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(11) **EP 1 061 231 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
20.12.2000 Bulletin 2000/51

(51) Int. Cl.⁷: **E21B 33/068**

(21) Application number: **00305002.8**

(22) Date of filing: **13.06.2000**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **14.06.1999 US 332241**

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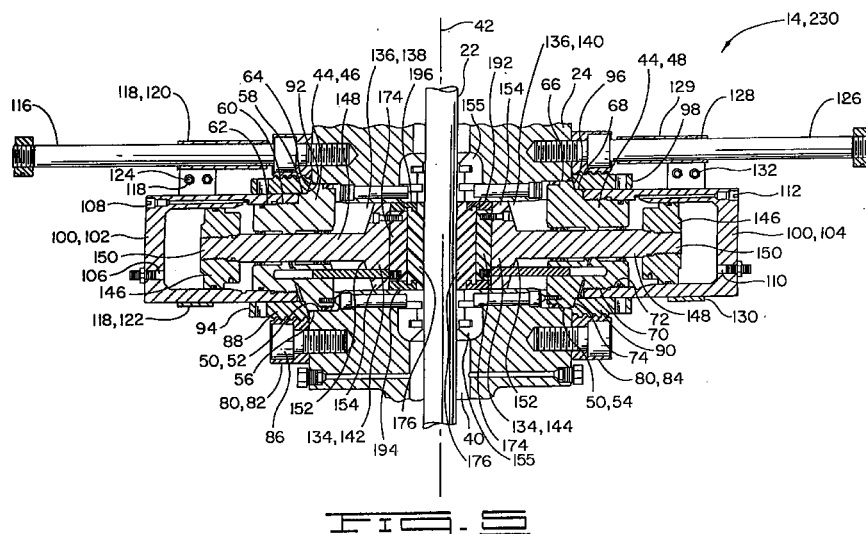
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(54) **Stripper/packer**

(57) A stripper/packer (14) for sealing against tubing being moved therethrough includes sealing elements (176) which are urged against a tubing (22) being moved into or removed from a wellbore to isolate the pressure in the wellbore. The sealing elements (176) are comprised of a non-pliable material, preferably an ultra-high molecular weight (UHMW) plastic. The sealing elements (176) are urged into sealing engagement with the tubing (22) so that as the tubing passes there-

through, the wellbore pressure is isolated. The sealing elements (176) may be used in stripper/packers which apply pressure laterally to cause the sealing elements to engage the sides of the tubing, or in stripper/packers that apply pressure to the top and bottom of the sealing element to cause the element to compress and seal around the tubing.



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Description

[0001] The present invention relates generally to a stripper/packer, also referred to as a stuffing box.

[0002] Packers are used in oil and gas wells for a number of purposes. One type of packer used in a stack at the wellhead to provide a seal for high downhole pressures is commonly referred to as a stuffing box and maybe referred to herein as a stuffing box and/or a stripper/packer. The stuffing box provides a seal so that various operations may be performed below the wellhead while safety is maintained above the wellhead. Typically, the packer or sealing element utilized in a stuffing box is made of a polymeric material that is deformed to seal against the tubing being injected and/or withdrawn from the wellbore through the stuffing box.

[0003] One type of stuffing box utilizes a generally cylindrical sealing element having bushings thereabove and therebelow. An energizer will often be disposed about the sealing element. A piston will cause the bushings to move together, which will cause the energizer and the sealing element to compress so that the sealing element will seal against the tubing being injected and/or retracted from the wellbore. The bushings also prevent extrusion of the sealing element. If an energizer is not used, the bushings push directly on the sealing element to cause it to seal against the tubing. Although the sealing element is typically made of a pliable polymeric material, movement of the tubing through the stripper/packer causes abrasion of the surface of the sealing element requiring regular replacement of the element. Replacement of such elements can be expensive and dangerous since the sealing elements must be changed on the well without being uncoupled from the stack at the wellhead.

[0004] One stuffing box which reduces the time and cost associated with seal replacement is the stripper/packer shown in US patent 5,566,753 to D. Wayne Van Winkle and Bobby G. Hurst, issued October 22, 1996 (the '753 patent), to which reference should be made for further details. The stuffing box shown therein is a side-access stuffing box which is particularly adapted for use with coiled tubing and which provides for easier replacement of worn packer elements. Although replacement of the packer elements in the side-access stripper/packer is easier than with other types of stuffing boxes, there are still some difficulties associated with the use of such a stripper/packer, especially at locations where the wellbore pressure is at about 5,000 psi or higher.

[0005] The packer or sealing element utilized in the side-access stuffing box is generally a polyurethane which, as is well known in the art, is a pliable plastic. When the stripper/packer described in the '753 patent is utilized in locations where the wellbore pressure is about or exceeds 5,000 psi, the polyurethane packer elements abrade and wear at an unacceptable rate. This causes leakage, and requires that the packer ele-

ment be replaced. Further, the worn elements may blow out releasing large quantities of well fluid and very high pressures which can be dangerous to workers at the site. Constant replacement is time-consuming and can be expensive. To replace the packer elements, the pressure must be isolated below the stripper/packer with other apparatus in the stack, such as blowout preventers. Further, each time a seal fails, the safety of the workers is placed at risk.

[0006] Thus, there is a need for a stripper/packer which utilizes a longer lasting sealing element that will maintain its integrity and provide a pressure seal at applications where the wellbore pressures are high (i.e. those locations where the wellbore pressure is at about or exceeds 5,000 psi), while several thousand feet of tubing is moved through the stripper/packer.

[0007] The present invention comprises a stripper/packer that provides for extended stripping of tubing in and/or out of a wellbore. The stripper/packer of the present invention provides for such extended usage without the need for the repetitive placement of sealing elements, since the sealing elements utilized in the stripper/packer of the present invention are comprised of material that alleviates, and can virtually eliminate, failures and/or blowout of the sealing element.

[0008] In one aspect, the invention provides a stripper/packer for sealing against tubing as it is moved therethrough in and out of a wellbore, the stripper/packer comprising: a body having a longitudinal central opening therethrough, said body defining a pair of opposed lateral chambers intersecting said longitudinal central opening; a pusher plate slidably disposed in each lateral chamber; a sealing element connected to each pusher plate for sealingly engaging a cylindrical tubing disposed in said longitudinal central opening, said sealing elements being comprised of an ultra-high molecular weight plastic; and actuator means for moving said pusher plates and said sealing elements laterally between a disengaged position and an engaged position, wherein in said engaged position said sealing elements engage and seal against said tubing.

[0009] In another aspect, the invention provides a stripper/packer for use in high pressure wellbores, said stripper/packer comprising: a body having a longitudinal opening therethrough, for receiving a cylindrical tubing therethrough; and a non-pliable sealing element disposed in said body; wherein said sealing element is selectively movable between a closed position wherein said sealing element sealingly engages said cylindrical tubing, and an open position wherein said sealing element disengages said cylindrical tubing, wherein said sealing element will maintain a seal with said cylindrical tubing as said tubing is being injected or withdrawn from a wellbore through said stripper/packer.

