

1	<b>INCLUDING JUSTIFICATION OR QUADDING OF PRINT-LINE</b>	29	.For typing on flat blueprint or drawing (e.g., "platenless" typewriter)
2	.Including quadding of print-line	30	.For typing on carton or package
3	.By programmed-control-system	31	.By multidirectional movement of typewriter structure (e.g., "Elliot-Fisher" structure)
4	..On auxiliary-record-program (e.g., tape, card, etc.)	32	.Bottom-strike typewriter including type-bar action or bar platen or anvil platen
5	...Magnetic record	33	.Top-strike typewriter including pivoted type-bar
6	...With error-correcting storage register	34	.Including carriage-return mechanism
7	...Including artificial or end-of-line hyphen	35	.Including case-shift by shifting platen
8	.By using "no-print" device	36	.Including ribbon-feed mechanism
9	.By interword or intercharacter spacing	37	.For typing on manifold set (e.g., with type-die, etc.)
10	..Variable carriage-feed mechanism	38	..Including feeding of wide carbon paper transverse to feed of record-medium
11	..Carriage slidable relative to its carriage-rack	39	..Including spool for roll of carbon paper
12	..By interword spacing only	40	..Including clamp or guide for carbon paper
13	...Including plural space-bars for different spacings	41	..Including adjustment of platen perpendicular to its surface
14	.By typing line on stretchable medium	42	..Including aligning and feeding manifold set
15	.Including justification indicator	43	.Including feed of tally strip
16	<b>FOR TYPING OR FORMING CONTINUOUS OR DISCONTINUOUS LINE (E.G., BY "LINER")</b>	44	.Including line-spacing mechanism
17	.Including programmed-control-system	45	..Platen shifted for line-spacing
18	.By scribe (e.g., pen, pencil, etc.) or with scribe guide	46	..Including adjustment of line-space distance or increment
19	..For writing in script	47	..Including disengagement of line-spacing mechanism
20	..Rotatable disc scribe	48	.Work support (e.g., sheet or card holddown or guide, sheet-size platen, etc.)
21	.Responsive to carriage movement	49	.Collating-table attachment
22	.Underscoring concurrently with character imprinting	50	<b>INCLUDING DELAY MEANS FOR PREVENTING MALFUNCTION IN POWERED TYPEWRITER</b>
23	<b>FOR TYPING ON FLAT RECORD-MEDIUM OR AGAINST FLAT PLATEN</b>	51	.Delay of sequential character rate in programmed-control typewriter
24	.For typing on a book	52	.Delay by storage of next character to be imprinted
25	..Including a type-head (e.g., cylinder, disc, etc.)	53	<b>INCLUDING ADJUSTMENT MEANS TO COMPENSATE FOR WEAR</b>
26	..Against cylindrical backing		
27	..Including adjustment of typewriter relative to book (e.g., to compensate for book thickness)		
28	..Including adjustment of book support relative to typewriter (e.g., for top or bottom of book, etc.)		

54	<b>SAFETY SWITCH OR CONDITION-RESPONSIVE-CUTOFF SWITCH FOR ELECTRICALLY POWERED TYPEWRITER</b>	75	.Including type-bar selection using mechanical program
55	<b>INCLUDING ADJUSTMENT FOR OPTIMUM PRINTING PLANE</b>	76	<b>INCLUDING CONTROL OF FORMAT BY PROGRAMMED-CONTROL-SYSTEM</b>
56	.Responsive to thickness of record-medium	77	<b>TYPEWRITER CONTROLS OTHER INFORMATION RECORDER</b>
57	.In accordance with the number of sheets of record-medium	78	.Typewriter controls apparatus used for accounting function
58	.By adjustment of platen relative to carriage	79	..And a tape-punch or card-punch apparatus
59	.By adjustment of carriage (e.g, carriage-guide rollers)	80	.Typewriter (e.g, output typewriter) controls tape-punch or card-punch apparatus
60	..Via adjustment of case-shift linkage	81	..And imprints the character represented by the punched code on the tape or card
61	<b>INCLUDING CONTROL OF FORMAT AND SELECTION OF TYPE-FACE BY PROGRAMMED CONTROL-SYSTEM (E.G., INPUT TYPEWRITER)</b>	82	<b>INCLUDING PLURAL, INDEPENDENTLY SUPPORTED KEY-BOARDS, PLATENS, OR TYPE-SET ASSEMBLAGES</b>
62	.Including means for responding to input program or incoming signals and providing output program or signals representing typing operations (e.g., output typewriter)	83	<b>DISPLAYING TYPEWRITER-FORMED REPRESENTATION OF PRINT-LINE</b>
63	.Including editing or revision system	84	.By projecting typed image on screen
64	.Including right-hand margin control system	85	..Including transparent or translucent record-medium
65	.Including typing of graphical representations	86	<b>OPERATING BY SOUND</b>
66	.Including baseplate attachment with electromagnets for input or output operations	87	<b>FOR OPERATION BY HANDICAPPED USER</b>
67	.Separate interrelated programs	88	<b>POCKET TYPEWRITER</b>
68	..Including message writing (e.g, address program, form-letter program, etc.)	89	<b>KEY REASSIGNMENT</b>
69	.Type-face selection via magnetic program tape	90	.Electrically powered
70	<b>INCLUDING SELECTION OF TYPE-FACE BY PROGRAMMED-CONTROL-SYSTEM OR BY REMOTE CONTROL</b>	91	<b>STENOGRAPHIC TYPEWRITER</b>
71	.Plural typewriters coupled for simultaneous operation (e.g., "master-slave" relationship)	92	.Using common-letter type-face
72	.Including character-selection latches (e.g., for type-face selection)	93	..Including plural type-faces mounted on carrier and movable for selection of type-face
73	.Including particular reader structure and operation	94	.Electrically powered
74	.Including error detection	95	<b>LOGOTYPE TYPEWRITER (E.G., WORD TYPING)</b>
		96	.Including date-stamp type-face
		97	.Including signature type-face
		98	.Actuation of single key types plural characters
		99	..Characters typed simultaneously
		100	<b>PLURAL-KEY-ACTUATED TYPEWRITER (E.G., PERMUTATIVE KEY-BOARD)</b>
		101	.Having type-faces disposed on pivotable type-bars
		102	.Having type-faces disposed on rotatable type-head
		103	<b>CODE-PRINTING TYPEWRITER (E.G., FOR PRINTING A PATTERN OR MARK)</b>
		104	.For typing and encoding
		105	..Including magnetic encoding

