

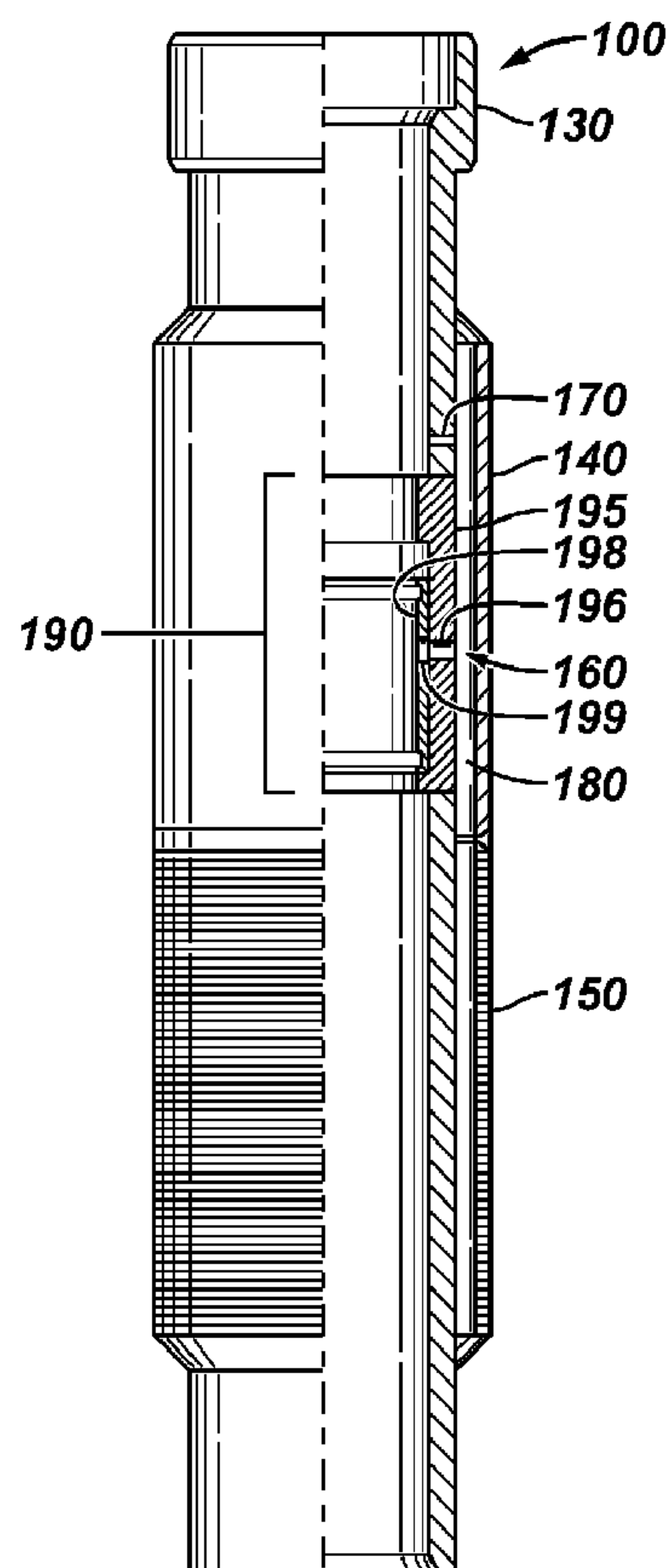


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FIG. 1



(57) **Abrégé/Abstract:**

A downhole gravel pack completion with an integrated inflow control device. The gravel pack completion with an integrated inflow control device can include a first tubular member disposed at least partially within a second tubular member. A chamber can be



(57) **Abrégé(suite)/Abstract(continued):**

formed between the first tubular member and second tubular member. A screen can be connected with the second tubular member and can encircle at least a portion of the first tubular member. A selectively openable flow port can be formed through the first tubular member, and an inflow control device can be formed through the first tubular member. The flow port and the inflow control device can be located within the chamber.

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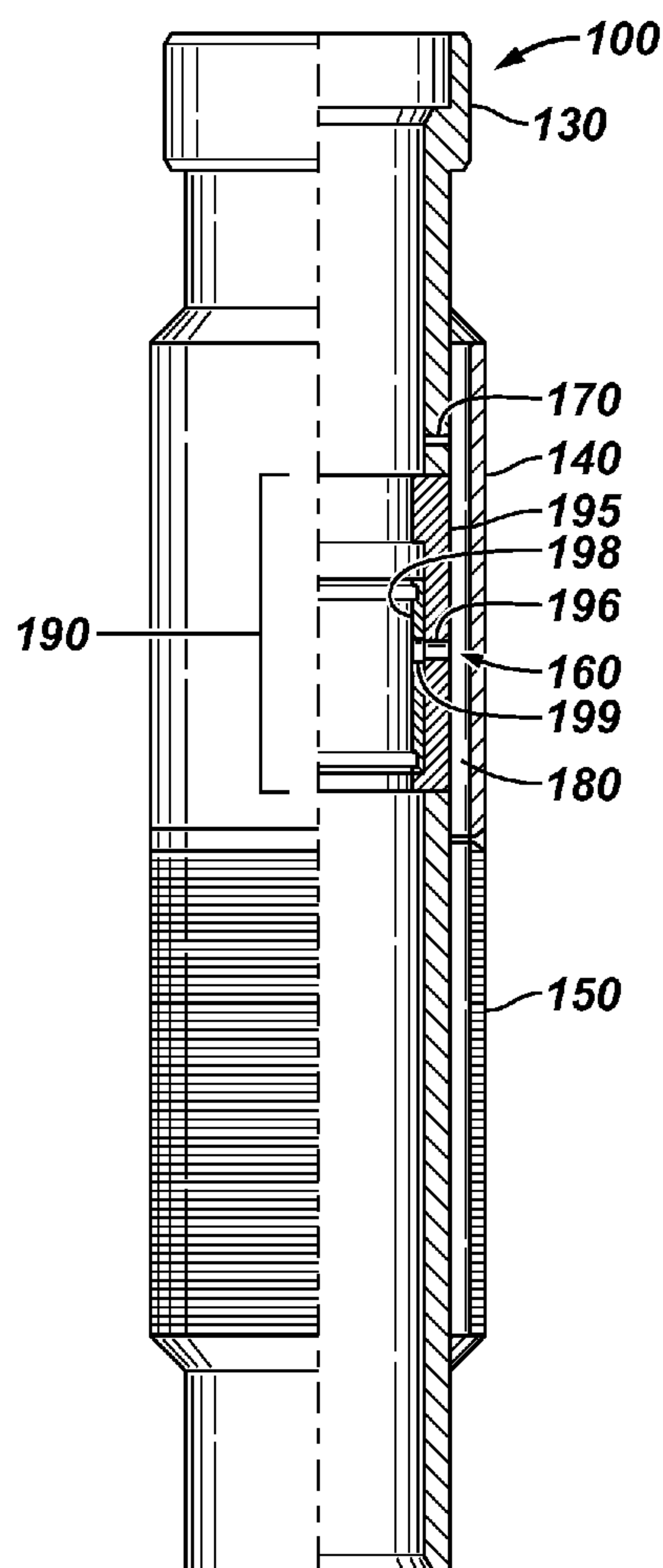
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[Continued on next page]

(54) Title: VALVE APPARATUS FOR INFLOW CONTROL

FIG. 1

(57) Abstract: A downhole gravel pack completion with an integrated inflow control device. The gravel pack completion with an integrated inflow control device can include a first tubular member disposed at least partially within a second tubular member. A chamber can be formed between the first tubular member and second tubular member. A screen can be connected with the second tubular member and can encircle at least a portion of the first tubular member. A selectively openable flow port can be formed through the first tubular member, and an inflow control device can be formed through the first tubular member. The flow port and the inflow control device can be located within the chamber.