[0010] The stripper/packer of the present invention includes packer elements comprised of an ultra-high molecular weight (UHMW) plastic. The packer elements are urged against a tubing being moved through the

stripper/packer to isolate wellbore pressure therebelow. The stripper/packer may comprise a body having a longitudinal central opening and a pair of opposed lateral chambers intersecting the longitudinal central opening. The sealing elements are connected to pressure plates slidably disposed in each lateral chamber. The pressure plates are urged laterally from a disengaged position to an engaged position wherein the UHMW sealing elements engage and seal against the tubing being moved through the stripper/packer.

[0011] The UHMW sealing elements are non-pliable and preferably have a hardness of about 60 Durometer ("D") to 80 D. Strippers/packers utilizing UHMW sealing elements may be utilized at any well location, and are especially useful at locations where the wellbore pressure is approximately 5,000 psi or higher. At such locations, the stripper/packer utilizing such sealing elements is preferred since several thousand feet of tubing can be moved through the stuffing box in or out of the wellbore and the sealing elements will not fail, rupture or cause a blowout like prior art sealing elements. Thus, strippers/packers utilizing UHMW sealing elements provide distinct advantages over the prior art. These and other features of the present invention will be apparent to those skilled in the art from a review of the detailed description along with the accompanying drawings, wherein

Fig. 1 schematically shows a tubing injector positioned over a wellbore.

Fig. 2 shows a front elevation view of one embodiment of stuffing box of the present invention.

Fig. 3 shows a right-side elevation view of the embodiment of Fig. 2.

Fig. 4 shows a partial section view taken from line 4-4 of Fig. 2.

Fig. 5 shows a section view taken from line 5-5 of Fig. 3 showing the packer elements engaging a tubing.

Fig. 6 is a partial section view taken from line 5-5 showing the sealing element disengaged.

Fig. 7 shows a top plan view of an embodiment of energizer and seal element of the present invention.

Fig. 8 shows a front elevation view of the energizer and seal element of Fig. 7.

Figs. 9 and 10 show section views of an energizer taken from lines 9-9 and 10-10 of Fig. 8. The seal element is not shown.

Fig. 11 shows an additional embodiment of a stripper/packer with seal elements of the present invention.

[0012] Fig. 1 depicts a typical stack 10 that may be used at a wellhead. The stack may include a stuffing box 14, a standard quad blowout preventer 16 and blowout preventer 18 above wellhead 12. A coiled tubing injector 20 is positioned above the stack and is utilized

to inject and/or withdraw a cylindrical tubing 22 which may be a coiled tubing. In a preferred embodiment of the present invention, stuffing box 14 comprises a side-access stripper/packer similar to that described in U. S. Patent No. 5,566,753 issued October 22, 1996, the details of which are incorporated herein by reference.

[0013] As shown in FIGS. 2-6, stuffing box 14 of the present invention includes a body 24 having an upper end 26, a lower end 28, first or left-hand side 30, second or right-hand side 32 and front and rear sides 34 and 36, respectively. Upper and lower ends 26 and 28 are adapted to be connected in the stack below the tubing injector in a manner known in the art.

[0014] Body 24 defines a longitudinal central opening 40 having a longitudinal central axis 42. As is apparent from FIG. 5, the components on the right-hand side as seen therein are substantially identical to the components on the left-hand side. Some parts are shown rotated out of position so that the assembly can be shown in one view. The invention described herein, namely use of UHMW sealing elements, may be utilized in any side access stripper, or, as set forth herein, in other types of strippers/packers as well.

[0015] Stuffing box 14 includes a pair of bonnets or piston guides 44 comprising a left or first guide 46 and a right or second guide 48, which are received in body 24. Bonnet 46 has first, second, third and fourth outer diameters 56, 58, 60 and 62. A shoulder 64 is defined by and extends between first and second outer diameters 56 and 58. Third diameter 60 preferably has threads defined thereon. Bonnet 48 has first, second, third and fourth outer diameters 66, 68, 70 and 72, respectively. A shoulder 74 is defined by and extends between first and second outer diameters 66 and 68. Third outer diameter 70 has threads defined thereon.

[0016] Load rings 80 which may comprise a left or first load ring 82 and a second or right load ring 84 are disposed about the bonnets 46 and 48, respectively, and are mounted to sides 30 and 32 with a plurality of cap screws 86. Load rings 82 and 84 are internally threaded and have load nuts 88 and 90 threaded thereto. Load nut 88 has first end 92 and second end 94 and load nut 90 has first end 96 and second end 98. Load nut 88 is threaded to load ring 82 and engages shoulder 64 of piston guide 46 to hold piston guide 46 in place. Likewise, load nut 90 is threaded to load ring 84 and engages shoulder 74 on piston guide 48 to hold piston guide 48 in place.

[0017] Cylinders 100, which may comprise cylinders 102 and 104 are threadedly connected to piston guides 46 and 48, respectively. Cylinder 102 is threadedly connected to piston guide 46 at threaded diameter 60 and is sealingly disposed about diameter 62. Cylinder 102 has an energizing port 106 and a pack-off port 108. Cylinder 104 is threadedly connected to piston guide 48 at threaded diameter 70, and is sealingly disposed about diameter 72. Cylinder 104 has an energizing port 110 and a pack-off port 112.

[0018] A piston change rod 116 is threaded into body 24 through load ring 82. A bracket 118 is mounted to piston change rod 116. Bracket 118 comprises an upper portion 120 disposed about change rod 116 and a lower cylindrical clamp portion 122 which holds cylinder 102 connected to upper portion 120 with bolts 124.

[0019] A piston change rod 126 is threaded into body 24 through load ring 84 and has a bracket 128 connected thereto. Bracket 128 has an upper portion 129 disposed about change rod 126. A lower cylindrical clamp portion 130 which holds cylinder 104 is connected thereto with bolts 132.

[0020] Opposed pistons 134 are disposed in opposed lateral chambers 136. Chambers 136 are oriented perpendicular to longitudinal central opening 40 and may comprise a first or left lateral chamber 138 and right or second lateral chamber 140. Thus, pistons 134 may comprise a first or left-hand piston 142 and a second or right-hand piston 144. Each piston has a piston head, a piston rod and a pusher plate. Thus, pistons 142 and 144 each have a head 146 connected to a piston rod 148 at a first end 150 thereof. Piston rod 148 has a second end 152 connected to a pusher plate 154. Heads 146 are sealingly received in cylinders 102 and 104.

[0021] The stuffing box of the present invention may also include bushings 155 which may be utilized to guide the tubing 22. Bushings 155 are held by a bushing carriers 156 and are attached thereto with cap screws 158. A crank arm 159 comprising a stem 160 and a handle 162 is connected to bushing carrier 156. A bushing cap 164 is disposed in body 24. Load rings 168 are attached to sides of body 24 with cap screws or other fasteners 169. Load ring 168 is internally threaded and has a bushing load nut 166 threaded thereto to hold bushing cap 164 in place.

[0022] Stuffing box 14 includes a seal assembly 170 which includes opposed seal subassemblies 172 disposed in opposed lateral chambers 138 and 140. Each seal subassembly comprises an energizer 174 and a sealing element 176. Seal subassemblies 172 are attached to pusher plates 154 with cap screws or other fasteners, or by any other means known in the art.