- 106 .Including coded ink (e.g., phosphorescent or color-coded ink, etc.)
- 107 .For coding by conductive mark
- 108 .For marking laundry
- 109 **FOREIGN LANGUAGE OR BRAILLE TYPEWRITER**
- 109.1 .Braille
- 110 .Including Oriental language
- 111 .Including Semitic language
- 112 **ANNULAR TYPEWRITER (E.G., FOR TYPING AROUND CIRCUMFERENCE OF PLATEN)**
- 113 .Including vertically disposed platen
- 114 .Platen axis horizontal and extending front-to-rear
- 115 .Powered Actuated
- 116 **MUSIC-ROLL OR MUSICAL-NOTATION TYPEWRITER**
- 117 .Musical-notation typewriter
- 118.1 **TYPING BY HEATED DIE**
- 118.2 **TYPING BY OTHER THAN TYPE-FACE OR TYPE-DIE**
- 118.3 .Electroconductive transfer
- 120.01 .Thermal
- 120.02 ..Multicolor
- 120.03 ..Having multilayered colored transfer material
- 120.04 ...Having single layer colored transfer material
- 120.05 ..Block driving
- 120.06 ..Sequentially
- 120.07 ..Gradational recording
- 120.08 ..Preheating
- 120.09 ..Density control
- 120.1 ...By number of heated recording elements
- 120.11 ...In accordance with output characteristic of recording elements
- 120.12 ..By voltage regulation
- 120.13 ...By transfer material or record receiver
- 120.14 ...In accordance with temperature of the recording means
- 120.15 ...By history of recording elements
- 120.16 ..Recording means support or actuator
- 120.17 ...Adjustable
- 120.18 ..Pre- or post-image recording treatment
- 124.01 .Character formation by impact (e.g., wire matrix)
- 124.02 ..With signal conditioning
- 124.03 ...Overheat protection
- 124.04 ...Responsive to impact member position
- 124.05 ...Control of drive force
- 124.06 ...Manifold form or plural copies
- 124.07 ...With wear or defect compensation
- 124.08 ..Plural printheads
- 124.09 ...Multicolor
- 124.1 ..With inking
- 124.11 ..Printhead
- 124.12 ...Having assembly means
- 124.13 ...Overheat protection
- 124.14 ...With actuator
- 124.15 ....Single actuator for simultaneous actuation of plural impact members
- 124.16 ....Electrostrictive, magnetostrictive, or piezoelectric
- 124.17 ....Actuator having electromagnet
- 124.18 .....Electrical component
- 124.19 .....Moving coil
- 124.2 .....Permanent magnet
- 124.21 .....With biasing means
- 124.22 .....Backstop
- 124.23 ....Armature structure or mounting
- 124.24 ...Impact member guide
- 124.25 ...With lubricator
- 124.26 ....Specific material
- 124.27 ...Including shifting of guide
- 124.28 ..Impact member tip arrangement
- 124.29 ...Impact member structure
- 124.3 ....Tip cross-section
- 124.31 ...With attachment or engagement means
- 124.32 ...Specific material
- 127 **TYPING TO PRODUCE EMBOSSED CHARACTER**
- 128 .Character embossed or typed on nonplanar article (e.g., golf ball, toothbrush, etc.)
- 129 .By type-die mounted on carrier movable for selection of character
- 130 ..Including programmed-control-system
- 131 ..Electrically powered
- 132 ..Type-die reciprocable on carrier
- 133 ..On endless-band carrier
- 134 ..On rotatable carrier

- 134.1 ...Actuated by key-board control
- 134.2 ....Including type-die movable relative to carrier
- 134.3 .....With magazine for supply of record-medium plates
- 134.4 ...On manually held embosser
- 134.5 ....Including web supply of record-medium
- 134.6 ...Including web supply of record-medium
- 135 **TYPING TO PRODUCE PIERCED CHARACTER**
- 136 .Cutout character for stencil
- 137 .Check-protection character
- 138 ..By type-die mounted on carrier movable for selection of character
- 138.1 ...Electrically powered
- 138.2 ...On rotatable carrier (e.g., for scarifying elements, etc.)
- 138.3 ....Actuated by key-board control
- 138.4 ....Including plural-character type-die
- 138.5 .....And rotating contact with platen
- 138.6 ....For type-die including piercing or cutting elements
- 139 **INCLUDING TYPE-SET-ASSEMBLAGE MOUNTED ON CARRIER AND RELATIVELY MOVABLE FOR SELECTION AND FOR IMPACT OF TYPE-FACE**
- 140 .Including type-faces movable relative to type-face-carrier
- 141 ..Slidable type-faces mounted on reciprocable carrier
- 141.1 ...On rotatable or oscillatable carrier reciprocable along its axis
- 142 ..Slidable type-faces on rotatable carrier
- 143 ..Rotatable type-face carrier including type-faces on pivotable arms
- 144 ..Type-face-carrier including type-faces on flexible arms
- 144.1 ...Rotatable or oscillatable carrier
- 144.2 ....Carrier having coplanar flexible arms (e.g., "daisy" wheel, etc.)
- 144.3 .....Continuously rotated carrier
- 144.4 .....Manually rotated carrier
- 145 ..Type-faces on deformable type-face-carrier
- 145.1 ...Rotatable carrier
- 145.2 ....Cylindrical carrier
- 146 .Including endless-band carrier for type-faces
- 147 .Type-faces arranged in rectilinear row and selected by reciprocable movement
- 148 ..On rotatable carrier having plural rectilinear rows
- 149 .Plural type-heads mounted for selective individual type-head-imprinting movement
- 150 ..Type-heads arranged for selective individual imprinting movement away from coaxial rest position
- 151 ..Turret carrier for type-heads
- 151.1 ...Axis of turret carrier parallel to platen axis
- 152 .Type drum having multiple type-set-assemblages
- 153 .Imprint by movement of record-medium against type-face
- 154 ..By hammer impacting record-medium against type-face on type-head (e.g., type shuttle, etc.)
- 154.1 ...Including selection of type-face
- 154.2 ...Via pulley and cord arrangement (e.g., summing displacements)
- 154.3 ...By shortest peripheral path
- 154.4 ...Via coded disc in electric or magnetic circuit (e.g., photoelectric)
- 154.5 ...Via stepping motor responsive to selection
- 155 ...Via electrical or electromagnetic means
- 155.1 ....Including plural-function actuation by electromagnet(s)
- 156 ...Via helical arrangement of projections
- 156.1 ...Via mechanically permutated bar(s), disc(s), or plate(s)
- 156.2 ...Via planetary gear arrangement
- 156.3 ....Including latch means
- 157 ...Including type-faces arranged along helical path(s)
- 157.1 ...Including particular structure of hammer(s)
- 157.2 ...Electromagnetically actuated

- 157.3 ....For variable impression (e.g., impact control)
- 157.4 ....Hammer(s) mounted on endless belt or in helical array
- 158 ..Including platen for moving record-medium against type-face and mechanism for feeding record-medium
- 158.1 ...Including moving and feeding by platen
- 159 ..Including platen for moving record-medium against type-face and mechanism for inking type-face
- 160 .Imprint by pivoting of type-head-carrier and type-head against record-medium
- 161 ..Type-head-carrier movable on movable carriage
- 161.1 ...Including selection of type-face (e.g., on "golf ball" type-head)
- 161.2 ....Via gear train
- 161.3 ....Gears mounted on type-head and type-head-carrier
- 161.4 ....Including gear (e.g., rack) reciprocated by transmission mechanism
- 161.5 ....Via multiple cam surfaces
- 162 ..Type-head movable for selection of type-face
- 162.1 ..Via pulley and cord arrangement
- 162.2 ..Via shortest peripheral path
- 162.3 ..Via coded disc in electric or magnetic circuit (e.g., photoelectric)
- 163 ..Via stepping motor responsive to selection
- 163.1 ..Via electrical or electromagnetic means
- 163.2 ....Including electromagnetically actuated type-head movement toward record-medium
- 163.3 ....Including plural-function actuation by electromagnet(s)
- 164 ..Via helical arrangement of projections
- 164.1 ..Via pneumatic actuation
- 164.2 ..Via setting elements actuating selector-command member(s)
- 164.3 ...Control arm connected to selection gear and movable to engage key-lever actuated abutment
- 164.4 ...Via stop pins actuatable by key-board
- 164.5 ...Toothed member connected to selection gear and slidable by key-lever movement
- 164.6 ...Selection gear rotated by key-lever movement
- 165 ...Simultaneous rotation and translation of type-head by manually powered actuation (e.g., helical shift)
- 165.1 ...Via manually powered actuation other than by key-board (e.g., stylus selection)
- 165.2 ....Including type-head movable to print-point by actuator common to all type faces
- 165.3 ....Selection by rotatable dial
- 166 ..Including impact control
- 167 ..Including rebound control
- 168 ..Articulated-support joint
- 169 ..Detenting to fix type-head for imprinting
- 170 ..Including movable printing anvil within type-head
- 171 .Plural type-set-assemblages selectively movable from a storage station to a printing station
- 172 .Type-faces mounted on type chips and removable from storage for printing
- 173 .With means for exposing last-typed character
- 174 .Type-head, per se
- 175 ..Detachable from carrier (e.g., interchangeable)
- 176 **HAVING FLUID-PRESSURE POWER DRIVE**
- 177 .Including pneumatic decoder for perforated tape
- 178 .For producing typewriter-control tape (e.g., perforated tape, etc.)
- 179 .For type-face selection or choice
- 180 ..Including key-board driven by external pneumatic source
- 181 ..By pneumatic actuation of type-face or type-bar
- 182 .For movement of carriage or platen
- 183 ..Including line-spacing