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VALVE APPARATUS FOR INFLOW CONTROL**CROSS-REFERENCE TO RELATED APPLICATIONS**

[0001] This application claims priority to U.S. Provisional Patent Application having serial number 61/028,740, filed on February 14, 2008, which is incorporated by reference herein.

BACKGROUND

[0002] A wellbore can pass through various hydrocarbon bearing reservoirs or extends through a single reservoir for a relatively long distance. One technique to increase the production of the well is to perforate the well in a number of different zones. Such perforations can be done either adjacent the same hydrocarbon bearing zone or adjacent different hydrocarbon bearing zones.

[0003] However, an issue associated with producing from a well in multiple zones is the control of the flow of fluids from the wellbore into a completion assembly. For example, in a well producing from a number of separate zones, one zone can have a higher pressure than another zone. The higher pressure zone may produce into the lower pressure zone rather than to the surface.

[0004] Similarly, in a horizontal well that extends through a single reservoir, zones near the "heel" of the well (closest to the vertical or near vertical part of the well) may begin to produce unwanted water or gas (referred to as water or gas coning) before those zones near the "toe" of the well (furthest away from the vertical or near vertical departure point) begin producing unwanted water or gas. Production of unwanted water or gas in any one of these zones may require special interventions to be performed to stop production of the unwanted water or gas.

[0005] Inflow control devices can be used to manage pressure differences between different zones in a wellbore. Inflow control devices can be used in wells to balance inflow of produced hydrocarbons into the completion across different hydrocarbon bearing zones. The balanced flow can enhance reservoir management and reduce the risk of early water or gas breakthrough from a high permeability streak or heel of a well. Additionally, the use of inflow control devices can allow for increased capture of hydrocarbons from the toe of a well.

[0006] In addition to managing production or flow of hydrocarbons from various zones, well management may require the use of sand control devices. Sand control devices are

typically utilized within a well to manage the production of solid material, such as sand. The production of solid material may result in sand production at the surface, downhole equipment damage, reduced well productivity and/or loss of the well. The sand control device may have slotted openings or may be wrapped by a screen.

[0007] Typically, such sand control screens are used in conjunction with a gravel pack. Gravel packing a well involves placing gravel or other particulate matter around a sand control device. In an open-hole completion, a gravel pack is typically positioned between the wall of the wellbore and a sand screen that surrounds a perforated base pipe. In a cased-hole completion, a gravel pack is positioned between a casing string having perforations and a sand screen that surrounds a perforated base pipe. Produced hydrocarbons can flow from the hydrocarbon bearing zone into the production tubing string through the gravel pack and sand control device; however, particulates above a certain size can be blocked.

[0008] Gravel packing operations can require passing large quantities of fluid, such as a carrier fluid, through the sand screen and inflow control device, gravel packing with inflow control devices can be difficult if not impossible using typical inflow control devices because the gravel packing and production operations utilize the same flowpath. One typical problem associated with gravel packing using inflow control devices is the formation of voids or bridges in the gravel pack. The bridging or voids can be caused by reduced return flow rate of the carrier fluid.

[0009] There is a need, therefore, for a sand completion that incorporates inflow control devices and prevents reduced return flow rates of carrier fluids.

SUMMARY

[0010] One or more apparatus and methods for gravel packing and producing a zone are provided. The apparatus can include a first tubular member disposed at least partially within a second tubular member. A chamber can be formed between the first tubular member and second tubular member. A screen can be connected with the second tubular member and can encircle at least a portion of the first tubular member. A selectively openable flow port can be formed through the first tubular member, and an inflow control device can be formed through the first tubular member. The flow port and the inflow control device can be located adjacent the chamber.

[0011] In one or more embodiments, a method for gravel packing and producing a zone through the apparatus can include placing a completion assembly adjacent to a hydrocarbon bearing zone within a wellbore.

[0012] The completion assembly can include a first tubular member disposed at least partially within a second tubular member. A chamber can be formed between the first tubular member and the second tubular member. A portion of the second tubular member can be connected with a screen. The first tubular member can have an inflow control device and a selectively openable flow port formed therethrough. The completion assembly can be disposed downhole with the flow ports in an open configuration.

[0013] In one or more embodiments, the method can further include isolating the hydrocarbon bearing zone, and providing a gravel slurry to the hydrocarbon bearing zone. The gravel slurry can include a carrier fluid and a particulate from the surface to an annulus formed between the completion assembly and a wall of the wellbore. The carrier fluid to the surface through the flow port. The method can also include placing the flow port in a closed configuration, and hydrocarbons can be produced to the surface through the inflow control device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] So that the recited features can be understood in detail, a more particular description, briefly summarized above, may be had by reference to one or more embodiments, some of which are illustrated in the appended drawings. It is to be noted, however, that the appended drawings illustrate only typical embodiments and are therefore not to be considered limiting of its scope, for the invention may admit to other equally effective embodiments.

[0015] Figures 1-2 depict cross section views of an illustrative downhole gravel pack completion with an integrated inflow control device having a sliding sleeve for selectively allowing fluid flow through a selectively openable flow port, according to one or more embodiments described.

[0016] Figure 3 depicts a cross section view of another illustrative downhole gravel pack completion with an integrated inflow control device having a sealing device for selectively opening fluid flow through the selectively openable flow port, according to one or more embodiments described.

[0017] Figure 4 depicts a cross sectional view of another illustrative downhole gravel pack completion with an integrated inflow control device having a selectively closable flow path formed between a first zone and a second zone of a chamber for selectively allowing fluid flow through the selectively openable flow port, according to one or more embodiments described.

[0018] Figure 5 depicts a cross sectional view of another illustrative downhole gravel pack completion with an integrated inflow control device having a sliding sleeve disposed within the chamber for selectively allowing fluid flow through the selectively openable flow port, according to one or more embodiments described.

[0019] Figure 6 depicts a cross sectional view of another illustrative downhole gravel pack completion with an integrated inflow control device having a sliding sleeve disposed within the chamber for selectively allowing fluid flow through the selectively openable flow port, according to one or more embodiments described.

[0020] Figure 7 depicts a schematic view of a system for gravel packing and producing one or more zones, according to one or more embodiments described.

DETAILED DESCRIPTION

[0021] Figures 1 and 2 depict cross section views of an illustrative downhole gravel pack completion 100 with an integrated inflow control device 170 having a sliding sleeve 190 for selectively allowing fluid flow through a selectively openable flow port 160, according to one or more embodiments. The illustrative downhole gravel pack completion or completion assembly 100 with integrated inflow control device 170 can include one or more first tubular members 130. A second tubular member or housing 140 can at least partially encircle or encase the first tubular member 130. A chamber 180 can be formed between the first tubular member 130 and the second tubular member 140. The second tubular member 140 can be connected to one or more screens 150. One or more selectively openable flow ports 160 can be formed through the first tubular member 130. Furthermore, one or more inflow control device or choked flow ports 170 can be formed through the first tubular member 130. The flow ports 160 and the inflow control device 170 can be at least partially encircled by the second tubular member 140.

