

- [54] **ADJUSTABLE SPACING EMBOSSE**
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 [51] Int. Cl.² B41J 1/60
 [58] Field of Search 197/6.7, 6.4

[56]

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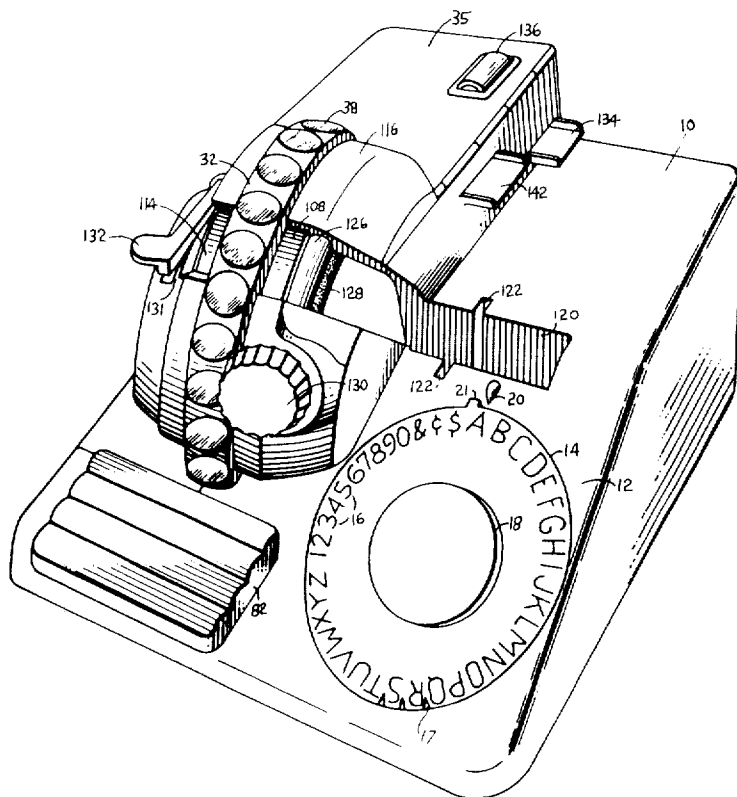
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ABSTRACT

This invention relates to an Adjustable Spacing Embosser and is a type-embossing device which protuberates alpha-numeric characters on pressure sensitive adhesive backed aluminum or other suitable material tapes, and includes a means for visual positioning, spacing, and kerning of each character. The invention particularly refers to a method which produces fully controlled visual spacing of all character combinations in two-color character and background motifs.

