immediately adjacent the gripper jaw member 19 is corrugated or knurled at 20. The gripper jaw member 19 includes an outer end portion 21 which is at an angle to the wall portion 22 and which is provided on its radial edge 23 with saw-tooth-like serrations forming tape gripping teeth thereon. The gripper jaw 19 is integrally joined to the side rim member 14 by a web portion 24 which has a free edge 25 tapering inwardly to the periphery of the rim 14 and provided with a notch 26 for cooperation with a latching element on the other case member 13. The gripper member 19 is provided at its inner or lateral free edge 27 with a latch member 28 having an end portion 29 extending inwardly of the wall portion 22.

The other case section or portion 13 is likewise comprised of a rim 30, a side wall 31 which tapers inwardly of the rim 30 and a central hub forming portion 32 extending into the interior of the case and being of substantially the same size as the hub portion 16 on the case section 12 and cooperating therewith for providing a trunnion for receiving the tape roll 11. The case section 13 is provided with an inwardly extending flange or peripheral wall 33 (Fig. 4) which is integral with the outer edge of the rim portion 30 and which extends substantially half the periphery of the section 13. At one end of the flange or wall 33 a gripper jaw formation 34 projects outwardly in a generally radial direction with the body wall 35 terminating in an angled or bent over portion 36 which is provided along the radial edge 37 thereof with a plurality of tape gripping teeth or serrations for cooperating with the teeth on the jaw member 19 of case section 12. The outer side of the wall portion 35 of gripper 34 is integrally joined to the rim portion 30 of the section by a web or wall formation 37' which has a tapered free edge 38 provided with a notch 39 for receiving the end 29 of the latching member 28 on the jaw 19 of case section 12 when the two sections are in assembled relation. The flange formation 33 is extended at 40 beneath the jaw member 34 to provide a transverse edge or perch 41 forming a rest or support for the end of the tape 42. The wall 35 of the gripper 34 is provided with a latch member 43 having an end portion 44 adapted to be received in the notch 26 in the section 12. The ends 29 and 44 of the latch members 28 and 43 project somewhat beyond

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the outside faces of the walls 37 and 24 to permit engagement by the fingers of the user to unlatch the gripper jaws in the same manner as with a conventional purse latch. The flange formation or peripheral wall 33 is corrugated or knurled at 45 and is also provided with two laterally extending radially projecting peripheral spaced feet 46 which are adapted to support the case 10 in upright position on the shelf of a cabinet or the like when it is not in use.

The case sections 12 and 13 are assembled with the roll of tape 11 as indicated in the drawings. The inner faces of the hub forming portions 16 and 32 are positioned in abutting relation and connected in pivotal relation by a screw or bolt 47 extending through central apertures 48 and 49 provided in the hub formations or portions 16 and 32. The roll of tape 11 is, of course, mounted on the cooperating trunnion forming portions 16, 32 so that it is free to rotate within the casing. The outwardly tapered side walls 15 and 31 of the case sections 12 and 13 provide ample space for gaining access to the roll of tape 11 to recover a lost end when the tape 42 is accidentally or intentionally loosened from the perch 41 on which it is normally retained after a portion is withdrawn from the case and torn off.

When in assembled relation the two case sections are adapted to rotate relative to each other about the pivot screw 47 to provide adequate circumferential opening for access to the roll 11, the flanges or peripheral wall sections 18 and 33 being adapted to telescope each other during the rotation as illustrated in Figs. 4 and 5. The ends 29 and 44 of the latch elements are adapted to snap into engagement in the notches 26 and 39, respectively, and to normally hold the casing in closed relation. The latches may be disengaged by a light twisting motion of the fingers of the user to permit the case sections 12 and 13 to be rotated and to open the case and provide access to the tape roll 11 for withdrawing the end of the tape 42. The jaw member 34 of case section 13 is open at the one side along the rim 14 of the other case section 12 so that the tape end 42 can be grasped with the fingers and a portion thereof, of the desired length, withdrawn and draped over the serrated margin or edge 37 of the jaw 34. Thereafter the case sections 12 and 13 are rotated to close the two tape gripping jaw members 34 and 19 and to bring the serrated edges 37 and 23 into engagement on opposite sides of the tape. When the jaw members 19 and 34 are held in closed position with the fingers of one hand the user may readily tear off the extending portion of the tape leaving the remainder of the tape in position in the casing, fully protected and closed. The corrugations 20 and 45 on the peripheral wall sections 18 and 33 permit the user to better grip the members during the opening and closing movements of the case sections. The corrugated surface may, of course, be knurled or provided with other surface projections for accomplishing the same purpose.

