1	PROCESSES	34	By means to vary engagement of
2	.Involving registration of		feed means with material
	material	35	Feed means moved out of
3	Involving lateral registration	2.6	engaging position
4	.Involving plural feeding means	36	By ancillary feed means
5	.Involving stripping from conveyer	37	By disconnectable connection in drive train
6	.By engaging material	38	By means to retard material
	modifications		movement
7	.By fluid current	39	By material contact
8	.Intermittently or interruptedly	40	By variable-ratio transmission
9	CONTROL MEANS RESPONSIVE TO	41	Coaxially shiftable pulley
	INDICIA CARRIED BY AUXILIARY		cones
	RECORD (E.G., TAPE OR CARD)	42	By variable speed power source
10	WITH MATERIAL-RESPONSIVE CONTROL	43	To stop and/or start movement
	MEANS		of material
11	.Responsive to break or depletion	44	Responsive to dancer detector
12	.For threading device	45	.Detector means
13	.For flywheel	46	WITH INTERLOCK MEANS
14	.For festooner	47	.And means to initiate operation
15	.To position material laterally		of part
16	With control of longitudinal	48	WITH RANDOMLY ACTUATED STOPPING
	movement		MEANS
17	By roller pair engaging web	49	SELECTIVELY REVERSIBLE MATERIAL
_ /	margin		MOVER
18	By shiftable material support	50	.By optional moving means
19	Laterally movable support	51	.By optional drive trains
20	Responsive to photocell	52	MEANS TO ENGAGE LONGITUDINALLY
20	detection		SPACED MODIFICATIONS IN
21	Pivotally mounted roller		MATERIAL
22	Responsive to pneumatic	53	.Such means produces the
22	detection		modifications
23	Responsive to material-	54	.Alternately selectable prongs
23	contacting element	55	.Prong operable intermittently to
24	.To regulate longitudinal		prevent longitudinal material
24	movement of material		movement (e.g., registration
25	Responsive to overload		pins)
26	Responsive to weight of	56	With means to disable
20	accumulation		restraining operation of prong
27	Registration	57	With positive actuator to
28	Of continuously moving		project and to retract prong
20	material	58	With resilient means to urge
29	By means to vary speed of		prong toward material
2)	material momentarily	59	.With additional means to
30	By means to vary speed of		restrict material movement
30	feed roll	60	Fluctuation damping means
31	By ancillary power source	61	By flywheel
32		62	.Reciprocating or oscillating
J	By means to change feeding movement of intermittent feed		claw or finger
	movement of intermittent feed stroke	63	Serial sequentially operated
33	By means to discontinue		claws
<i>J J</i>	movement of material	64	With means to change path or extent of claw movement

65	Range changer	97.4	.Vacuum jet for strand
66	To stop material movement	100	WITH ALARM, SIGNAL, OR INDICATOR
67	On longitudinally reciprocated	101	CONVERTIBLE
	carrier	102	COMBINED
68	Claw pivotable on carrier	104	BY FESTOONER
69	On two rotated carriers	105	.With means to shift girt with
70	On carrier pivoted about a		respect to festoon and
	fixed axis		conveyer
71	Claw pivotable on carrier	106	.With means to hold material on
72	Claw radially slidable on		girt
	carrier	107	.With means to feed girt to
73	Claw slides on and pivots about		conveyer
	fixed stud	108	PLURAL MATERIAL-MOVING MEANS
74	.Pins on flexible belt or chain	109	.With plural paths for material
75	With means to effect	110	Alternately usable
	supplementary pin movement	111	.With means to independently vary
76	.Rotating sprocket (e.g., pin-		mover speed
, 0	wheel)	112	.Continuous feed from serial
77	For concatenated material	112	sequentially operated feeders
78		113	.With bight former
70	Circumferentially opposite pins	114	With pivotal former-support
7.0	engage looped material		
79	With laterally adjustable	115	.With intermittent material-mover
0.0	sprocket(s)	116	Including auxiliary material-
80	With means to disengage		mover for starting
	material from prong(s)	117	And continuous material-mover
81	By supplementary movement of	118.1	.And intermediate storage
	prong(s)	118.2	In a loop having a displaceable
82	With means to retain material		support
	on prong(s)	118.3	$\ldots$ Where support is upheld by the
83	Retainer and sprocket		material (e.g., dancer roller,
	relatively displaceable		etc.)