[0022] The first tubular member 130 can be a sleeve or a base pipe, or a non-perforated tubular. The second tubular member or housing 140 can be a solid tubular or sleeve. The second tubular member 140 can be concentric with the second tubular member 130. The screen 150 can be connected to an end of the second tubular member 140. In one or more embodiments, the screen 150 can be connected to an intermediate portion of the second tubular member 140. For example, the screen 150 can be wrapped around a perforated or slotted portion of the second tubular member 140. The screen 150 can be a sand control screen. The screen 150 can be any type of sand control screen. For example, the screen 150 can be a wire wrapped screen or mechanical type screen, or a combination thereof. An illustrative sand control screen is described in more detail in U.S. Patent No. 6, 725, 929.

[0023] The chamber 180 can be located between the second tubular member 140 and the first tubular member 130. The chamber 180 can be a void or cavity provided between the inner diameter of the second tubular member 140 and the outer diameter of the first tubular member 130. The chamber 180 can be in fluid communication with the exterior of the second tubular member 140 via the screen 150. The inflow control device 170 and the flow port 160 can be formed through the first tubular member 130 and can be located on the portion of the first tubular member 130 encircled by the second tubular member 140.

[0024] The flow port 160 can be an aperture or hole formed through the first tubular member 130. The flow port 160 can have a flow area equal to the flow area of the inner bore of the first member 130. The flow port 160 can be selectively switched from an opened or closed position or configuration using one or more flow control devices, such as the sliding sleeve 190.

[0025] The sliding sleeve 190 can include a second member 198 positioned within a first member or housing 195. The first member or housing 195 can be a tubular or sleeve. The second member 198 can be a tubular or sleeve sized to fit within the first member 195. The second member 198 can have one or more notches or portions adapted to engage or catch a work string or service string (not shown) within the first tubular member 130. When the work string is engaged by the second member 198, the axial motion of the work string can be transferred to the second member 198.

[0026] The first member 195 and second member 198 can be positioned around the first tubular member 130. A first aperture 196 can be formed through the first member 195. A second aperture 199 can be formed through the second member 198. The first and second apertures 196, 199 can have the same flow area or substantially same flow area as the flow port 160. The first aperture 196 can be permanently aligned with the flow port 160. The second aperture 199 can be selectively aligned with the flow port 160. For example, when the second member 198 is in a first position the second aperture 199 can be aligned with the flow port 160, as depicted in Figure 1. When the second member is in a second position, the second aperture 199 can be out of alignment with the flow port 160, as depicted in Figure 2. Accordingly, the flow port 160 can be in an opened configuration when the second member 198 is in a first position and a closed configuration when the second member 198 is in a second position.

[0027] The inflow control device 170 can be an aperture or flowpath configured to induce pressure drop therethrough. For example, the inflow control device 170 can be a nozzle; a

choked flow path; an orifice with a nozzle insert; a tortuous path formed into a channel or orifice, a series of tubes, or other device capable of causing pressure drop therethrough.

[0028] Figure 3 depicts a cross section view of another illustrative downhole gravel pack completion 300 with an integrated inflow control device 170 having a sealing device 320 for selectively opening fluid flow through the selectively openable flow port, according to one or more embodiments. The downhole gravel pack completion 300 can include the flow port 160 formed into the first tubular member 130, and the second tubular member 140 can at least partially encircle or encase the first tubular member 130. The chamber 180 can be formed between the first tubular member 130 and the second tubular member 140. The screen 150 can be secured to the second tubular member 140 or integral with the second tubular member 140, as described above. A sealing device 320 can be disposed in the chamber 180 between the screen 150 and the flow port 160. The sealing device 320 can be actuated to prevent communication between the flow port 160 and screen 150. When communication between the flow port 160 and screen 150 is prevented the flow port 160 can be said to be in a closed configuration. The sealing device 320 can be a ball valve, a swellable material, or any other device capable of selectively controlling flow therethrough. In one or more embodiments, the sealing device 320 can be actuated mechanically, magnetically, hydraulically, chemically, electronically, or by any other method.

[0029] Figure 4 depicts a cross sectional view of another illustrative downhole gravel pack completion 400 with an integrated inflow control device 170 having a flow control device 450 formed between a first zone 430 and a second zone 440 of the chamber 180 for selectively allowing fluid flow through the selectively openable flow port 160, according to one or more embodiments. The screen 150 can be adjacent or within the first zone 430. The inflow control device 170 can also be located adjacent or within the first zone 430. At least a portion of the second tubular member 140 and the flow port 160 can be part of the second zone 440.

[0030] The flow control device 450 can be located between the first zone 430 and the second zone 440. The flow control device 450 can be selectively operated to allow or prevent communication between the screen 150 and the flow port 160. The flow control device 450 can be a ball valve or swellable member. The flow control device 450 can be disposed within a flow path 420 formed within the chamber 180 between the first zone 430 and the second zone 440. In one or more embodiments, the flow control device 450 can be actuated mechanically, magnetically, hydraulically, chemically, electronically, or by any other method.

[0031] Figure 5 depicts a cross sectional view of another illustrative downhole gravel pack completion 500 with an integrated inflow control device 170 having a sliding sleeve 510 disposed within the chamber 180 for selectively allowing fluid flow through the selectively openable flow port 160, according to one or more embodiments. The sliding sleeve 510 can be disposed within the chamber 180 between the screen 150 and the selectively openable flow port 160. The sliding sleeve 510 can be located on the outer diameter of the first tubular member 130. The inner diameter of the second tubular member 140 can have a portion extending into the chamber 180 for providing a shoulder or mating surface 520. The shoulder 520 can be sealingly engaged by the sliding sleeve 510. When the sliding sleeve 510 is moved axially to engage the shoulder 520 the flow port 160 can be prevented from communicating with the screen 150. Accordingly, the flow port 160 can be said to be in a closed configuration when the sliding sleeve 510 is engaged with shoulder 520. The flow port 160 can be in an open configuration when the flow port 160 can communicate with the screen 150.

[0032] Figure 6 depicts a cross sectional view of another illustrative downhole gravel pack completion 600 with the integrated inflow control device 170 having a sliding sleeve 620 disposed within the chamber 180 for selectively allowing fluid flow through the selectively openable flow port 160, according to one or more embodiments. The sliding sleeve 620 can be disposed in the chamber 180 on the inner diameter of the second tubular member 140. The outer diameter of the first tubular member 130 can have a portion extending into the chamber 180 forming a channel 630 configured to receive the sliding sleeve 620 in a sealing relationship. The sliding sleeve 620 can be moved axially to sealingly engage the channel 630. When the sliding sleeve 620 is engaged with the channel 630 communication between the screen 150 and the flow port 160 can be prevented. When the sliding sleeve 620 is engaged with the channel 630 the flow port 160 can be said to be in a closed position.

[0033] Figure 7 depicts a schematic view of a system 700 for gravel packing and producing one or more zones, according to one or more embodiments. The system 700 can include one or more completion assemblies 100 with one or more integrated inflow control devices 170. Each completion assembly 100 can be positioned between at least two packers 708, 710, 712. A tubing string 720 can be connected between the sand completion assemblies 100. The tubing string 720 can provide fluid communicate between the completion assemblies 100 and the surface.

