Symbol	Typ	Titel
B	**Sektion**	**SECTION B — PERFORMING OPERATIONS; TRANSPORTING**
B65	**Klasse**	**CONVEYING; PACKING; STORING; HANDLING THIN OR FILAMENTARY MATERIAL**
B65H	**Unterklasse**	**HANDLING THIN OR FILAMENTARY MATERIAL, e.g. SHEETS, WEBS, CABLES**
		Feeding articles to machines; Separating articles from piles; Pile supports (combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling B65H 83/00; recirculating articles B65H 85/00; manipulators B25J)
B65H 1/00	**Hauptgruppe**	**Supports or magazines for piles from which articles are to be separated (carriers used for associating, collating, or gathering articles B65H 39/00)**
B65H 1/02	1-Punkt Untergruppe	. adapted to support articles on edge
B65H 1/04	1-Punkt Untergruppe	. adapted to support articles substantially horizontally, e.g. for separation from top of pile
B65H 1/06	2-Punkt Untergruppe	. . for separation from bottom of pile
B65H 1/08	1-Punkt Untergruppe	. with means for advancing the pile to present the articles to a separating device (pressing on piles from which articles are separated from the bottom B65H 1/06)
B65H 1/10	2-Punkt Untergruppe	. . comprising weights
B65H 1/12	2-Punkt Untergruppe	. . comprising springs
B65H 1/14	2-Punkt Untergruppe	. . comprising positively-acting mechanical devices
B65H 1/16	2-Punkt Untergruppe	. . comprising pneumatic or hydraulic means
B65H 1/18	2-Punkt Untergruppe	. . controlled by height of pile
B65H 1/20	2-Punkt Untergruppe	. . controlled by weight of pile; Floating arrangements
B65H 1/22	2-Punkt Untergruppe	. . moving in direction of plane of articles, e.g. for bodily advancement of fanned-out piles
B65H 1/24	2-Punkt Untergruppe	. . with means for relieving or controlling pressure of the pile
B65H 1/26	1-Punkt Untergruppe	. with auxiliary supports to facilitate introduction or renewal of the pile
B65H 1/28	1-Punkt Untergruppe	. compartmented to receive piles side by side
B65H 1/30	1-Punkt Untergruppe	. with means for replenishing the pile during continuous separation of articles therefrom
B65H 3/00	**Hauptgruppe**	**Separating articles from piles (associating, collating, or gathering articles B65H 39/00; machines for separating superposed webs B65H 41/00; unpiling thin material combined with folding B65H 45/26)**
B65H 3/02	1-Punkt Untergruppe	. using friction forces between articles and separator
B65H 3/04	2-Punkt Untergruppe	. . Endless-belt separators
B65H 3/06	2-Punkt Untergruppe	. . Rollers or like rotary separators
B65H 3/08	1-Punkt Untergruppe	. using pneumatic force
B65H 3/10	2-Punkt Untergruppe	. . Suction rollers
B65H 3/12	2-Punkt Untergruppe	. . Suction bands, belts, or tables moving relatively to the pile
B65H 3/14	2-Punkt Untergruppe	. . Air blasts producing partial vacuum
B65H 3/16	1-Punkt Untergruppe	. using magnetic force
B65H 3/18	1-Punkt Untergruppe	. using electrostatic force

Symbol	Typ	Titel
B65H 3/20	1-Punkt Untergruppe	. using adhesives
B65H 3/22	1-Punkt Untergruppe	. by needles or the like engaging the articles
B65H 3/24	1-Punkt Untergruppe	. by pushers engaging the edges of the articles
B65H 3/26	1-Punkt Untergruppe	. by separators engaging folds, flaps, or projections of articles
B65H 3/28	1-Punkt Untergruppe	. by screw or like separators
B65H 3/30	1-Punkt Untergruppe	. by escapement devices (screw or like separators B65H 3/28); from staggered piles; from piles of articles having staggered formations, e.g. cuts or perforations
B65H 3/32	1-Punkt Untergruppe	. by elements, e.g. fingers, plates, rollers, inserted or traversed between articles to be separated and remainder of the pile (such elements acting only as supplementary devices to assist separation or prevent double feed B65H 3/50)
B65H 3/34	1-Punkt Untergruppe	. Article-retaining devices controlling the release of the articles to the separators
B65H 3/36	1-Punkt Untergruppe	. by separators moved in special paths, e.g. enclosing an area
B65H 3/38	2-Punkt Untergruppe	. . the paths not enclosing an area
B65H 3/40	1-Punkt Untergruppe	. by two or more separators acting alternately on the same pile (rotary or oscillating bodies carrying two or more separators B65H 3/42)
B65H 3/42	1-Punkt Untergruppe	. by two or more separators mounted for movement with, or relative to, rotary or oscillating bodies
B65H 3/44	1-Punkt Untergruppe	. Simultaneously, alternately, or selectively separating articles from two or more piles
B65H 3/46	1-Punkt Untergruppe	. Supplementary devices or measures to assist separation or prevent double feed (control means comprising detectors responsive to double feed B65H 7/12)
B65H 3/48	2-Punkt Untergruppe	. . Air blast acting on edges of, or under, articles
B65H 3/50	2-Punkt Untergruppe	. . Elements, e.g. fingers, plates, rollers, inserted or traversed between articles to be separated and remainder of the pile
B65H 3/52	2-Punkt Untergruppe	. . Friction retainers acting on under or rear side of article being separated
B65H 3/54	2-Punkt Untergruppe	. . Pressing or holding devices
B65H 3/56	2-Punkt Untergruppe	. . Elements, e.g. scrapers, fingers, needles, brushes, acting on separated article or on edge of the pile
B65H 3/58	2-Punkt Untergruppe	. . Articles spiked, threaded, cemented, or gummed together, to prevent double feed, e.g. piles with gummed edges
B65H 3/60	2-Punkt Untergruppe	. . Loosening articles in piles
B65H 3/62	3-Punkt Untergruppe	. . . by swinging, agitating, or knocking the pile
B65H 3/64	3-Punkt Untergruppe	. . . by vacuum apparatus
B65H 3/66	1-Punkt Untergruppe	. Article guides or smoothers, e.g. movable in operation
B65H 3/68	2-Punkt Untergruppe	. . immovable in operation
B65H 5/00	**Hauptgruppe**	**Feeding articles separated from piles; Feeding articles to machines (identical mechanisms or parts for delivering or advancing articles from machines B65H 29/00)**
B65H 5/02	1-Punkt Untergruppe	. by belts or chains
B65H 5/04	1-Punkt Untergruppe	. by movable tables or carriages (rotary tables B65H 5/18)