15 Claims, 16 Drawing Figures



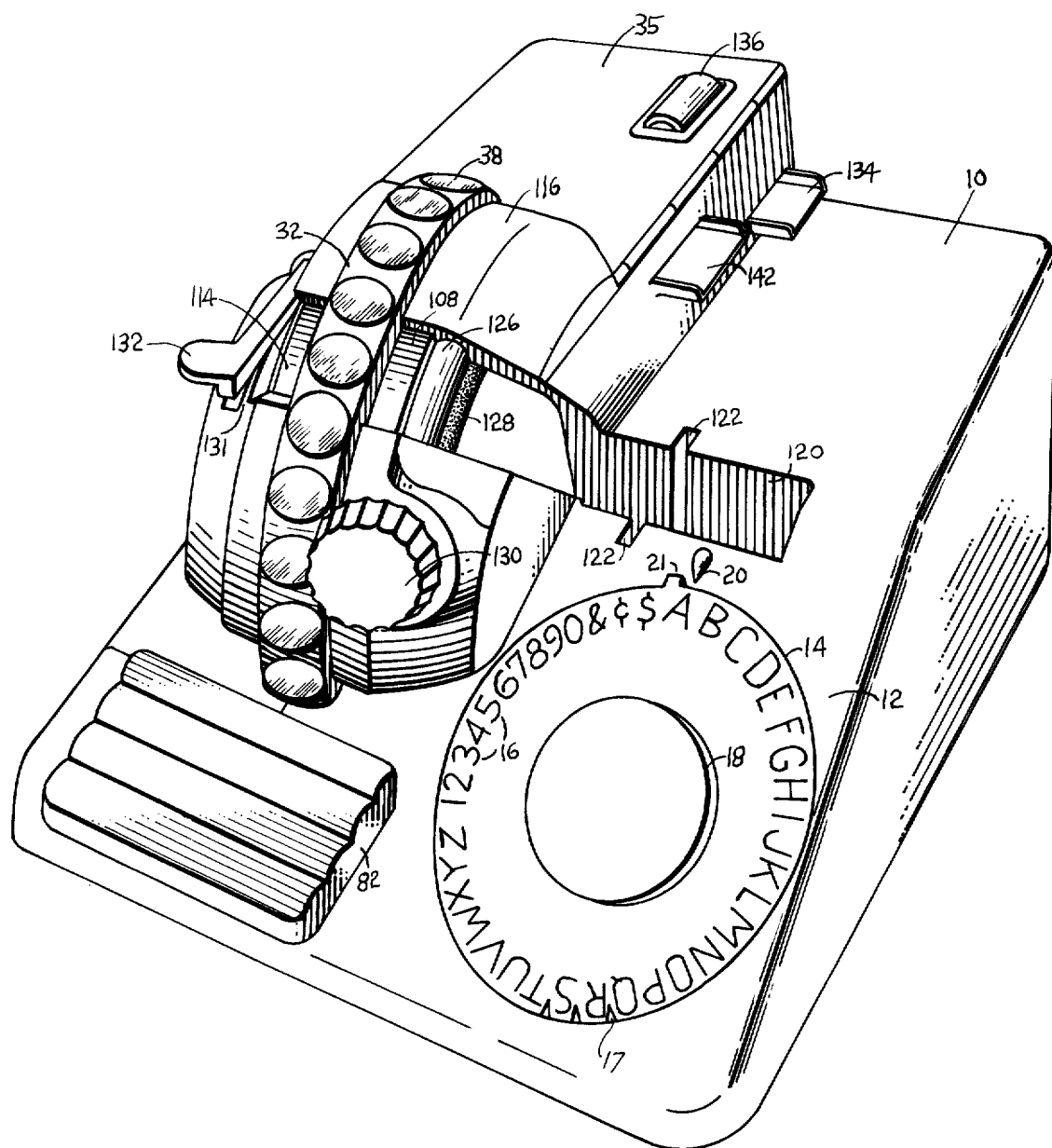


Fig. 1

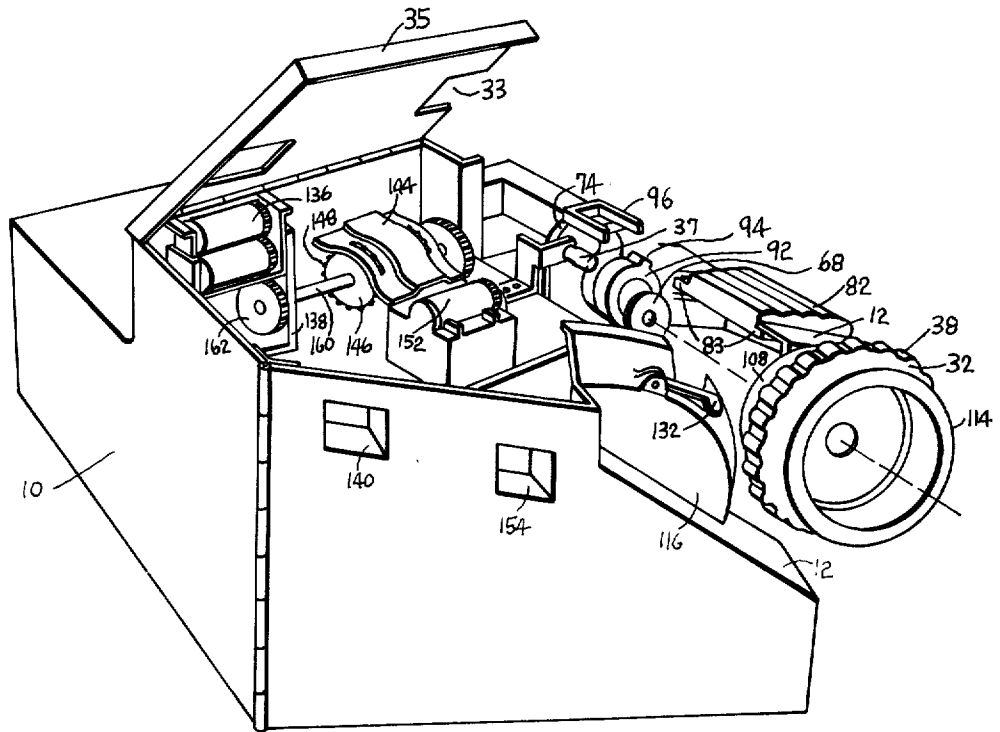


Fig. 2

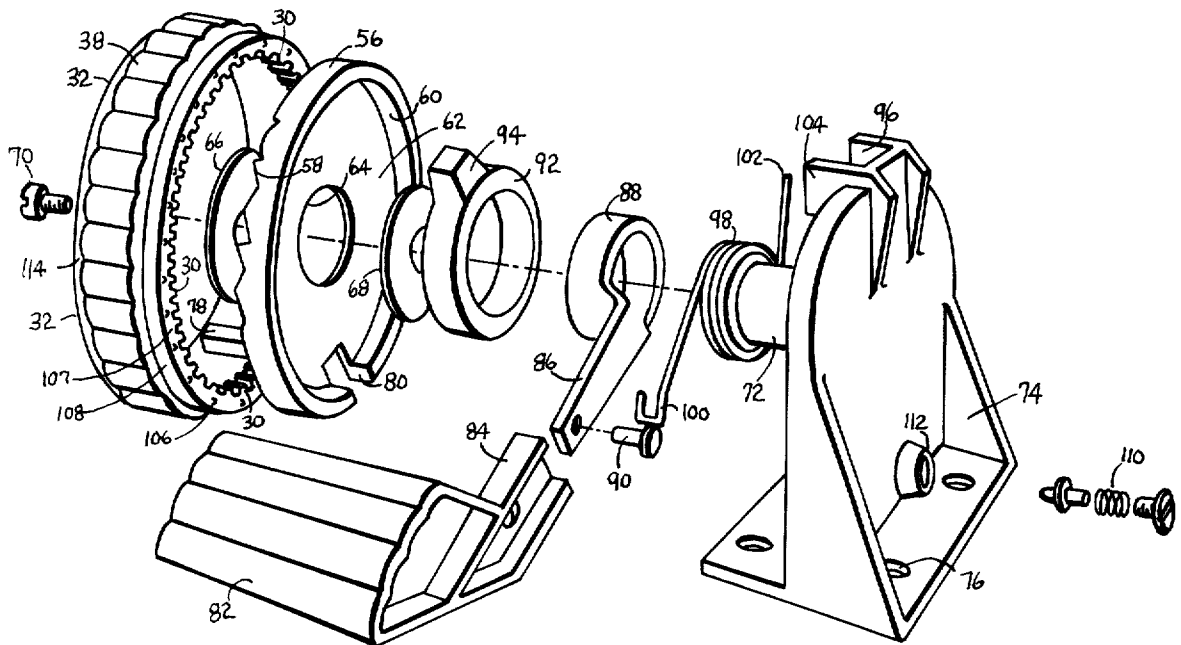
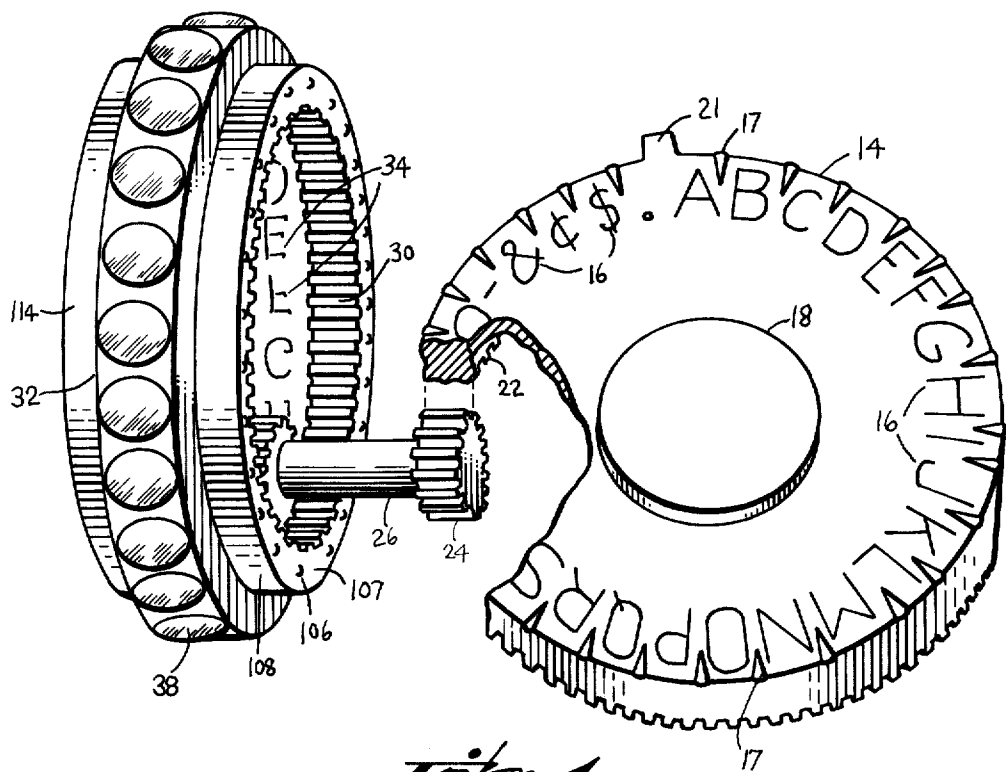