[0034] For clarity and ease of description, the operation of the system 700 will be further described with reference to a horizontal wellbore 750 having a "left" or first hydrocarbon

bearing zone 730 and a "right" or second hydrocarbon bearing zone 740. However, the system 700 can be equally effective or useful in a vertical wellbore, deviated wellbore, multi-lateral wellbore, or any other wellbore having one or more zones. The general operation of the system 700 will be discussed referring to the illustrative embodiment of the completion assembly 100, which is described in more detail in Figures 1 and 2; however, any of the other above described completions assemblies or combinations of the above described completion assemblies can be integrated into the system 700 instead of the completion assembly 100.

[0035] Referring to Figures 1, 2 and 7, a "right" or second completion assembly 100 can be located within the horizontal wellbore 750 adjacent or proximate to the second hydrocarbon bearing zone 740. A "right" or third packer 708 can be connected with the "right" or first end of the second completion assembly 100. The third packer 708 can isolate the right portion of the second hydrocarbon bearing zone 740 from other zones (not shown) of the wellbore 750 to the right of the second hydrocarbon bearing zone 740. The third packer 708 can be connected with the right portion of the second completion assembly 100 by one or more tubing strings 720. An "intermediate" or second packer 710 can be connected to a "left" or first end of the second completion assembly 100. The second packer 710 can isolate the left part of the second hydrocarbon bearing zone 740 from the first hydrocarbon bearing zone 730. Accordingly, the second hydrocarbon bearing zone 740 can be isolated from other hydrocarbon bearing zones within the horizontal wellbore 750 by the first and second packers 708, 710. Of course, more than one packer 708, 710 can be connected with each end of the second completion assembly 100 and can be used to isolate the hydrocarbon bearing zone 740. In some embodiments, the packers may also be omitted, as the gravel packed annulus in many cases will provide an annular flow restriction between the different hydrocarbon bearing zones.

[0036] The first completion assembly 100 can be located within the horizontal wellbore 750 adjacent the first hydrocarbon bearing zone 730. The first completion assembly 100 can be connected with the second completion assembly 100 via the tubing string 720. The second packer 710 can isolate the right part of the first hydrocarbon bearing zone 730 from the second hydrocarbon bearing zone 740. In the alternative, an additional packer (not shown) can be connected with the "right" or second end of the first completion assembly 100 adjacent the second packer 710, and can be used in conjunction with the second packer 710 to isolate the first hydrocarbon bearing zone 730 to the right of the first completion assembly 700. A "left" or first packer 712 can be connected to a "left" or first end of the first completion assembly 100 and can be used to isolate the right portion of the first hydrocarbon

bearing zone 730 to the right of the first completion assembly 100. One or more packers can be connected to each end of the first completion assembly 100 and can be used to isolate the first hydrocarbon bearing zone 730. A tubing string 720 connected with the first completion assembly 100 can provide fluid communication between the first completion assembly 700 and the surface.

[0037] Each completion assembly 100 can be conveyed into the horizontal wellbore 750 with the flow port 160 in an open configuration. A service string or wash pipe 770 can be conveyed through the tubing string 720 into the horizontal wellbore 750. The service string 770 can be used to take return flow from the gravel slurry provide to an annulus 742 between the second completion assembly 100 and a wall 755 of the horizontal wellbore 750. The gravel pack slurry is pumped down 741 into the annulus 750 through a gravel pack packer or similar device (not shown). The carrier fluid or fluid portion of the gravel slurry can migrate from the annulus 742 through the screen 150 of the second completion assembly 100 to the chamber 180. When the flow port 160 is in an opened configuration there can be two flow paths for the carrier fluid from the chamber 180 to the inner bore of the first tubular member 130. A first flowpath can be from the chamber 180 into the inner bore of the first tubular member 130 through the flow port 160. A second flow path can be from the chamber 180 to the inner bore of the first tubular member 130 via the inflow control device 170. Although both flow paths are available, the carrier fluid can take the first flow path, due to the higher resistance of the second flow path. Accordingly, the carrier fluid can migrate through the screen 150 into the chamber 180, and through the flow port 160 into the inner bore of the first tubular member 130. Consequently, when the flow port 160 is in an open configuration the inflow control device 170 can be inoperative. With the flow port 160 in an opened configuration the carrier fluid can be returned to the surface via the tubing string 720 turning into 725 the service string 770. The port 160 allows this to take place at a flow rate sufficient to ensure a gravel pack about the second completion assembly 100 absent bridges or voids.

[0038] After the annulus 742 is gravel packed the gravel pack process continues up into the first hydrocarbon bearing zone 730.

[0039] Gravel slurry is provided to an annulus 732 formed between the wall 755 of the horizontal wellbore 750 and the first completion 100. The carrier fluid or fluid portion of the gravel slurry can migrate from the annulus 732 through the screen 150 into the chamber 180 of the first completion assembly 100. The carrier fluid can enter the inner bore of the first tubular member 130 of the first completion assembly 100 via the flow port 160, as described above. After the gravel pack is formed in annulus 732, the service string 770 can be moved

axially and can transfer axial movement to the sliding sleeves 190 of the completion string 700. The axial movement of the sliding sleeve 190 of the completion string 700 can place the flow port 160 of the first and second completion assembly 100 in a closed configuration. The packers 708, 710 and 712 can also be activated by the axial movement of the service string. They may also be activated later by a timer mechanism or by time dependent swelling. Alternatively, the packers may be set prior to pumping of the gravel, but in this case a shunt system (not described) is required to allow gravel transport into the different annular sections.

[0040] Each of the hydrocarbon production zones 730, 740 can be produced. Produced hydrocarbons can flow from the horizontal wellbore 750 through the screens 150 of the first and second completion assemblies 100 into the chamber 180 of each completion assembly 100. The produced hydrocarbons can flow into the inner bore of the first tubular member 130 of the first and second completion assemblies 100 via the inflow control device 170 of the first and second completion assemblies 100. Of course each completion assembly 100 can have a plurality of inflow control devices 170 depending on the pressure differences between the hydrocarbon bearing zones 730, 740. For example, if the pressure of the first hydrocarbon bearing zone 730 is substantially higher than the pressure of the second hydrocarbon bearing zone 740, the first completion assembly 100 can have one, two, three, four, or more inflow control devices 170 formed through the first tubular member 130 allowing for management of the pressure between the two hydrocarbon producing zones 730, 740. Consequentially, the produced hydrocarbons flowing from the wellbore 750 into the first tubular member 130 of the first completion assembly 100 will have a larger pressure drop than the produced hydrocarbons flowing from the wellbore 750 into the first tubular member 130 of the second completion assembly 100. The pressure differences between the hydrocarbon producing zones 730, 740 can be calculated using logging information or other downhole data.

[0041] As used herein, the terms "up" and "down"; "upper" and "lower"; "upwardly" and "downwardly"; "upstream" and "downstream"; and other like terms are merely used for convenience to depict spatial orientations or spatial relationships relative to one another in a vertical wellbore. However, when applied to equipment and methods for use in wellbores that are deviated or horizontal, it is understood to those of ordinary skill in the art that such terms are intended to refer to a left to right, right to left, or other spatial relationship as appropriate.

[0042] Certain embodiments and features have been described using a set of numerical upper limits and a set of numerical lower limits. It should be appreciated that ranges from

any lower limit to any upper limit are contemplated unless otherwise indicated. Certain lower limits, upper limits and ranges appear in one or more claims below. All numerical values are “about” or “approximately” the indicated value, and take into account experimental error and variations that would be expected by a person having ordinary skill in the art.