Symbol	Typ	Titel
B65H 5/06	1-Punkt Untergruppe	. by rollers
B65H 5/08	1-Punkt Untergruppe	. by grippers, e.g. suction grippers
B65H 5/10	2-Punkt Untergruppe	. . Reciprocating or oscillating grippers
B65H 5/12	2-Punkt Untergruppe	. . Revolving grippers, e.g. mounted on arms, frames, or cylinders
B65H 5/14	2-Punkt Untergruppe	. . Details of grippers; Actuating mechanisms therefor
B65H 5/16	1-Punkt Untergruppe	. by pusher, needles, friction, or like devices adapted to feed single articles along a surface or table
B65H 5/18	1-Punkt Untergruppe	. by rotary dials or tables
B65H 5/20	1-Punkt Untergruppe	. by dropping-roller or like device
B65H 5/22	1-Punkt Untergruppe	. by air-blast or suction device (suction grippers B65H 5/08)
B65H 5/24	1-Punkt Untergruppe	. Feeding streams of overlapping articles
B65H 5/26	1-Punkt Untergruppe	. Duplicate, alternate, selective, or coacting feeds
B65H 5/28	1-Punkt Untergruppe	. Feeding articles stored in rolled or folded bands
B65H 5/30	1-Punkt Untergruppe	. Opening devices for folded sheets or signatures
B65H 5/32	1-Punkt Untergruppe	. Saddle-like members over which partially-unfolded sheets or signatures are fed to signature-gathering, stitching, or like machines
B65H 5/34	1-Punkt Untergruppe	. Varying the phase of feed relative to the receiving machine
B65H 5/36	1-Punkt Untergruppe	. Article guides or smoothers, e.g. movable in operation
B65H 5/38	2-Punkt Untergruppe	. . immovable in operation
B65H 7/00	**Hauptgruppe**	**Controlling article feeding, separating, pile-advancing, or associated apparatus, to take account of incorrect feeding, absence of articles, or presence of faulty articles**
B65H 7/02	1-Punkt Untergruppe	. by feelers or detectors
B65H 7/04	2-Punkt Untergruppe	. . responsive to absence of articles, e.g. exhaustion of pile (B65H 7/14 takes precedence)
B65H 7/06	2-Punkt Untergruppe	. . responsive to presence of faulty articles or incorrect separation or feed (B65H 7/14 takes precedence)
B65H 7/08	3-Punkt Untergruppe	. . . responsive to incorrect front register
B65H 7/10	3-Punkt Untergruppe	. . . responsive to incorrect side register (controlling transverse register of webs B65H 23/032)
B65H 7/12	3-Punkt Untergruppe	. . . responsive to double feed or separation
B65H 7/14	2-Punkt Untergruppe	. . by photoelectric feelers or detectors
B65H 7/16	1-Punkt Untergruppe	. Controlling air-supply to pneumatic separators
B65H 7/18	1-Punkt Untergruppe	. Modifying or stopping actuation of separators
B65H 7/20	1-Punkt Untergruppe	. Controlling associated apparatus
B65H 9/00	**Hauptgruppe**	**Registering, e.g. orientating, articles; Devices therefor**
B65H 9/02	1-Punkt Untergruppe	. Gauge pins
B65H 9/04	1-Punkt Untergruppe	. Fixed or adjustable stops or gauges (gauge pins B65H 9/02)
B65H 9/06	1-Punkt Untergruppe	. Movable stops or gauges, e.g. rising and falling front stops

Symbol	Typ	Titel
B65H 9/08	1-Punkt Untergruppe	. Holding devices, e.g. finger, needle, suction, for retaining articles in registered position
B65H 9/10	1-Punkt Untergruppe	. Pusher or like movable registers; Pusher or gripper devices which move articles into registered position
B65H 9/12	1-Punkt Untergruppe	. carried by article grippers
B65H 9/14	1-Punkt Untergruppe	. Retarding or controlling the forward movement of articles as they approach stops
B65H 9/16	1-Punkt Untergruppe	. Inclined tape, roller, or like article-forwarding side registers
B65H 9/18	1-Punkt Untergruppe	. Assisting by devices such as reflectors, lenses, transparent sheets, or mechanical indicators
B65H 9/20	1-Punkt Untergruppe	. Assisting by photoelectric, sonic, or pneumatic indicators
B65H 11/00	**Hauptgruppe**	**Feed tables**
B65H 11/02	1-Punkt Untergruppe	. angularly adjustable in plane of articles
B65H 13/00	**Hauptgruppe**	**Lifting the ends of piles to facilitate the formation of overlapped piles**
B65H 15/00	**Hauptgruppe**	**Overturning articles [4]**
B65H 15/02	1-Punkt Untergruppe	. Overturning piles [4]
		Feeding webs to or from machines; Winding or unwinding webs; Splicing webs (web-delivering apparatus incorporating devices for performing auxiliary operations B65H 35/00, B65H 37/00; associating two or more webs B65H 39/16; winding or unwinding metal band or like flexible metallic material during manufacture B21C; in selective printing mechanisms B41J; in cinematographic or photographic apparatus G03B; winding, unwinding, or feeding tape to, in, or from, information-processing apparatus G06, G11B)
B65H 16/00	**Hauptgruppe**	**Unwinding, paying-out webs [4]**
B65H 16/02	1-Punkt Untergruppe	. Supporting web roll [4]
B65H 16/04	2-Punkt Untergruppe	. . cantilever type [4]
B65H 16/06	2-Punkt Untergruppe	. . both-ends type [4]
B65H 16/08	2-Punkt Untergruppe	. . parallel rollers type [4]
B65H 16/10	1-Punkt Untergruppe	. Arrangements for effecting positive rotation of web roll [4]
B65H 18/00	**Hauptgruppe**	**Winding webs [4]**
B65H 18/02	1-Punkt Untergruppe	. Supporting web roll [4]
B65H 18/04	2-Punkt Untergruppe	. . Interior-supporting [4]
B65H 18/06	2-Punkt Untergruppe	. . Lateral-supporting [4]
B65H 18/08	1-Punkt Untergruppe	. Web-winding mechanisms [4]
B65H 18/10	2-Punkt Untergruppe	. . Mechanisms in which power is applied to web-roll spindle [4]
B65H 18/12	3-Punkt Untergruppe	. . . to effect step-by-step advancement of web [4]
B65H 18/14	2-Punkt Untergruppe	. . Mechanisms in which power is applied to web roll, e.g. to effect continuous advancement of web [4]
B65H 18/16	3-Punkt Untergruppe	. . . by friction roller [4]
B65H 18/18	4-Punkt Untergruppe	. . . . to effect step-by-step advancement of web [4]
B65H 18/20	3-Punkt Untergruppe	. . . the web roll being supported on two parallel rollers at least one of which is driven [4]
B65H 18/22	3-Punkt Untergruppe	. . . by friction band [4]