[0023] As shown in FIGS. 7-10, the energizer is preferably generally rectangularly shaped and has a top 180, a bottom 182, a left side 184, a right side 186, a rear side 188 and a front side 190. Front side 190 defines a semi-cylindrical surface 191.

[0024] Energizer 174 may have a main body portion 193 and upper and lower caps 192 and 194. Upper cap 192 may include an anti-extrusion ring 196. Upper cap 192 extends radially inwardly from surface 191, and has upper and lower surfaces 198 and 200. A groove 202 is defined in lower surface 200. Groove 202 is located radially inwardly from surface 191, and is preferably defined by anti-extrusion ring 196. Lower cap 192 has upper and lower surfaces 204 and 206, respectively. A semi-circular groove 208 is defined in upper surface 204

of cap 192.

[0025] Sealing elements 176 have an upper end 207, a lower end 209 and are semi-cylindrical sealing elements. Each sealing element 176 has a groove 210 defined in the upper end thereof and a groove 212 defined in the lower end thereof. Groove 210 defines an outer leg 214 and an inner leg 216. Groove 210 mates with groove 202, so that leg 214 is received in groove 202. Leg 216 extends upwardly so that the upper end thereof is substantially coplanar with upper end 180 of energizer 174. Groove 212 defines an outer leg 218 and an inner leg 220. Groove 212 mates with groove 208 so that outer leg 218 is received in groove 208. Leg 220 extends downwardly so that the end thereof is substantially coplanar with bottom 182 of energizer 174. Sealing element 176 can be attached to energizer 174 simply by aligning the grooves and rotating element 176 until grooves 202 and 204 are mated with grooves 210 and 212, respectively.

[0026] The stuffing box of the present invention is shown in FIG. 5 in a closed or engaged position 230 wherein sealing elements 176 engage tubing 22 to create a seal therebetween. FIG. 6 shows a partial section and shows the piston withdrawn to an open or disengaged position 232 whereby the seal does not contact the tubing 22. Seal assembly 170 is movable between closed and open positions 230 and 232. The packer is actuated, or energized and moved to closed position 230 through energizing ports 106 and 110, to cause pistons 142 and 144 to move toward tubing 22 so that opposed seal elements 174 seal against tubing 22. Elements 174 are released or moved to open position 232 by the application of pressure through packoff ports 108 and 112.

[0027] Sealing elements 176 of the present invention are preferably comprised of a non-pliable material and are more preferably comprised of an ultra-high molecular weight ("UHMW") plastic material. Preferably, the UHMW material has a hardness of about 60 Durometer ("D") to 80 D, and more preferably a hardness of about 65 D to 75 D. The most preferred material will have a hardness of about 72 D. Material hardnesses are based on measurements utilizing ASTM Method 02240. Although any UHMW material falling within the foregoing hardnesses may be utilized with the present invention, UHMW polyethylene is the preferred material.

[0028] Energizers 174 are preferably comprised of a pliable polyurethane. It is also preferred that upper and lower caps 192 and 194 are comprised of polyurethane. Anti-extrusion ring 196 is preferably a brass anti-extrusion ring. Anti-extrusion ring 196 and caps 192 and 194 may be bonded to main body 193 of the energizer 174 in any manner known in the art.

[0029] The stuffing box of the present invention is an advance over prior art stuffing boxes in that seal elements 174 will maintain an adequate sealing engagement with tubing 22 not only at low pressures, but also at high pressure applications, namely any application

where the wellbore pressure is 5,000 psi or above, as tubing 22 is injected into or withdrawn from a wellbore through the stuffing box. This is a major advance over prior art stuffing boxes since prior art sealing elements often fail and/or blow out at such pressures, which not only causes the loss of time due to the necessity of replacing the seals but also can cause damage to equipment and/or personal injury.

[0030] Prior art sealing elements are typically a pliable polyurethane having a hardness of about 30 D to 50 D. Such polyurethane sealing elements are not capable of maintaining a seal with any kind of reliable integrity at high pressures (i.e., above 5000 psi) as cylindrical tubing is moved in and out of the well therethrough. For example, in one test 4,000 feet of tubing was lowered through a stuffing box into a well at a pressure of 10,000 psi. The stuffing box, configured as described herein, utilized polyurethane sealing elements. After 4,000 feet of tubing was lowered into the test well, the direction of the tubing was reversed, and soon thereafter the element failed, resulting in a blow-out. The elements were completely destroyed and only small pieces of the elements could be found.

[0031] In a separate test, cylindrical tubing was withdrawn through polyurethane elements at a test well having a pressure of about 10,000 psi. After approximately 3900 feet of tubing had been withdrawn, the elements were removed for examination. Although the elements were not destroyed, the top portion of both of the elements was missing, a great amount of damage had been done to the elements and the elements were well on their way to a blowout.

[0032] Conversely, tests utilizing sealing elements comprised of UHMW polyethylene showed that such elements are capable of maintaining a seal with the tubing at high pressures while several thousand feet of tubing passes therethrough. UHMW elements were tested in a well with a pressure of 10,000 psi. 4,000 feet of tubing was lowered into the well through UHMW sealing elements with a packoff pressure of 1500 psi. The tubing was then withdrawn to near the top of the well as the packoff pressure was increased to 2500 psi. A total of 8,000 running feet of tubing passed through the elements with no leakage and no damage to the elements.

[0033] A second test was done at 10,000 psi with packoff pressure varying from 1500 psi to 3000 psi. 40,000 feet of tubing was run through the stripper/packer at that pressure. Only minimal leakage was observed, and the UHMW elements showed very little wear.

[0034] Thus, a 20,000-foot well with up to 10,000 psi wellbore pressure could be serviced without the need for stopping or changing the sealing elements or energizers. This is a major advance in tubing services. Although the stuffing box of the present invention may be utilized in all wells, it is most useful in wells having wellhead pressures of 5,000 or more, and its primary application is that wells having ultra-high pressures (i.e.,

those exceeding about 10,000 psi).

[0035] Although the preferred embodiment described herein is a side access stripper/packer utilizing UHMW sealing elements, the sealing elements described herein can also be used with the types of strippers/packers that apply force from the top and the bottom to cause compression of a seal around a tubing string. For example, FIG. 11 shows a stuffing box, or stripper/packer 250 utilizing a UHMW sealing element wherein pressure is applied to the top and bottom of the energizer and sealing element to cause the sealing element to compress around a tubing. The configuration of stripper/packer 250 is a conventional stripper/packer and is known. However, the use of UHMW sealings in such a configuration is new. Stripper/packer 250 includes a body 252 comprised of a top sub 254 and a bottom sub 256. Body 252 has a piston 258 slidably disposed therein. Stripper/packer 250 also includes a lower bushing 260 and an upper bushing 262. A tapered bushing 264 is positioned above upper bushing 262 which is held in place by a slip bowl 266 threaded to the upper end of body 250. An energizer 268 having an upper end 270 and a lower end 272 is disposed in body 250 between upper and lower bushings 260 and 262. A sealing element 274, comprising a non-pliable sealing element which is preferably a UHMW sealing element having the material properties hereinbefore described, is disposed in energizer 268. Sealing element 274 has an upper end 276 and a lower end 278. A non-extrusion ring 280 is disposed between the upper ends of the energizer and sealing element and upper bushing 262. Piston 258 is operated by pressurization of packoff port 282 and release port 284.