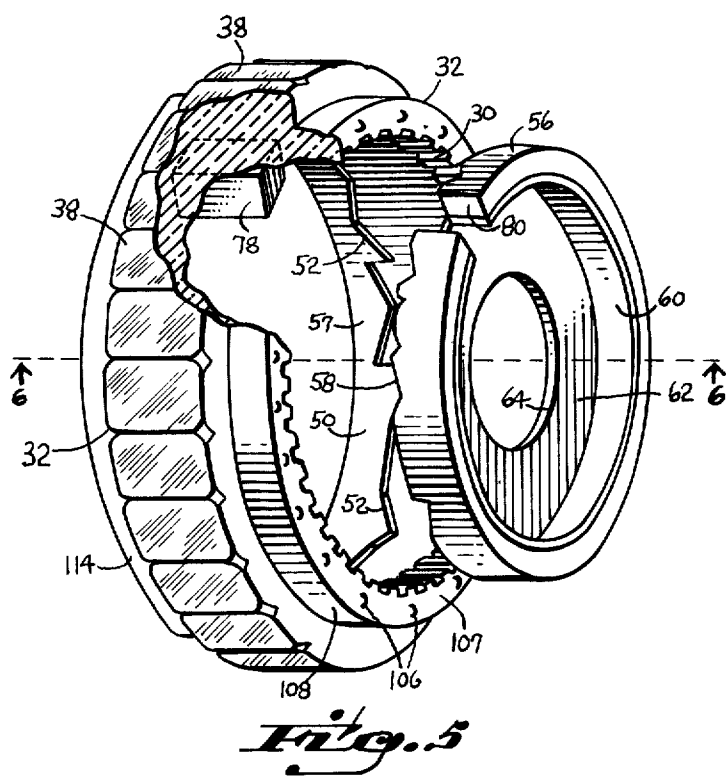
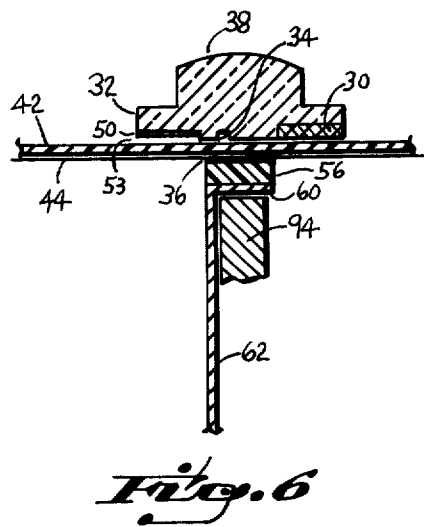
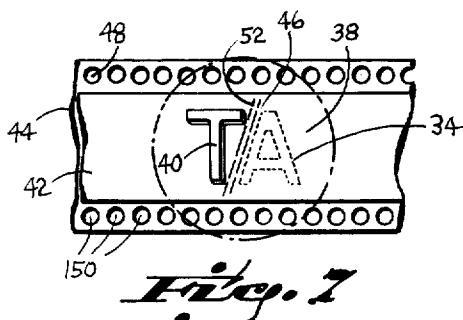
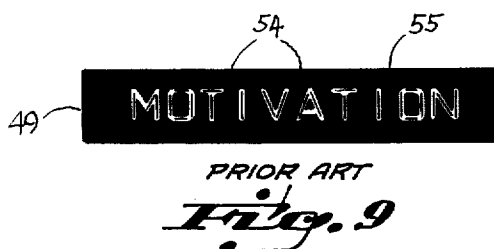
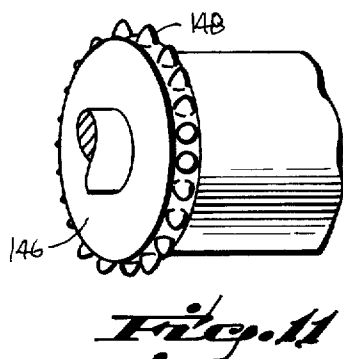
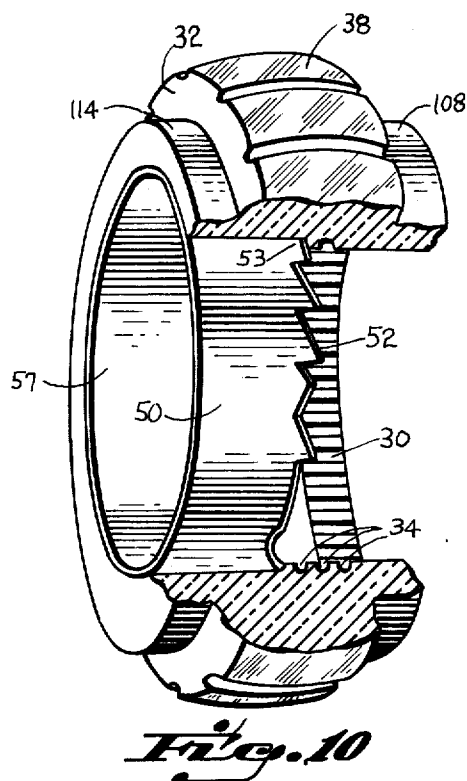