184	<b>HAVING TYPEWRITER-CONTROLLED RECIPROCAL ELECTROMAGNETIC DRIVE FOR PLURAL FUNCTIONS IN SAME TYPEWRITER</b>	205	..Including holder for short length of ribbon
		205.1	..Holder movable to inoperative position on typewriter
185	<b>HAVING POWER-DRIVEN OPERATOR FOR PLURAL FUNCTIONS</b>	206	..Using plural ribbons (e.g., additional ribbon(s))
186	.Via continuously rotated power roll selectively connected to operate	206.1	..Including "carbon paper" ribbon
187	.Usable selectively (e.g., for powered or manual operation, alternative usable functions, etc.)	206.2	..And ribbon holder movable to inoperative position on typewriter
		206.3	..On plural coaxial spools
		206.4	..On single spool
188	<b>FOR TYPING ON REVERSE SURFACE OF RECORD-MEDIUM</b>	207	.Package for ribbon facilitating mounting of ribbon on typewriter (e.g., ribbon cartridge)
189	.By simultaneous use of both surfaces of same ribbon		
190	.By use of "carbon paper"	208	..Package attached to typewriter
191	<b>INCLUDING INTERPOSED INKING DEVICE (E.G., RIBBON) FOR RECORD-MEDIUM</b>	208.1	..And includes separable assemblage of spools
		209	.For bottom-strike typewriter
192	.Moved by continuously rotating power drive intermittently applied	210	.For boldface typing
		211	.Including mechanism for shifting ribbon laterally at print- point
193	.Inking device handheld during typing	212	..Via electrically powered actuator
194	.Endless ribbon or cartridge therefor	213	..For impact of successive type- faces on one field of ribbon in path not parallel to longitudinal extent of ribbon (e.g., "zigzag", oblique, etc.)
195	..Mobius strip		
196	..Including storage (e.g., in cartridge, etc.) of ribbon		
196.1	..Having ribbon stored in pleated form		
197	.Renovation of used ribbon	213.1	..Via ribbon vibrator
198	..With ink heater (e.g., for melting solid ink)	214	..Plural ribbons shiftable laterally (e.g., by duplicate vibrators)
199	..By discrete auxiliary band movable with ribbon	215	..By ribbon vibrator
200	..Selectively actuatable re-inker	215.1	..Including vibrator shiftable during use of nonfeed character key (e.g., for typing accent mark, etc.)
201	..Of multicolor ribbon		
202	..Renovator attachable to typewriter for replenishing ribbon ink	215.2	..With retardation of vibrator return after type-face impact (e.g., with dashpot)
202.1	..Attached to ribbon spool		
202.2	..And includes refillable chamber (e.g., reservoir) for liquid ink	215.3	..With elevation and holding of vibrator above print-point (e.g., to facilitate ribbon insertion)
202.3	....And conveyor of discrete drops of ink		
202.4	....And re-inking roller	215.4	..With inactivation of vibrator (e.g., for cutting a stencil)
203	.Ribbon disposed within platen		
204	.For typing plural copies simultaneously with ribbon(s) (e.g., duplicate typing)	216	..Including variable throw of vibrator
		216.1	....For diverse-field (e.g., plural-color) ribbon

- 216.2 .....With typewriter-controlled change of field
- 216.3 .....By movement parallel to print-line
- 216.4 .....Vibrator throw controlled via alternate pins selectively inserted in slots
- 216.5 .....Field selection by selectively positioned stop faces to limit vibrator movement
- 216.6 .....To compensate for case-shift
- 217 ..To shift impact path (e.g., during ribbon reversal)
- 217.1 ...By adjustable ribbon guide spaced from supply spool
- 218 ..Ribbon-reversing mechanism
- 219 ..Including means responsive to depletion of ribbon supply
- 219.1 ...Including an electric switch
- 219.2 ...Including lever retained in spool by wound ribbon
- 219.3 ...Including senser for diameter of wound ribbon
- 219.4 ....Senser received in depression in core of spool
- 219.5 ...Including projection from ribbon
- 220 ..Alternative pawl-and-ratchet drive including ratchet directly connected to spool or spindle
- 220.1 ...Including a common pawl member (e.g., double-toothed pawl)
- 220.2 ...Including member interposed in pawl drive path
- 221 ..Alternative gear drive including gear directly connected to spool or spindle
- 221.1 ...And gears mounted on ends of axially shiftable common shaft
- 221.2 ...And gears mounted on ends of pivoted common shaft
- 222 ..Alternative clutch drive including clutch member directly connected to spool or spindle
- 223 ..Ribbon-feeding mechanism
- 224 ..For feeding ribbon angularly to print-line at print-point
- 224.1 ...Ribbon fed perpendicular to print-line at print-point
- 224.2 ....Ribbon is full-page wide
- 225 ..Including electrically powered drive means (e.g., solenoid, stepping motor, etc.)
- 226 ..For feeding ribbon partial character-space before impact and partial character-space after impact
- 227 ..For narrow carbon ribbon (e.g., carbon ink, "single use", etc.)
- 227.1 ...Ribbon destroyed after use
- 227.2 ...Or for alternatively used fabric ribbon
- 228 ..Including pin-feed-engaging ribbon
- 229 ..Mounted with movable type-face-carrier or type-head-carrier
- 230 ..With fast rewind of ribbon
- 231 ..With prevention of ribbon feed (e.g., for nontype operation, etc.)
- 232 ..Including feed at particular feed rate (e.g., "creep" feed)
- 233 ..Ribbon feed from supply only during carriage return
- 234 ..Including ribbon tensioner
- 235 ..Drive applied by means directly engaging ribbon in advance of takeup
- 235.1 ...Drive applied by pinch-roller couple
- 236 ..Drive applied directly to spool or spool spindle
- 236.1 ...By a pawl driving a ratchet on the spool or spindle
- 236.2 ...By a gear driving a gear on the spool or spindle
- 237 ..Ribbon, per se
- 238 ..Having leader portion (e.g., for threading, etc.)
- 239 ..With ribbon-reversing indicator or device on ribbon
- 240 ..Including differently pigmented fields
- 240.1 ...Including correction-material field
- 240.2 ...With prevention of bleeding between adjacent fields
- 240.3 ...Including fields arranged transversely to elongated dimension of ribbon
- 240.4 ...Including more than two fields
- 241 ..Particular ribbon material
- 241.1 ...Synthetic material

241.2	...Wherein ink is entrapped in ribbon material (e.g., microcapsules, micropores, etc.)	263.1	...By pivoting type-face relative to type-bar
241.3	...Particular weave pattern	263.2	...By rotating type-face relative to type-bar
241.4	...Including ink-impervious backing for ribbon	264	.For shifting platen
242	.Ribbon spool or mount therefor	265	..Fore-and-aft (e.g., for top-strike or bottom-strike typewriter)
243	..Universally adaptable	266	..Mounted on pivotally movable platen carrier
244	..Including ribbon-reversing indicator or device on spool or mount	266.1	...With movement of platen out of typing position
245	..Including magnetic retainer	266.2	...Including adjustable counterbalance spring
246	..Spool for full-page-wide ribbon	266.3	...Including a yieldable link (e.g., spring, etc.)
247	..Means auxiliary to ribbon mechanism (e.g., shield, guide, etc.)	267	..By depression of space-bar
248	..Including guide for ribbon	268	.For shifting type-face or type-bar
248.1	...Ribbon guide opening expandable to facilitate ribbon insertion	269	..By shifting type-bar or type-face on type-bar
248.2	...And typewriter-actuated closing of guide	269.1	...By pivoting type-face relative to type-bar
248.3	...Including electrical, magnetic, or pneumatic guide means	270	..Mounted on type-bar support (e.g., guide pin, type-bar-segment, etc.)
249	..Including indicator for depletion of ribbon (e.g., bell, sign, etc.)	270.1	...Ring hanger support
250	..Including tool for inserting ribbon	270.2	...Including ball-bearing support
251	<b>CASE-SHIFT MECHANISM</b>	270.3	...Including pivoted-lever support (e.g., cantilever spring, etc.)
252	.Including programmed-control-system	271	.By choosing from one of a plurality of type-bars operated by a single key
253	.Including electronic control or code-bar control	272	.Including key attachment for case-shift
254	.Controlled by typewriter-actuated mechanism	273	..Operated by user's leg, (e.g., foot, knee, etc.)
255	.Including plural case-shift mechanisms (e.g., for simultaneous or selective use)	274	.For locking case-shift mechanism in position (e.g., rebound lock, cam, etc.)
256	.Actuated by toggle-linkage	275	..For locking platen in fore-and-aft position (e.g., by overcenter spring, etc.)
257	.For case-shift by type-head (e.g., spherical type-head) movement	276	..For locking shift-key lever in depressed position
258	.Power-operated mechanism (e.g., for locking shift key)	276.1	...By toggle-linkage
259	..For shifting platen	276.2	...By means pivoted on shift-key lever
260	..For shifting type-bar-segment	277	.Including limit stop (e.g., block, chain, etc.)
261	.Multiple-shift mechanism (i.e., for type-bar having three or more type faces thereon)	278	..Including limit screw
262	..For shifting type-bar-segment	279	<b>CONTROL OF PRINT POSITION ALONG PRINT-LINE BY SIGNAL GENERATED BY PROGRAMMED-CONTROL-SYSTEM</b>
263	..For shifting type-bar or type-face on type-bar		