[0036] Pressurization of packoff port 282 urges piston 258 upwardly which presses lower bushing 260 upwardly to squeeze energizer 268, which is preferably a urethane energizer, and sealing element 274, which is preferably a UHMW sealing element, so that sealing element 274 is compressed against tubular member 282 which may be coiled tubing or other tubing disposed in the wellbore. Thus, UHMW sealing elements may be utilized with strippers/packers as described with reference to FIGS. 2-10 or with strippers/packers wherein pressure is applied to the top and the bottom thereof to compress the sealing element so that it seals against a tubing.

[0037] Although UHMW elements have been used in the past in snubbing and/or hydraulic workover (HWO) applications, it had not been previously believed that non-pliable materials such as UHMW elements could be utilized in a stripper/packer. In snubbing and HWO applications, UHMW elements are used as inserts in blowout preventer pipe rams as jointed pipe is urged therethrough. Typically, there will be at least an upper and lower set of blowout preventers, both of which include pipe rams that urge the UHMW elements into sealing engagement with the jointed tubing. In operation, once a tubing joint reaches a predetermined

point, the upper pipe ram will close and the lower pipe ram will open so that the joint can pass therethrough. Once the joint has passed below the lower pipe ram, it will close and the upper pipe ram will open to allow the next tubing joint to pass. The system stops each time a joint is encountered to allow the rams to open and close. This process is repeated continually and the operation is reversed for pulling jointed tubing from the well. Although UHMW elements are used in such applications, the element used therein is small and typically is only about a half inch in length (i.e., distance from the top to the bottom of the element is approximately one-half inch).

[0038] The sealing elements utilized in stuffing boxes are typically at least three and one-half inches in length. Thus, the distance from the upper end 207 to the lower end 209 of sealing elements 176 shown in FIG. 8 is at least three and one-half inches long and is preferably four to five inches long. Likewise, the distance between upper end 276 and lower end 278 of sealing element 274 is at least three and one-half inches and is preferably four to five inches. Furthermore, the element in the stripper/packer must seal against the tubing as tubing is continuously stripped therethrough, as opposed to the "stop-and-go" snubbing operation. It had not been believed that energizing UHMW elements having the necessary dimensions for use as sealing elements in stripper/packers would provide for an adequate seal against tubing being continuously stripped therethrough. However, based on the foregoing, it is apparent that non-pliable materials such as UHMW plastic, specifically UHMW polyethylene, are useful as sealing elements in strippers/packers and such elements provide an effective seal that will maintain its integrity for an extended period of time as tubing is continuously stripped therethrough at locations where high and ultra-high pressure exists in the wellbore.

[0039] Thus, the present invention is well adapted to carry out the objects and advantages mentioned as well as those that are inherent therein. While numerous changes may be made by those skilled in the art, such changes are encompassed within the scope and spirit of the present invention as defined by the appended claims.

Claims

1. A stripper/packer for sealing against tubing as it is moved therethrough in and out of a wellbore, the stripper/packer comprising: a body having a longitudinal central opening therethrough, said body defining a pair of opposed lateral chambers intersecting said longitudinal central opening; a pusher plate slidably disposed in each lateral chamber; a sealing element connected to each pusher plate for sealingly engaging a cylindrical tubing disposed in said longitudinal central opening, said sealing elements being comprised of an ultra-high molecular

weight plastic; and actuator means for moving said pusher plates and said sealing elements laterally between a disengaged position and an engaged position, wherein in said engaged position said sealing elements engage and seal against said tubing.

2. A stripper/packer according to claim 1, wherein said ultra-high molecular weight plastic sealing elements have a hardness of 60 D to 80 D, preferably 65 D to 75 D.
3. a stripper/packer according to claim 1 or 2, wherein said sealing elements comprise polyethylene.
4. A stripper/packer according to claim 1, 2 or 3, further comprising an energizer disposed between said sealing elements and said pusher plates, said energizers being comprised of polyurethane.
5. A stripper/packer according to claim 4, wherein each said energizer has a front side defining a semi-cylindrical surface, said energizer having semi-circular grooves defined at the upper and lower ends thereof, said sealing elements comprising semi-cylindrical elements having grooves defined therein to mate with said grooves on said energizer, said energizer preferably having an anti-extrusion element disposed at the upper end thereof, and said groove preferably being defined in said anti-extrusion element.
6. A stripper/packer for use in high pressure wellbores, said stripper/packer comprising: a body having a longitudinal opening therethrough, for receiving a cylindrical tubing therethrough; and a non-pliable sealing element disposed in said body; wherein said sealing element is selectively movable between a closed position wherein said sealing element sealingly engages said cylindrical tubing, and an open position wherein said sealing element disengages said cylindrical tubing, wherein said sealing element will maintain a seal with said cylindrical tubing as said tubing is being injected or withdrawn from a wellbore through said stripper/packer.
7. A stripper/packer according to claim 6, wherein said sealing element will maintain sealing engagement while at least 4,000 tubing feet of tubing is moved therethrough.
8. A stripper/packer according to claim 6 or 7, wherein said element is substantially wear-resistant at a wellbore pressure of at least 5,000 psi.
9. A stripper/packer according to claim 6, 7 or 8, which has opposed lateral chambers intersecting said longitudinal opening and having a pair of opposed

sealing elements, said sealing elements comprising a pair of opposed semi-cylindrical elements disposed in said lateral chambers and movable therein between said open and closed positions.

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10. A stripper/packer according to any of claims 6 to 9, wherein said sealing element has a hardness of 65 D to 75 D.

11. A stripper/packer according to any of claims 6 to 10, wherein said sealing element is comprised of a non-pliable plastic. 10

12. A stripper/packer according to claim 11, wherein said plastic comprises a UHMW plastic. 15

13. A stripper/packer according to any of claims 6 to 12, wherein said packer element can maintain a sealing engagement with said tubing as at least 4,000 tubing feet of tubing is moved therethrough, in a wellbore having a wellbore pressure at least 10,000 psi. 20

14. A stripper/packer according to any of claims 6 to 12, wherein said sealing element will maintain sealing engagement with said tubing as said tubing is continuously and repetitively withdrawn and injected through said sealing element, wherein the wellbore pressure is at least approximately 5,000 psi. 25