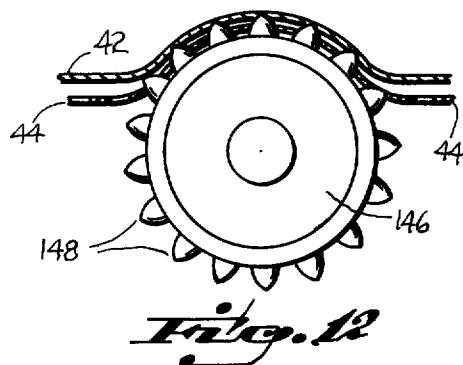
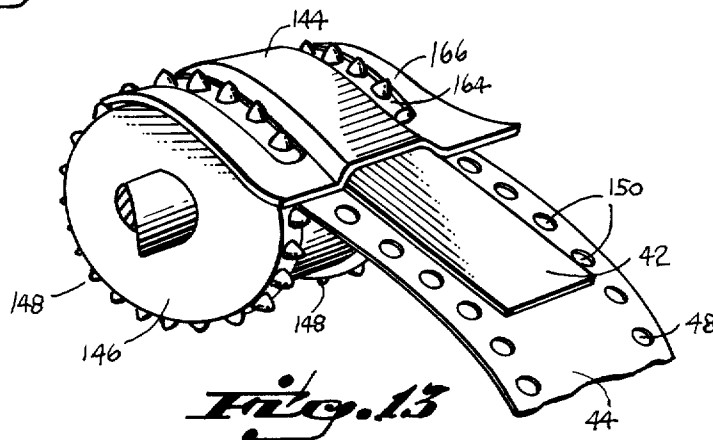
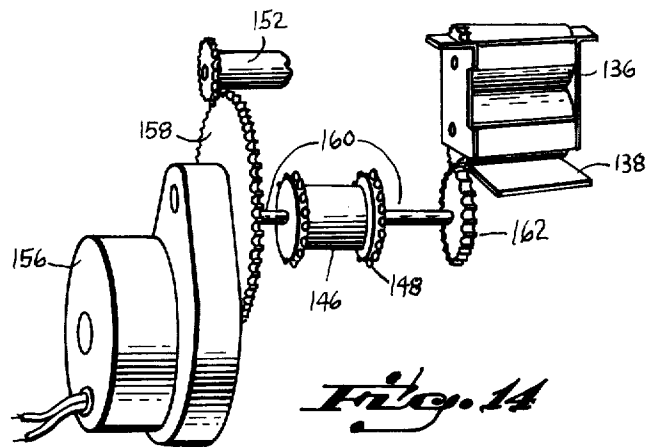
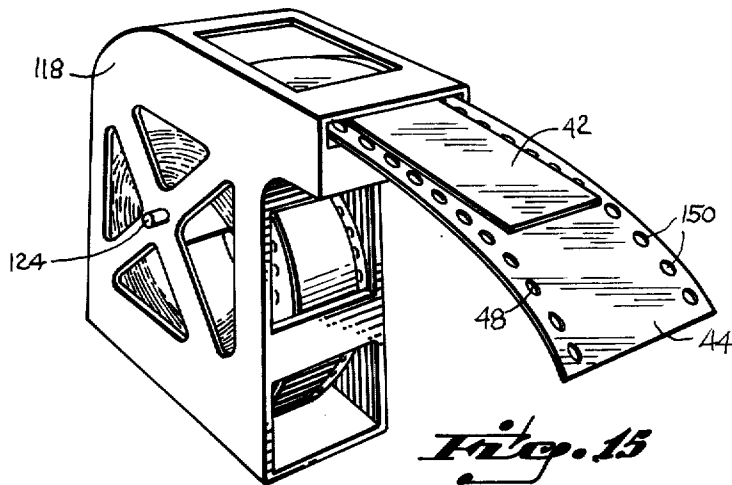
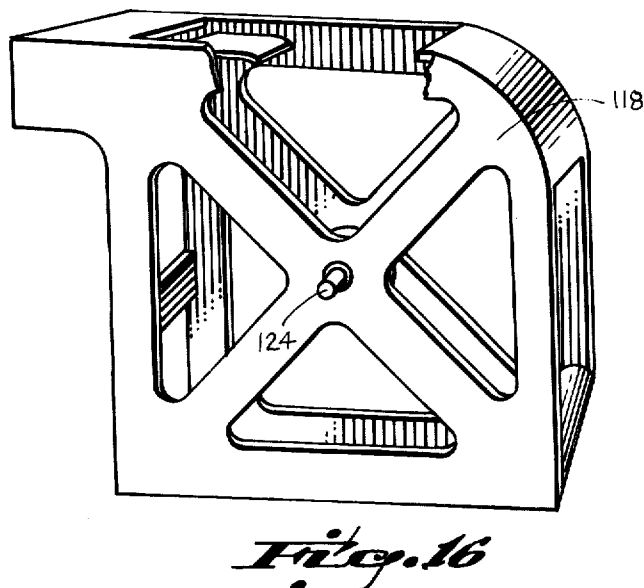