A modified form of the container is shown in Figs. 7 to 10. In this form of the container two cooperating container or case sections 51 and 52 are provided. One case section 51 comprises an annular disk-like member having a rim portion 53 and a side wall portion 54 with a central inwardly extending hub formation 55. A peripheral wall or flange formation 56 extends around a portion of the edge of the rim member 53. At one end of the flange 56 there is an outwardly extending tape gripping jaw formation 57 having an angular marginal portion provided with a serrated end edge 58. One side edge of the jaw member 57 is connected to the rim 53 by a web portion 59 and the other side edge is connected to the edge of the peripheral wall 56 by a web portion 60. The web portions 59 and 60 are provided along the tapered free edges thereof with a latching element 62 and latching notch 61 respectively. The flange 56 immediately adjacent the gripper jaw 57 is ribbed at 63.

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The other case section 52 is similar to the section 51 having an annular rim 64, and a side wall 65 which is tapered inwardly to a hub forming portion 66 which cooperates with the hub forming portion 55 to provide a trunnion support for the roll of tape 67. The case section 52 is provided with a flange or wall formation 68 which extends around a portion of the periphery thereof and which terminates at a gripper jaw formation 69 extending laterally outwardly thereof and having an end portion 70 with a serrated end edge 71. The wall formation 68 is extended at 72 beneath the gripper jaw to provide a transversely extending edge or perch 73 which is braced or connected along the median line to the outer wall 74 of the jaw 69 by a reinforcing web 75, thus permitting access to the tape from either side edge of the jaw 69 when the case sections are in open position as shown in Fig. 8. The wall 74 of the jaw 69 is of a width sufficient to fit between the side webs 59 and 60 of the jaw 57 in case section 53. Wall 74 is provided with latching formation 76 and notch 76' for cooperating with notch 61 and latching element 62 to retain the case sections in closed condition. A pair of feet 77 and 78 are arranged on the peripheral edges of rim portions 53 and 64, respectively. The feet 77 and 78 each move with the case sections to which they are attached so that when the case sections are assembled in closed pivotally connected relation they may be readily moved to open the case by pressure applied to the ends 79 and 80 of the feet 77 and 78. The latching elements on the jaw members 57 and 69 are disengaged by pressure applied to the feet or they may be separately disengaged. The assembly and operation of the case sections 52 and 53 with the roll of tape 67 is, of course, the same as described with respect to case 10.

Referring to Figs. 11 and 12 there are shown two forms of connecting means for attaching the two case sections together in pivoted relation. In Fig. 11 the abutting faces or walls of the case sections 81 and 82 are perforated at the center and an internally threaded grommet 83 is positioned in the aligned apertures which receives a machine screw 84. Appropriate washers 85 and 86 may be used at the end of the grommet 83, if desired. This construction permits disassembly and re-use of the case by replacing a spent roll of tape with a fresh roll.

In Fig. 12 the wall sections 90 and 91 of the two casing members are connected in face-to-face pivoted relation by providing a laterally extending pin or rivet 92 on one wall which is headed at 93 and axially slit so that it will contract and then expand after insertion in the aperture 94 provided in the other wall 91. This construction permits a snap assembly of the case sections.

In Fig. 13 a modified gripper jaw structure is shown in which an integral gripper jaw 95 on one container section 96 extends outwardly at the end of the peripheral wall of the section and is provided with serrations 97 at the outer margin and a rib formation 98 immediately adjacent the same. The rib 98 is arranged to be received in a cooperating recess 99 in the opposed gripper jaw 100. The gripper jaw 100 extends outwardly at the end of the peripheral wall of the other container section 101 and is provided with serrations 102. The rib 98 and recess 99 cooperate to securely grip the tape as it is fed between the jaw members, thereby engaging the tape in clamping relation over a substantial surface area. A modified latching arrangement is illustrated in this form which comprises an inwardly extending detent 103 on the side wall of one container section 96 and a recess 104 for receiving the same in latching relation in the facing edge of the peripheral wall of the other container section 101.

Referring now to Figs. 14 and 15 there is illustrated a further form of the invention which is particularly adapted to dispense a plurality of rolls of tape. The case 110 is formed in the same manner as the case in

