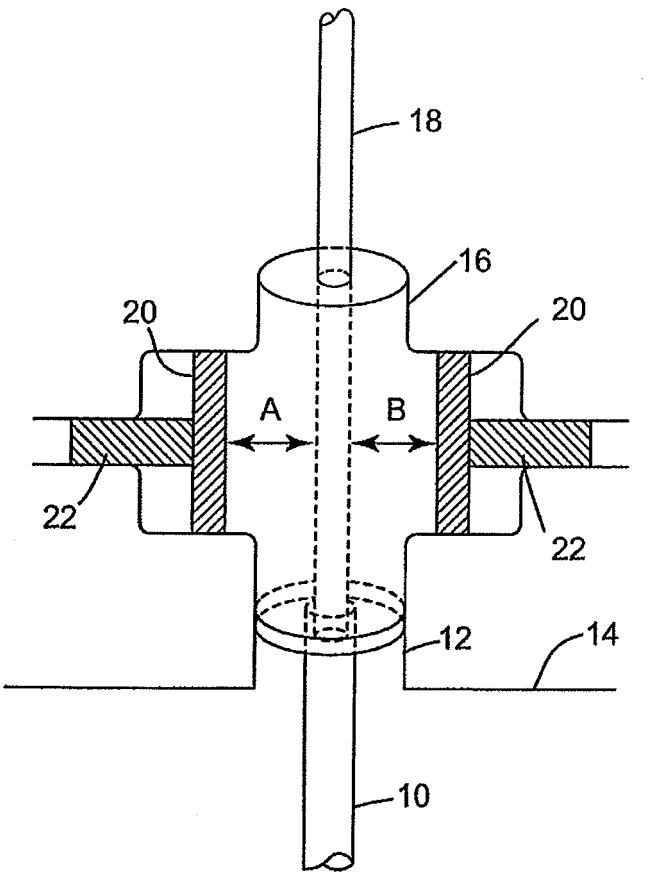
FIG. 1
Prior Art



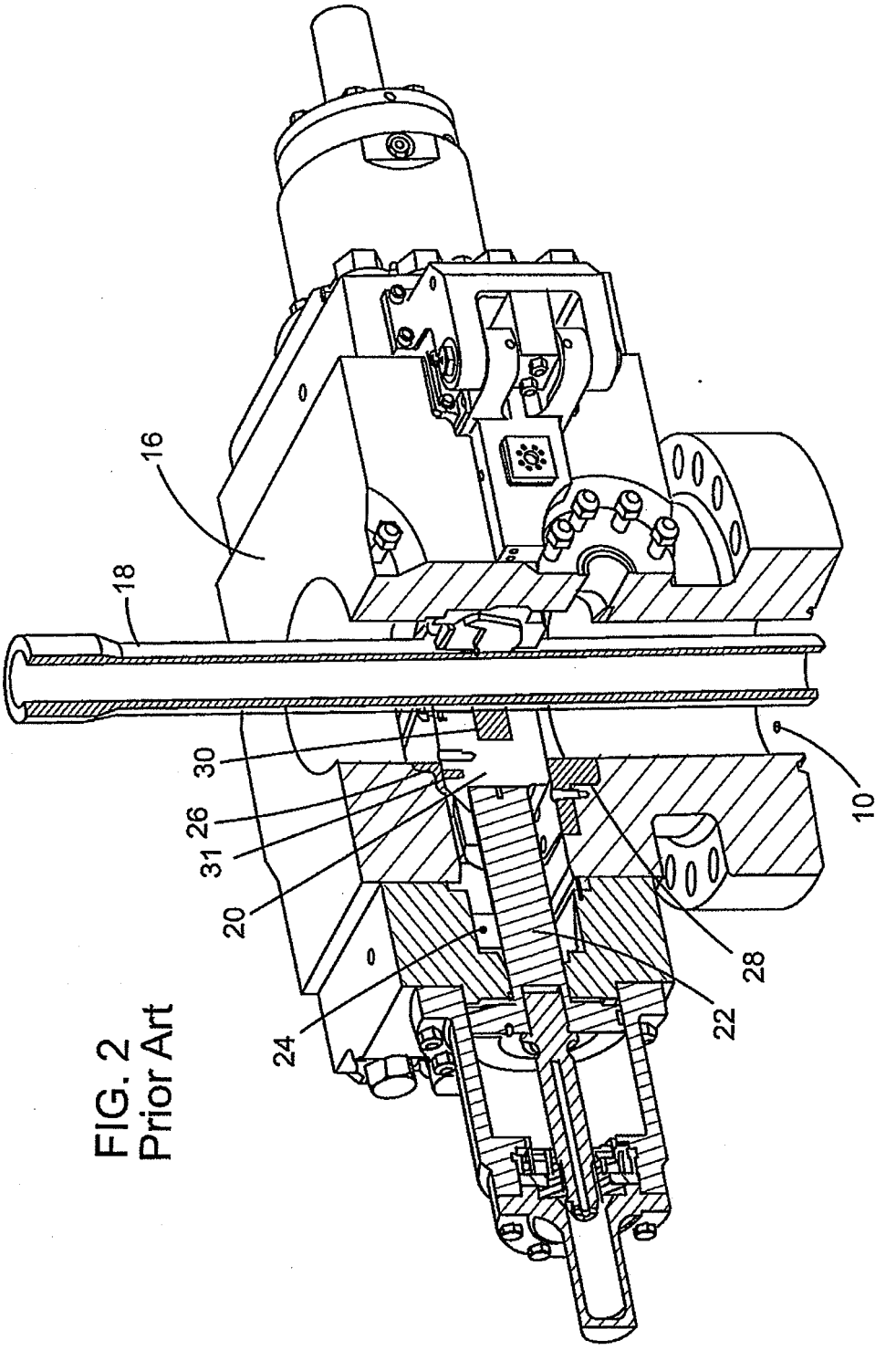


FIG. 2
Prior Art

FIG. 3

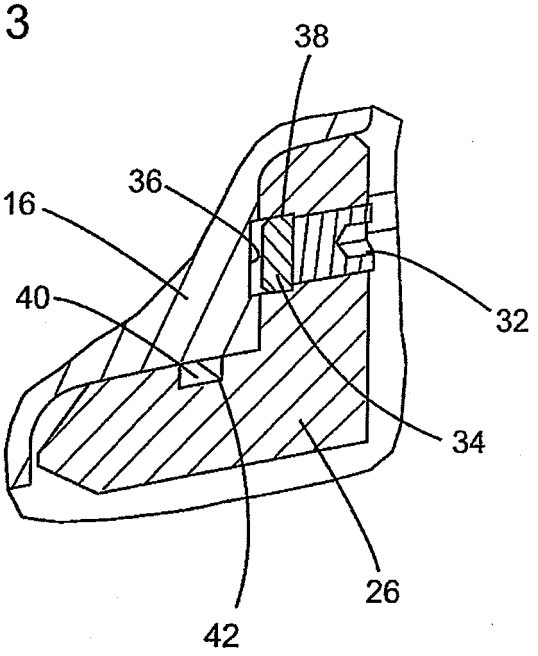


FIG. 4

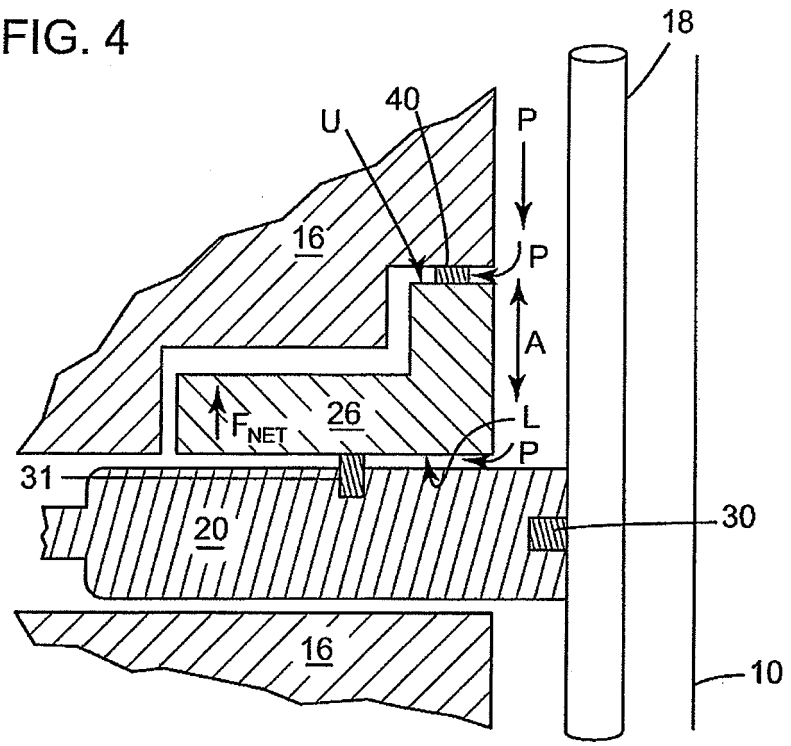


FIG. 5

