

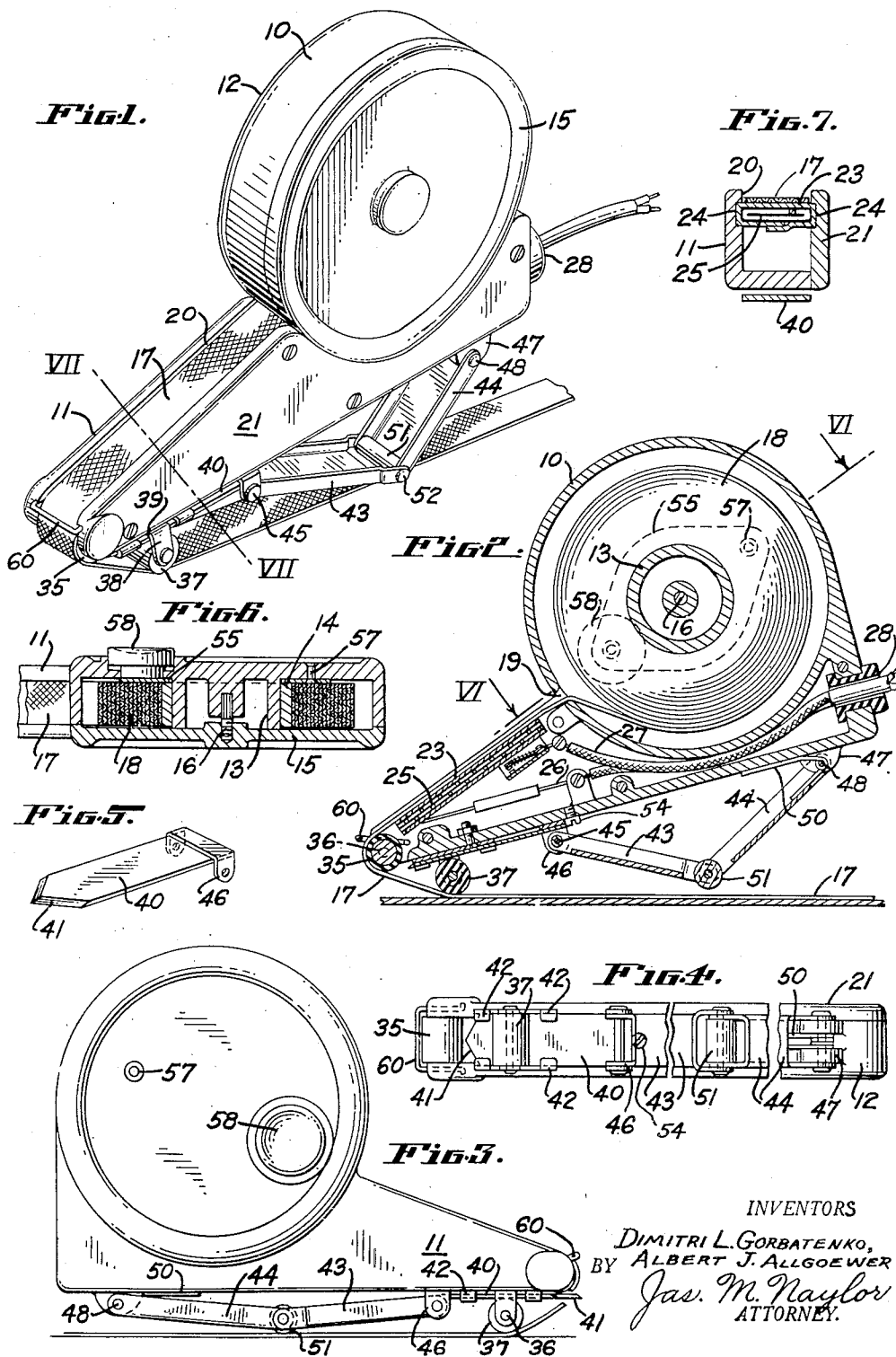
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TAPING INSTRUMENT

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TAPING INSTRUMENT

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This invention relates to an instrument for applying tape and constitutes an improvement on the subject matter of Letters Patent 2,123,415 issued to Dimitri L. Gorbatenko on July 12, 1938.