Symbol	Typ	Titel
B65H 18/24	4-Punkt Untergruppe	. . . . to effect step-by-step advancement of web [4]
B65H 18/26	2-Punkt Untergruppe	. . Mechanisms for controlling contact pressure on winding-web package, e.g. for regulating the quantity of air between web layers [4]
B65H 18/28	1-Punkt Untergruppe	. Wound package of webs [4]
B65H 19/00	**Hauptgruppe**	**Changing the web roll [4]**
B65H 19/10	1-Punkt Untergruppe	. in unwinding mechanisms or in connection with unwinding operations [4]
B65H 19/12	2-Punkt Untergruppe	. . Lifting, transporting, or inserting the web roll; Removing empty core [4]
B65H 19/14	2-Punkt Untergruppe	. . Accumulating surplus web for advancing to machine while changing the web roll [4]
B65H 19/16	2-Punkt Untergruppe	. . Driving, e.g. accelerating, the replacement web roll in association with web-splicing operation [4]
B65H 19/18	2-Punkt Untergruppe	. . Attaching, e.g. pasting, the replacement web to the expiring web [4]
B65H 19/20	2-Punkt Untergruppe	. . Cutting-off the expiring web [4]
B65H 19/22	1-Punkt Untergruppe	. in winding mechanisms or in connection with winding operations [4]
B65H 19/24	2-Punkt Untergruppe	. . Accumulating surplus web delivered while changing the web roll [4]
B65H 19/26	2-Punkt Untergruppe	. . Cutting-off the web running to the wound web roll [4]
B65H 19/28	2-Punkt Untergruppe	. . Attaching the leading end of the web to the replacement web-roll core or spindle (cores, formers, supports or holders, e.g. reels, with arrangements for securing ends of material B65H 75/28) [4]
B65H 19/29	2-Punkt Untergruppe	. . Securing the trailing end of the wound web to the web roll (cores, formers, supports or holders, e.g. reels, with arrangements for securing ends of material B65H 75/28) [4]
B65H 19/30	2-Punkt Untergruppe	. . Lifting, transporting, or removing the web roll; Inserting core [4]
B65H 20/00	**Hauptgruppe**	**Advancing webs [4]**
B65H 20/02	1-Punkt Untergruppe	. by friction roller [4]
B65H 20/04	2-Punkt Untergruppe	. . to effect step-by-step advancement of web [4]
B65H 20/06	1-Punkt Untergruppe	. by friction band [4]
B65H 20/08	2-Punkt Untergruppe	. . to effect step-by-step advancement of web [4]
B65H 20/10	1-Punkt Untergruppe	. by a feed band against which web is held by fluid pressure, e.g. suction or air blast [4]
B65H 20/12	1-Punkt Untergruppe	. by suction roller [4]
B65H 20/14	1-Punkt Untergruppe	. by direct action on web of moving fluid [4]
B65H 20/16	1-Punkt Untergruppe	. by web-gripping means, e.g. grippers, clips [4]
B65H 20/18	2-Punkt Untergruppe	. . to effect step-by-step advancement of web [4]
B65H 20/20	1-Punkt Untergruppe	. by web-penetrating means, e.g. pins [4]
B65H 20/22	2-Punkt Untergruppe	. . to effect step-by-step advancement of web [4]
B65H 20/24	1-Punkt Untergruppe	. by looping or like devices [4]
B65H 20/26	1-Punkt Untergruppe	. Mechanisms for advancing webs to or from the inside of web rolls [4]
B65H 20/28	1-Punkt Untergruppe	. Mechanisms for delivering webs in superposed folds and refeeding them from the lower end of the folded assemblies [4]

Symbol	Typ	Titel
B65H 20/30	1-Punkt Untergruppe	. Arrangements for accumulating surplus web (while changing the web roll B65H 19/14, B65H 19/24) [4]
B65H 20/32	2-Punkt Untergruppe	. . by making loops [4]
B65H 20/34	3-Punkt Untergruppe	. . . with rollers [4]
B65H 20/36	1-Punkt Untergruppe	. having means to optionally advance the web either in one longitudinal direction or in the opposite longitudinal direction [4]
B65H 20/38	2-Punkt Untergruppe	. . by changing the direction of mechanism driving the web-roll spindle [4]
B65H 20/40	2-Punkt Untergruppe	. . by changing the direction of mechanism driving the pinch roller [4]
B65H 21/00	**Hauptgruppe**	**Apparatus for splicing webs (during web-roll changing B65H 19/00)**
B65H 21/02	1-Punkt Untergruppe	. for premarked, e.g. preprinted, webs
B65H 23/00	**Hauptgruppe**	**Registering, tensioning, smoothing, or guiding webs (registering articles B65H 9/00; in connection with splicing B65H 21/00; tensioning devices of general interest in connection with the handling of webs, tapes, or filamentary materials B65H 77/00)**
B65H 23/02	1-Punkt Untergruppe	. transversely (by tentering, gripper, or like apparatus operating on fabric webs D06C)
B65H 23/022	2-Punkt Untergruppe	. . by tentering devices [4]
B65H 23/025	3-Punkt Untergruppe	. . . by rollers [4]
B65H 23/028	3-Punkt Untergruppe	. . . by clips [4]
B65H 23/032	2-Punkt Untergruppe	. . Controlling transverse register of web [4]
B65H 23/035	3-Punkt Untergruppe	. . . by guide bars [4]
B65H 23/038	3-Punkt Untergruppe	. . . by rollers [4]
B65H 23/04	1-Punkt Untergruppe	. longitudinally
B65H 23/06	2-Punkt Untergruppe	. . by retarding devices, e.g. acting on web-roll spindle
B65H 23/08	3-Punkt Untergruppe	. . . acting on web roll being unwound
B65H 23/10	3-Punkt Untergruppe	. . . acting on running web (by fluid action B65H 23/24)
B65H 23/12	4-Punkt Untergruppe	. . . . and causing parts thereof to move in opposite directions and in frictional engagement
B65H 23/14	4-Punkt Untergruppe	. . . . Tensioning rollers applying braking forces
B65H 23/16	2-Punkt Untergruppe	. . by weighted or spring-pressed movable bars or rollers
B65H 23/18	2-Punkt Untergruppe	. . by controlling or regulating the web-advancing mechanism, e.g. mechanism acting on the running web
B65H 23/182	3-Punkt Untergruppe	. . . in unwinding mechanisms or in connection with unwinding operations [4]
B65H 23/185	4-Punkt Untergruppe	. . . . motor-controlled [4]
B65H 23/188	3-Punkt Untergruppe	. . . in connection with running-web [4]
B65H 23/192	4-Punkt Untergruppe	. . . . motor-controlled [4]
B65H 23/195	3-Punkt Untergruppe	. . . in winding mechanisms or in connection with winding operations [4]
B65H 23/198	4-Punkt Untergruppe	. . . . motor-controlled [4]
B65H 23/24	2-Punkt Untergruppe	. . by fluid action, e.g. to retard the running web [4]

Symbol	Typ	Titel
B65H 23/26	2-Punkt Untergruppe	. . by transverse stationary or adjustable bars or rollers
B65H 23/28	2-Punkt Untergruppe	. . by longitudinally-extending strips, tubes, plates, or wires (flexible tapes or bands B65H 23/30)
B65H 23/30	2-Punkt Untergruppe	. . by longitudinally-extending flexible tapes or bands
B65H 23/32	2-Punkt Untergruppe	. . Arrangements for turning or reversing webs
B65H 23/34	2-Punkt Untergruppe	. . Apparatus for taking-out curl from webs
B65H 26/00	**Hauptgruppe**	**Warning or safety devices, e.g. automatic fault detectors, stop-motions, for web-advancing mechanisms (safety devices in general F16P; investigating chemical or physical properties of materials in general G01N; indicating devices in general G08B) [4]**
B65H 26/02	1-Punkt Untergruppe	. responsive to presence of irregularities in running webs [4]
B65H 26/04	2-Punkt Untergruppe	. . for variation in tension [4]
B65H 26/06	1-Punkt Untergruppe	. responsive to predetermined lengths of webs [4]
B65H 26/08	1-Punkt Untergruppe	. responsive to a predetermined diameter [4]
B65H 27/00	**Hauptgruppe**	**Special constructions of feed or guide rollers or surfaces thereof (rollers in general F16C 13/00)**
		Delivering articles from machines; Piling articles; Article or web delivery apparatus incorporating devices for performing specified auxiliary operations; Associating or gathering articles or webs; Machines for separating superposed webs (combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling B65H 83/00; recirculating articles B65H 85/00)
B65H 29/00	**Hauptgruppe**	**Delivering or advancing articles from machines; Advancing articles to or into piles (associating, collating or gathering articles B65H 39/00; for articles other than those defined by Note (3) (i) of this subclass, see B65G)**
B65H 29/02	1-Punkt Untergruppe	. by mechanical grippers engaging the leading edge only of the articles
B65H 29/04	2-Punkt Untergruppe	. . the grippers being carried by endless chains or bands
B65H 29/06	2-Punkt Untergruppe	. . the grippers being carried by rotating members
B65H 29/08	2-Punkt Untergruppe	. . the grippers being oscillated in arcuate paths
B65H 29/10	2-Punkt Untergruppe	. . the grippers being reciprocated in rectilinear paths
B65H 29/12	1-Punkt Untergruppe	. by means of the nip between two, or between two sets of, moving tapes or bands
B65H 29/14	2-Punkt Untergruppe	. . and introducing into a pile
B65H 29/16	1-Punkt Untergruppe	. by contact of one face only with moving tapes, bands, or chains
B65H 29/18	2-Punkt Untergruppe	. . and introducing into a pile
B65H 29/20	1-Punkt Untergruppe	. by contact with rotating friction members, e.g. rollers, brushes, or cylinders
B65H 29/22	2-Punkt Untergruppe	. . and introducing into a pile
B65H 29/24	1-Punkt Untergruppe	. by air-blast or suction apparatus (dropping articles from suction carriers B65H 29/32)
B65H 29/26	1-Punkt Untergruppe	. by dropping
B65H 29/28	2-Punkt Untergruppe	. . from mechanical grippers (grippers engaging the leading edge only B65H 29/02)
B65H 29/30	2-Punkt Untergruppe	. . from magnetic holders
B65H 29/32	2-Punkt Untergruppe	. . from pneumatic, e.g. suction, carriers