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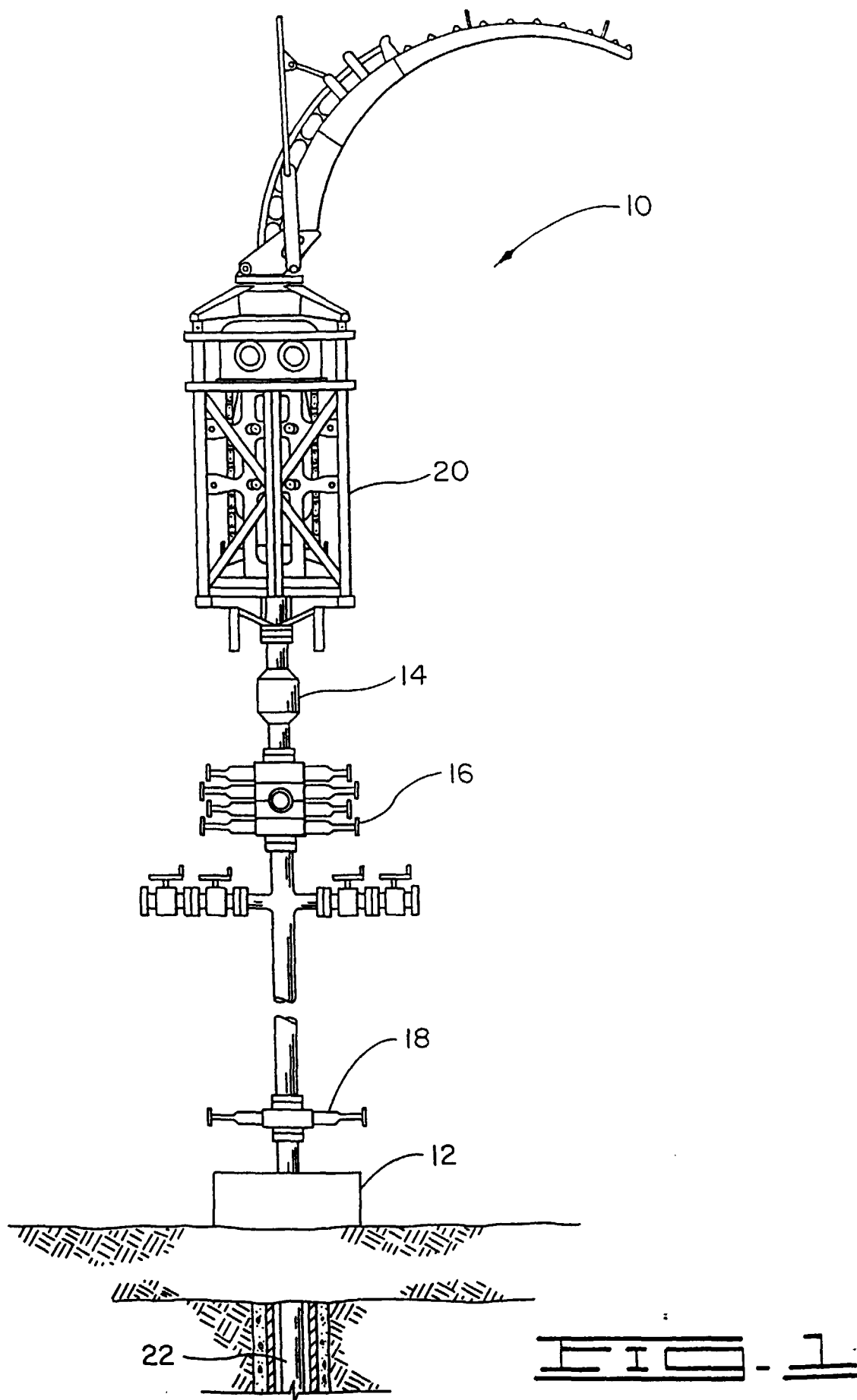
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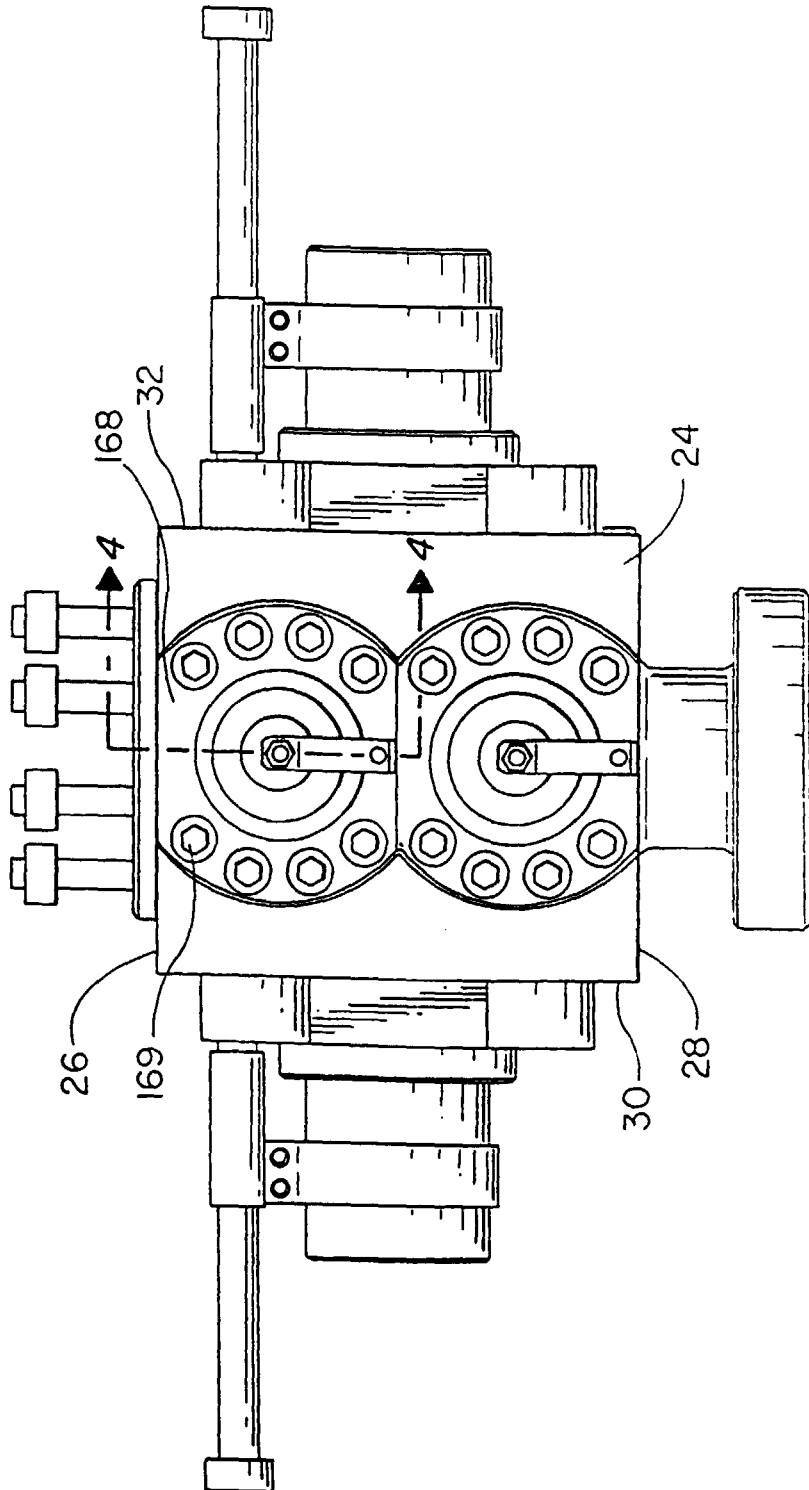