Fig. 3





SHEET 5 OF 5



ADJUSTABLE SPACING EMBOSSE

BACKGROUND OF THE INVENTION

In the present state of the art, some embossing devices produce raised characters on metal or plastic tapes with fixed spacing control by detent pin indexing of the selected character and tape movements distances. The present invention uses a system of lenses which provides visual magnified observation of the character to be embossed and its relationship to the previously embossed character. This visualization effects operator control over correct character selection and spacing. Incorrectly selected characters may be changed prior to embossing, and esthetically pleasing, properly kerned copy is produced.

OBJECTS OF THIS INVENTION

One of the objects of this invention is to provide an improved type-embossing device which avoids one or more of the disadvantages and limitations of prior art type-embossing devices.

Another object of the present invention is to provide operator-controlled spacing of each character in relationship to its adjacent character.

Another object of the present invention is to provide visualization of each character prior to embossing and to disclose its relationship to the previously embossed character, thereby reducing the chance for errors.

Another object of the present invention is to provide an unlimited combination of characters and background colors.

SUMMARY OF THE INVENTION

A feature of the present invention is the use of a font ring with clear plastic lenses which may be any shape, for viewing each character and its position relative to the previously embossed character.

Another feature of the present invention is the use of a plastic insert in the front ring containing a built-in spacing rule for kerning of characters without flattening out the protuberated, prior-embossed character.

Another feature of the present invention is the molding of characters into the font ring which serve as dies for formation of characters in aluminum or plastic tapes.

Another feature of the present invention is the use of a pressure wheel of polyurethane or other suitable elastomeric material for extrusion of an aluminum or plastic tape into the molded characters in the font ring.

Another feature of the present invention is the use of an accurately cut configuration around the periphery of the pressure wheel matching the built-in spacing rule in the plastic insert. This combination of features comprises a viewable image of the character selected prior to embossing, in juxtaposition to the previously embossed character. A spacing control permits minute movement of the special adhesive backed aluminum or plastic tape under the molded character in the font ring for accurate spacing. Characters of fine detail in an infinite selection of type faces may be molded into the font ring by use of silicone molds and materials selected from among clear acrylic, polystyrene, polycarbonate or epoxy plastics which possess properties of high optical transparency and high impact and pressure resistance.

The aluminum or plastic tape which is the substrate into which the characters are embossed is in the form

of a laminate of aluminum or plastic adhesive backing and peelable paper or plastic strip which serves as a release material. Said peelable paper or strip is perforated with sprocket holes which match a sprocket drive within the present invention to insure positive movement through the grinder mechanism. Index detents are molded into the font ring which, operating cooperatively with the control knob, transfer pinions, and internal gear molded into the font ring, accurately position each character relative to the longitudinal axis of the aluminum or plastic tape and maintain its position until intentionally changed by the operator.

Another feature of the present invention is the transfer of embossing pressure by means of a cammed steel pressure ram through the elastomeric pressure wheel, thence through the aluminum or plastic tape into the molded character in the font ring, causing extrusion of the aluminum or plastic tape into the mold recesses.

The aluminum or plastic tapes is supplied in the cassettes easily and rapidly inserted into the embossing device.

Another feature of the invention is the color selectivity in the product provided by use of any of the anodized aluminum colors, pre-painted or enameled colors, on aluminum or plastic tapes or color-coating within the machine itself. A means for fine grinding of the surface of the characters is provided, for selection of color combinations involving bare metal or plastic character coloration against colored backgrounds.

The invention consists of the construction, combination and arrangement of parts, as herein illustrated, described and claimed.

DESCRIPTION OF THE DRAWINGS

In the accompanying drawings, forming a part hereof, is illustrated one form of embodiment of the invention in which drawings similar reference characters designate corresponding parts and in which:

FIG. 1 is an isometric view of the embossing device of this invention with external parts shown.

FIG. 2 is an isometric view of the embossing device with some internal mechanism shown, and some parts shown in exploded view, rotated ninety degrees to FIG. 1 on a slightly smaller scale.

FIG. 3 is an exploded view of the embossing pressure assembly components and the font ring.

FIG. 4 is an enlarged cutaway perspective view of the character selection mechanism.

FIG. 5 is an exploded view in perspective of the font ring and pressure wheel showing the means for accurately matching configuration of components of plastics insert rule edge and spacing rule edge of the pressure pad.

FIG. 6 is a cross-sectional view on line 6—6 of FIG. 5 of the pressure components showing the relative positions of font, tape, strip, pressure wheel and ram.

FIG. 7 is a top view of the image visible to the operator in the font lens.

FIG. 8 is a view of the product from the present invention.

FIG. 9 shows the prior art for comparison.

FIG. 10 is a cutaway perspective view of the plastic ring inserted within the font ring, showing the spacing rule, internal gear, and character dies.

FIG. 11 is a partial perspective view of a portion of the sprocketed drive mechanism for movement of the aluminum or plastic tape.

FIG. 12 is a side view of the relative positions of a portion of the sprocketed drive mechanism, aluminum or plastic tape, and the inverted channel tape guide.

FIG. 13 is a perspective view of a portion of the sprocketed drive mechanism, aluminum or plastic tape and housing, showing also, the perforated peelable plastic strip backing which is affixed to the aluminum or plastic tape.

FIG. 14 is a perspective view of the component of the mechanism for grinding and coating of the surface of the raised characters, showing the geared drive motor, gear-driven grinder, sprocketed drive reel, coating roller unit and support plate.

FIG. 15 is an isometric view of the aluminum or plastic tape within its cassette, including the peelable perforated backing strip and the alignment and assembly pin construction in the cassette.

FIG. 16 is an isometric view of the cassette.

There is shown at 10 the basic cabinet or housing of this embossing invention with its visually adjustable spacing capabilities. Rotatably mounted through the sloping front wall 12 or housing 10 is a selector dial 14 having a circle of alpha-numeric characters 16 along its periphery. A central raised handle knob 18 is provided for rotating it to select any desired character by bringing it to the indicator pointer 20 embossed on sloping housing wall 14. A die and font ring stop projection 21 cooperates with embossed indicator 20 to limit the rotation of dial 14 to just less than one complete revolution. The dial 14 is provided with a bottom ring gear 22 in mesh with one end of a pinion gear 26 whose other gear end 28 is in mesh with an internal ring gear 30 forming an integral part of a transparent font ring 32. Font ring 32 passes through a notch 33 in hinged top 35. Integrally molded in font ring 32 are correspondingly located series of alpha-numeric character female dies 34.

Each particular die 34 is in the embossing station 36 of FIG. 6 when the corresponding character 16 of dial 14 is at the indicator pointer 20. An illuminator 37, suitably powered, may be used to improve vision in the embossing station 36. Externally of the font ring 32 is a lens 38 of any desired outline; different but equivalent lens outlines are shown in different figures. A lens 38 is provided over each character die 34, and each lens 38 is large enough and so located that it will reveal therethrough both die 34 at station 36 and also the last previously embossed character 40 on the embossable tape 42.

This tape 42 may be of aluminum or of any other suitable material, such as a suitable plastic. A peelable paper or plastic strip 44 is adhered to the bottom of embossable tape 42 by the same adhesive that will cause embossed tape, after being completed, to adhere to any desired surface. This peelable tape 44 may be provided with sprocket holes 48 in portions that extend laterally of tape 42, for a purpose later described.