Symbol	Typ	Titel
B65H 29/34	2-Punkt Untergruppe	. . from supports slid from under the articles
B65H 29/36	2-Punkt Untergruppe	. . from tapes, bands, or rollers rolled from under the articles
B65H 29/38	1-Punkt Untergruppe	. by movable piling or advancing arms, frames, plates, or like members with which the articles are maintained in face contact
B65H 29/40	2-Punkt Untergruppe	. . Members rotated about an axis perpendicular to direction of article movement, e.g. star-wheels formed by S-shaped members
B65H 29/42	2-Punkt Untergruppe	. . Members rotated about an axis parallel to direction of article movement, e.g. helices
B65H 29/44	2-Punkt Untergruppe	. . Members oscillated in arcuate paths
B65H 29/46	2-Punkt Untergruppe	. . Members reciprocated in rectilinear path
B65H 29/48	1-Punkt Untergruppe	. by tables arranged to be tilted to cause sliding of articles
B65H 29/50	1-Punkt Untergruppe	. Piling apparatus of which the discharge point moves in accordance with the height of the pile
B65H 29/51	2-Punkt Untergruppe	. . piling by collecting on the periphery of cylinders [3]
B65H 29/52	1-Punkt Untergruppe	. Stationary guides or smoothers
B65H 29/54	1-Punkt Untergruppe	. Article strippers, e.g. for stripping from advancing elements
B65H 29/56	2-Punkt Untergruppe	. . for stripping from elements of machines
B65H 29/58	1-Punkt Untergruppe	. Article switches or diverters
B65H 29/60	2-Punkt Untergruppe	. . diverting the stream into alternative paths (B65H 29/62 takes precedence)
B65H 29/62	2-Punkt Untergruppe	. . diverting faulty articles from the main stream (control devices detecting faulty articles B65H 43/04)
B65H 29/64	2-Punkt Untergruppe	. . directing the components of composite articles into separate paths
B65H 29/66	1-Punkt Untergruppe	. Advancing in streams of overlapping articles
B65H 29/68	1-Punkt Untergruppe	. Reducing the speed of articles as they advance (web retarding devices B65H 23/06)
B65H 29/70	1-Punkt Untergruppe	. Article-bending or stiffening arrangements
B65H 31/00	**Hauptgruppe**	**Pile receivers (carriers used for associating, collating, or gathering articles B65H 39/00)**
B65H 31/02	1-Punkt Untergruppe	. with stationary end support against which pile accumulates
B65H 31/04	1-Punkt Untergruppe	. with movable end support arranged to recede as pile accumulates
B65H 31/06	2-Punkt Untergruppe	. . the articles being piled on edge
B65H 31/08	2-Punkt Untergruppe	. . the articles being piled one above another
B65H 31/10	3-Punkt Untergruppe	. . . and applied at the top of the pile
B65H 31/12	2-Punkt Untergruppe	. . Devices relieving the weight of the pile or permitting or effecting movement of the pile end support during piling
B65H 31/14	3-Punkt Untergruppe	. . . Springs (fluid springs B65H 31/16)
B65H 31/16	3-Punkt Untergruppe	. . . Fluid-pressure devices
B65H 31/18	3-Punkt Untergruppe	. . . Positively-acting mechanical devices
B65H 31/20	1-Punkt Untergruppe	. adjustable for different article sizes

Symbol	Typ	Titel
B65H 31/22	1-Punkt Untergruppe	. removable or interchangeable
B65H 31/24	1-Punkt Untergruppe	. multiple or compartmented, e.g. for alternate, programmed, or selective filling
B65H 31/26	1-Punkt Untergruppe	. Auxiliary devices for retaining articles in the pile
B65H 31/28	1-Punkt Untergruppe	. Bands, chains, or like moving receivers (for articles piled on edge B65H 31/06)
B65H 31/30	1-Punkt Untergruppe	. Arrangements for removing completed piles (bands, chains, or like moving receivers B65H 31/28)
B65H 31/32	1-Punkt Untergruppe	. Auxiliary devices for receiving articles during removal of a completed pile
B65H 31/34	1-Punkt Untergruppe	. Apparatus for squaring-up piled articles
B65H 31/36	2-Punkt Untergruppe	. . Auxiliary devices for contacting each article with a front stop as it is piled
B65H 31/38	2-Punkt Untergruppe	. . Apparatus for vibrating or knocking the pile during piling
B65H 31/40	2-Punkt Untergruppe	. . Separate receivers, troughs, and like apparatus for knocking-up completed piles
B65H 33/00	**Hauptgruppe**	**Forming counted batches in delivery pile or stream of articles**
B65H 33/02	1-Punkt Untergruppe	. by moving a blade or like member into the pile
B65H 33/04	1-Punkt Untergruppe	. by inserting marker slips in pile or stream
B65H 33/06	1-Punkt Untergruppe	. by displacing articles to define batches
B65H 33/08	2-Punkt Untergruppe	. . Displacing whole batches, e.g. forming stepped piles
B65H 33/10	2-Punkt Untergruppe	. . Displacing the end articles of a batch
B65H 33/12	1-Punkt Untergruppe	. by creating gaps in the stream
B65H 33/14	1-Punkt Untergruppe	. by diverting batches to separate receivers
B65H 33/16	1-Punkt Untergruppe	. by depositing articles in batches on moving supports
B65H 33/18	2-Punkt Untergruppe	. . with separators between adjacent batches
B65H 35/00	**Hauptgruppe**	**Delivering articles from cutting or line-perforating machines; Article or web delivery apparatus incorporating cutting or line-perforating devices, e.g. adhesive tape dispensers (cutting or perforating machines or devices in general B26D, B26F)**
B65H 35/02	1-Punkt Untergruppe	. from or with longitudinal slitters or perforators
B65H 35/04	1-Punkt Untergruppe	. from or with transverse cutters or perforators
B65H 35/06	2-Punkt Untergruppe	. . from or with blade, e.g. shear-blade, cutters or perforators (from or with revolving blade B65H 35/08)
B65H 35/07	3-Punkt Untergruppe	. . . Adhesive-tape dispensers [3]
B65H 35/08	2-Punkt Untergruppe	. . from or with revolving, e.g. cylinder, cutters or perforators
B65H 35/10	1-Punkt Untergruppe	. from or with devices for breaking partially-cut or perforated webs, e.g. bursters
B65H 37/00	**Hauptgruppe**	**Article or web delivery apparatus incorporating devices for performing specified auxiliary operations (incorporating cutting or line-perforating devices B65H 35/00)**
B65H 37/02	1-Punkt Untergruppe	. for applying adhesive (and securing together B65H 37/04)
B65H 37/04	1-Punkt Untergruppe	. for securing together articles or webs, e.g. by adhesive, stitching, or stapling (adhering replacement to expiring web during change of web roll B65H 19/18) [2]
B65H 37/06	1-Punkt Untergruppe	. for folding