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Fig. 1 except for the width of the same and the details of the cooperating tape gripping jaw members or formations 111 and 112. Jaw member 111 is attached to the case section 113 while the jaw member 112 is attached to the section 114 and the two sections 113 and 114 are assembled with the tape rolls 115, 116 and 117 arranged so that they are rotatable with reference to each other and the ends can be withdrawn between the jaw members 111 and 112. The jaw member 111 as illustrated comprises an outwardly extending plate or body portion 118 which is joined to the peripheral wall or flange section 119 and which has an angled or turned over end 120. The end 120 of the jaw member 111 is divided or stepped according to the width of the tape on the rolls 115, 116 and 117. Each of the stepped portions of the jaw end 120 is provided on its face edge with serrations 121, 122 and 123. The jaw member 111 is joined at one side edge by the web portion 124 with the side wall of the casing section 113 and a latching notch 125 is provided in the free edge thereof. A latch member 126 is provided on the other side edge of the jaw. The other jaw 112 is provided on its angled end edge 127 with stepped portions 128, 129 and 130 which correspond to the stepped portions on the jaw 111 and which are serrated in the same manner. Jaw 112 is also provided with laterally extending stepped web portions 131, 132 and 133 spaced inwardly of jaw edge portions 128, 129 and 130 respectively, which provide a perch for the tape end of each of the rolls 115, 116 and 117. At the one end the jaw 112 is connected by a web 134 with the side wall of the case section 114 and the free edge of the web 134 is notched at 135 to receive the cooperating latch member 126 on the jaw 111. The latch and notch arrangement on the tape gripping jaw members 111 and 112 is the same as described for case 10 (Figs. 1 to 6). The case section 114 is provided with a pair of supporting feet 136 which are formed on the peripheral wall or flange 137 thereof and which serve to support the container in an upright position. The opposite case section 113 with its peripheral wall 116 and gripper jaw 111 is movable or rotatable about the center of the case to open and close the same for providing access to the several rolls of tape which are mounted therein. The tape is dispensed in the same manner as described with respect to the other forms of the invention. The multiple roll type of case is, of course, especially suitable for use in hospitals, or the like, where considerable quantities of tape material of various widths are required.

In the several forms of the container which are described a perch (at 41 in Figs. 1 to 6) is provided for supporting the end of the tape adjacent the tear-of or saw-tooth gripper surfaces. In dispensing certain materials such as pressure sensitive tape the perch may be omitted and the end of the tape allowed to adhere to the serrated jaw edges until it is pulled loose to feed out of the container the desired length.

While specific materials and details of construction have been referred to in describing the illustrated forms of the invention it will be understood that other materials and other details of construction may be resorted to within the spirit of the invention.

I claim:

1. In a dispensing container for a roll of tape, relatively movable complementary casing sections having the general form of the roll of tape when assembled in casing forming rotation and having movable peripheral wall sections providing an opening for feeding there-through desired lengths of the tape, and radially extending circumferentially spaced transverse feet on said container for supporting the same in upright position on a supporting surface, said feet each being mounted on one of said container sections whereby movement of said feet opens and closes said peripheral tape feeding opening.

2. In a dispensing container for a roll of tape, relatively movable complementary casing sections having

the general form of the roll of tape when assembled in casing forming relation, means for supporting a roll of tape in freely rotatable relation within said container, said casing sections being axially rotatable and having movable peripheral wall sections to provide a peripheral opening for feeding therethrough desired lengths of the tape, tape gripping jaws adjacent the ends of said peripheral wall sections and peripherally extending feet on said casing sections for supporting the same in upright position on a supporting surface, said feet providing oppositely directed abutment surfaces for manual engagement to rotate said casing sections.

3. In a tape dispensing device a container comprising cooperating relatively short tubular sections arranged for rotation about their longitudinal axis, said tubular sections, having end walls and peripheral wall portions movable therewith to provide a dispensing opening upon relative rotation of the tubular sections, cooperating tape supporting and gripping jaws adjacent the ends of said wall portions adapted to be moved by rotation of said tubular sections into tape gripping relation, said jaws having confronting faces provided with serrated margins and cooperating tape roll supporting means extending inwardly of said end walls.

4. In a tape dispensing device as recited in claim 3 and said tape roll supporting means including readily separable means whereby said tubular sections are connected for relative axial rotation.

5. A container for dispensing a plurality of separate rolls of tape, comprising cooperating casing forming sections arranged in the form of an elongate tube with the ends closed and having relatively movable peripheral wall sections provided with outwardly extending cooperating gripper jaw formations, said gripper jaw formations having opposed gripping surfaces in stepped relation across the length of the container corresponding to the widths of the several rolls of tape adapted to be received therein and having cooperating opposed tearing edges to permit desired lengths of tape to be torn from selected rolls without disturbing adjoining rolls.

6. A container as recited in claim 5 and latch elements for retaining said gripper jaw formations in closed relation.

7. A container as recited in claim 5 and one of said gripper jaw formations having laterally extending stepped web formations spaced inwardly of the tearing edges thereof providing a perch for the end of the tape on each of the respective rolls therein.

8. A tape dispensing container comprising two cooperating container members adapted when assembled to form an annular casing of the general shape of a roll of tape, said members being connected for rotation about a common axis and having peripheral wall sections movable with said members to provide a peripheral opening for dispensing the tape and cooperating tape holding and gripping jaw formations extending outwardly of said wall sections in opposed relation and adapted to engage the tape at spaced longitudinal points as it is fed through the opening and to permit the leading end of the tape to be readily torn off, and said jaw formations having cooperating serrated surfaces adapted to provide a severing line for tearing off the desired length of tape.