[0043] Various terms have been defined above. To the extent a term used in a claim is not defined above, it should be given the broadest definition persons in the pertinent art have given that term as reflected in at least one printed publication or issued patent. Furthermore, all patents, test procedures, and other documents cited in this application are fully incorporated by reference to the extent such disclosure is not inconsistent with this application and for all jurisdictions in which such incorporation is permitted.

[0044] While the foregoing is directed to embodiments of the present invention, other and further embodiments of the invention may be devised without departing from the basic scope thereof, and the scope thereof is determined by the claims that follow.

Claims

What is claimed is:

1. A downhole gravel pack completion with an integrated inflow control device comprising:
 - a first tubular member disposed at least partially within a second tubular member;
 - a chamber formed between the first tubular member and second tubular member;
 - a screen connected with the second tubular member and encircling at least a portion of the first tubular member; and
 - a selectively openable flow port formed through the first tubular member; andan inflow control device formed through the first tubular member or connected to the first tubular member.
2. The downhole gravel pack completion of claim 1, further comprising a sliding sleeve for selectively opening or closing the flow port, wherein the sliding sleeve comprises:
 - a first member disposed at least partially about the first tubular member;
 - a first aperture formed through the first member, wherein the first aperture is aligned with the flow port;
 - a second member disposed within the first member, wherein the second member comprises:
 - a second aperture formed through the second member;
 - at least one recessed portion adjacent an inner bore of the first tubular member for engaging a work string within the inner bore of the first tubular member, wherein the work string can move the second member axially from a first position to a second position, and wherein the second aperture provides a flow path from the flow port to an inner bore of the first tubular member in the first position and prevents fluid flow from the flow port to the inner bore of the first tubular member in the second position.
3. The downhole gravel pack completion of claim 1, wherein the flow port is disposed in a first zone and the inflow control device is in a second zone, wherein the second zone is located between the flow port and the screen.

4. The downhole gravel pack completion of claim 3, further comprising a flow control device disposed between the first zone and the second zone.
5. The downhole gravel pack completion of claim 3, further comprising a sealing device disposed between the first zone and the second zone.
6. The downhole gravel pack completion of claim 1, wherein the inflow control device comprises a nozzle insert, tortuous flow path, or a reduced flow area hole.
7. The downhole gravel pack completion of claim 1, wherein the flow path comprises a flow area at least equal to the flow area of an inner bore of the first tubular member.
8. A system for gravel packing and producing one or more zones comprising:
 - a completion assembly disposed between at least two packers, wherein the completion assembly comprises:
 - a first tubular member disposed at least partially within a second tubular member;
 - a chamber formed between the first tubular member and the second tubular member;
 - a screen connected to the second tubular member and encircling the first tubular member; and
 - a selectively openable flow port formed through the first tubular member; and a inflow control device and a flow port formed through the first tubular member, wherein the flow port and the inflow control device are located adjacent the chamber; and
 - a tubing string communicating the completion assembly to a surface.
9. The system of claim 8, further comprising a plurality of completion assemblies, wherein each completion assembly is disposed between at least two packers, and wherein each completion assembly is connected in series by a tubing string.

10. The system of claim 8, wherein the system for gravel packing and producing one or more zones is configured for use in a horizontal wellbore, a vertical wellbore, or a deviated wellbore.
11. The system of claim 8, further comprising a sliding sleeve for selectively opening or closing the flow port, wherein the sliding sleeve comprises:
 - a first member disposed at least partially about the first tubular member;
 - a first aperture formed through the first member, wherein the first aperture is aligned with the flow port;
 - a second member disposed within the first member, wherein the second member comprises:
 - a second aperture formed through the second member; and
 - at least one recessed portion adjacent an inner bore of the first tubular member for engaging a work string within the inner bore of the first tubular member, wherein the work string can move the second member axially from a first position to a second position, and wherein the second aperture provides a flow path from the flow port to an inner bore of the first tubular member in the first position and prevents fluid flow from the flow port to the inner bore of the first tubular member in the second position.
12. The system of claim 8, wherein the flow port is disposed in a first zone and the inflow control device is in a second zone, wherein the second zone is located between the flow path and the screen.
13. The system of claim 12, further comprising a flow control device disposed between the first and second zone.
14. The system of claim 12, further comprising a sealing device disposed between the first and second zone.
15. A method for gravel packing and producing a zone with a completion assembly incorporation an inflow control device comprising:

placing a completion assembly adjacent to a hydrocarbon bearing zone within a wellbore, wherein the completion assembly comprises:

a first tubular member disposed at least partially within a second tubular member;

a chamber formed between the first tubular member and the second tubular member;

a screen connected with the second tubular member and encircling the first tubular member; and

a selectively openable flow port formed through the first tubular member; and an inflow control device formed through the first tubular member, wherein the flow port and the inflow control device are located adjacent the chamber, wherein the completion assembly is disposed downhole with the flow ports in an open configuration;

isolating the hydrocarbon bearing zone;

providing a gravel slurry comprising a carrier fluid and a particulate from the surface to an annulus formed between the completion assembly and a wall of the wellbore;

returning the carrier fluid to the surface through the flow port;

placing the flow port in a closed configuration; and

producing hydrocarbons to the surface through the inflow control device.

16. The method of claim 15, further comprising:

placing a plurality of completion assemblies adjacent to a plurality of hydrocarbon bearing zones penetrated by the wellbore;

isolating each hydrocarbon bearing zone, wherein the flow port of each completion assembly is in an opened configuration;

flowing the gravel slurry to at least one annulus formed between at least one completion assembly and the wall of the wellbore;