Symbol	Typ	Titel
B65H 39/00	**Hauptgruppe**	**Associating, collating, or gathering articles or webs (machines for both collating or gathering and permanently attaching together sheets or signatures B42C 1/00)**
B65H 39/02	1-Punkt Untergruppe	. Associating, collating, or gathering articles from several sources
B65H 39/04	2-Punkt Untergruppe	. . from piles
B65H 39/041	3-Punkt Untergruppe	. . . the piles being disposed in rotary carriers [3]
B65H 39/042	3-Punkt Untergruppe	. . . the piles being disposed in superposed carriers [3]
B65H 39/043	3-Punkt Untergruppe	. . . the piles being disposed in juxtaposed carriers [3]
B65H 39/045	3-Punkt Untergruppe	. . . by collecting in rotary carriers [2]
B65H 39/05	3-Punkt Untergruppe	. . . by collecting in superposed carriers [2]
B65H 39/055	3-Punkt Untergruppe	. . . by collecting in juxtaposed carriers [2]
B65H 39/06	2-Punkt Untergruppe	. . from delivery streams
B65H 39/065	3-Punkt Untergruppe	. . . by collecting in rotary carriers [2]
B65H 39/07	3-Punkt Untergruppe	. . . by collecting in superposed carriers [2]
B65H 39/075	3-Punkt Untergruppe	. . . by collecting in juxtaposed carriers [2]
B65H 39/10	1-Punkt Untergruppe	. Associating articles from a single source, e.g. to form a writing pad
B65H 39/105	2-Punkt Untergruppe	. . in rotary carriers [3]
B65H 39/11	2-Punkt Untergruppe	. . in superposed carriers [3]
B65H 39/115	2-Punkt Untergruppe	. . in juxtaposed carriers [3]
B65H 39/14	1-Punkt Untergruppe	. Associating sheets with webs
B65H 39/16	1-Punkt Untergruppe	. Associating two or more webs
B65H 41/00	**Hauptgruppe**	**Machines for separating superposed webs**
B65H 43/00	**Hauptgruppe**	**Use of control, checking, or safety devices, e.g. automatic devices comprising an element for sensing a variable**
B65H 43/02	1-Punkt Untergruppe	. detecting, or responding to, absence of articles (B65H 43/08 takes precedence)
B65H 43/04	1-Punkt Untergruppe	. detecting, or responding to, presence of faulty articles (B65H 43/08 takes precedence; diverting faulty articles from main streams B65H 29/62)
B65H 43/06	1-Punkt Untergruppe	. detecting, or responding to, completion of pile (B65H 43/08 takes precedence)
B65H 43/08	1-Punkt Untergruppe	. Photoelectric devices
		Folding or unfolding thin material
B65H 45/00	**Hauptgruppe**	**Folding thin material (specially adapted for the manufacture or treatment of particular products, see the relevant places, e.g. D06F 89/00) [4]**
B65H 45/02	1-Punkt Untergruppe	. Folding limp material without application of pressure to define or form crease lines (winding or unwinding fabrics for feeding to or from machines B65H 16/00-B65H 27/00; folding garments for packaging purposes B65B; folding fabrics in sewing machines D05B)
B65H 45/04	2-Punkt Untergruppe	. . Folding sheets
B65H 45/06	2-Punkt Untergruppe	. . Folding webs (B65H 20/28 takes precedence)

Symbol	Typ	Titel
B65H 45/08	3-Punkt Untergruppe	. . . longitudinally
B65H 45/09	4-Punkt Untergruppe	. . . . Doubling, i.e. folding into half of width
B65H 45/10	3-Punkt Untergruppe	. . . transversely
B65H 45/101	4-Punkt Untergruppe	. . . . in combination with laying, i.e. forming a zig-zag pile
B65H 45/103	5-Punkt Untergruppe	. . . . . by a carriage which reciprocates above the laying station
B65H 45/105	6-Punkt Untergruppe	. . . . . coacting with fold holders
B65H 45/107	5-Punkt Untergruppe	. . . . . by means of swinging or reciprocating guide bars
B65H 45/109	4-Punkt Untergruppe	. . . . Registering or counting the folds; Detecting irregularities in the zig-zag pile
B65H 45/12	1-Punkt Untergruppe	. Folding articles or webs with application of pressure to define or form crease lines (B65H 20/28 takes precedence; pleating, kilting, or goffering textile fabrics D06J)
B65H 45/14	2-Punkt Untergruppe	. . Buckling folders
B65H 45/16	2-Punkt Untergruppe	. . Rotary folders
B65H 45/18	2-Punkt Untergruppe	. . Oscillating or reciprocating blade folders (carried on rotary members B65H 45/16)
B65H 45/20	2-Punkt Untergruppe	. . Zig-zag folders
B65H 45/22	2-Punkt Untergruppe	. . Longitudinal folders, i.e. for folding moving sheet material parallel to the direction of movement
B65H 45/24	2-Punkt Untergruppe	. . Interfolding sheets, e.g. cigarette or toilet papers
B65H 45/26	2-Punkt Untergruppe	. . Folding in combination with unpiling (unpiling B65H 3/00)
B65H 45/28	2-Punkt Untergruppe	. . Folding in combination with cutting (cutting machines B26D)
B65H 45/30	2-Punkt Untergruppe	. . Folding in combination with creasing, smoothing, or application of adhesive (folding or adhesive-application in article or web delivering B65H 37/00)
B65H 47/00	**Hauptgruppe**	**Unfolding thin limp material (B65H 20/28 takes precedence; opening devices for sheets or signatures B65H 5/30)**
		Unwinding, paying-out, forwarding, winding, coiling, or depositing filamentary material (devices specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material B65H 75/34; working or processing wire B21F, B21G; unwinding, paying-out, forwarding, or winding ropes or cables in load-moving apparatus B61B, B65G, B66; creels, warping, beaming, or leasing machines or methods for textile manufacturing purposes D02H)
B65H 49/00	**Hauptgruppe**	**Unwinding or paying-out filamentary material; Supporting, storing, or transporting packages from which filamentary material is to be withdrawn or paid-out (winding B65H 54/00; flyers or other guides assisting paying-out B65H 57/00; bobbins, tubes, or other cores for packages B65H 75/00)**
B65H 49/02	1-Punkt Untergruppe	. Methods or apparatus in which packages do not rotate
B65H 49/04	2-Punkt Untergruppe	. . Package-supporting devices
B65H 49/06	3-Punkt Untergruppe	. . . for a single operative package
B65H 49/08	4-Punkt Untergruppe	. . . . enclosing the package
B65H 49/10	3-Punkt Untergruppe	. . . for one operative package and one or more reserve packages
B65H 49/12	4-Punkt Untergruppe	. . . . the reserve packages being mounted to permit manual or automatic transfer to operating position
B65H 49/14	3-Punkt Untergruppe	. . . for several operative packages
B65H 49/16	4-Punkt Untergruppe	. . . . Stands for frameworks