84	Roller retainer	118.4	In a container
85	Roller retainer	118.5	Having conveying means within
86	With additional means to	120	
		120	BY INTERMITTENT (INTERRUPTED)
	support material	120	BY INTERMITTENT (INTERRUPTED) MATERIAL-MOVER
87	support material .Including detail of prong shape	121	
87			MATERIAL-MOVER
87 88	.Including detail of prong shape		MATERIAL-MOVER .Stored material-movement-derived
-	.Including detail of prong shape or construction	121	MATERIAL-MOVER .Stored material-movement-derived energy provides moving force
-	.Including detail of prong shape or construction WITH MEANS TO TEMPORARILY DEFORM	121	MATERIAL-MOVER .Stored material-movement-derived energy provides moving force .With means varying the material
-	.Including detail of prong shape or construction WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR	121 122	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements
88	.Including detail of prong shape or construction WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)	121 122 123	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force  .With means varying the material speed during movement  .Cyclical unequal movements  .Comprising constantly rotated
88	.Including detail of prong shape or construction WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING) SHIFTABLE PART ALLOWING HAND LOADING	121 122 123	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force  .With means varying the material speed during movement  .Cyclical unequal movements  .Comprising constantly rotated roll on reciprocating or
88 89 90	.Including detail of prong shape or construction  WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)  SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller	121 122 123 124	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier
88 89 90 91	.Including detail of prong shape or construction  WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)  SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller  THREADING DEVICE	121 122 123 124	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutment
88 89 90 91 92	.Including detail of prong shape or construction WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING) SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller THREADING DEVICE .With means to pull lead-end	121 122 123 124 125 126	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutmentMovable with material
88 89 90 91	.Including detail of prong shape or construction  WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)  SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller  THREADING DEVICE	121 122 123 124	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutmentMovable with material .Manual material-mover (e.g.,
88 89 90 91 92 93	.Including detail of prong shape or construction WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING) SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller THREADING DEVICE .With means to pull lead-end WITH ADHERENCE OR ATTRACTION OF MATERIAL TO ADVANCING MEANS	121 122 123 124 125 126 127	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutmentMovable with material .Manual material-mover (e.g., dispenser)
88 89 90 91 92 93	.Including detail of prong shape or construction  WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)  SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller  THREADING DEVICE .With means to pull lead-end  WITH ADHERENCE OR ATTRACTION OF MATERIAL TO ADVANCING MEANS .By electrostatic force	121 122 123 124 125 126	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutmentMovable with material .Manual material-mover (e.g., dispenser)With means to clamp material
88 89 90 91 92 93 94 95	.Including detail of prong shape or construction  WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)  SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller  THREADING DEVICE .With means to pull lead-end  WITH ADHERENCE OR ATTRACTION OF MATERIAL TO ADVANCING MEANS .By electrostatic force .By pneumatic pressure	121 122 123 124 125 126 127	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutmentMovable with material .Manual material-mover (e.g., dispenser)With means to clamp material during dwell