5 The taping instrument forming the subject matter of the aforementioned patent consists of a resilient pressure roller for engaging a tape, a handle for guiding the roller and for pressing the tape against a surface, means for holding a supply roll of tape, and means for heating the tape as it is fed from the roll.

15 The present invention includes these elements in improved form and, in addition, provides means for cutting the tape when a desired length has been fed from the supply roll, thus obviating the necessity and inconvenience of using separate cutting means such as scissors or the like. It is an object of this invention to provide a fully self-contained efficient taping instrument.

20 In general terms the objects of this invention are attained through the provision of a casing for a supply of tape, an arm integral therewith for guiding the tape, a pressure roller for applying the tape, means for severing the tape, and means for heating the tape as it is fed from the supply roll.

25 While the invention forming the subject matter hereof has been designed particularly for use in the furrier's art wherein tape is heated to soften an adhesive substance thereon and applied along the inside edges of the pieces of fur to be sewn together, it should be understood that the principles of the invention will find many other uses. For instance the heating means may be eliminated or simply disconnected for the application of cold process tape such as Scotch tape. Also the invention may take many additional forms without departing from the spirit thereof; hence, the form shown and described is 40 to be deemed illustrative only.

In the drawing forming a part hereof—

Fig. 1 is a perspective of a preferred form of the taping instrument forming the subject matter hereof,

45 Fig. 2 is a longitudinal section of the taping instrument,

Fig. 3 is a side elevation of the device opposite to that shown in Fig. 1,

Fig. 4 is a bottom plan view of the device,

50 Fig. 5 is a perspective view of the cutting means,

Fig. 6 is a sectional plan view taken along the line 6—6 of Fig. 2, and

Fig. 7 is a section along the line 7—7 of Fig. 1.

55 In the preferred form illustrated in the drawing there is included a case 10, adapted to contain a suitable supply roll of tape, and an applicator arm 11 projecting therefrom. While the arm 11 is here shown as cast integral with a portion of the case 10, it will be appreciated that the same may be a separate piece attached in any conventional way. The case 10 is provided with a cup-like sector 12 having an integral stud 13 forming a journal for the core 14 of a tape roll. A cover 15 is provided for the case and is secured thereto by threaded engagement with the screw 16 co-axially disposed in the stud 13.

5 The tape 17 is unrolled from a supply roll 18 and passage through a slot 19 in the casing 10 from whence it is drawn in a channel 20, formed by the top edge of the arm 11 and the corresponding edge of a detachable cover 21 for the arm, the latter being attached in the conventional way such as by the screws illustrated in the drawing.

15 Inasmuch as heating of the tape is desired in certain taping operations, such as the furrier's art, we provide a plate 23 in the bottom of the channel 20 over which the tape is drawn. The edges of the plate 23 are received by the opposed slots 24 in the cover plate 21 and the arm 11 and thereby held in the position shown (see Fig. 7). As will be noted from Fig. 2 an electrical element 25 is disposed beneath the plate 23 as the heating means therefor, which electrical element is provided with suitable leads 26 and 27, the latter passing rearwardly through the arm and through the conventional aperture 28 for connection with the usual outlet.

25 At the tip of the arm 11 we provide a guide roller 35 over which the tape is drawn, which roller has a shaft 36 journaled in the arm 11 and the cover 21 therefor. A pressure roller 37, which serves to apply tape to the desired surface, is disposed on the bottom of the arm 11, adjacent roller 35, being journaled in the lugs 38 dependent from a frame member 39 secured to the arm 11.

35 As clearly indicated in Figs. 1 and 2 in applying tape the device is tilted and roller 37 presses the tape against the surface to which it is being applied. The value of the device thus far described is materially enhanced by the provision of convenient means to sever the tape when the desired length has been applied.