Symbol	Typ	Titel
B65H 49/18	1-Punkt Untergruppe	. Methods or apparatus in which packages rotate (supports or holders, for storing and repeatedly paying-out and rewinding lengths of material provided for particular purposes B65H 75/34)
B65H 49/20	2-Punkt Untergruppe	. . Package-supporting devices
B65H 49/22	3-Punkt Untergruppe	. . . Overhead suspension devices
B65H 49/24	3-Punkt Untergruppe	. . . Rollers
B65H 49/26	3-Punkt Untergruppe	. . . Axial shafts or spigots
B65H 49/28	3-Punkt Untergruppe	. . . Turntables
B65H 49/30	3-Punkt Untergruppe	. . . Swifts or skein holders
B65H 49/32	3-Punkt Untergruppe	. . . Stands or frameworks
B65H 49/34	2-Punkt Untergruppe	. . Arrangements for effecting positive rotation of packages
B65H 49/36	1-Punkt Untergruppe	. Securing packages to supporting devices (replacing or removing cores, receptacles, or completed packages at paying-out, winding, or depositing stations B65H 67/00)
B65H 49/38	1-Punkt Untergruppe	. Skips, cages, racks, or containers, adapted solely for the transport or storage of bobbins, cops, or the like
B65H 51/00	**Hauptgruppe**	**Forwarding filamentary material (stretch-spinning methods D01D 5/12; drawing or drafting rovings or the like D01H 5/00)**
B65H 51/005	1-Punkt Untergruppe	. Separating a bundle of forwarding filamentary materials into a plurality of groups [4]
B65H 51/01	2-Punkt Untergruppe	. . by means of static electricity [4]
B65H 51/015	1-Punkt Untergruppe	. Gathering a plurality of forwarding filamentary materials into a bundle [4]
B65H 51/02	1-Punkt Untergruppe	. Rotary devices, e.g. with helical forwarding surfaces (devices for temporarily storing filamentary material during forwarding B65H 51/20; driven rotary devices for controlling tension B65H 59/18)
B65H 51/04	2-Punkt Untergruppe	. . Rollers, pulleys, capstans, or intermeshing rotary elements
B65H 51/06	3-Punkt Untergruppe	. . . arranged to operate singly
B65H 51/08	3-Punkt Untergruppe	. . . arranged to operate in groups or in co-operation with other elements
B65H 51/10	4-Punkt Untergruppe	. . . . with opposed coacting surfaces, e.g. providing nips
B65H 51/12	4-Punkt Untergruppe	. . . . in spaced relation to provide a series of independent forwarding surfaces around which material is passed or wound
B65H 51/14	1-Punkt Untergruppe	. Aprons, endless belts, lattices, or like driven elements
B65H 51/16	1-Punkt Untergruppe	. Devices for entraining material by flow of liquids or gases, e.g. air-blast devices (blowing slag wool in molten state C03B 37/06)
B65H 51/18	1-Punkt Untergruppe	. Gripping devices with linear motion
B65H 51/20	1-Punkt Untergruppe	. Devices for temporarily storing filamentary material during forwarding, e.g. for buffer storage
B65H 51/22	2-Punkt Untergruppe	. . Reels or cages, e.g. cylindrical, with storing and forwarding surfaces provided by rollers or bars
B65H 51/24	3-Punkt Untergruppe	. . . with interdigitating bars
B65H 51/26	2-Punkt Untergruppe	. . Rollers or bars mounted askew to facilitate movement of filamentary material along them, e.g. pairs of canted rollers
B65H 51/28	1-Punkt Untergruppe	. Arrangements for initating a forwarding operation

Symbol	Typ	Titel
B65H 51/30	1-Punkt Untergruppe	. Devices controlling the forwarding speed to synchronise with supply, treatment, or take-up apparatus (B65H 59/10, B65H 59/38 take precedence)
B65H 51/32	1-Punkt Untergruppe	. Supporting or driving arrangements for forwarding devices
B65H 54/00	**Hauptgruppe**	**Winding, coiling, or depositing filamentary material (cores, formers, holders, cans, or receptacles B65H 75/02)**
B65H 54/02	1-Punkt Untergruppe	. Winding and traversing material on to reels, bobbins, tubes, or like package cores or formers
B65H 54/04	2-Punkt Untergruppe	. . for making packages with closely-wound convolutions
B65H 54/06	2-Punkt Untergruppe	. . for making cross-wound packages
B65H 54/08	3-Punkt Untergruppe	. . . Precision winding arrangements
B65H 54/10	2-Punkt Untergruppe	. . for making packages of specified shapes or on specified types of bobbins, tubes, cores, or formers
B65H 54/12	3-Punkt Untergruppe	. . . on flanged bobbins or spools (B65H 54/20 takes precedence)
B65H 54/14	3-Punkt Untergruppe	. . . on tubes, cores, or formers having generally- parallel sides, e.g. cops or packages to be loaded into loom shuttles
B65H 54/16	3-Punkt Untergruppe	. . . forming bottle bobbin packages
B65H 54/18	3-Punkt Untergruppe	. . . forming spools to be loaded into sewing, lace, embroidery, or like machines
B65H 54/20	3-Punkt Untergruppe	. . . forming multiple packages
B65H 54/22	2-Punkt Untergruppe	. . Automatic winding machines, i.e. machines with servicing units for automatically performing end-finding, interconnecting of successive lengths of material, controlling or fault-detecting of the running material, and replacing or removing of full or empty cores
B65H 54/24	3-Punkt Untergruppe	. . . having a plurality of winding units moving along an endless path past one or more fixed servicing units
B65H 54/26	3-Punkt Untergruppe	. . . having one or more servicing units moving along a plurality of fixed winding units
B65H 54/28	2-Punkt Untergruppe	. . Traversing devices; Package-shaping arrangements (arrangements for preventing ribbon winding B65H 54/38; grooved, slotted, or split drums for driving of packages B65H 54/46)
B65H 54/30	3-Punkt Untergruppe	. . . with thread guides reciprocating or oscillating with fixed stroke
B65H 54/32	3-Punkt Untergruppe	. . . with thread guides reciprocating or oscillating with variable stroke
B65H 54/34	3-Punkt Untergruppe	. . . for laying subsidiary winding, e.g. transfer tails
B65H 54/36	3-Punkt Untergruppe	. . . Yarn-guide advancing or raising mechanisms, e.g. cop-building arrangements
B65H 54/38	2-Punkt Untergruppe	. . Arrangements for preventing ribbon winding
B65H 54/40	2-Punkt Untergruppe	. . Arrangements for rotating packages
B65H 54/42	3-Punkt Untergruppe	. . . in which the package, core, or former is rotated by frictional contact of its periphery with a driving surface
B65H 54/44	3-Punkt Untergruppe	. . . in which the package, core, or former is engaged with, or secured to, a driven member rotatable about the axis of the package
B65H 54/46	3-Punkt Untergruppe	. . . Package drive drums
B65H 54/48	4-Punkt Untergruppe	. . . . Grooved drums
B65H 54/50	4-Punkt Untergruppe	. . . . Slotted or split drums
B65H 54/52	3-Punkt Untergruppe	. . . Drive contact pressure control, e.g. pressing arrangements