FIG. 2

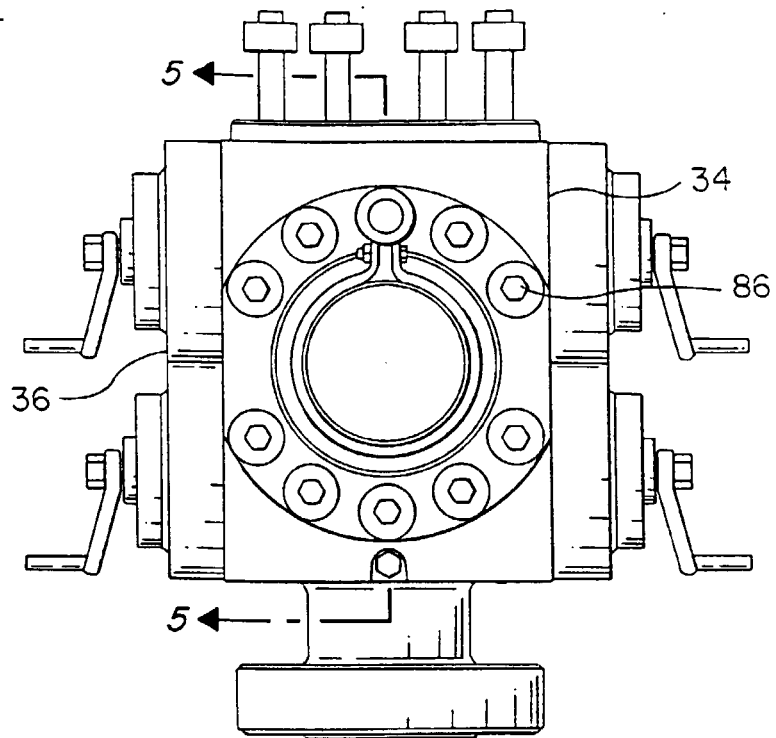


FIG. 3

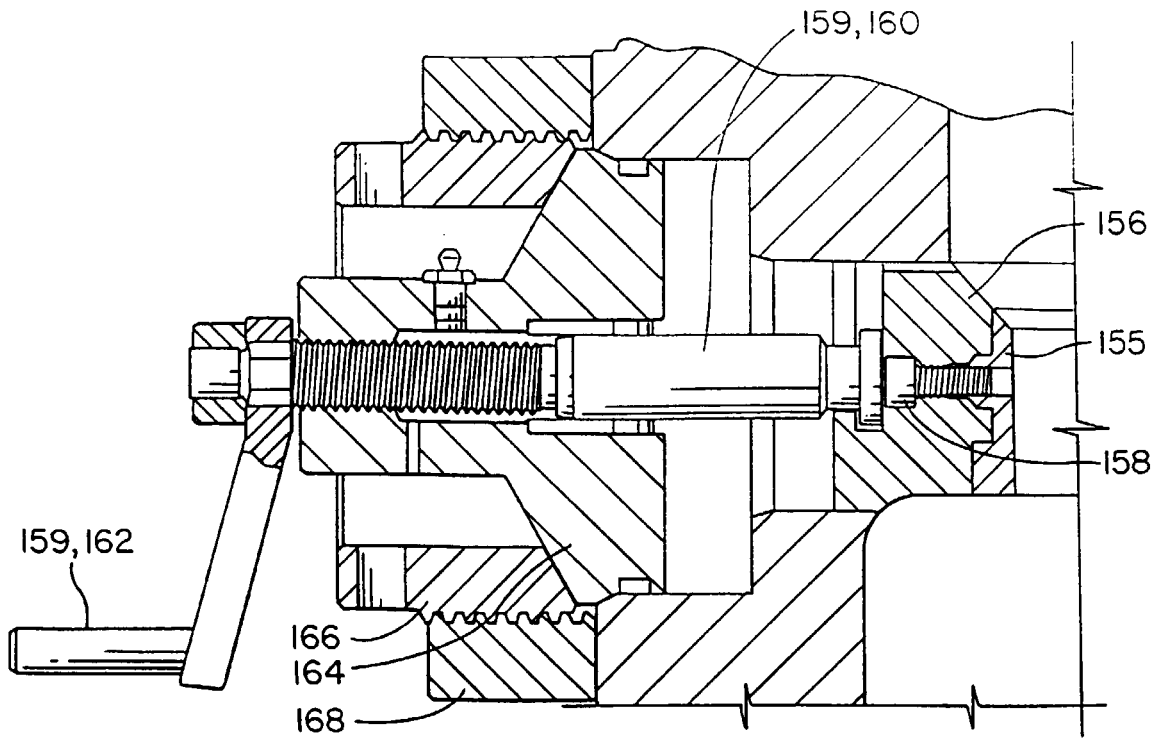
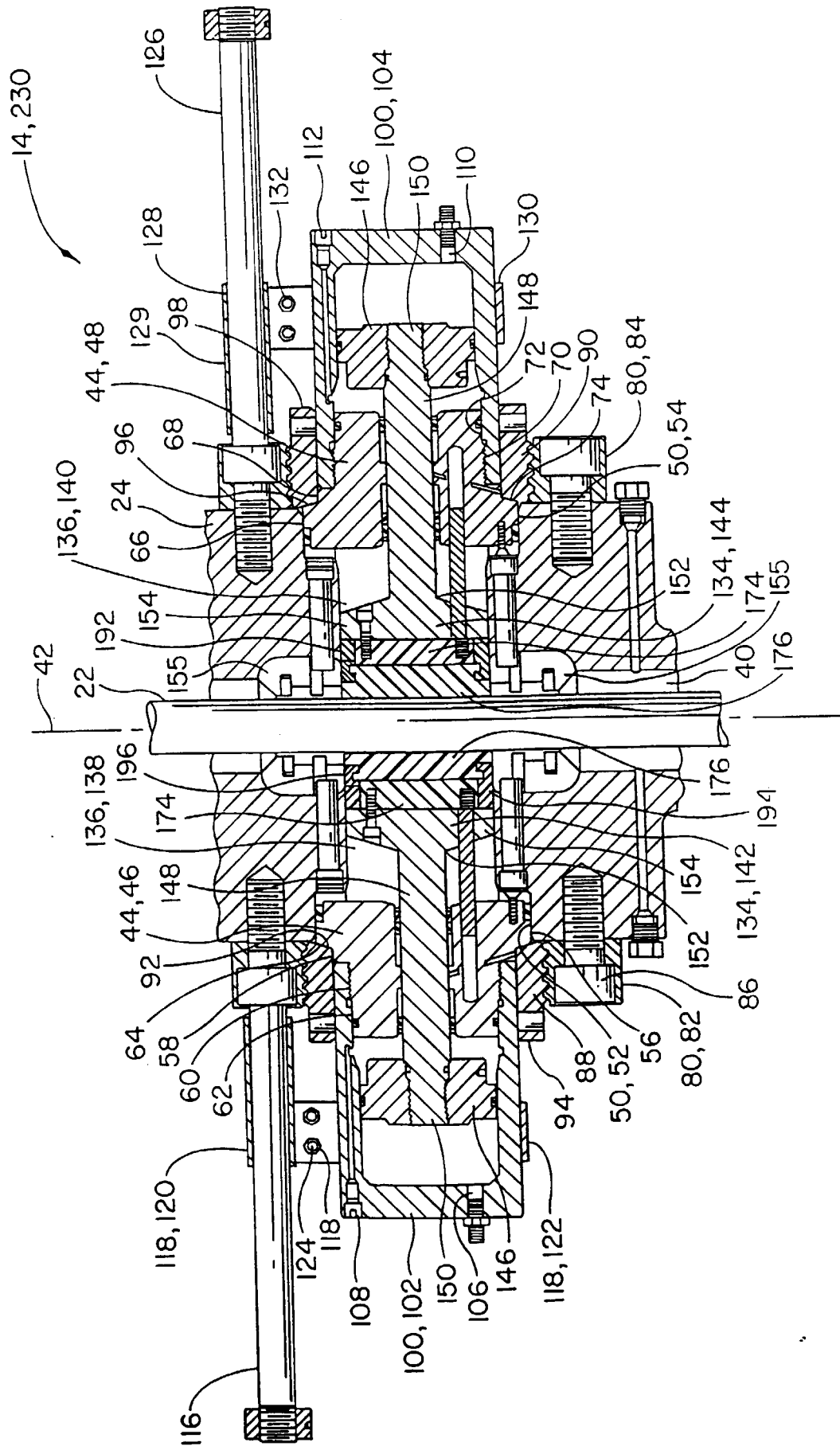


