Title (en)
Yarn feeder

Title (de)
Fadenliefergerät

Title (fr)
Fournisseur de fil

Publication
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Application
EP 98124613 A 19981223

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Abstract (en)
[origin: EP0926089A1] The yarn feed apparatus has a display assembly (A) where the incremental rotations of the screw spindle (8) are shown in successive symbol displays (16,23), in at least a logic symbol sequence. The symbols (16,23) within each symbol sequence show the increments of each rotation and the full rotations. The symbols (16,23) are moved in relation to a static display (E) or display window (25) round the axis of the screw spindle (8). Their movement through the display is at a reduced speed in relation to the spindle (8) rotary speed, with a mechanical or electrical speed reduction mechanism (M), and pref. a step-by-step switch gear, between the display (E) and spindle (8). The symbol sequence represents increments of equal value, or equal or proportional increasing or decreasing increments. The symbols show letters and/or numbers. The symbols (16) showing increments follow a circular path at a knob (D) keyed to the spindle (8). The optical viewing path at the display (E) gives a view of the symbols (23) showing full rotations together with the symbols (16) giving the increments. A counter is at the display system, where the symbol sequence is stored or arranged. The switch gear (M) is between the screw spindle (8) and the counter. Increments are shown at the knob (D), keyed to the spindle (8), with a static scanner which registers their movement mechanically, electrically, electromagnetically, optically, or by induction to be transferred to the counter where the symbol sequence is held mechanically or electronically. The display (E) is at the knob (D), or at a housing strut of the yarn feed housing, pref. close to the adjustable unit. For a linear setting movement of the adjustable component of about 12 mm, there are 40-120 symbols or symbol combinations, and pref. about 50. The knob (D) has at least one tooth segment (Z) at the peripheral side, over a fraction of the circumference. A stationary switch pinion (R) is operated by a meshing outer display ring (S), which has a relative rotation to the knob, and along the circular path of the symbols (23). A static indicator or display window (25) is at the circular path. The incremental symbols (16) at the knob (D) can be seen together at the window (25) with the dominant rotation symbol (23). The knob (D) has a peripheral wall (17) towards the switch pinion (R), flush with the meshing teeth of the tooth segment (Z), to define a space (18) under the segment (Z). The switch pinion (R) has alternating long teeth, and at least one short tooth, brought into contact in succession with the inner toothed rim (21) of the display ring. The longer teeth extend downwards over the radial height of the free space (18), while the short teeth end at the segment (Z). The tooth count of the switch pinion (R) is pref. a whole number multiple of the teeth at the segment (Z), and the tooth count of the toothed rim (21) is a multiple of the tooth count of the switch pinion (R). The switch pinion (R) has six teeth, the segment (Z) has three teeth and the rim (21) has 48 teeth. A rotating ratchet (11) is between the knob (D) and a static mounting section (12,13) of the screw spindle (8), with a number of ratchet positions matching the rotary settings of the knob (D) where a symbol (16) is shown in the window (25). The symbols (23) at the display ring (S), and the symbols (16) at the knob (D), are on generally parallel and axially spaced coaxial conical ring surfaces (15,22).

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