A plastic spacing ring 50 of Mylar having spacing rule edges 52 is inserted and countersunk at 53 within the font ring 32, extending to the molded key 78. Mylar is a trade name for a transparent plastic polyester. Other suitable plastic, which is of a stable base, clear material in the thickness used in the font ring 32 shown in FIG. 10, can also be used. Thus, the Mylar surface 57 of ring 53 is of a greater inside diameter than the diameter of the character dies 34 so that the embossed character 40 when advanced to pressure the next character in char-

acter die 34 is free from contact with previously embossed character and allows clearance, preventing flattening of character 40.

The spacing rule edges 52 assist in judging the spacing between the last previously embossed character 40 on the tape 44 and the next selected character 34 to be embossed, thus facilitating the production of esthetically pleasing, properly kerned copy such as shown at 46, FIG. 8 rather than the unesthetic uniform spacing 54 that is irrespective of the space occupied by the characters such as in the prior art 55 in FIG. 9.

A pressure pad 56, of urethane or other suitable material, having complimentary rule spacing edges 58 is located on the rim 60 of a pressure wheel 62. The pressure wheel 62 has a somewhat large axial opening 64 enabling the pressure wheel 62 and pressure pad 56 to be moved radially for pressuring the tape 40 into the selected female character die 34.

64 is an oversized axial aperture in pressure wheel 62 and is loosely fitted between washers 66 and 68 allowing pressure wheel 62 to drop by specific gravity when embossing operating treadle 82 is released, creating a space above pressure pad 56 as clearance for tape 42 and peelable strip 44 to travel under female character die 34 and internal ring gear 30, as shown in FIG. 6.

The wheel 62 is rotatably and slidably held between two washers 66 and 68 by a screw 70 threaded through washer 66 into the end of shaft 72 extending from the support frame 74. Frame 74 has bolt holes 76 for receiving bolts or studs (not shown) for fastening it to the bottom floor of the housing 10. A key 78 molded inside the font ring 32 coordinates with the key slot 80 cut in pressure wheel 62 and causes the wheel 62 to coordinate its rotation with font ring 32 while permitting radial pressure action caused by selective action of treadle 82. Treadle 82 extends through a complimentary opening in the housing front sloping wall 12 and has wings 83 retaining it in housing wall 12. This treadle 82 has a channel arm 84 into which a finger 86 of an eccentric hub 88 is riveted at 90.

This eccentric hub 88 is journaled on support frame shaft 72, and, in turn, it journals in ram wheel 92 which has a ram abutment 94 guided in ram guide 96, formed in the support frame 74. A treadle return spring 98 coiled about shaft 72 has a hook end 100 under eccentric hub finger 86 and has its other end 102 biased against the near side 104 of ram guide 96 for returning treadle 82 to its unpressed position when pressure is released. Index detents 106 coordinated with the position of the character dies 34, are provided in the side face 107 of laterally extending rim 108 on the support frame side of font ring 32 for cooperating with font index plunger assembly 110 extending through aperture 112 in vertical support 74 to hold the selected character die against accidental rotation properly in the embossing station 36. Thus, pressure on treadle 82, rotating the eccentric hub 88 within ram ring 92, causes abutment ram 94 to abut rim 60 and press its pressure pad 56 against the bottom of strip 44 and embossable tape 42 into the selected character die 34 and thus embosses the character into the tape 42 at 40. Then, countersunk insert spacing ring 50 permits embossed character to pass by without damage. Font ring gear 30 is provided internally in the lateral rim 108. An opposite laterally extending rim 114 with rim 108 rotatably holds the font ring 30 within the housing 10 with the ring lenses 32 ex-

tending through the housing semi-circular complimentary protuberance 116.

The tape 42 and strip 44 are provided in a readily insertable and removable cassette 118 which may be dropped into a complimentary cassette well 120 having locator pin slots 122 in its opposite walls for receiving the locator pins 124 extending from the sides of the cassette 118. The tape 42 and peelable strip 44 are inserted between smooth upper roller 126 and lower grit surfaced roller 128 for controllably feeding and moving the tape and strip to and from and then through the embossing station, the rollers 126 and 128 being controlled by the control handle knob 130 having a geared shaft (not shown) extending through the housing protuberance 116 into mesh with a gear (not shown) on grit surfaced roller 128.

The embossed tape is then advanced from the embossing station 36 to a housing tape exit 131 and under a tape cutter 132 for cutting off the embossed tape either for direct use, or for further treatment, if desired.

The embossed tape 42 may be coated or colored by inserting it through coating entry 134 to coating rollers 136 within the housing, supported on a plate 138 and thence to a coating exit 140. Next, it may be buffed by inserting it through buffing entry 142 to pass under an inverted channel 144 over a sprocket wheel 146 having sprocket teeth 148 which extend into sprocket holes 150 of peelable strip 44 and thence under buffing or grinding wheel 152 to buffing exit 154. A suitably powered motor 156 rotates a large gear 158, geared buffing wheel 152 and has a shaft 160 operating sprocket wheel 146 and extending to a gear 162 for operating coating rollers 136.

OPERATION OF THE INVENTION

The cassette 118, with its tape 42 of aluminum or any other suitable material, and its peelable strip 44 is inserted into the cassette well 120 with its pins 124 in the slots 122. The tape 42 and strip 44 is inserted between grit faced roller 128 and smooth roller 126 and advanced by control handle knob 130 to the embossing station 36. The selected character 16 is rotated to the indicator pointer 20 which, through its gear 22 and pinion 24, brings the corresponding character die 34 to the embossing station 36. Treadle 82 is then depressed, causing abutment ram 94 to pressure the tape 42 and extrude into the selected character die 34, the embossed character 40 being visible through the lens 38 thereover. Tape control handle knob 130 is then rotated to advance the embossed character 40 somewhat, still within the view through the lens 38, and the next selected character 40 is positioned at the embossing station 36, and becomes visible through the lens 38 thereover, and the last previously embossed character 40 on tape 42 is positioned relative to the next character die 34. This positioning may rely on the judgement of the operator, or he may view the rule edges 52 to more accurately align the last previously embossed character 40 against the next character die 34. Should he have mistakenly placed a wrong character die 34 in the embossing station 36, he will see the wrong character die 34 through the lens 36 and have the opportunity of correcting it before embossing such wrong character. With the correct character die 34 in the embossing station 36 and the last previously embossed character 40 properly spaced from the next character die to be embossed, the treadle 82 is then depressed, thus em-