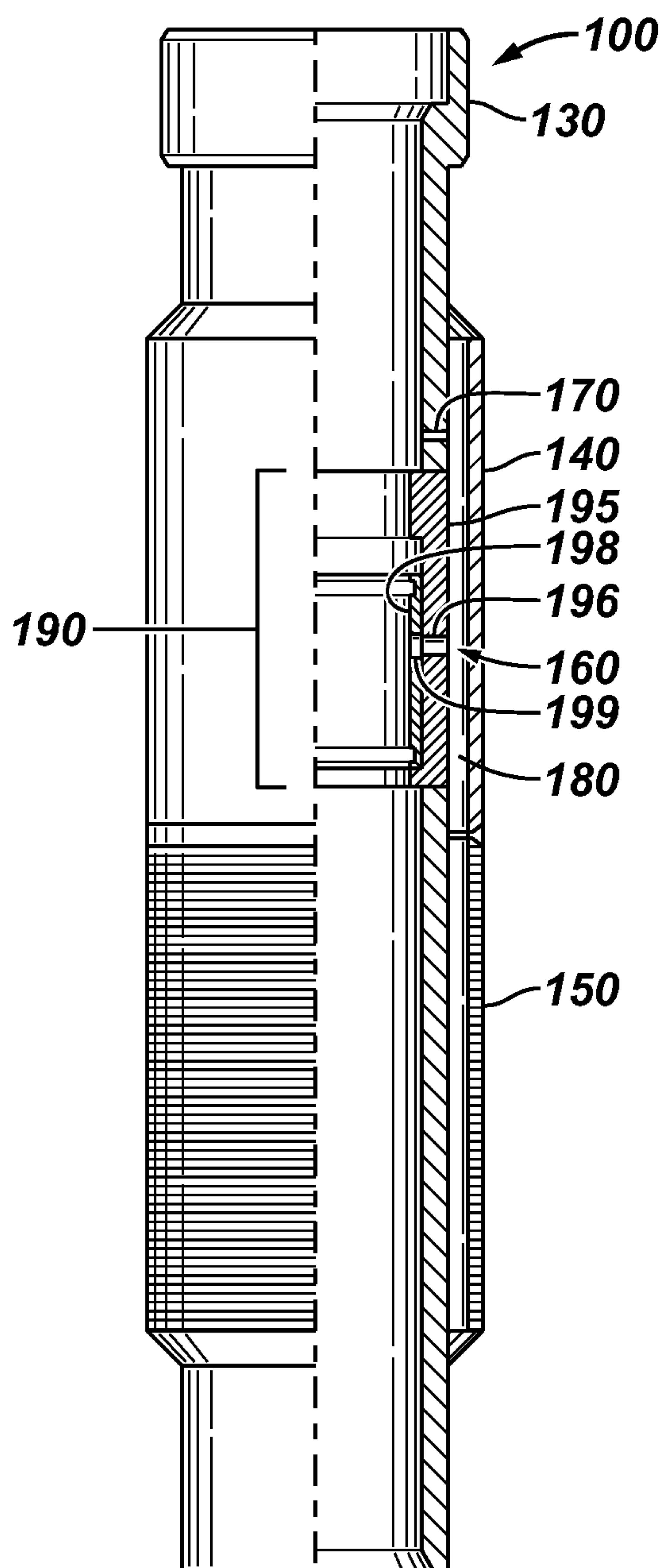
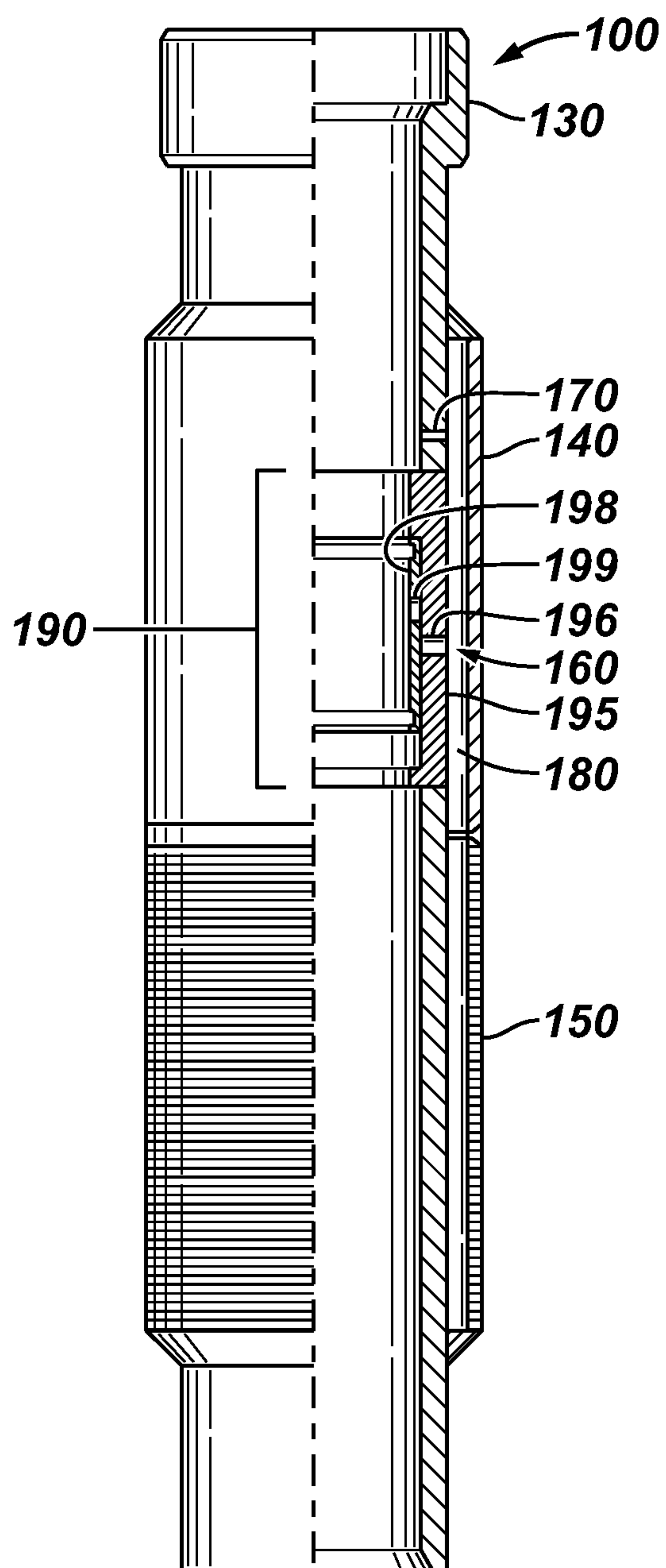
returning the carrier fluid to the surface through the flow port of at least one completion assembly;

placing the flow port of each completion assembly in a closed configuration;

and

producing hydrocarbons to the surface through the inflow control device of each completion assembly.

17. The method of claim 16, wherein at least one completion assembly comprises two or more inflow control device.
18. The method of claim 16, wherein placing the flow port in a closed configuration comprises axially moving a sliding sleeve.
19. The method of claim 16, wherein placing the flow port in a closed position comprises sealing the flow port with a sealing device.
20. The method of claim 16, wherein the gravel slurry is provided with a work string.
21. A downhole gravel pack completion with an integrated inflow control device comprising:
 - a first tubular member disposed at least partially within a second tubular member;
 - a chamber formed between the first tubular member and second tubular member;
 - a screen connected with the second tubular member and encircling at least a portion of the first tubular member; and
 - a selectively openable flow port hydraulically connected between the screen and the inner part of the first tubular member and an inflow control device or injection control device also hydraulically connected between the screen and the inner part of the first tubular member.