- 280 ..Program is indicia on auxiliary member
- 281 ..Member is punched tape or card
- 282 ..Program is indicia on record-medium
- 283 **CARRIAGE OR CARRIAGE-MOVING OR MOVEMENT-REGULATING MECHANISM**
- 284 ..For stopping carriage in tabular position (e.g., column-set positions)
- 285 ..In denominational positions
- 285.1 ...And column-set positions
- 285.2 ....Tab-rack stop intercepted by denominational-stop
- 285.3 ....Tab stops grouped in stepped fashion
- 285.4 ...With control of zero or space for decimal point
- 285.5 ...With reverse-direction movement of carriage
- 285.6 ...Helically mounted denominational-stop(s)
- 286 ...Shiftable denominational-stop(s)
- 286.1 ....Step-shaped denominational-or tab-stop(s)
- 286.2 ....Engaging movable tab-rack means
- 286.3 ...With latch or lock means
- 287 ..Column set by control of mutilated carriage-rack
- 288 ..Column set by control of tab-rack
- 289 ..Column set by control of tap-stops or column-stops or counter-stops
- 289.1 ...Tab-stops grouped in stepped fashion
- 290 ..Forward or reverse tabulation
- 291 ..With impact cushion or rebound check
- 292 ..With control of carriage velocity
- 293 ..By multiple-pitch tab-racks or multilated gear
- 294 ..Stop-setting or stop-clearing mechanism
- 294.1 ...With stop magazine (i.e., for supply of stops)
- 294.2 ...With key-locking mechanism
- 294.3 ...Drum-mounted tab-stops
- 295 ..Stop setting by linear shift of tab-stop or counter-stop
- 295.1 ....Stop shifts horizontally from tab-rack
- 295.2 ....Stop shifts laterally along tab-rack
- 296 ...Stop setting by movement of tab-rack
- 296.1 ....Tab-rack rotates about its axis
- 296.2 ....Plural tab-racks
- 297 ...Stop setting by partial rotation of tab stop relative to tab-rack
- 297.1 ...Stop setting by pivoting pawllike stop
- 298 ..Tab-stop or tab-rack structure, per se
- 299 ..With rotatable type wheel for repeat printing in response to carriage movement
- 300 ..Key-actuated mechanism for nonfeed of carriage (e.g., "silent" key, locking carriage, etc.)
- 301 ..By disabling carriage-escapement mechanism
- 302 ..By key actuated independently of carriage feed
- 303 ..For varying carriage feed
- 304 ..For kerning or overlap imprinting
- 305 ..By force-feed or screw-feed mechanism
- 306 ..Proportional to variable widths of imprinted characters
- 306.1 ...By settable elements (e.g., pins, bars, slides)
- 306.2 ...By ratchet-wheel and controlled pawl
- 306.3 ....Including multiple pawls
- 306.4 ....And multiple wheels
- 307 ...By ratchet rack and controlled pawl
- 307.1 ....Including multiple pawls
- 307.2 ...By cooperating toothed members (e.g., gear, segment, rack, etc.)
- 308 ..Carriage backspace mechanism
- 309 ..Backspace proportional to variable width of imprinted characters
- 310 ..Including powered drive means
- 311 ..Including pawl and escapement wheel
- 312 ..Including pawl and escapement rack
- 313 ..Carriage-return mechanism
- 314 ..With concurrent line-spacing

- 314.1 ...Using electromagnetic drive
- 314.2 ...For selected number of line-spaces
- 314.3 ..With disconnection of return by margin-stop
- 314.4 ...Initiated by user's leg or foot
- 314.5 ...Initiated by actuator adjacent key-board
- 314.6 ...By return-clutch means
- 315 ..Responsive to carriage position
- 316 ..Partial return (e.g., for start of paragraph, etc.)
- 317 ..Including power drive (e.g., electric, spring, etc.)
- 317.1 ...For bidirectional drive
- 317.2 ...By spring-driven motor
- 317.3 ...Powered via engagement of a clutch
- 318 ..Initiated by actuator adjacent key-board
- 319 ..Carriage-feed mechanism (e.g., escapement, etc.)
- 320 ..For carriage on which a type-head-carrier is mounted
- 320.1 ...With concurrent movement of carriage for record-medium and carriage for type-head-carrier
- 321 ..With repeat spacing
- 322 ..By electric or magnetic power
- 323 ..Carriage-feed in two directions (e.g., continuous typing in both directions)
- 323.1 ...In selected direction (e.g., for Semitic language, etc.)
- 324 ..Word-space concurrent with typing of last character of word
- 325 ..By space-bar mechanism (e.g., separate connection to escapement) or paragraph-indentation key
- 326 ..With compensator for tilt of typewriter
- 327 ..For diagonal print-line
- 328 ..By force-feed or screw mechanism (e.g., direct drive, screw-biasing carriage, etc.)
- 328.1 ...Including pawl and toothed rack
- 329 ..Carriage escapement controlled by pawl
- 329.1 ...Means to ensure engagement of pawl at start of print-line (i.e., overbanking control)
- 329.2 ...Carriage-feed initiated and completed during depression of character key (e.g., "speed" or "reverse" escapement)
- 329.3 ...Pawl rocker spring regulating device
- 330 ...Via ratchet wheel connected to pinion and carriage-rack
- 330.1 ...And plural pawls
- 330.2 ....For half-drop escapement
- 330.3 ....Mounted on pivotable pawl carrier or rocker
- 330.4 .....Including pawl(s) fixed to rocker
- 330.5 .....And slidable pawl
- 330.6 .....Including pawl pivoted about axis parallel to rocker axis
- 330.7 ....Mounted on movable (e.g., rotatable, slidable) pawl carrier
- 330.8 ....Including particular structure of pawl (e.g., pivoted, unitary, with roller, etc.)
- 331 ...Including plural ratchet wheels
- 331.1 ...Including particular structure of ratchet wheel
- 331.2 ...Including cushioned escapement support (e.g., rocker, pawl buffer, etc.)
- 331.3 ...Including particular structure of mount for ratchet wheel (e.g., bearing, clutch, etc.)
- 332 ...Via toothed rack
- 332.1 ...And plural pawls
- 332.2 ....Mounted on pivotable pawl carrier or rocker
- 332.3 ....Mounted on movable (e.g., rotatable, slidable) pawl carrier
- 332.4 .....Including particular structure of pawl (e.g., slidable, pivoted, unitary, etc.)
- 332.5 ...Including plural toothed racks (e.g., pivoted, etc.)
- 332.6 ...Including particular structure of rack (e.g., toothed, slidable, etc.)
- 333 ..Universal-bar or actuator therefor