bossing the next selected character and extruding the tape 42 into the selected character die 34, and the treadle 82 is released, whereupon the same procedure is repeated for each ensuing character until the tape 42 is finished. Then the control handle knob 130 is operated to bring the last of the embossed characters 40 sufficiently beyond tape cutter 132 and out of tape exit 131, and the embossed tape is then cut off. If desired, it may be used in such condition, and the strip 44 is peeled off at the location for use of the tape, whereupon the adhesive backing is used to attach the tape 42 at the desired location point of use. Otherwise, before peeling off the strip 44, the cut tape 42 and strip 44 may be inserted through the coating entry 134, past the coating rollers 126 as above described, after first actuating the motor 156, and out the coating exit 136. Finally, it may be inserted through buffing entry 142, over the sprocket wheel 146, under inverted channel 144 and thence to grinding or buffing wheel 152 and through buffing exit 154, ready to be peeled and used at the desired point of use. Slots 164 in channel wings 166 permit the sprocket teeth to rotate therethrough.

ABSTRACT OF THE DRAWINGS

In the drawings, like numbers refer to like parts, and for the purposes of explication, marshalled below are the numbered parts of a Tape Embossing Device with its Visually Adjustable Spacing Capabilities, of this invention:

Number	Part	Shown in Figures
10	cabinet or housing	1, 2
12	sloping front wall	1, 2
14	selector dial	1, 4
16	circle of alpha-numeric characters	1, 4
17	surface edge detents	1, 4
18	handle knob for 14	1, 4
20	indicator pointer	1
21	font ring stop projection	1, 4
22	bottom ring gear of 14	4
24	pinion end gear	4
26	pinion gear shaft	4
28	other pinion gear end	4
30	internal ring gear	4, 5, 6, 10
32	transparent font ring	1, 2, 3, 4, 5, 6, 10
33	notch in hinged top 35	2
34	female character dies	4, 6, 10
35	hinged top cover	1, 2
36	embossing station	6
37	illuminator	2
38	lenses	1, 2, 3, 4, 5, 6, 7, 10
40	embossed character in tape 42	7
42	embossable tape	6, 7, 12, 13, 15
44	peelable strip	6, 7, 12, 13, 15
46	properly spaced and kerned copy	7, 8
47	horizontal & vertical kerning	9A
48	sprocket hole	7, 13
49	prior art tape	9
50	plastic space ring	5, 6, 10
52	rule edge	5, 6, 7, 10
53	countersink of 50 in 32	5, 6, 10
54	unkerned spacing of prior art	9
55	poor spacing of prior art	9
56	pressure pad	3, 5, 6
57	inner surface at 50	5, 10
58	complimentary spacing edges on 56	3, 5
60	rim of wheel 62	3, 5, 6
62	pressure wheel	3, 5, 6
64	axial aperture in 62	3, 5
66	washer, side toward 74	3
68	washer on other side	3
70	screw through 68	3
72	fixed shaft on 74	3
74	support frame	3
76	stud bolt holes in 74	3
78	molded key on inside of font ring 32	3, 5

-Continued

Number	Part	Shown in Figures
80	key slot for receiving 78	3, 5
82	embossing operating treadle	1, 2, 3
83	wings on 82 holding it with wall 12	2
84	channel arm on 82	3
86	finger of hub 88	3
88	eccentric hub, rotatable in ram wheel 92	3
90	rivet connecting 86 and 88	3
92	ram wheel	2, 3
94	ram abutment	2, 3, 6
96	ram guide	2, 3
98	coil spring on shaft 72	3
100	hook end of 98 under 86	3
102	biasing end of 98	3
104	spring biasing side of 96	3
106	index detents in lateral rim of 108 of font ring 32	3, 4, 5
107	side face of rim 108	3, 4, 5
108	lateral rim	1, 2, 3, 4, 5, 10
110	index plunger assembly	3
112	plunger aperture in support frame 72	3
114	oppositely extending rim	1, 2, 3, 4, 5, 10
116	semi-circular housing protuberance	1, 2
118	tape cassette	15, 16
120	cassette well in housing 10	1
122	pin slots in well 120	1
124	locator pins on 118	15, 16
126	smooth upper feeder roller	1
128	grit faced lower feeder roller	1
130	feeder rollers control handle knob	1
131	housing tape exit	1
132	tape cutter	1, 2
134	coating entry	1
136	coating rollers	1, 2
138	support plate for 136	2, 14
140	coating exit	2
142	buffing entry	1
144	inverted channel over 146	2, 13
146	sprocket wheel	2, 11, 12, 13, 14
148	sprocket teeth	2, 11, 12, 13, 14
150	sprocket holes in peelable strip	7, 13, 15
152	buffing or grinding wheel	2, 14
154	buffing exit	2
156	powered motor	14
158	gear on 156 to buffing wheel 152	14
160	gear shaft from 156	2, 14
162	gear on 160 to coating rollers 136	2, 14
164	slots in 166	13
166	channel wings	13

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied.

Having thus set forth the nature of this invention, what is claimed is:

1. A tape embossing device for embossing alpha-numeric characters (16) with visually adjustable spacing capabilities in relationship to the prior embossed character on the tape (42) comprising a housing (10), a font ring (32) rotatably mounted on said housing (10), said font ring (32) having a plurality of selectable alpha-numeric character dies (34) thereon, means (14, 18) on said housing for rotating a selected alpha-numeric character die (34) to an embossing station (36), means (126, 128) for controllably moving the tape (42) in either direction to or through the embossing station (36), means (82) for embossing the selected die character on said tape (42) at the embossing station (36), means (38) for making the last previously embossed character (40) on said tape (42) and the next selected character die (34) on said font ring (32) simultaneously visible to the operator, manually operable means (130) for operating said tape moving means (126, 128) to kern and to adjust the spacing between

said last previously embossed character (40) on said tape (42) and said next selected character die (34) of said font ring (32) whereby said next selected character may then be embossed in said tape (42) in a desired kernal, adjusted relationship (46) to the last previously embossed character in said tape (42), said font ring (32) being of transparent material, said simultaneous visibility means including lens means (38) on said transparent font ring (34) through which said station 10 located characters (34, 40) may be observed, said adjustably spacing means including a spacing rule means (50) countersunk in said font ring (34) having aligning edges (52) aligned with said character dies (34) for aligning said embossed character (40) against said next 15 selected character die (34), said countersunk spacing rule means permitting said embossed character to pass thereby free of contact therewith.