9. A tape dispensing container comprising two complementary container members adapted, when assembled, to form an annular casing of the general shape of a roll of tape, said members being connected for rotation about a common axis and each having a peripheral wall section movable therewith to provide a peripheral opening for dispensing the tape, and cooperating tape holding and gripping jaw members extending radially outwardly of said wall sections adjacent the juxtaposed ends of said sections, said jaw members being adapted to engage the tape as it is fed through the opening along longitudinally spaced transversely extending lines, one of said jaw

members having a sharp terminal edge to facilitate tearing of the tape and a transversely extending rib formation providing a perch for supporting the tape which is spaced radially inwardly of said terminal edge whereby to retain the new end of the tape in an accessible position as successive lengths are severed therefrom, and a reinforcing web extending between said rib formations of said jaw member intermediate the side edges of said jaw member.

10. A tape dispensing container comprising cooperating annular container sections having flange formations adapted to be positioned in sliding telescoping relation and having coaxial hub formations extending inwardly of the container and adapted to be pivotally connected in aligned relation for receiving thereon a roll of tape, said flange formations each extending around a portion of the periphery of said sections and providing a peripheral opening for dispensing the tape, said flange formations terminating at the end defining the opening, cooperating tape holding gripper jaws, which gripper jaws extend radially and outwardly of said flange formation and into opposed relation so that upon rotation of said container sections relative to each other about their pivotal connection said gripper jaws move into and out of confronting relation for gripping therebetween an end portion of the tape which is withdrawn from the container through the dispensing opening, whereby to permit the leading end of the tape to be readily torn off, said jaws having cooperating serrated surfaces adapted to provide a severing line for tearing off the desired length of tape.

11. A tape dispensing container comprising two complementary container members adapted when assembled to form an annular casing of the general shape of a roll of tape, said members being connected for rotation about a common axis and each having a peripheral wall section movable with said member to provide a peripheral opening for dispensing the tape and complementary tape holding and gripping jaw members extending radially and outwardly of said wall sections adjacent the juxtaposed ends of said sections, said jaw members terminating in relatively sharp substantially aligned tearing edges, said jaw members being arranged to move into confronting relation and to grip the tape on opposite faces as it is fed through the opening, one of said jaw members having a relatively narrow transversely extending ledge formation providing a perch for supporting the tape, which ledge formation is spaced radially inwardly of said terminal edge and which is separated from said terminal edge by a recess providing finger clearance for grasping the end of the tape, whereby to retain the new end of the tape in an accessible position where it may be readily grasped as successive lengths are severed therefrom.

12. A tape dispensing container as recited in claim 11 wherein said ledge formation is located on the end edge of the peripheral flange from which the adjacent jaw member extends and which defines one side of the dispensing opening.

13. A tape dispensing container comprising two complementary container members adapted when assembled to form an annular casing of the general shape of a roll of tape, said members being connected for rotation about a common axis and each having a peripheral wall section movable with said member to provide a peripheral opening for dispensing the tape, and cooperating tape holding and gripping jaw members extending radially and outwardly of said wall sections adjacent the juxtaposed ends of said sections, said jaw members being adapted to engage the tape as it is fed through the opening along longitudinally spaced transversely extending lines, one of said jaw members having a relatively narrow transversely extending ledge formation providing a perch for supporting the tape, which ledge formation is spaced inwardly of the terminal edge of said jaw member, and said jaw member having a recess extending inwardly of at least one side edge thereof between said ledge forma-

tion and the terminal edge of said jaw member, said recess providing finger clearance for ready access to the tape whereby the end of the tape may be readily grasped and released from said perch.

14. A tape dispenser as recited in claim 9 with inter-engaging latch elements on said jaw members to normally hold said container members in closed jaw engaging relation.

15. A container as recited in claim 5 and perch forming ledges spaced inwardly of one of said jaw formations and in corresponding stepped relation across the length of the container providing a perch for the end of the tape of the respective rolls therein.

16. A container as recited in claim 5 and perch forming ledges spaced inwardly of one of said jaw formations and in corresponding stepped relation across the length of the container providing a perch for the end of the tape of the respective rolls therein, said perch forming ledges being separated from said jaw formation by a recess of substantial depth sufficient to permit the insertion of the fingers beneath the tape.

17. A container as recited in claim 5 and perch forming ledges on the end of the peripheral wall of one of said casing forming sections, which ledges are spaced inwardly of one of the jaw formations and in stepped relation corresponding to the stepped relation of said jaw formation providing a perch for the end of the tape on each of the respective rolls therein.

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