FIG. 1**FIG. 2**

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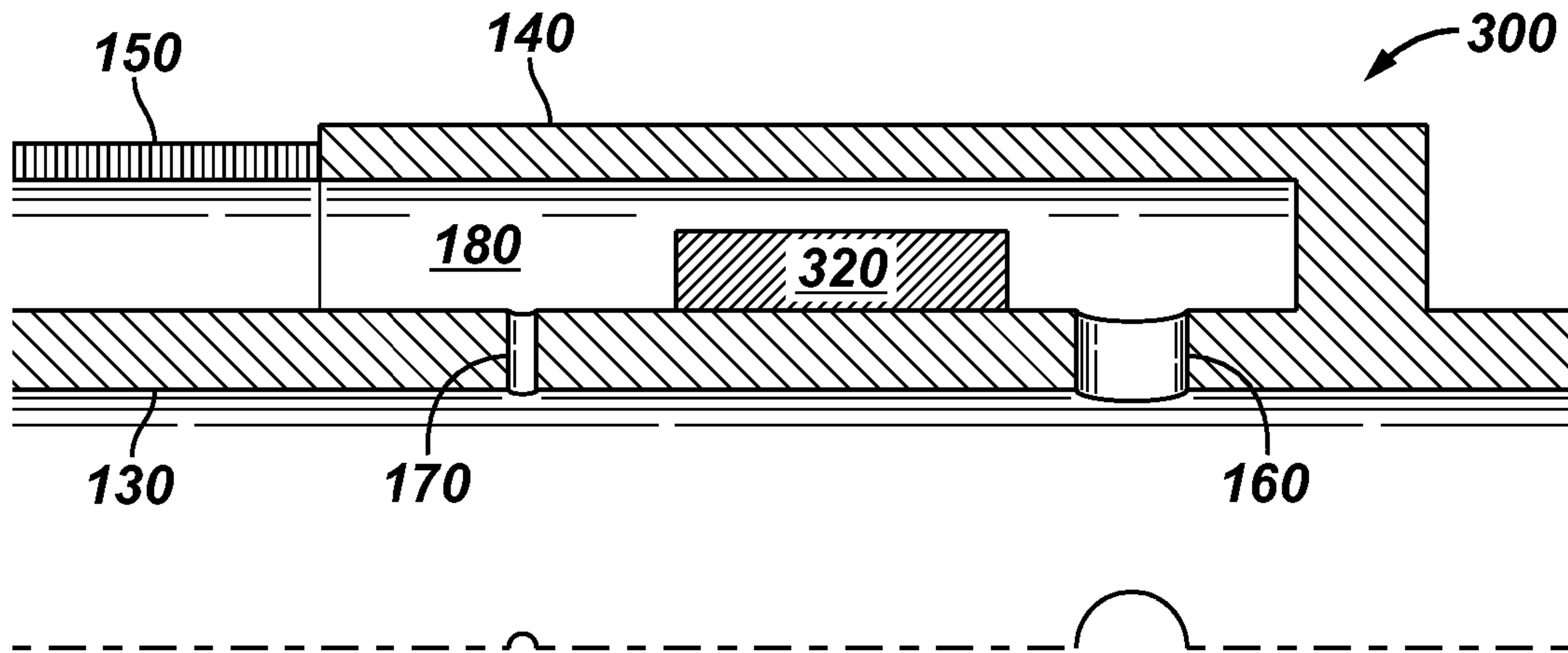
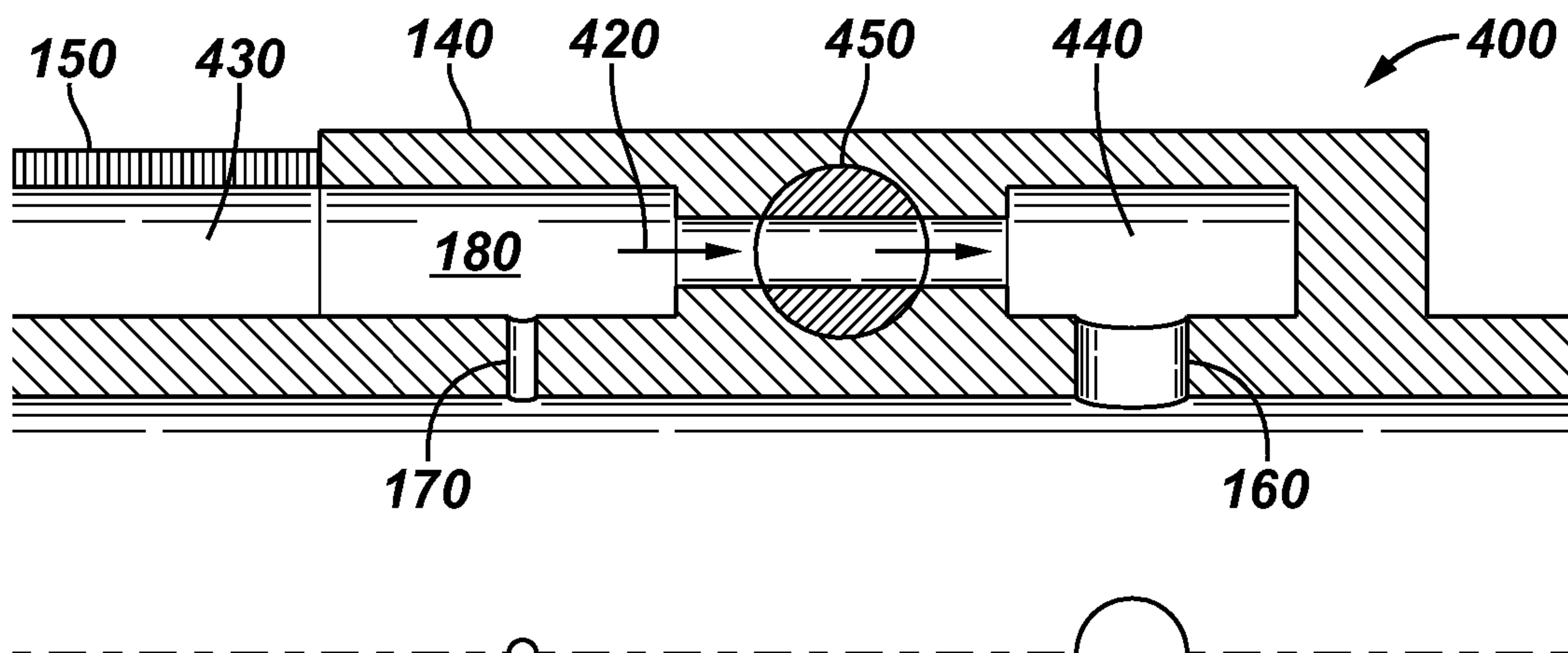
FIG. 3**FIG. 4**