- 333.1 ...Connected to actuator for another function
- 333.2 ...Adjustable
- 333.3 ...Actuated by type-bar or type-bar action
- 334 ..Carriage-feed-release mechanism
- 334.1 ...By disengagement of clutch between ratchet wheel and pinion
- 334.2 ...By disengagement of escapement pawl(s)
- 334.3 ...From carriage-rack
- 335 ..With particular connection to carriage (e.g., gear train, pulley and strap, etc.)
- 336 ..Spring-biasing carriage for feed
- 336.1 ...Torsion spring in rotatable barrel
- 337 ..Carriage-retarder mechanism
- 338 ..Including governor responsive to speed or momentum
- 338.1 ...Using centrifugal force
- 338.2 ...Using inertial force retarder (e.g., flywheel, weight, etc.)
- 339 ..Using fluid or fluent-material retarder
- 340 ..Using frictional retarder (e.g., strap, disc, drum, etc.)
- 341 ..Carriage-buffer stop or rebound control
- 342 ..Margin-regulator (e.g., adjustable margin-stop) mechanism
- 343 ..With intermediate margin-stop
- 344 ..With other typewriter function controlled by margin-stop (e.g., signal, line-space)
- 345 ...Carriage-arrest function (e.g., "overbank")
- 346 ...Print-line locking function
- 347 ..With multiple-pitch selector
- 348 ..With release of margin-stop
- 349 ..Conjointly set or centrally spring biased
- 350 ..On record-medium table or paper-finger
- 351 ..Margin-stop structure, per se
- 352 ..Carriage, per se, or guideway therefor
- 353 ..Including auxiliary carriage
- 354 ..Guideway or bearings for carriage
- 354.1 ...Guideway cooperating with ball bearings or roller bearings
- 354.2 ...Including bearing holder geared to carriage
- 354.3 ...Including repositionable guideway
- 355 ..Means for repositioning carriage or platen thereon
- 356 ..To nonprint position
- 357 ..To detach carriage
- 358 ..To detach platen
- 359 **HAVING TYPEWRITER-CONTROLLED RECIPROCAL ELECTROMAGNETIC DRIVE FOR TYPE BAR ACTUATION IN SAME TYPEWRITER**
- 360 ..Including electromagnetic return of universal actuator
- 361 ..Including actuator to complete depression of selected key or key lever
- 362 ..Including universal actuator to actuate selected type-bar action
- 363 ..And individual solenoids to connect the type-bar action to be actuated
- 364 ..Including individual solenoids to actuate the selected type-bar action
- 365 **HAVING ROTATED POWER DRIVE INTERMITTENTLY APPLIED FOR TYPE-BAR ACTUATION**
- 366 ..Including jam-release means
- 367 ..Interposed components driven by filter shaft
- 368 ..For repeat-type action
- 369 ..With prevention of repeat typing
- 370 ..Via continuously rotated power roll
- 371 ..And oscillatable cam
- 372 ..And rotatable cam (e.g., single-lobe cam)
- 373 ...Including double-lobe cam
- 374 ..And friction leg (e.g., other than by cam)
- 375 ..Snatch roll
- 375.1 ...Including plural coaxial snatch discs
- 375.2 ...With control of impact force
- 375.3 ...With electromagnetic control of pawl
- 375.4 ...And star wheel
- 376 ..With control of impact force
- 377 ..Via limited-rotation clutch

378	..Plural cams clutched to drive shaft	402	..By breaking toggle-linkage (e.g., to pull type-bar to print-point)
379	.Via spring drive (e.g., spring-driven snatch roll)	403	..By straightening toggle-linkage (e.g., to push type-bar to print-point)
380	..Including individual spring for each type-bar action	404	..Including adjustment of toggle-linkage anchor position
381	..Including reciprocable common actuator	405	..By type-bar connecting link
382	.Via reciprocating common actuator	405.1	...Including gear connection
383	<b>TYPE-BAR-ACTION MECHANISM OR TYPE-FACE ON TYPE-BAR OR TYPE-FACE INKER</b>	406	..By pin and slot connection
384	.Spring drive for type-bar action	407	..Including type-bar starter means
385	.With added-motion mechanism for type-bar near print-point	408	.For bottom-strike typewriter
386	..Including toggle-linkage	409	..Including simultaneous actuation of plural type-bars for simultaneous imprinting
387	..Including momentum accumulator	410	..With pivotally mounted platen carrier (e.g., for access, etc.)
388	..Including hammer, roller, or presser mechanism	411	..Type-bar actuated by rack and gear
388.1	...Type-bar pivotable to vicinity of print-point	412	..Including type-bar mounting arrangement
389	..With power assist for mechanism	413	..With type-face inker (e.g., ink-pad rest)
390	.With end-thrust mechanism for type-bar	414	..Including key or key-lever arrangement
391	..Type-bar slidable on flat support	415	.For top-strike typewriter
391.1	...Driven by gear means	416	..Including type-bars pivoted on both sides of, or above and across, platen axis
391.2	...Driven by cam means	417	..With type-face inker (e.g., ink pad, roller, etc.)
391.3	...Driven by toggle-linkage	418	..Type-bar pivoted by gear connection
391.4	...With power assist for mechanism	419	..Type-member or type-bar pivoted and rotatable (e.g., for selection of type face)
392	..Including momentum accumulator	420	..Type-bar pivoted by push link
393	..For top-strike or bottom-strike typewriter	421	..Type-bar pivoted by cam
394	.With type-bar pivot traveling during typing movement of type-bar	422	.Type-bar action
395	..Type-bar pivot on longitudinally movable carriage in top-strike typewriter	423	..Including selectively disengageable type-bar action to render action inoperable
396	..With ink pad on type-bar rest	424	..With type-face pivoted on type-bar for rolling contact with platen
397	.With disconnection of type-bar action during movement thereof	425	..Including jam-release means
398	.With accelerated (e.g., motion amplifying) type-bar action	426	..Including type-bar return before release of key lever
399	..By rolling contact between links	427	..Including yieldable link in type-bar action
399.1	...By key-lever rolling on fulcrum	428	..Including means to limit type-bar movement
400	..By cam-engaging link		
401	..By breaking and straightening toggle-linkages		

- 429 ..Type-bar pushed or pulled by hooklike cam
- 430 ..Type-bar pulled to print-point
- 430.1 ...By cam means (e.g., slotted cam, helix, etc.)
- 430.2 ...By toggle-linkage
- 430.3 ...With movable type-bar-segment
- 431 ..Type-bar moved to print-point by gear drive
- 432 ..Type-bar moved to print-point by cam means
- 433 ..Type-bar moved to print-point by toggle-linkage
- 434 ..Including connecting link or joint
- 434.1 ...Adjustable (e.g., in length, etc.)
- 434.2 ...Flexible (e.g., spring, strap, etc.)
- 434.3 ...Including connecting element (e.g., joint, etc.)
- 435 .Type-bar rebound preventer (e.g., via latch, brake, linkage, etc.)
- 436 .Type-bar return spring connected to type-bar-action linkage
- 437 ..For impact control
- 438 ..With adjustment means (e.g., for "touch" control, ect.)
- 438.1 ...Including an indicator
- 439 ..Attached to type-bar or universal-bar
- 440 ..Attached to key lever (e.g., tension spring)
- 440.1 ...Compression spring
- 440.2 ...Cantilever spring (e.g., torsion, hairpin, etc.)
- 441 .Type-bar pivot support
- 442 ..For plural groups of type-bars
- 442.1 ...Having type-bars disposed on plural ring supports
- 442.2 ...Including type-bars pivoted on vertical pivot(s) (e.g., moved in horizontal plane)
- 443 ..Ring support
- 444 ..Type-basket laterally movable relative to platen and key-board
- 445 ..Type-bar-segment (e.g., wire journal)
- 445.1 ...With guide for movement of segment
- 445.2 ...Including hanger for individual type-bar
- 445.3 ....And bearing for type-bar
- 445.4 ...Interchangeable (i.e., easily removable) segment
- 445.5 ...With type-bar anvil
- 446 ..Interconnected (e.g., nested) support bearings
- 447 ..Ball-and-socket bearing for type-bar (e.g., universal joint)
- 448 ..Roller bearing or ball bearing for type-bar
- 448.1 ...Including plural bearings for each type-bar
- 449 ..Adjustable bearing for type-bar
- 450 ..Pin support for type-bar
- 451 ..Wire support for type-bars
- 452 .Type-bar structure
- 453 ..With type-face movable in plane of type-bar movement
- 454 .Type-bar rest or rest support
- 455 ..Including metallic material
- 456 .Type-bar or type-member guide structure
- 457 ..Including resilient means for energy absorption or kickback
- 458 ..Mounted on platen-carriage
- 459 ..For thrusting type-bar
- 460 ..Guide adjacent print-point
- 460.1 ...Including rollers or balls
- 460.2 ...Including pin or collar
- 461 ..Adjustable guide
- 462 .Type-member structure
- 463 ..Removable type-member
- 464 ..Rotatable on type-bar
- 465 ..Pivotable on type-bar
- 466 ..Type-face or type-die configuration (e.g., reverse image, boldface, piercing, etc.)
- 467 .Dust guard for type-bar action mechanism
- 468 ..For type-bar bearing (e.g., shield on type-bar-segment)
- 469 .Attachment to type-bar for imprinting extra character
- 470 .Ink-impregnated type-face or inker for type-face
- 471 ..Including stationary ink pad for inking type-face directly
- 471.1 ...And a wick for feeding pad from reservoir
- 472 **KEY-BOARD OR KEY LEVER-ACTUATING MECHANISM**
- 473 .Including mechanism (e.g., auxiliary key-board) for activating keys