45 The preferred form of cutting means consists in a blade 40, having a cutting edge 41, slidably received in the frame member 39, there being four ears 42 on said frame bent upon it to define

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the guide means for reciprocation of the said blade (see Fig. 4). The movement of the knife 40 to and from the cutting position (Fig. 3) is accomplished by the pivotally connected links 43 and 44, the first of which is connected to the blade 40 by means of a pin 45 through the ears 46 on the blade 40 (see Figs. 1, 2 and 5), and the second of which is connected to the bottom of arm 11 by means of the dependent ears 57 and a pin 48. A spring 50, the spiral of which is on the pin 48, normally urges the link 44 away from the bottom of arm 11 and through the heretofore described linkage throws the pivotally connected end of link 43 outwardly drawing blade 40 rearwardly in its guides 42 and out of the cutting position (see Figs. 1 and 2). This movement of the blade is limited by the provision of a stop, illustrated by the screw 54 in the bottom of arm 11 (see Figs. 2 and 4).

From the foregoing description it will be seen that the cutting of the tape is effected by downward pressure on the casing 10, to the position illustrated in Fig. 3, whereupon link 44 is forced inwardly against the urge of the spring 50 and, through the link 43, blade 40 is thrust outwardly in its guiding means 42. Since the cutting of the tape will be effected in the majority of cases as the mechanism is moved over the surface being taped, a roller 51 is provided on the pin 52 connecting links 43 and 44, the function of which is to facilitate movement of the instrument over the tape already applied without in any way disturbing it. In the cutting operation, the apparatus is rocked by the operator to the position shown in Fig. 3, that is, with both rollers 37 and 51 in contact with the applied tape.

In order to facilitate the severance of the tape we provide means for interrupting the feed thereof from the supply roll 18, to the end that the tape may be under tension as the knife 42 is moved into its cutting position. A braking member 55 of resilient material such as a thin sheet of metal, having an aperture 56 therein to encircle the stud 13, is riveted as at 57 at one end to the wall of the cup-like portion of the casing 12. Its opposite end is riveted to a plug 58 projecting through an aperture in the side of the cup-like portion 12 of the casing. Looking at Fig. 6 it will be noted that when the plug 58 is pressed inwardly the braking element 55 frictionally engages the supply roll of tape 18 and stops the feed therefrom through the slot 19. Thus the tape 17 will be under tension from the roll to that portion thereof already adhesively secured to the surface being treated, and upon which the rollers 37 and 54 are pressed, thereby facilitating the severance thereof by the knife 40.

A keeper 60, in juxtaposition to the roller 35, consisting of a U-shaped wire retained between the tip of the cover 21 and the corresponding section of the arm 11, serves to hold the severed end of the tape 17 in position for immediate application at the start of further taping operations.

From the foregoing it will be appreciated that the principle of the present invention is susceptible of many changes and modifications. For instance, the feed and cutting means may be used for taping operations wherein the heating of the tape is neither desirable nor necessary. For such uses elimination of the heating plate 23, the element 25 and the leads 26 and 27, or disconnection of the same, will be sufficient.

Further modification may be made without departing from the spirit of this invention and

for that reason we desire protection in accordance with the full scope of the appended claims.

The invention claimed is:

1. A taping instrument comprising means for holding a supply roll of tape, a roller for engaging the tape to press the latter against a surface, means for interrupting as desired the feed of tape from the supply roll to the pressure roller, and means for severing the tape when the feed thereof is thus interrupted.

2. A taping instrument comprising means for holding a supply roll of tape, a roller for engaging the tape to press the latter against a surface, means for heating the tape as fed from the supply roll, means for interrupting as desired the feed of tape from the supply roll to the pressure roller, and means for severing the tape when the feed thereof is thus interrupted.

3. A taping instrument comprising means for holding a supply roll of tape, a roller for engaging the tape to press the latter against a surface, means for interrupting as desired the feed of tape from the supply roll to the pressure roller, and pressure actuated means for severing the tape when the feed thereof is thus interrupted.

4. A taping instrument comprising a casing for holding a supply roll of tape, an arm attached to said casing, a roller on said arm for engaging the tape to press the latter against a surface, means for heating the tape as it is fed from the supply roll to said roller, means on said arm for severing the tape when a desired length thereof has been fed over said roller, and means for interrupting the feed of tape from the supply roller during said cutting operation.