2. The embossing device of claim 1, said simultaneous visibility means also including an illuminator 20 (37) lighting the character (40) and character die (34) in the embossing station (36).

3. The embossing device of claim 1, said embossing means including a pressure wheel (62), a peripheral pressure pad (56) on said pressure wheel (62), rotatable through the embossing station (36) and a pressure ram (94) cooperating with said peripheral pressure pad (56) for pressuring said tape (42) in the embossing station (36) into the selected character die (34).

4. The embossing device of claim 1, said means for 30 selectively rotating said font ring (32), comprising an internal ring gear (30) in said font ring (32), a circular rotatably mounted selector dial (14) on said housing (10) having the alpha-numeric characters (16) of said font ring (34) similarly displayed on its top, a depending rim (108) on said selector dial having a circumferential gear (24) on its bottom, transfer pinions (24, 26, 28) in mesh with said font gear (30) and said selector dial gear (22), and indicator pointer (20) of said housing indicating the selector dial character (16) corresponding to the font ring character die (34).

5. The embossing device of claim 4, and index detents in the side surface of said rim (108) of said font ring (32) and a font index plunger assembly (110) in said support frame (74), coordinating therewith to hold 45 said font ring (32) against accidental rotation.

6. The embossing device of claim 1, and a tape cassette (118), said housing (10) having a well (120) complementary to said tape cassette (118) removably receiving said tape cassette therein, the tape (42) being feedable from said cassette (118) through the embossing station (32), said tape moving means including feed rollers (126, 128) in said housing pulling said tape (42) from said cassette (118) through the embossing station (36) to a tape housing exit (131).

7. The embossing device of claim 6 and a tape cutter (132) at said housing exit (131).

8. The embossing device of claim 6, the bottom one (128) of said feed rollers (126, 128) being grit surfaced to frictionally contact the bottom of the tape means (42, 44).

9. The embossing device of claim 6, said controllable tape moving means including a rotatable knob (130) on said housing (10) connected to said feed rollers (126, 128).

10. A tape embossing device for embossing alpha-numeric characters (16) with visually adjustable spacing capabilities in relationship to the prior embossed

character on the tape (42) comprising a housing (10), font ring (32) rotatably mounted on said housing (10), said font ring (32) having a plurality of selectable alpha-numeric character dies (34) thereon, means (14, 18) on said housing for rotating a selected alpha-numeric character die (34) to an embossing station (36), means (126, 128) for controllably moving the tape (42) in either direction to or through the embossing station (36), means (82) for embossing the selected die character on said tape (42) at the embossing station (36), means (38) for making the last previously embossed character (40) on said tape (42) and the next selected character die (34) on said font ring (32) simultaneously visible to the operator, manually operable means (130) for operating said tape moving means (126, 128) to kern and to adjust the spacing between said last previously embossed character (40) on said tape (42) and said next selected character die (34) on said font ring (32), whereby said next selected character may then be embossed in said tape (42) in a desired kerned, adjusted relationship (46) to the last previously embossed character in said tape (42), said embossing means including a pressure wheel (62), a peripheral pressure pad (56) on said pressure wheel (62) rotatable through the embossing station (36) and a pressure ram (94) cooperating with said peripheral pressure pad (56) for pressuring said tape (42) in the embossing station (36) into the selected character die (34), said ram (94) being mounted on a ram wheel (92), an eccentric hub (88) rotatable within said ram wheel (92) for pressuring said ram (94) and a treadle (82) connected to said eccentric hub (88) for rotating said eccentric hub (88) within said ram wheel (92) to pressure said ram into embossing tape (42).

11. The embossing device of claim 10, and a supporting shaft (72) on which said eccentric hub (88) is rotatably supported, a support frame (74) on which the support shaft is mounted, and an upstanding ram guide (96) supported on said support frame (74) for guiding said ram (94) into pressure contact with said peripheral pressure pad (56) to pressure the embossable tape portion (42) in the embossing station (36) into the selected character die.

12. A tape embossing device for embossing alpha-numeric characters (16) with visually adjustable spacing capabilities in relationship to the prior embossed character on the tape (42) comprising a housing (10), a font ring (32) rotatably mounted on said housing

(10), said font ring (32) having a plurality of selectable alpha-numeric character dies (34) thereon, means (14, 18) on said housing for rotating a selected alpha-numeric character die (34) to an embossing station (36), means (126, 128) for controllably moving the tape (42) in either direction to or through the embossing station (36), means (82) for embossing the selected die character on said tape (42) at the embossing station (36), means (38) for making the last previously embossed character (40) on said tape (42) and the next selected character die (34) on said font ring (32) simultaneously visible to the operator, manually operable means (130) for operating said tape moving means (126, 128) to kern and to adjust the spacing between said last previously embossed character (40) on said tape (42) and said next selected character die (34) of said font ring (32) whereby said next selected character may then be embossed in said tape (42) in a desired kerned, adjusted relationship (46) to the last previously embossed character in said tape (42), an embossed tape coating and buffing apparatus comprising said housing (10) having a tape coating entry (134) and a coated tape exit (140), tape coating means (136) aligned between tape coating entry (134) and said coated tape exit (140), said housing (10) also having a tape buffing entry (142) and buffed tape exit (154) and tape buffing means (152) aligned between said tape buffing entry (142) and said buffed tape exit (154), and a common motor means (156) actuating both said tape coating means (136) and said tape buffing means (152).

13. In the embossing device of claim 12, the tape (42) having a readily peelable strip (44) adhered thereto, said strip (44) extending laterally of said tape (42) and having sprocket holes (150) in the laterally extending portions, and rotatable sprocket means (146) engaging in said sprocket holes (150) actuated by said motor means (156).

14. In the embossing device of claim 13, and an inverted channel (144) over said sprocket means (146) directing said tape (42) and peelable strip (44) past said buffing means (152) to said buffed tape exit (154).

15. In the embossing device of claim 14, said inverted channel (144) having laterally extending wings (166), said wings having longitudinal slots (164) permitting rotation of the sprocket teeth (148) therethrough.

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