CLASS 227 ELONGATED-MEMBER-DRIVING APPARATUS

1. \textit{WITH RANDOMLY ACTUATED STOPPING OR DISABLING MEANS}
2. \textit{WITH CONTROL MEANS RESPONSIVE TO SENSED CONDITION}
3. \textit{Responsive to work feed means}
4. \textit{Responsive to position of work support or anvil}
5. \textit{Work-responsive}
6. \textit{Position of work}
7. \textit{Control initiates driver-actuation}

175.1 \textbf{SURGICAL STAPLER}
175.2 \textit{With lockout}
175.3 \textit{Responsive to a condition or position of a staple magazine}
175.4 \textit{Lockout prevents firing of a spent staple magazine}
176.1 \textit{With magazine}
177.1 \textit{Including biasing means}
178.1 \textit{Multiple driving means}
179.1 \textit{Tubular driving path}
180.1 \textit{With cutting means}
181.1 \textit{With means to position a mating-member in alignment with driver}
182.1 \textit{With means to prevent partial drive cycle}

8. \textbf{WITH INTERLOCK MEANS}
9. \textbf{EXPLOSIVE-TYPE DRIVING MEANS}
10. \textit{With plunger}
11. \textit{With protective shield}
12. \textbf{STRETCHING TOOL WITH MEANS TO FASTEN FLACCID WORK TO RIGID BASE}
13. \textit{Including mechanical means to apply force to stretching tool}
14. \textbf{WITH MEANS TO CEMENT WORK OR MEMBER}
15. \textbf{WITH MEANS TO POSITION "MATING-MEMBER" IN ALIGNMENT WITH DRIVER}
16. \textit{Strip-type "mating-member"}
17. \textit{With means to form "mating-member"}
18. \textit{Comprising feed means for "mating-member"}
19. \textbf{WITH MEANS TO ASSEMBLE PLURAL PIECES OF WORK}
20. \textit{With means to deform work}
21. \textit{Including cutting means}
22. \textit{Including means to rotate work}
23. \textit{With die-shaping means}

24. \textit{With end-inserting or clamping means}
25. \textit{Means to buckle flaccid work}
26. \textit{With means to place member between workpieces (e.g., dowels, etc.)}
27. \textit{With drilling or punching means}
28. \textit{With means to sequentially secure layers (e.g., heels, etc.)}
29. \textit{With work clamp}
30. \textit{With driver acting through clamp jaw}
31. \textit{Bight attaching means (e.g., buttons, etc.)}
32. \textit{Including means to insert member in bight}
33. \textit{With member-forming means}
34. \textit{After member is applied to a workpiece}
35. \textit{Single pointed member}
36. \textit{With work feed means}
37. \textit{With work feed means}
38. \textit{With means to actuate driver}
39. \textit{Work conveyor means}
40. \textit{Including common means to shift and clamp work}
41. \textit{Pivoted work carrier}
42. \textit{Plural pivotal axes}
43. \textit{Including means to align member-aperture with member}
44. \textit{Endless conveyor}
45. \textit{Including magazine-type work supply means}
46. \textit{With reel-type work supply means}
47. \textit{Including work cutting means}
48. \textit{Including magazine-type work supply means}
49. \textit{With means to rotate work}
50. \textit{With means to move assemblage to fastener station}
51. \textbf{WITH MEANS TO HEAD MEMBER}
52. \textit{Driver or heading means located within tubular work}
53. \textit{Common tool to drive and head member}
54. \textit{Pointed or edged tool}
55. \textit{Heading tool extends within hollow portion of member}
56. \textit{Simultaneously used heading tools}
57. \textit{With work feed means}
...With means to form opening in work for member
...Heading means also acting as opening former
...With pilot pin
...Die

WITH MEANS TO WITHDRAW MEMBER
WITH MEANS TO SHAPE WORK OR CUT PRODUCT
...With means to form opening in work for member
...Driver also acting as punch
...Rotatable cutting tool
...Plural cutting tools (e.g., awls, etc.)
...For dual openings
...With pivoted tool carrier
...Including work-feeding means
...Cutting tool having work-feeding motion
...With pivoted tool carrier
...Cutting means

WITH MEANS TO DEFORM MEMBER REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION

SELECTIVE ALTERNATIVE APPLYING MEANS
WITH MEANS TO CUT MEMBER AFTER PENETRATION
...From material of indefinite length

DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER)
WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK
...Deflector
...With means to vary length of members
...With offset tools to deform members (e.g., bending, drawing, etc.)
...With cutting edge on driver
...With driver acting through offset tools
...Including retractable forming bar
...With movable member-holder

....Pivoted
...Including diverse means to sever and apply member
...With opposed tools to form member (e.g., forging, swaging, etc.)
...Severing means sole member former
...Including plural diverse severing operations
...With feed means for concatenated members
...Pivoted feed means
...Severing means moves member to driver
...With reciprocating member carrier to driver

WITH MEANS TO CONVEY WORK OR PRODUCT RELATIVE TO DRIVING STATION
...Interrelated conveying and driver-actuating means
...With means to move both the conveyor and a driver carriage
...With means to vary timed relationship between conveyor movement and driver actuating means
...Plural conveying means
...With compound movement of work holder
...With rotary movement of work holder
...Work holder moves in curved path

WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION
WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION
...With work-penetrating clenching tools
...Adaptable to dispense different sizes or quantities of members
...With positionable driver
...Including means to move driver carriage
...Fluid-contact member-feed means
...Magnetic member-feed and/or holding means
...Including means other than the driver to separate leading member from a supply
...Interrelated separator elements
...Rectilinear motion
...Rotary
...Oscillating separator
With means to assure correct orientation of member(s)
Including supply magazine for constantly urged members
With means to prevent partial drive cycle
With means to cut jammed member
With removable or resiliently urged (antijam) noseplate
With interrelated driver and work clamp
With means to disable urging means
...By lock means
...With magazine closure
...Pivoted magazine cover
...With means to actuate driver
...Fluid pressure means
...Magnet or solenoid
...Spring
...Inertia means
...Spring-retracting means
Including carrier feed means for a plurality of members
With means to feed strip-type carrier
...Rotary
...Driver actuates member-feed means
...With means to guide member
With means to support member and/or work relative to driver
...Driver moves work, member held stationary
...With means to vary the length of the tool stroke
...With means to move elements of tool-pair during driving
...Pivoted tool element
...Curved driver path
...Spring-actuated driver
...Impact-type driver
...Comprising means to angularly orient member
...Bias-type member holder
...Means to guide moving work
...Work immobilizer
...Means to clamp work
...Interrelated with driver-actuation
...Work support
...Including clenching means

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