474	..Electromagnetic key-board-drive mechanism	495.1	...By spring means
475	..Operated by user's leg (e.g., foot, knee, etc.)	496	.Key lever or space-bar mounting structure (e.g., dust guard, buffer, pivot, etc.)
476	..For actuating function key only	497	<b>WITH CONTROL OF "CARBON PAPER" FOR TYPING PLURAL SIMULTANEOUS COPIES BY SINGLE IMPRESSION (E.G., ON "MANIFOLD SET")</b>
477	..Including means generating a signal for type selecting or other typing function	498	.Including prevention of full imprint on "carbon copy" record-medium
478	..Via slidable code bars	499	.On record-medium wound around platen together with carbon paper
479	..Via electrical component (e.g., switch, stylus, etc.) in or with key-board	500	.With means for causing slack in web of manifold set
479.1	...Capacitance-responsive switch	501	..By arcuate movement of carbon paper carrier
479.2	...Electromagnetic-responsive switch	502	..By clamp on carbon paper carrier
480	..Including control of key action (e.g., buffer, etc.)	503	.By use of other than rectangular sheet carbon paper (e.g., disc, etc.)
481	..By regulating key force or movement (e.g., key dip or stroke)	504	..Endless-band carbon paper
482	..For stenographic typewriter	505	.By multicolor carbon paper
483	..For Braille typewriter	506	.With means to prevent creep (e.g., relative movement) between record-media
484	..For foreign-language typewriter	507	.Including means for creep feed of carbon paper
485	..Key-board having multiple-character, multiple-movement keys	508	.Including spool or support for roll of carbon paper
486	..Key-board arranged according to character location	509	..Including a flat roll or core therefor
487	..Color-coded key-board	510	..And guide for changing feed direction
488	..Key-board including row of keys having different heights	510.1	...Spool support shiftable to and from platen
489	..Key-board including keys grouped to facilitate positioning of typist's fingers	511	..Feed mechanism for feed from roll of carbon paper
490	..Key-cap or key-stem structure	511.1	...Responsive to return of carriage
491	..Including cushioning means (e.g., yieldable surface)	511.2	...With retraction of carbon paper for reuse thereof (e.g., by slidable carrier)
491.1	...Including underlying air cushion	511.3	...Carbon paper rewound for retraction
491.2	...Including spring supporting key cap or key stem	511.4	....By driving carbon paper roll directly from platen (e.g., by endless band)
491.3	...With sensory indicator (e.g., sound, tactile response, etc.)	512	..And support for roll of record-medium
492	..Adjustable in plane of key(s) (e.g., to facilitate reach, rotatable, etc.)	513	.Including relative movement between carbon paper and record-medium
493	..Including character-bearing disc on key cap		
493.1	...Secured by encircling ring member		
493.2	...With slot for exchanging disc		
494	..Having raised or recessed character		
495	..Including means for mounting key cap or key stem		

- 514 ..Including positioning of auxiliary record-medium
- 515 ..Including front insertion of carbon paper or record-medium
- 516 ..By simultaneously advancing record-medium and retracting carbon paper
- 517 ..By means to arrest advance of carbon paper
- 518 ..Carbon paper carrier(s) repositionable relative to platen
- 518.1 ...Plural carriers disposed side-by-side for selective use singly or simultaneously
- 518.2 ...Plural carries for serial retraction of plural carbon papers
- 518.3 ...With means to imprint selectively on one or more media (e.g., by holding selected media away from print-line)
- 518.4 ...Including retraction of carbon paper and record-medium and subsequent advance of record-medium
- 519 ...Carbon paper carrier movable rectilinearly
- 519.1 ...With means to hold record-medium against retraction
- 519.2 ...Including means to reduce binding of carbon paper during retraction
- 519.3 ....Including lifting of platen for retraction of carrier
- 519.4 ....With guard over settable parts (e.g., denominational jacks, etc.)
- 519.5 ....With relative movement between record media (e.g., for condensed-billing, etc.)
- 519.6 ...With support or guiding or positive-driving structure for carrier (e.g., table, adjustable stop, etc.)
- 519.7 ...Carbon paper carrier on endless member
- 520 .Carbon paper holder (e.g., loading board, etc.)
- 521 **FOR TYPING ON CARD IN CARD HOLDER**
- 522 .Flexible holder fed around platen with single card
- 523 .On card pierced or indented to aid holding
- 524 .Holder movable responsive to case-shift
- 525 .Card holder carrier by platen
- 526 ..And actuated in response to platen rotation
- 527 ..With platen surface modified for card
- 527.1 ...Including card gripper on platen
- 527.2 ...Including axially extending slot or hollow in platen
- 528 ..Holder attached via detachable arms at ends of platen
- 529 ..Holder attached via pins on holder or via adhesive attachment
- 530 ..Holder attached via element (e.g., band) gripping platen periphery
- 531 .Including line-spacing of holder or card
- 532 ..Variable line-spacing (e.g., platen creep)
- 533 ..In a curvilinear path
- 534 ..By pinion and rack
- 535 .Including support engaging bottom edge of card
- 536 .Card holder mounted on typewriter frame
- 537 ..Including means enabling movement of card relative to holder
- 538 ..Transparent card holder
- 539 ..Including finger movable away from holding position
- 540 ...Spring urged to holding position
- 541 .Including a feed-roller
- 542 .Card holder mounted on platen-carriage frame
- 543 .Including gripper or means urging card against platen
- 544 .Backing for stencil cutting (e.g, celluloid strip, etc.)
- 545 **FOR LINE-SPACING BY INCREMENTAL ROTATION OF PLATEN**
- 546 .To facilitate condensed billing (i.e., by determining a desired limit or amount of retrograde or advance platen movement)
- 547 ..Including stop structure (e.g, traveling stop, etc.)