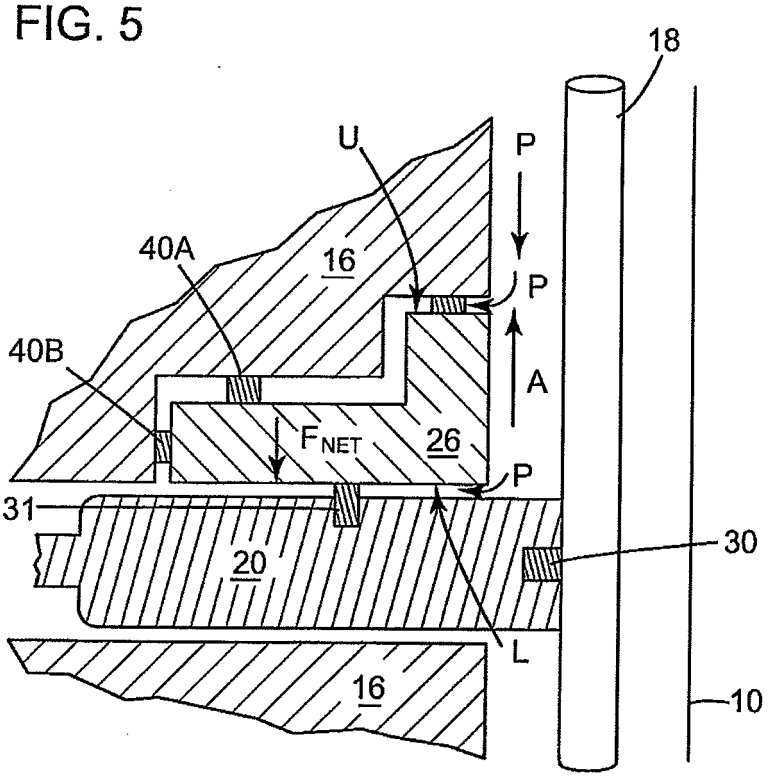


FIG. 6

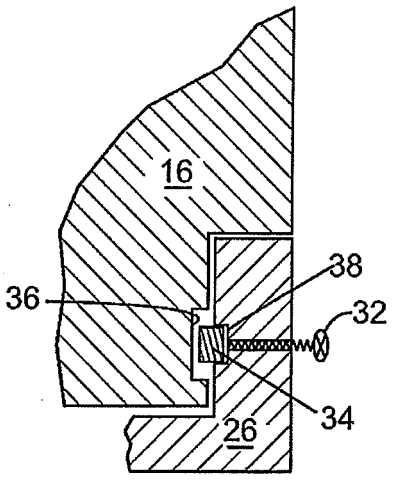


FIG. 7

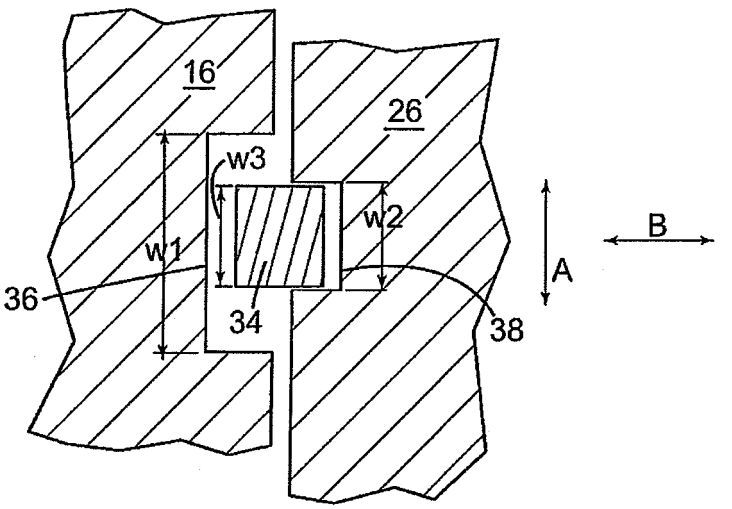


FIG. 8

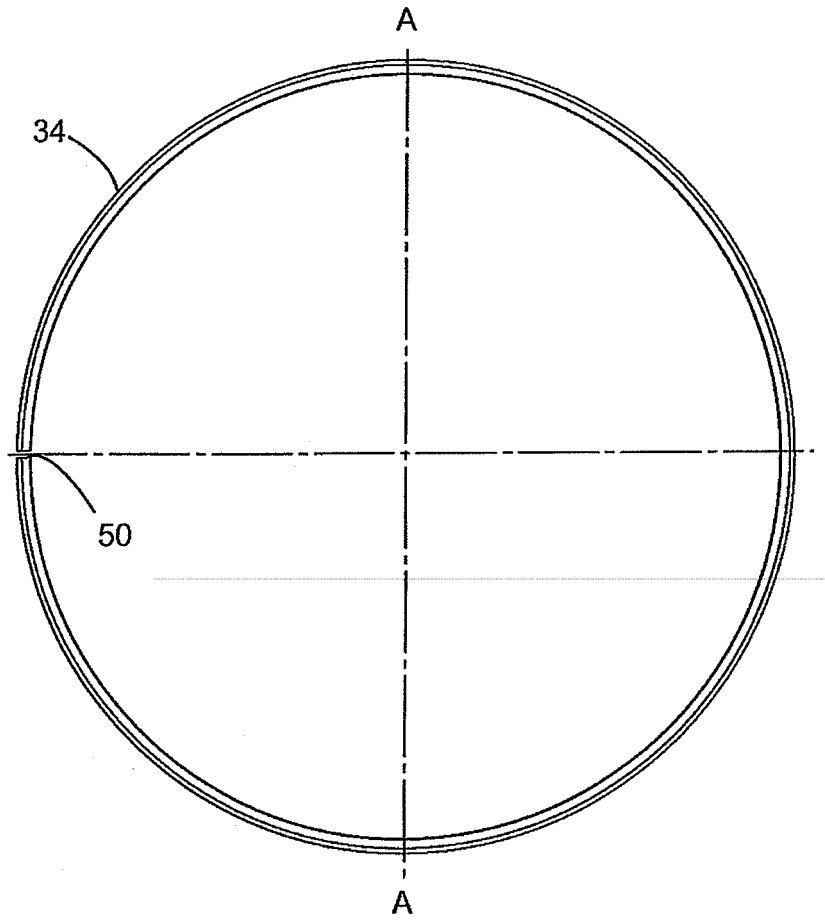


FIG. 9

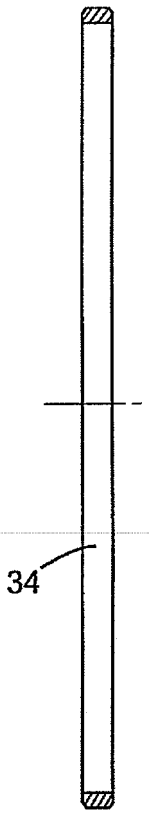


FIG. 10