FIG. 4



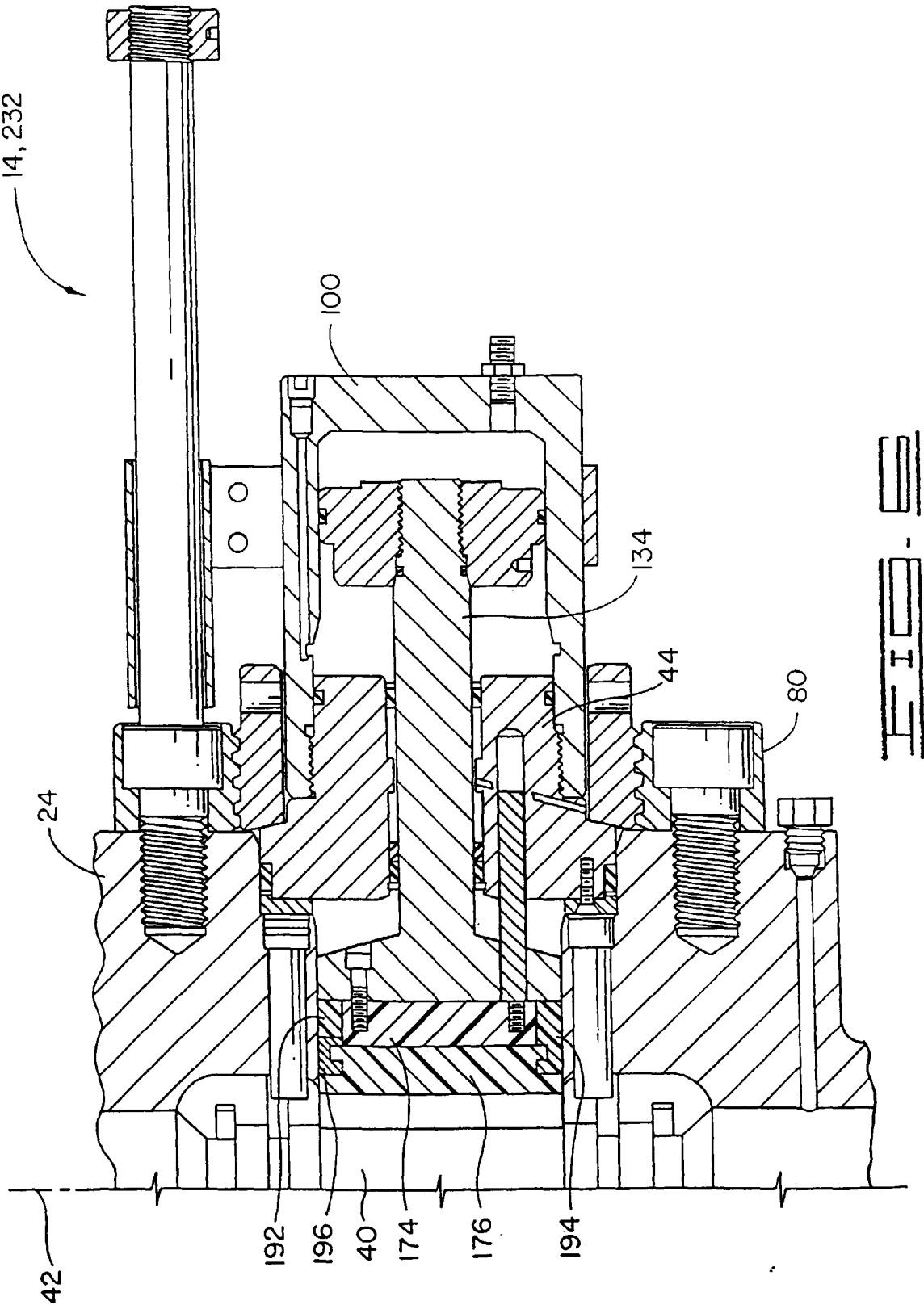
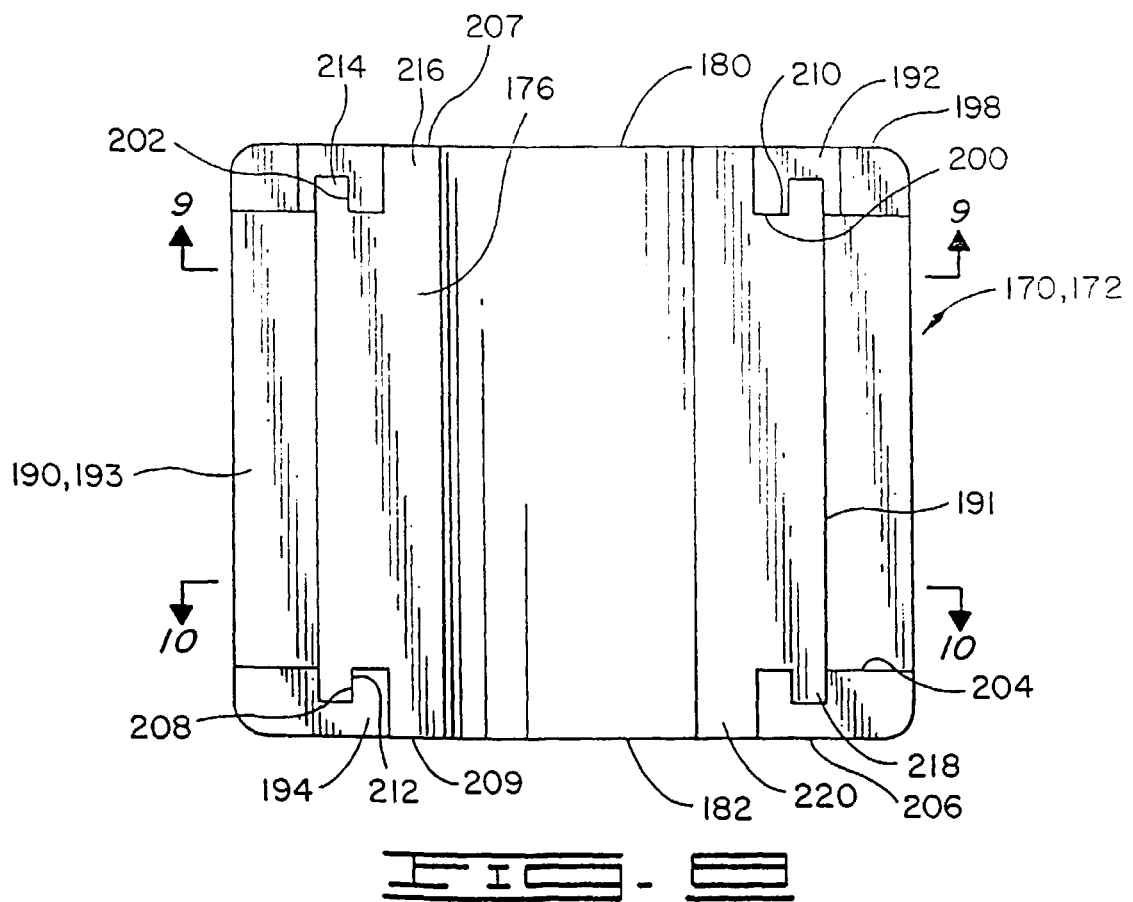
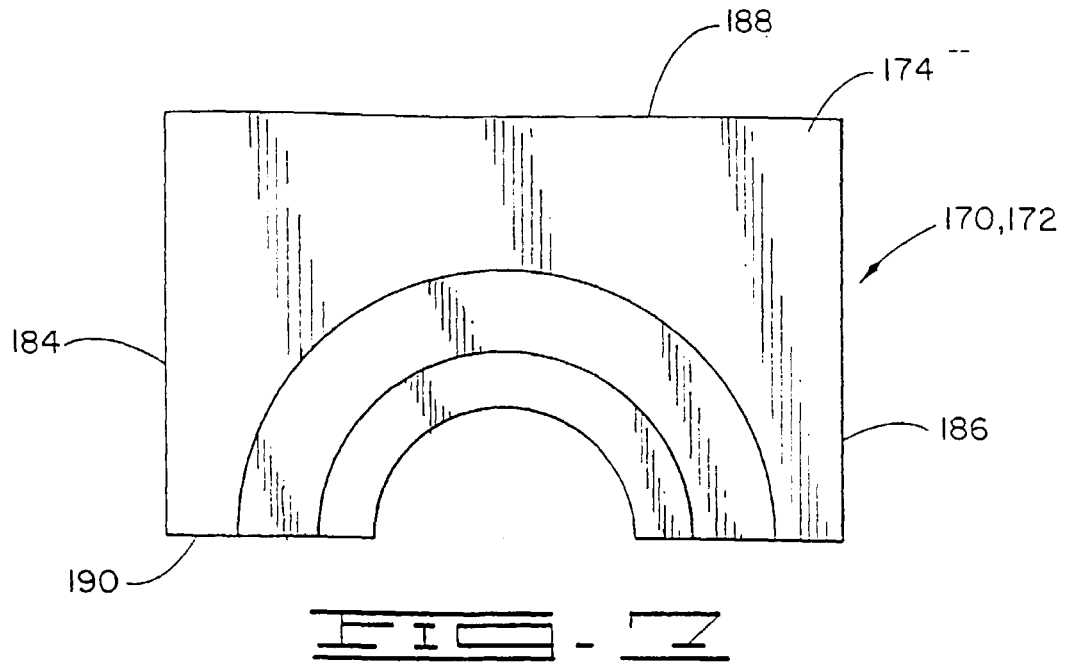