FIG. 5

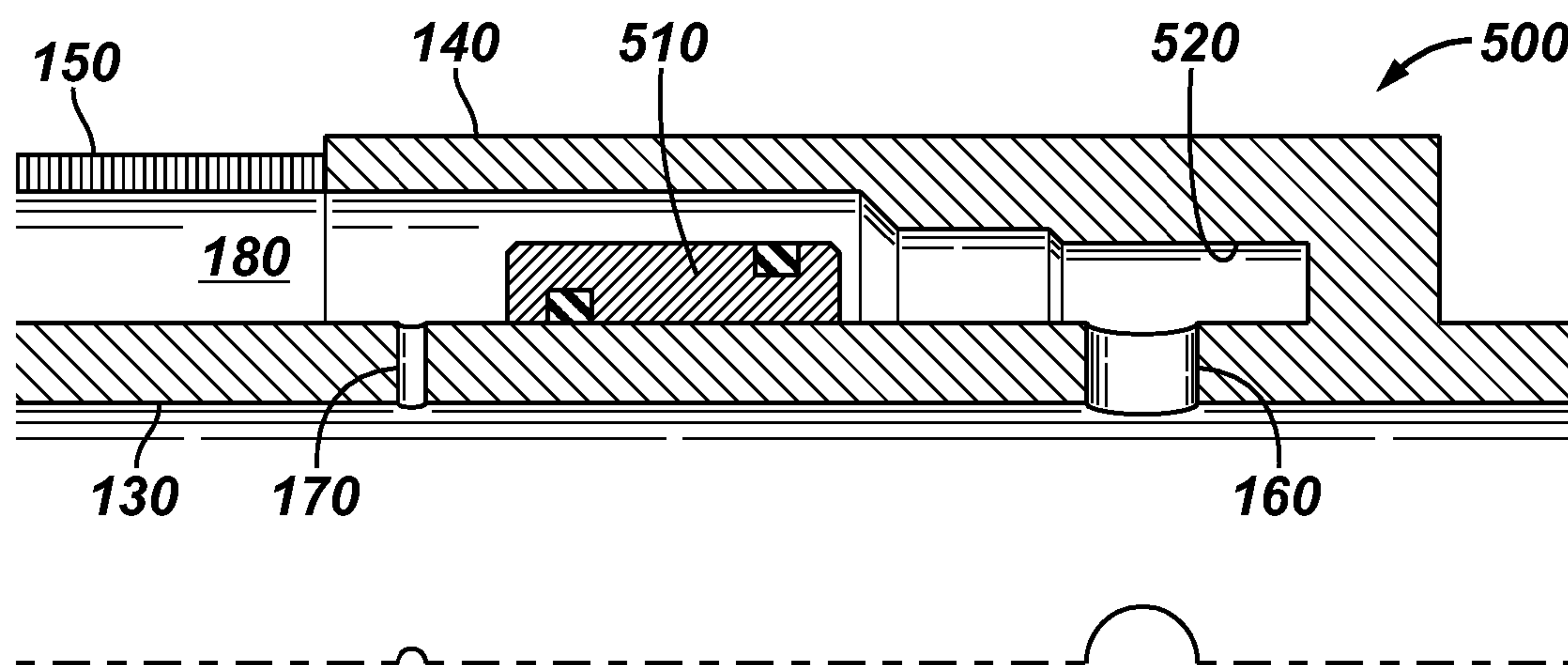


FIG. 6

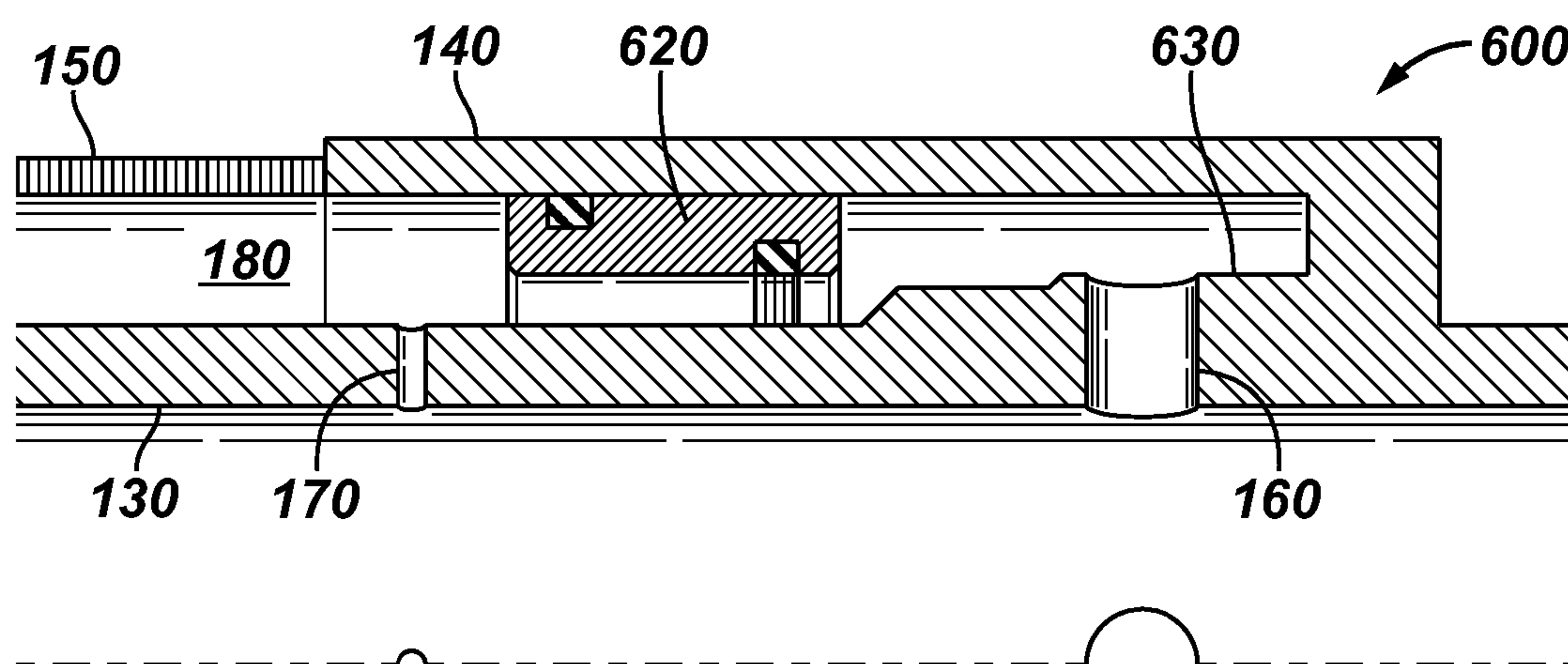


FIG. 7

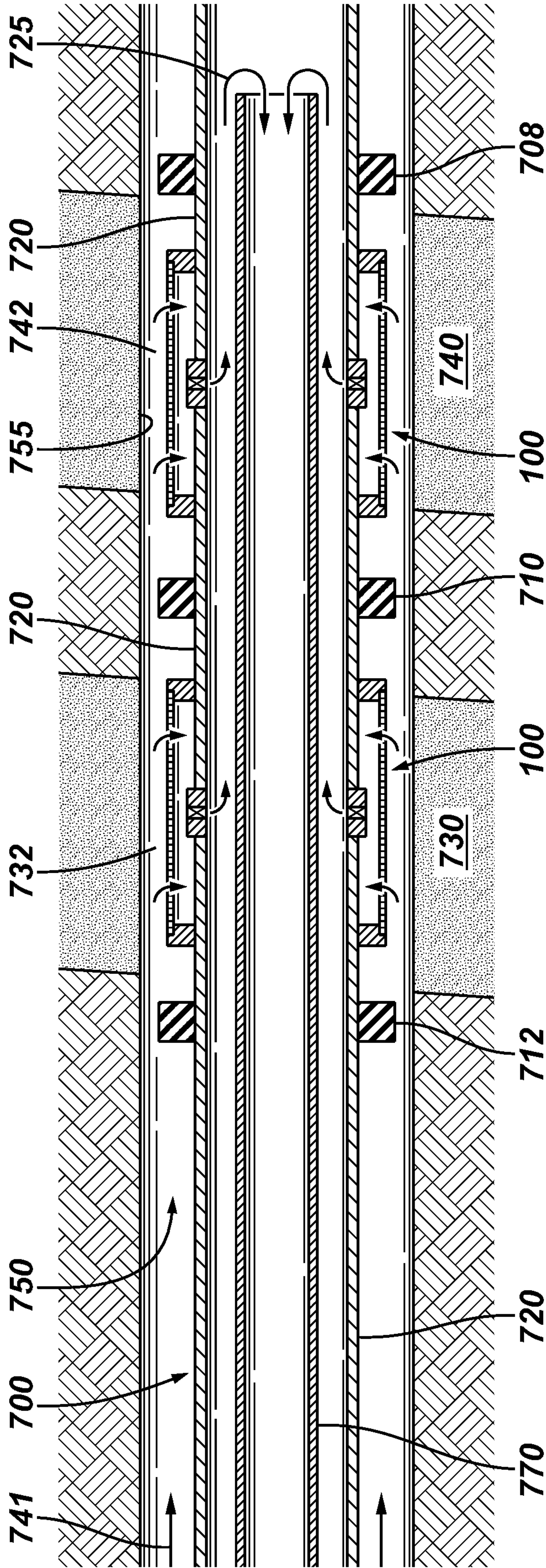


FIG. 1