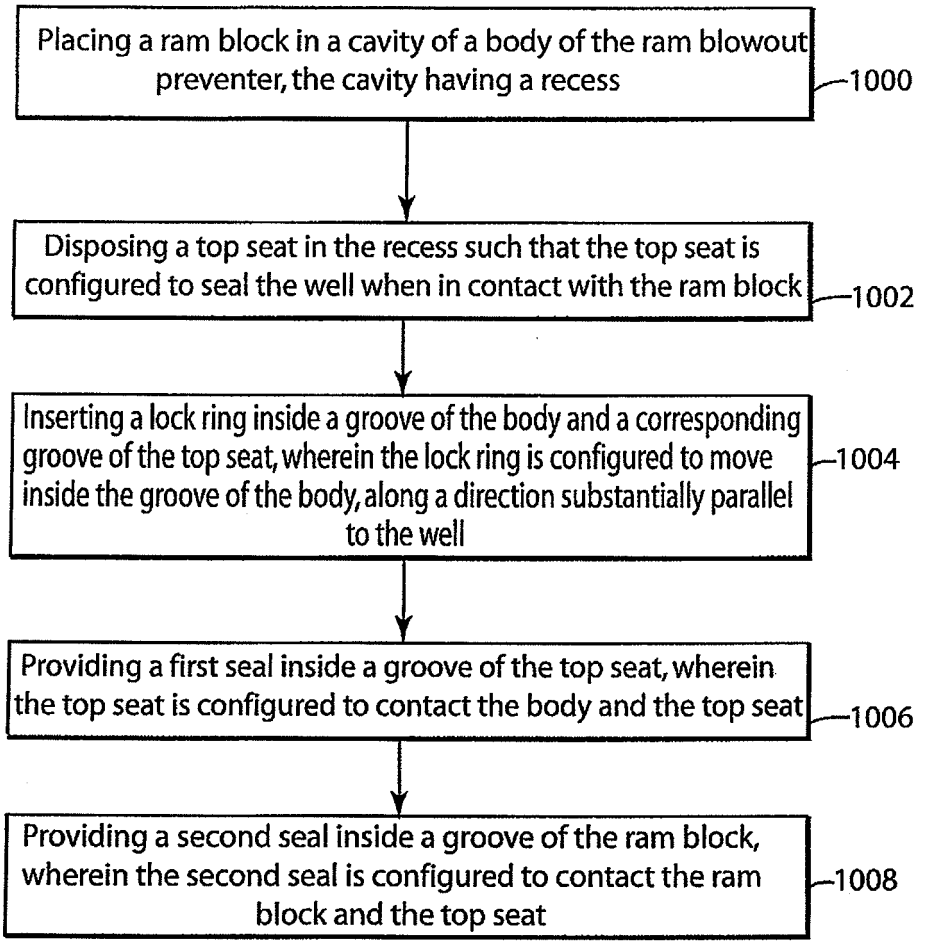

Placing a ram block in a cavity of a body of the ram blowout preventer, the cavity having a recess
1000
Disposing a top seat in the recess such that the top seat is configured to seal the well when in contact with the ram block
1002
Inserting a lock ring inside a groove of the body and a corresponding groove of the top seat, wherein the lock ring is configured to move inside the groove of the body, along a direction substantially parallel to the well
1004
Providing a first seal inside a groove of the top seat, wherein the top seat is configured to contact the body and the top seat
1006
Providing a second seal inside a groove of the ram block, wherein the second seal is configured to contact the ram block and the top seat
1008