Symbol	Typ	Titel
B65H 54/54	3-Punkt Untergruppe	. . . Arrangements for supporting cores or formers at winding stations; Securing cores or formers to driving members
B65H 54/547	4-Punkt Untergruppe	. . . . Cantilever supporting arrangements [4]
B65H 54/553	4-Punkt Untergruppe	. . . . Both-ends supporting arrangements [4]
B65H 54/56	1-Punkt Untergruppe	. Winding of hanks or skeins
B65H 54/58	2-Punkt Untergruppe	. . Swifts or reels adapted solely for the formation of hanks or skeins (B65H 49/30 takes precedence)
B65H 54/60	2-Punkt Untergruppe	. . Devices for domestic use
B65H 54/62	2-Punkt Untergruppe	. . Binding of skeins
B65H 54/64	1-Punkt Untergruppe	. Winding of balls; Forming hollow objects by winding on to fusible or soluble cores, e.g. forming pressure vessels
B65H 54/66	2-Punkt Untergruppe	. . Winding yarns into balls
B65H 54/68	1-Punkt Untergruppe	. Winding on to cards or other flat cores, e.g. of star form
B65H 54/70	1-Punkt Untergruppe	. Other constructional features of yarn-winding machines
B65H 54/71	2-Punkt Untergruppe	. . Arrangements for severing filamentary materials [4]
B65H 54/72	2-Punkt Untergruppe	. . Framework; Casings; Coverings
B65H 54/74	2-Punkt Untergruppe	. . Driving arrangements (arrangements for preventing ribbon winding B65H 54/38; arrangements for rotating packages B65H 54/40)
B65H 54/76	1-Punkt Untergruppe	. Depositing materials in cans or receptacles
B65H 54/78	2-Punkt Untergruppe	. . Apparatus in which the depositing device or the receptacle is reciprocated
B65H 54/80	2-Punkt Untergruppe	. . Apparatus in which the depositing device or the receptacle is rotated
B65H 54/82	3-Punkt Untergruppe	. . . and in which coils are formed before deposition
B65H 54/84	2-Punkt Untergruppe	. . Arrangements for compacting materials in receptacles
B65H 54/86	1-Punkt Untergruppe	. Arrangements for taking-up waste material before or after winding or depositing
B65H 54/88	2-Punkt Untergruppe	. . by means of pneumatic arrangements, e.g. suction guns [4]
B65H 55/00	**Hauptgruppe**	**Wound packages of filamentary material**
B65H 55/02	1-Punkt Untergruppe	. Self-supporting packages
B65H 55/04	1-Punkt Untergruppe	. characterised by method of winding
B65H 57/00	**Hauptgruppe**	**Guides for filamentary materials; Supports therefor**
B65H 57/02	1-Punkt Untergruppe	. Stationary rods or plates
B65H 57/04	1-Punkt Untergruppe	. Guiding surfaces within slots or grooves
B65H 57/06	1-Punkt Untergruppe	. Annular guiding surfaces; Eyes, e.g. pigtails
B65H 57/08	2-Punkt Untergruppe	. . formed of wire or the like
B65H 57/10	2-Punkt Untergruppe	. . with flared apertures
B65H 57/12	1-Punkt Untergruppe	. Tubes

Symbol	Typ	Titel
B65H 57/14	1-Punkt Untergruppe	. Pulleys, rollers, or rotary bars
B65H 57/16	1-Punkt Untergruppe	. formed to maintain a plurality of filaments in spaced relation
B65H 57/18	1-Punkt Untergruppe	. mounted to facilitate unwinding of material from packages
B65H 57/20	2-Punkt Untergruppe	. . Flyers (for inserting twist D01H)
B65H 57/22	1-Punkt Untergruppe	. adapted to prevent excessive ballooning of material
B65H 57/24	1-Punkt Untergruppe	. with wear-resistant surfaces
B65H 57/26	1-Punkt Untergruppe	. Supports for guides
B65H 57/28	1-Punkt Untergruppe	. Reciprocating or oscillating guides (traversing devices for winding, coiling, or depositing filamentary material B65H 54/28)
B65H 59/00	**Hauptgruppe**	**Adjusting or controlling tension in filamentary material, e.g. for preventing snarling; Applications of tension indicators (tensioning devices of general interest in connection with the handling of webs, tapes, or filamentary material B65H 77/00)**
B65H 59/02	1-Punkt Untergruppe	. by regulating delivery of material from supply package (by contact of package with support B65H 49/02; by controlling speed of driving mechanism of unwinding or paying-out devices B65H 59/38)
B65H 59/04	2-Punkt Untergruppe	. . by devices acting on package or support
B65H 59/06	2-Punkt Untergruppe	. . by devices acting on material leaving the package
B65H 59/08	1-Punkt Untergruppe	. by contact of running length of material with supply package
B65H 59/10	1-Punkt Untergruppe	. by devices acting on running material and not associated with supply or take-up devices (by controlling speed of driving mechanism of material-forwarding devices B65H 59/38)
B65H 59/12	2-Punkt Untergruppe	. . Stationary elements arranged to deflect material from straight path
B65H 59/14	3-Punkt Untergruppe	. . . and provided with surfaces imposing additional retarding forces on material
B65H 59/16	2-Punkt Untergruppe	. . Braked elements rotated by material
B65H 59/18	2-Punkt Untergruppe	. . Driven rotary elements (material-forwarding devices B65H 51/00)
B65H 59/20	2-Punkt Untergruppe	. . Co-operating surfaces mounted for relative movement
B65H 59/22	3-Punkt Untergruppe	. . . and arranged to apply pressure to material
B65H 59/24	4-Punkt Untergruppe	. . . . Surfaces movable automatically to compensate for variation in tension
B65H 59/26	3-Punkt Untergruppe	. . . and arranged to deflect material from straight path
B65H 59/28	4-Punkt Untergruppe	. . . . the surfaces being urged towards each other
B65H 59/30	5-Punkt Untergruppe	. . . . . Surfaces movable automatically to compensate for variation in tension
B65H 59/32	4-Punkt Untergruppe	. . . . the surfaces being urged away from each other
B65H 59/34	5-Punkt Untergruppe	. . . . . Surfaces movable automatically to compensate for variation in tension
B65H 59/36	2-Punkt Untergruppe	. . Floating elements compensating for irregularities in supply or take-up of material (buffer storage devices B65H 51/20)
B65H 59/38	1-Punkt Untergruppe	. by regulating speed of driving mechanism of unwinding, paying-out, forwarding, winding, or depositing devices, e.g. automatically in response to variations in tension
B65H 59/40	1-Punkt Untergruppe	. Applications of tension indicators