- 547.1 ...For arresting platen at limit of both retrograde and advance movement
- 547.2 ....By stop travelling in a rectilinear path
- 547.3 ....By lever or push-rod drive for platen
- 547.4 .....Via gear drive
- 547.5 .....Including lever on axis transverse to platen axis
- 547.6 .....Including relatively adjustable coaxial gear segments
- 547.7 ....Via pawl and ratchet wheel drive
- 547.8 .....With spring motor
- 548 ..With graduated scale (e.g., on drum periphery)
- 549 .Actuated by key on key-board
- 550 .For multi-incremental rotation (e.g., "platen sweep")
- 551 .For line-spacing in forward or reverse direction
- 552 .With "floating" platen
- 553 .Via line-space / carriage-feed-release actuator
- 554 .For facilitating even wear of platen surface (e.g., by irregular increments, etc.)
- 555 .By irregular increments of platen rotation (e.g., for adjustment of platen relative to its actuator, etc.)
- 556 ..Including disconnecting ratchet wheel from platen (e.g., declutching ratchet, etc.)
- 556.1 ...Via relatively displaceable pin and slot members
- 556.2 ..Via toothed ring and locking member(s)
- 556.3 ....Including pivotable locking member(s)
- 556.4 ....Including radially displaceable locking member(s)
- 557 ..Via ball or roller clutching member(s)
- 558 ...Via binding jaws gripping annular flange between jaws
- 559 ...Via friction plate members engageable by axial displacement (e.g., pressure plate, etc.)
- 559.1 ....Friction members have cooperating conical surfaces
- 560 ...Via frictional engagement of periphery of cylindrical member
- 560.1 ....Friction member(s) acting on inner periphery of drum
- 560.2 .....Pivotable member(s)
- 561 ....Expandable band or split ring
- 562 ..Including settable stops
- 563 ..Including plural detents selectively engageable with ratchet wheel
- 564 ..Including a drive member engageable with line-space ratchet wheel
- 564.1 ...Via displaceable detent
- 565 ..Detent-release structure
- 566 ...With friction brake for platen
- 566.1 ...With simultaneous disengagement of drive pawl
- 567 ..Including gear (e.g., differential gear, etc.) structure
- 568 .By electric-power drive
- 569 .By gear train (e.g., including a clutch)
- 570 .By double-cam drive
- 571 .By friction drive (e.g., including regulation of increments)
- 572 .By pawl and ratchet wheel drive
- 573 ..Including rectilinearly movable pawl
- 573.1 ...And resilient drive
- 574 ..Including pawl carrier coaxial with ratchet wheel
- 574.1 ...And means to regulate pawl engagement or drive
- 575 ..Including means to regulate pawl engagement or drive
- 575.1 ...By movable ratchet-wheel shield
- 575.2 ...By stop adjustable to limit movement of actuator
- 576 .Via foldable line-space actuator
- 577 .With means to prevent reverse rotation or ensure full increment (e.g., for "backlash" prevention)
- 578 **SHEET OR WEB (E.G., RECORD-MEDIUM FEEDING MECHANISM)**
- 579 .Including skew correction responsive to position of sheet or web

- 580 ..Including forming indicia on record-medium during typing to find next line to be typed
- 581 ..To find last-produced slit or hole or notch in sheet
- 582 ..Including programmed-control-system for record-medium feed (e.g., on auxiliary record)
- 583 ..For web record-medium
- 583.1 ...Program on auxiliary-record tape
- 583.2 ...Program is indicia on rotatable disc or drum
- 583.3 ...Program is indicia on record-medium
- 583.4 ...Including plural speed record-medium feed
- 584 ..Including feed of plural record-media arranged side-by-side (e.g., fed independently of platen)
- 585 ..By divided platen
- 585.1 ..With positive clutch for simultaneous rotation of platen sections
- 586 ..Including feed of tally strip record-medium (e.g., plural tally strips)
- 587 ..And feed of endless transfer-medium
- 588 ..On plural-platen (e.g., divided platen) typewriter
- 589 ..With locking or interlocking mechanism (e.g., line lock, etc.)
- 590 ..Including feed varied for amount of tally strip on spool
- 591 ..Including tally-strip feed transverse to feed of main record-medium
- 592 ..Including feed independent of platen
- 593 ..With cutting or spring tensioning of tally strip
- 594 ..Including structure or mounting or adjustment of tally-strip roll
- 594.1 ...And roll for transfer-medium
- 595 ..Including insertion of sheet from front of platen (e.g., for "condensed billing", via sheet guide, etc.)
- 596 ..Including feed responsive to presence of sheet
- 597 ..With subsequent line-spacing independent of platen
- 598 ..With digitally selected, typewriter-actuated feed to selected line to be typed (e.g., via "dialing" disc, etc.)
- 599 ..Insertion of sheet relative to other record-medium
- 599.1 ...With sheet-associating attachment (e.g., collating-table, etc.)
- 600 ..Via feed throat having gate (e.g., actuated by power, etc.)
- 600.1 ...With platen repositioned for sheet insertion
- 600.2 ...With feed-roller repositioned for sheet insertion
- 600.3 ...And sheet feed by additional feed-roller couple
- 600.4 ...Coincident to pivoting of sheet guide
- 601 ..With laterally movable sheet holder (e.g., having concurrent feed movement)
- 602 ..With sheet ejector
- 603 ..Via chute(s) or feed-roller couple (e.g., plural chutes)
- 603.1 ...Pivotable chute
- 604 ..Attachment to typewriter for converting to condensed-billing operation
- 605 ..For feeding plural record media concurrently or selectively
- 606 ..Plural webs superimposed and aligned to each other during typing
- 607 ..Including movement of one record-medium relative to another
- 607.1 ...In lateral direction (e.g., lateral shift of web or sheet carrier)
- 607.2 ...By insertion of additional record-medium
- 607.3 ...With concurrent feed-roller and line-spacing control
- 608 ..With clamp for holding one record-medium stationary
- 608.1 ...Selectively engageable feed-rollers or feed-roller brakes
- 608.2 ...By auxiliary feed-roller or platen section (e.g., separate feed of sheets)

- 608.3 ...By retrograde movement of one record-medium
- 608.4 ...Including differential movement by separate drive means
- 609 ..Mount for plural web rolls
- 610 ..Including sheet-associating attachment (e.g., pin-band-encircling platen)
- 610.1 ..With table or frame (e.g., collating-table)
- 610.2 ....Front collating-table with sheet-holding means (e.g., clamps)
- 610.3 ....Including pin-holding means
- 610.4 ....Including indicator
- 611 ..For feeding web record-medium
- 612 ..Feeding web or sheet in perpendicular directions
- 613 ..With web supply or takeup or mount therefor (e.g., web cartridge, etc.)
- 613.1 ...Including insertion of leading edge of web
- 613.2 ...For folded or creased web (e.g., fan-folded web)
- 613.3 ....With web smoother
- 613.4 ....Holder for fan-folded web mounted to move with carriage
- 614 ...Including web rewind
- 614.1 ....Connected to platen drive
- 615 ..Mounted on typewriter having transversely moving carriage
- 615.1 ....Mounted to move with carriage
- 615.2 ...For feeding tape in direction of print-line (i.e., transverse feed)
- 616 ..By pin-feed means (e.g., reciprocating pin, etc.)
- 616.1 ...Including laterally adjustable bands (e.g., tractor feed, etc.)
- 616.2 ...Pin feed on endless band
- 616.3 ...Pin wheel (e.g., on platen cylinder)
- 617 ..By friction-feed means (e.g., reciprocating finger or gripper or pinch roller, etc.)
- 618 ..With web tensioning or braking
- 619 ..Including web guiding or aligning (e.g., laterally, relative to print-line, etc.)
- 620 ..Including web shifting to view print-line
- 621 ..With web cutter (e.g., tear bar, wire tool, etc.)
- 621.1 ...For longitudinal cut
- 621.2 ...And gauge for tear-off length
- 622 ..With holder for single sheet (e.g., clip, backing sheet, etc.)
- 623 ..Mounted on carriage (e.g., for extra-wide sheet, cylindrical holder, etc.)
- 624 ..For feeding sheet from stack or pack holder
- 625 ..And delivering to sheet receiver (e.g., by roller couple)
- 626 ..By engaging between flap and body of envelope
- 627 ..By pneumatic means
- 628 ..By reciprocating of oscillating member
- 629 ..By endless-band or rotating (e.g., feed-roller) member
- 630 ..Including aligning of sheet edge prior to typing
- 631 ..Aligner moved to operate concurrently with disengagement of feed means
- 632 ..Including leading-edge aligner located past print-point
- 632.1 ...Adjustable leading-edge aligner
- 633 ..Side-edge aligner (e.g., adjustable, etc.)
- 633.1 ...On rear sheet table or apron
- 633.2 ....Adjustable aligner (e.g., with lock)
- 634 ..Including friction-feed means (e.g., band)
- 635 ..By endless-feed band
- 636 ..By roller couple (e.g., rotatable pinch rollers, etc.)
- 636.1 ...With typewriter-actuated control of feed-roller position
- 636.2 ...Including intermediate drive means (e.g., gears) connecting feed-roller to platen
- 636.3 ...Including feed-roller having equalizing or pressure-adjusting means
- 637 ...Including lower feed-roller(s) (e.g., pressure roller, etc.)
- 637.1 ...Including concurrent control for disengagement of upper and lower feed rollers