FIG. 11

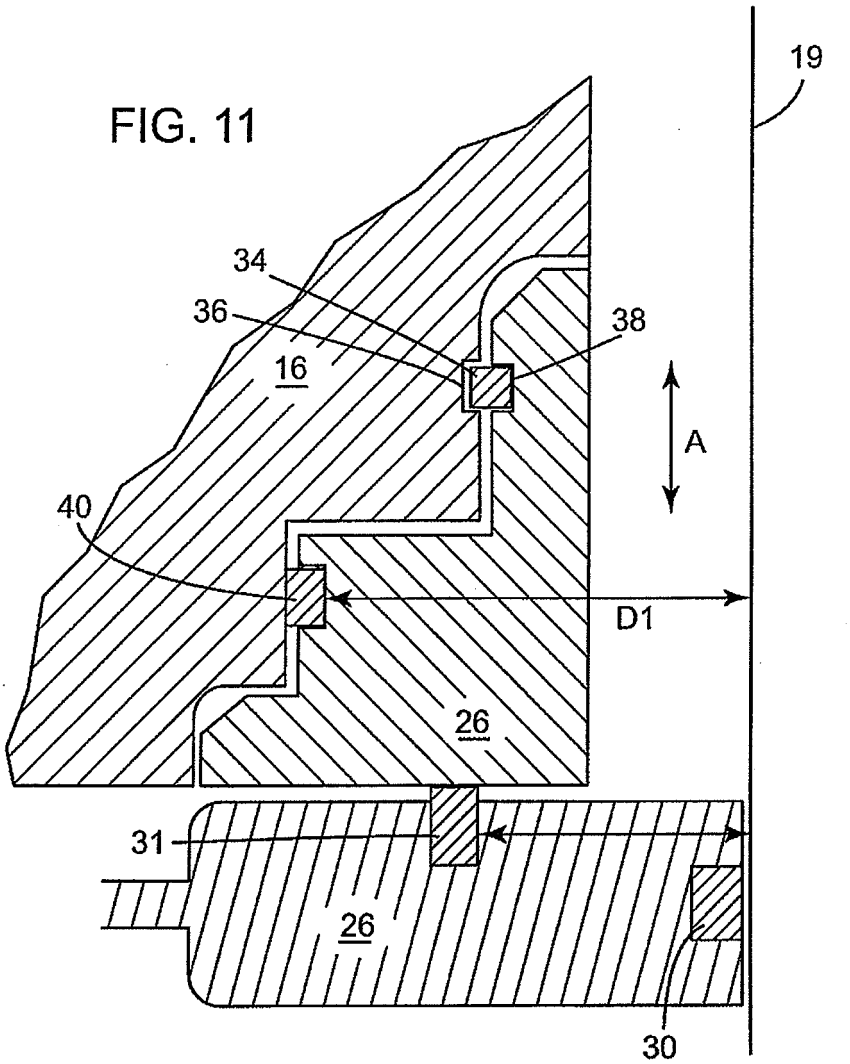


FIG. 12

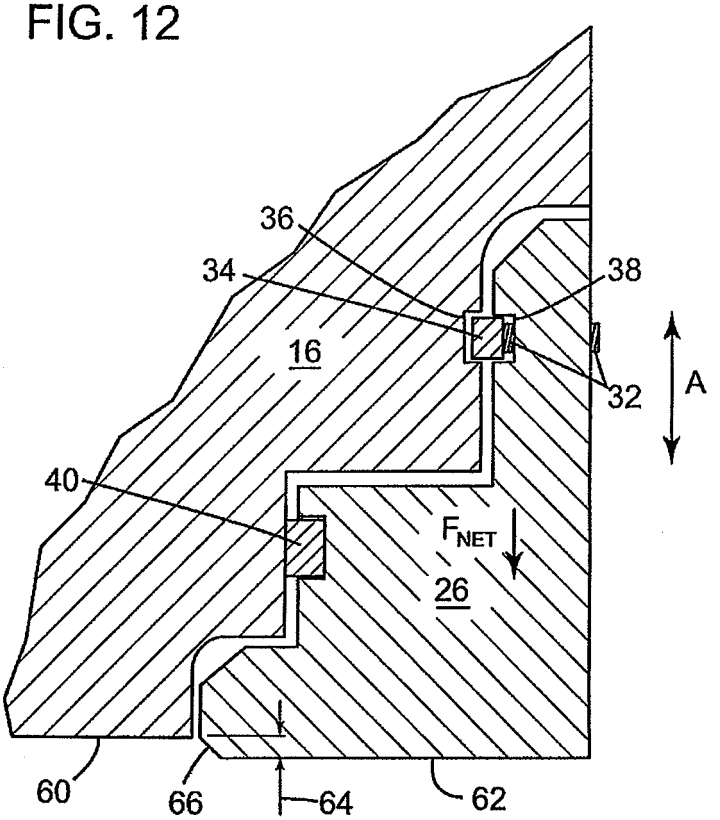
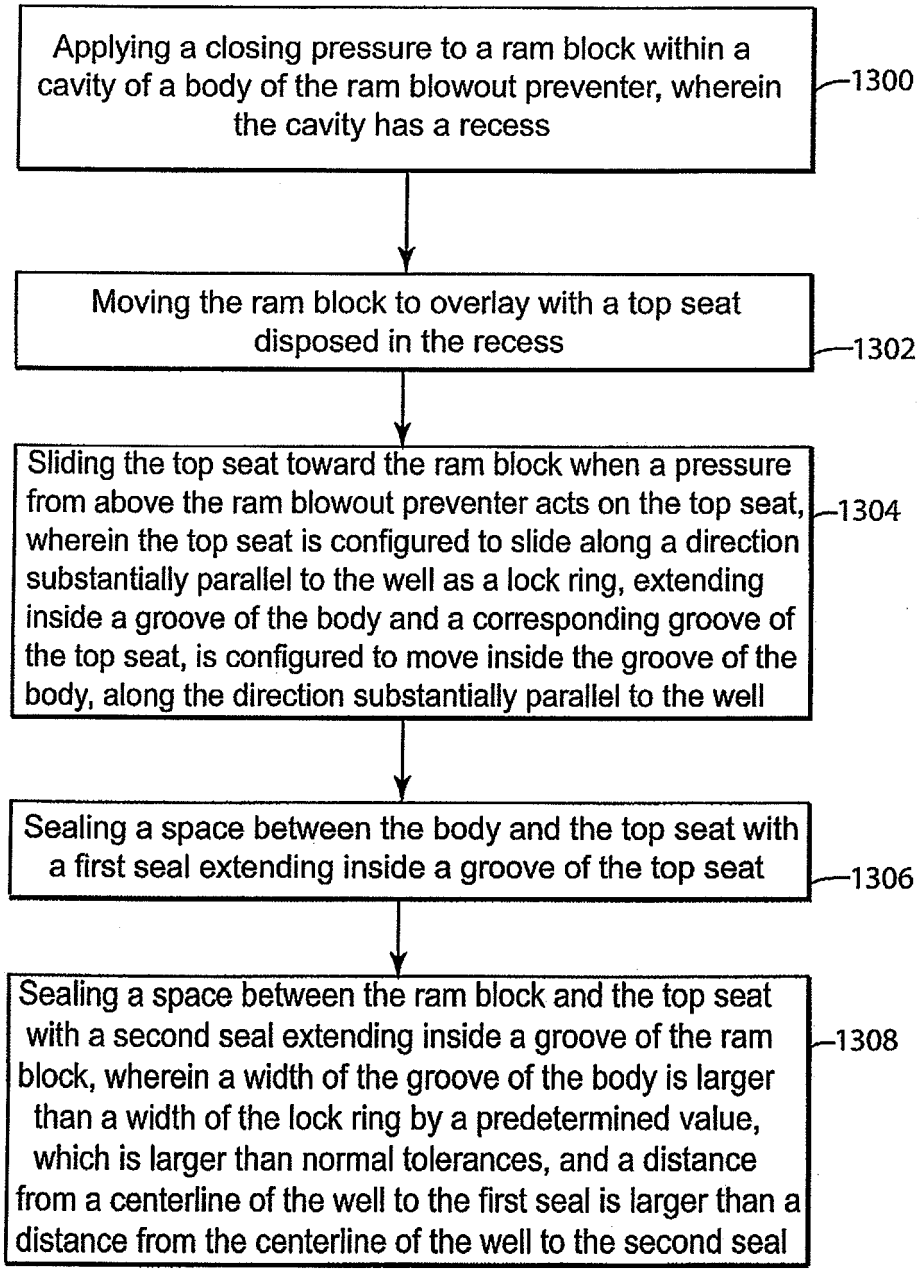


FIG. 13


Applying a closing pressure to a ram block within a cavity of a body of the ram blowout preventer, wherein the cavity has a recess
1300
Moving the ram block to overlay with a top seat disposed in the recess
1302
Sliding the top seat toward the ram block when a pressure from above the ram blowout preventer acts on the top seat, wherein the top seat is configured to slide along a direction substantially parallel to the well as a lock ring, extending inside a groove of the body and a corresponding groove of the top seat, is configured to move inside the groove of the body, along the direction substantially parallel to the well
1304
Sealing a space between the body and the top seat with a first seal extending inside a groove of the top seat
1306
Sealing a space between the ram block and the top seat with a second seal extending inside a groove of the ram block, wherein a width of the groove of the body is larger than a width of the lock ring by a predetermined value, which is larger than normal tolerances, and a distance from a centerline of the well to the first seal is larger than a distance from the centerline of the well to the second seal
1308