FIG. 13



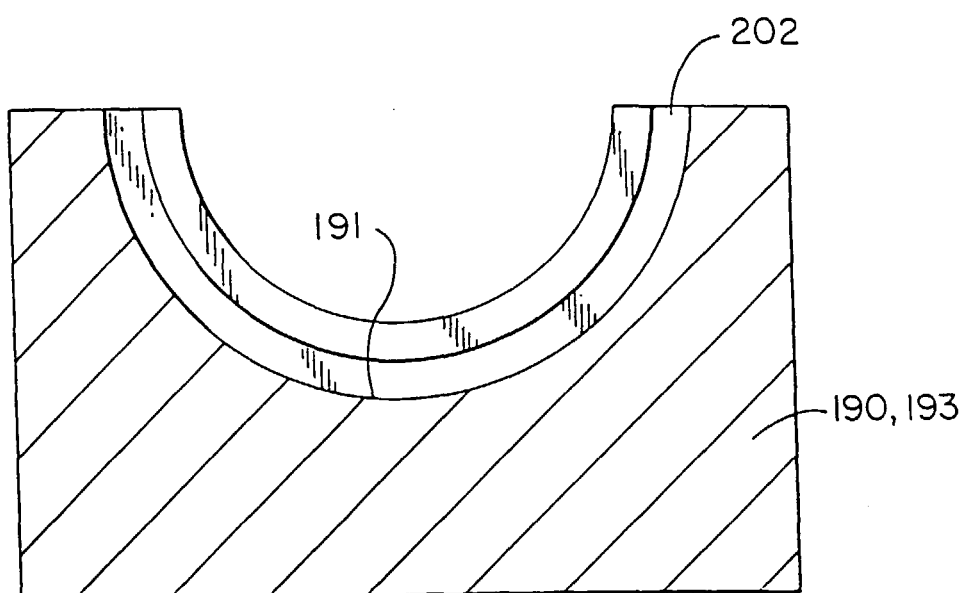


FIG. 9

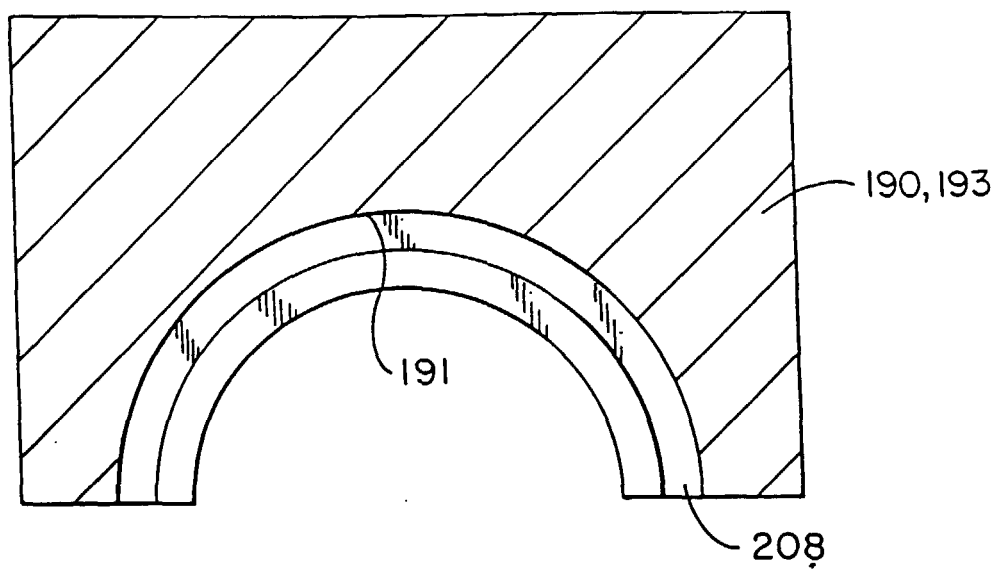


FIG. 10