5. A taping instrument comprising a casing for holding a supply roll of tape, an arm attached to said casing, a roller on said arm for engaging the tape to press the latter against a surface, means on said arm for severing the tape when a desired length thereof has been fed over said roller, and means for interrupting the feed of tape from the supply roller during said cutting operation.

6. A taping instrument comprising a casing for holding a supply roll of tape, an arm projecting therefrom, a roller on said arm for engaging the tape and to press the latter against a surface, cutting means on said arm for severing the tape when a desired length thereof has been applied by said roller, a brake for the supply roll normally in inoperative position but movable into operative position to interrupt the feed of tape, and means for applying said brake.

7. A taping instrument comprising a casing for holding a supply roll of tape, an arm projecting therefrom and over one surface of which the tape is fed from the supply roll, a roller on the arm for engaging the tape and pressing the same against a surface, means for heating the tape as it passes over said surface of the arm, cutting means slidably retained on said arm, means for moving the cutting means in and out of cutting position, and means for interrupting the feed of tape from the supply roll during the cutting operation.

8. A taping instrument comprising a casing for holding a supply roll of tape, an arm projecting therefrom and over one surface of which the tape is fed from the supply roll, a roller on the arm for engaging the tape and pressing the same against a surface, means for heating the tape as it passes over said surface of the arm, cutting means slidably retained on said arm, and yieldable means normally urging the cutting means into inoperative position.

9. A taping instrument comprising a casing

for holding a supply roll of tape, an arm projecting therefrom and over one surface of which the tape is fed from the supply roll a roller on the arm for engaging the tape and pressing the same against a surface, cutting means slidably retained on said arm and yieldable means normally urging the cutting means into inoperative position.

10. A taping instrument comprising a casing for holding a supply roll of tape, an arm projecting therefrom and over one surface of which the tape is fed from the supply roll, a roller on the arm for engaging the tape and pressing the same against a surface, means for heating the tape as it passes over said surface of the arm, cutting means slidably retained on said arm, yieldable means normally urging the cutting means into inoperative position, and means for interrupting the feed of tape from the supply roll during the cutting operation.

11. A taping instrument comprising a casing for holding a supply roll of tape, an arm projecting therefrom and over one surface of which the tape is fed from the supply roll, a roller on the arm for engaging the tape and pressing the same against a surface, cutting means slidably retained on said arm, yieldable means normally urging the cutting means into inoperative position, and means for interrupting the feed of tape from the supply roll during the cutting operation.

12. A taping instrument comprising means for holding a supply roll of tape, a brake associated therewith normally in inoperative position but movable into operative position means for applying the brake to the supply roll of tape, and means operable upon applying said brake for severing the tape fed from the supply roll.

13. A taping instrument comprising a casing, a stud therein to support a supply roll of tape, an arm projecting from said case and over which the tape is fed, means on the arm for applying

the tape to a surface, means on the arm for severing the tape when the desired length thereof has been applied to the surface.

14. A taping instrument comprising a casing for holding a supply roll of tape, an arm projecting therefrom over one surface of which the tape is fed, a heating plate in the surface of the arm over which the tape is fed, an electrical element for said heating plate, a roller on said arm for applying the tape to a surface, a slidable cutting member on said arm, yieldable means normally urging said cutting member into an inoperative position, and means for interrupting the feed of tape from the supply roll for the cutting operation.

15. A taping instrument comprising a casing for holding a supply roll of tape, an arm projecting therefrom over one surface of which the tape is fed a heating plate in the surface of the arm over which the tape is fed, an electrical element for said heating plate, a guide roller for the tape at the tip of said arm, a pressure roller on said arm for applying the tape to a surface, a slidable cutting member on said arm, yieldable means normally urging said cutting member into an inoperative position, means for tensioning the tape for the cutting operation, and a keeper on said arm for the severed end of said tape.

16. A taping instrument comprising a casing for holding a supply roll of tape, an arm projecting therefrom over one surface of which the tape is fed, a guide roller for the tape at the tip of said arm, a pressure roller on said arm for applying the tape to a surface, a slidable cutting member on said arm, yieldable means normally urging said cutting member into an inoperative position, means for tensioning the tape for the cutting operation, and a keeper on said arm for the severed end of said tape.

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