- 637.2 ....Mounted on apron
- 637.3 ....Mounted on plural roller carriers
- 637.4 .....Including plural parallel carrier pivots
- 637.5 .....Including single carrier pivot intermediate front and rear lower feed rollers
- 637.6 ....Mounted on single carrier having pivot intermediate front and rear lower feed-rollers
- 638 ...Including feed or pressure roller mounted on "paper-finger"
- 639 ...Including upper feed-roller(s) (e.g., pressure roller, etc.)
- 639.1 ....Mounted on "paper bail"
- 639.2 .....Disengaged from platen by compound movement of bail (e.g., on double pivoted mount)
- 640 ...With cooperating scale
- 641 ...Feed-roller structure or brake or spacer therefor
- 642 ..Including sheet guide (e.g., for sheet insertion, etc.)
- 643 ..Platen-encircling band
- 644 ..Sheet stripper (e.g., for preventing reentry, etc.)
- 645 ..Sheet holddown member (e.g., "paper-finger", end-of-page holddown, etc.)
- 645.1 ...With aperture or notch (e.g., for typing therethrough, etc.)
- 645.2 ...On or with erasing plate or signal or indicator
- 645.3 ...Movably mounted on movable finger carrier
- 645.4 ...Pivotally mounted holddown
- 645.5 ..Mounted in front of platen axis
- 646 ..Sheet table at delivery side of platen
- 647 ..Movable sheet table or apron (e.g., detachable, extensible, etc.)
- 647.1 ...Pivotable (e.g., fingerlike support)
- 648 **PLATEN OR PLATEN-MOVING MECHANISM**
- 649 ..For movement of platen other than for line-spacing
- 650 ..Cylindrical platen adjustable to facilitate compactness
- 651 ..Cylindrical platen axially adjustable
- 652 ..Platen movment conjointly with type-face movement
- 653 ..By eccentric mounting for platen
- 654 ..Character-size platen (e.g., anvil, disc, etc.)
- 655 ..Mounted on movable carrier
- 656 ..Bar (i.e., line size) platen
- 657 ..Mounted on cylindrical member
- 658 ..Semicylindrical platen
- 659 ..Cylindrical platen
- 660 ..Detachably secured to platen carriage
- 660.1 ...By axially displaceable supporting shaft
- 660.2 ...By pivoted member overlying platen shaft
- 660.3 ...By disengageable platen sectors
- 661 ..With sound-muffling means
- 661.1 ...Including plural layers of varying hardness
- 661.2 ...Including cylinder containing fluent (e.g., fluid, etc.) material
- 661.3 ...Including cylindrical sections or rings (e.g., of character-space width)
- 661.4 ...Including a wound member
- 662 ..Including particular surface characteristic (e.g., translucent, pigment yielding, corrugated, of varying hardness, etc.)
- 663 **LOCKING OR INTERLOCKING MECHANISM**
- 664 ..For interlocking plural functions or mechanisms
- 665 ..Plural carriage-moving mechanisms (e.g., escapement, tabulation, etc.)
- 666 ..Plural keys or key linkages (e.g., for type-face selection, etc.)
- 667 ..Key-board lock using interlock mechanism
- 668 ..Locking means actuated in response to a condition
- 669 ..Failure of power supply
- 670 ..End-of-page lock (e.g., responsive to preset condition)
- 670.1 ...Responsive to end-of-page sensor

- 670.2 ...Including lock for platen or line-space
- 670.3 ...By cam groove and follower
- 671 ..End of maximum typed line
- 671.1 ...Actuated by space-bar
- 671.2 ...Universal-bar lock (e.g., pivoted latch, slidable latch, etc.)
- 671.3 ...Actuated by paper-finger
- 671.4 ...Interposed component
- 672 ...Escapement lock
- 672.1 ...Type-bar lock
- 672.2 ...Key-lever lock (e.g., by hook on key-lever)
- 673 ..Coin-controlled lock (e.g., responsive to print-lines, time, etc.)
- 674 .For locking carriage in centered position (e.g., with shipping support)
- 675 ..And disengaging case-shift lock
- 676 .Key-board security lock (e.g., cover plate, etc.)
- 677 .For locking selected group(s) of keys
- 678 .For locking key in actuated position (e.g., to remove type-face from ink pad)
- 679 **MEANS AUXILIARY TO TYPEWRITING FUNCTION**
- 680 .Means for collapsing typewriter or support for record-medium or copy
- 681 ..By tilting typewriter (e.g., via collapsible legs, etc.)
- 682 ..By moving key-board relative to frame (e.g., into plural operating positions, etc.)
- 683 ..By moving carriage relative to frame
- 684 ..By moving type-bars relative to frame
- 685 ..Including typewriter built into carrying case
- 686 .Buffer (e.g., dashpot, of particular material, etc.) for movable typewriter element
- 687 ..Having nonimpact movement
- 688 .Means for increasing typewriter noise
- 689 .Means for muffling typewriter noise
- 690 ..By sound-barrier enclosure for typewriter (e.g., by sound-absorbing material)
- 690.1 ...With viewing window (e.g., having reflection eliminator)
- 690.2 ...And externally protruding (e.g., key-board, etc.) operating means
- 690.3 ...With externally protruding operating means
- 690.4 ...Including means facilitating opening of enclosure
- 691 .Frame, casing, or support for typewriter
- 692 ..Having means facilitating interchange of parts
- 693 ..Housing structure
- 693.1 ...For ink-ribbon spool (e.g., spool cover, etc.)
- 694 ..Made of particular material (e.g., plastic, etc.)
- 695 .Means for correcting typing errors (e.g., by abrasive eraser, etc.)
- 696 ..By laser beam or adhesive-surface ribbon or chemical eradicator
- 697 ..By overprinting (e.g., with coated material) to cancel error
- 697.1 ...With drive for ribbon having coating thereon
- 698 ..With erasing table
- 699 ..With receptacle for refuse
- 700 ..With means for rubbing eraser over surface of record-medium
- 701 .Means for cleaning, or facilitating cleaning of, type-face
- 702 ..By contacting type-face (e.g., via type-face cleaner, brush, etc.)
- 702.1 ...Including means for moving brush
- 703 .Indicator means
- 704 ..For indicating typist's skill or needed adjustment
- 705 ..For indicating position of carriage along print-line
- 705.1 ...Of carriage for type-head-carrier
- 705.2 ...With word counter
- 705.3 ...By means driven from carriage (e.g., for indicating end of print-line, etc.)
- 705.4 ...Scale for facilitating tabulation

- 705.5 ...Scale for facilitating centering of print-line
- 706 ..For indicating position of line or end-of-page
- 706.1 ...By scale mounted on paper table
- 707 ...By means driven from platen cylinder
- 707.1 ....Drive initiated by detector of record-medium
- 707.2 ....Including relatively movable pointer and scale (e.g., rotatable or rectilinearly movable pointer)
- 707.3 .....Scale rotated by gear drive
- 707.4 ....Rotatable scale coaxial with platen cylinder
- 707.5 ....With line numbering
- 708 ...Including detector of record-medium
- 708.1 ....Having electrical contacts separated by record-medium
- 709 ..For aligning record-medium with print-point or print-line (e.g., for facilitating correction of error, etc.)
- 709.1 ...By transparent indicator
- 709.2 ...For indicating print-line alignment
- 710 ..Including a page counter
- 711 ..Including a light
- 712 ..Including means producing an audible sound (e.g., plural tones, etc.)
- 713 .Attachment for shielding or screening record-medium or typewriter (e.g., against wind, etc.)
- 714 ..For screening key-board
- 715 .Attachment for guiding fingers or hands of typist (e.g., hand rest)
- 716 .Attachment for illuminating or viewing (e.g., prism, etc.)
- 717 .Attachment for holding an article (e.g., pencil, eraser, etc.)
- 718 ..Copyholder
- 718.1 ...Actuated by typewriter (e.g., to simulate line-spacing, for web copy, etc.)
- 718.2 ....With adjustment of line-spacing
- 719 **MISCELLANEOUS**

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