88 89 90 91 92 93 94 95 96	.Including detail of prong shape or construction  WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)  SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller  THREADING DEVICE .With means to pull lead-end  WITH ADHERENCE OR ATTRACTION OF MATERIAL TO ADVANCING MEANS .By electrostatic force .By pneumatic pressure .By adhesive nature of material	121 122 123 124 125 126 127	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutmentMovable with material .Manual material-mover (e.g., dispenser)With means to clamp material during dwellWith means to limit increment
88 89 90 91 92 93 94 95 96 97.1	.Including detail of prong shape or construction  WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)  SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller  THREADING DEVICE .With means to pull lead-end  WITH ADHERENCE OR ATTRACTION OF MATERIAL TO ADVANCING MEANS .By electrostatic force .By pneumatic pressure .By adhesive nature of material BY FLUID CURRENT	121 122 123 124 125 126 127 128 129	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutmentMovable with material .Manual material-mover (e.g., dispenser)With means to clamp material during dwellWith means to limit increment of advance
88 89 90 91 92 93 94 95 96	.Including detail of prong shape or construction  WITH MEANS TO TEMPORARILY DEFORM MATERIAL LATERALLY (E.G., FOR STIFFENING)  SHIFTABLE PART ALLOWING HAND LOADING .With shiftable roller  THREADING DEVICE .With means to pull lead-end  WITH ADHERENCE OR ATTRACTION OF MATERIAL TO ADVANCING MEANS .By electrostatic force .By pneumatic pressure .By adhesive nature of material	121 122 123 124 125 126 127	MATERIAL-MOVER  .Stored material-movement-derived energy provides moving force .With means varying the material speed during movement .Cyclical unequal movements .Comprising constantly rotated roll on reciprocating or oscillating carrier .Including material abutmentMovable with material .Manual material-mover (e.g., dispenser)With means to clamp material during dwellWith means to limit increment

131	Time-controlled	167	With spring-biased grip element
132	Plural selectable limit means	168	BY ORBITALLY TRAVELING MATERIAL-
133	With means to adjust limit		ENGAGING SURFACE(S)
	means	169	.With start-facilitating means
134	.Unicyclic mover	170	.On endless belt or chain
135	Plural means to select	171	With cooperating surface
	increments of advance	172	Comprising endless belt or
136	With means to adjust increment		chain
137	.Adjustable feeder	173	With gripper(s) mounted thereon
138	Operative-controlled, machine-	174	.With control or adjustment means
	powered adjustment	175	To vary diameter of roll
139	Adjustable feed increment	176	To vary bite of contacting
140	By means to vary material-		pinch members
	engagement of recessed roll	177	Infinitesimally variable
141	By means to change length of	178	To vary speed of material-
	feeder travel		advancer
142	Comprising variable-throw	179	For shifting roll(s) axially
	crank	180	For shifting roll(s) angularly
143	.With means to effect feed and	181	.Comprising rotary pinch pair
	retrograde movement	182	Including radial material-
144	.With overtravel preventer		engaging surface
145	Intermittently acting	183	Including means to ensure
146	And retrograde movement		arcuate engagement
	preventer	184	Tapered roll or bite
147	.With retrograde movement	185	Including equal-diameter
	preventer		coaxial rolls
148	Unidirectionally rotating roll	186	Yieldable bite
149	Positively actuated to grip	187	Roll axis resiliently urged
150	By hydraulic or electrical	188	.With drive means
	means	189	.Plural spaced apart rolls (e.g.,
151	Yieldingly biased		guide rolls)
152	.Comprising material-moving roll	190	.Including details of roll or
153	Recessed roll		mount
154	With means to disengage roll	191	Roll surface radially movable
	from material	192	And axially movable (e.g.,
155	Continuously rotating roll		centering rolls)
156	Unidirectional	193	Irregular friction surface
157	Ratcheted roll		(e.g., roughened)
158	.Comprising reciprocating or	194	Bearing or support
	oscillating material-mover	195	WITH MEANS TO RETARD MATERIAL
159	With means to retard movement		MOVEMENT (E.G., "TENSIONER")
	of advancer carrier	196.1	PASSIVE GUIDE
160	On pivoted carrier	200	MISCELLANEOUS
161	With means to disable material-		
	mover		
162	With means to move grip element		
	into material engagement	FOREIGN	ART COLLECTIONS
163	Comprising link positively		
	connected to element	FOR 000	CLASS-RELATED FOREIGN DOCUMENTS
164	Which link effects material-		
	advancing movement		
165	Comprising camlike surface		
166	Which surface effects		
	material-advancing movement		