Symbol	Typ	Titel
B65H 61/00	**Hauptgruppe**	**Applications of devices for metering predetermined lengths of running material (of general application G01B)**
B65H 63/00	**Hauptgruppe**	**Warning or safety devices, e.g. automatic fault detectors, stop-motions (safety devices in general F16P; indicating devices in general G08B)**
B65H 63/02	1-Punkt Untergruppe	. responsive to reduction in tension, failure of supply, or breakage, of material
B65H 63/024	2-Punkt Untergruppe	. . responsive to breakage of materials [4]
B65H 63/028	3-Punkt Untergruppe	. . . characterised by the detecting or sensing element [4]
B65H 63/032	4-Punkt Untergruppe	. . . . electrical or pneumatic [4]
B65H 63/036	3-Punkt Untergruppe	. . . characterised by the combination of the detecting or sensing elements with other devices, e.g. stopping devices for material advancing or winding mechanism [4]
B65H 63/04	1-Punkt Untergruppe	. responsive to excessive tension or irregular operation of apparatus
B65H 63/06	1-Punkt Untergruppe	. responsive to presence of irregularities in running material, e.g. for severing the material at irregularities
B65H 63/08	1-Punkt Untergruppe	. responsive to delivery of a measured length of material, completion of winding of a package, or filling of a receptacle
B65H 65/00	**Hauptgruppe**	**Securing material to cores or formers (arrangements for securing ends of material to cores, formers, supports or holders, e.g. reels, B65H 75/28) [3]**
B65H 67/00	**Hauptgruppe**	**Replacing or removing cores, receptacles, or completed packages at paying-out, winding, or depositing stations**
B65H 67/02	1-Punkt Untergruppe	. Arrangements for removing spent cores or receptacles and replacing by supply packages at paying-out stations (supports for packages B65H 49/04, B65H 49/20)
B65H 67/04	1-Punkt Untergruppe	. Arrangements for removing completed take-up packages and replacing by cores, formers, or empty receptacles at winding or depositing stations; Transferring material between adjacent full and empty take-up elements
B65H 67/044	2-Punkt Untergruppe	. . Continuous winding apparatus for winding on two or more winding heads in succession [4]
B65H 67/048	3-Punkt Untergruppe	. . . having winding heads arranged on rotary capstan head [4]
B65H 67/052	3-Punkt Untergruppe	. . . having two or more winding heads arranged in parallel to each other [4]
B65H 67/056	3-Punkt Untergruppe	. . . having two or more winding heads arranged in series with each other [4]
B65H 67/06	1-Punkt Untergruppe	. Supplying cores, receptacles, or packages to, or transporting from, winding or depositing stations
B65H 67/08	1-Punkt Untergruppe	. Automatic end-finding and material-interconnecting arrangements (knot-tying devices B65H 69/00)
B65H 69/00	**Hauptgruppe**	**Methods of, or devices for, interconnecting successive lengths of material; Knot-tying devices**
B65H 69/02	1-Punkt Untergruppe	. by means of adhesives
B65H 69/04	1-Punkt Untergruppe	. by knotting
B65H 69/06	1-Punkt Untergruppe	. by splicing
B65H 69/08	1-Punkt Untergruppe	. by welding
B65H 71/00	**Hauptgruppe**	**Moistening, sizing, oiling, waxing, colouring, or drying filamentary material as additional measures during package formation (applying liquids or other fluent materials to surfaces in general B05)**
B65H 73/00	**Hauptgruppe**	**Stripping waste material from cores or formers, e.g. to permit their re-use**
		Methods, apparatus, or devices of general interest or not otherwise provided for in connection with the handling of webs, tapes, or filamentary materials (unwinding, paying-out, forwarding, or winding ropes or cables in load-moving apparatus B61B, B65G, B66)
B65H 75/00	**Hauptgruppe**	**Storing webs, tapes, or filamentary material, e.g. on reels (fishing reels A01K 89/00; storing**

Symbol	Typ	Titel
		means for record carriers, specially adapted for co-operation with the recording or reproducing apparatus G11B 23/02)
B65H 75/02	1-Punkt Untergruppe	. Cores, formers, supports, or holders for coiled, wound, or folded material, e.g. reels, spindles, bobbins, cop tubes, cans (packaging aspects B65D 85/67)
B65H 75/04	2-Punkt Untergruppe	. . Kinds or types (B65H 75/18 takes precedence)
B65H 75/06	3-Punkt Untergruppe	. . . Flat cores, e.g. cards
B65H 75/08	3-Punkt Untergruppe	. . . of circular or polygonal cross-section (cans or receptacles B65H 75/16)
B65H 75/10	4-Punkt Untergruppe	. . . . without flanges, e.g. cop tubes
B65H 75/12	4-Punkt Untergruppe	. . . . with a single end flange; formed with one end of greater diameter than the barrel
B65H 75/14	4-Punkt Untergruppe	. . . . with two end flanges
B65H 75/16	3-Punkt Untergruppe	. . . Cans or receptacles, e.g. sliver cans
B65H 75/18	2-Punkt Untergruppe	. . Constructional details
B65H 75/20	3-Punkt Untergruppe	. . . Skeleton construction, e.g. formed of wire
B65H 75/22	3-Punkt Untergruppe	. . . collapsible; with removable parts
B65H 75/24	3-Punkt Untergruppe	. . . adjustable in configuration, e.g. expansible
B65H 75/26	3-Punkt Untergruppe	. . . Arrangements for preventing slipping of winding
B65H 75/28	3-Punkt Untergruppe	. . . Arrangements for securing ends of material [3]
B65H 75/30	3-Punkt Untergruppe	. . . Arrangements to facilitate driving or braking
B65H 75/32	3-Punkt Untergruppe	. . . Arrangements to facilitate severing of material
B65H 75/34	2-Punkt Untergruppe	. . specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material provided for particular purposes, e.g. anchored hoses, power cables (retractors for storing flexible hoses as accessories of dental work stands A61G 15/18; vehicle safety belt retractors B60R 22/34; hose-storing devices in apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or portable containers B67D 5/365; clothes-line supports D06F 53/00; spring drums for liftable blinds with horizontal lamellae E06B 9/322; spring drums or tape drums for roll-type closures or roller blinds E06B 9/56; hauling- or hoisting-chains with arrangements for holding electric cables, hoses or the like F16G 13/16; devices for guiding pipes, cables or protective tubing, between relatively movable points, e.g. movable channels, F16L 3/01; flexible rulers or tapes with scales G01B 3/10; electrical features of stored material, see the relevant subclasses, e.g. H02G) [2, 5]
B65H 75/36	3-Punkt Untergruppe	. . . without essentially involving the use of a core or former internal to a stored package of material, e.g. with stored material housed within casing or container, or intermittently engaging a plurality of supports as in sinuous or serpentine fashion [2]
B65H 75/38	3-Punkt Untergruppe	. . . involving the use of a core or former internal to, and supporting, a stored package of material [2]
B65H 75/40	4-Punkt Untergruppe	. . . . mobile or transportable
B65H 75/42	5-Punkt Untergruppe	. . . . . attached to, or forming part of, mobile tools or machines
B65H 75/44	4-Punkt Untergruppe	. . . . Constructional details
B65H 75/48	5-Punkt Untergruppe	. . . . . Automatic re-storing devices [2]
B65H 75/50	1-Punkt Untergruppe	. Methods of making reels, bobbins, cop tubes, or the like by working an unspecified material, or several materials

Symbol	Typ	Titel
B65H 77/00	**Hauptgruppe**	**Adjusting or controlling tension in material**
B65H 79/00	**Hauptgruppe**	**Driving gear for devices for forwarding, winding, unwinding, or depositing material, not otherwise provided for**
B65H 81/00	**Hauptgruppe**	**Methods, apparatus, or devices for covering or wrapping cores by winding webs, tapes, or filamentary material, not otherwise provided for (forming hollow objects by winding filamentary material on to fusible or soluble cores B65H 54/64; wrapping for the purpose of packaging B65B 11/00; making wound articles of paper B31C)**
B65H 81/02	1-Punkt Untergruppe	. Covering or wrapping annular or like cores forming a closed or substantially-closed figure
B65H 81/04	2-Punkt Untergruppe	. . by feeding material obliquely to the axis of the core
B65H 81/06	1-Punkt Untergruppe	. Covering or wrapping elongated cores
B65H 81/08	2-Punkt Untergruppe	. . by feeding material obliquely to the axis of the core
B65H 83/00	**Hauptgruppe**	**Combinations of piling and depiling operations, e.g. performed simultaneously, of interest apart from the single operation of piling or depiling (B65H 85/00 takes precedence) [5]**
B65H 83/02	1-Punkt Untergruppe	. performed on the same pile [5]
B65H 85/00	**Hauptgruppe**	**Recirculating articles, i.e. feeding each article to, and delivering it from, the same machine work-station more than once [5]**
B65H 99/00	***Hauptgruppe***	***Subject matter not provided for in other groups of this subclass [2006.01]***