I claim:

1. A pressure equalizing system for a subterranean tool operable from a surface through a tubing string, comprising:

a housing having a passage therethrough and a movable member operable in said passage to selectively close said passage while defining a downhole pressure zone and an uphole pressure zone, said zones separated by an intermediate pressure zone such that said movable member is subjected to a positive pressure differential of said lower zone with respect to said intermediate zone;

said upper and intermediate zones separated by at least one seal, whereupon pressure buildup in said upper zone said seal is bypassed as pressure is changed in said intermediate zone as flow from said upper zone into said intermediate zone brings said intermediate zone closer to the pressure in said lower zone to facilitate movement of said movable member to open said passage.

2. The system of claim **1**, wherein:

said seal is a resilient ring seal.

3. The system of claim **2**, wherein:

said seal has a circular cross section.

4. The system of claim **2**, wherein:

said seal is disposed in a groove and extends against an opposed sealing surface until pressure buildup in said upper zone moves said seal from said opposed sealing surface to allow pressure to build in said intermediate zone.

5. The system of claim **4**, wherein:

said movable member comprises a ball having a flow path therethrough and an upper seat sleeve and a lower seat sleeve in sealing contact with said ball in said passage on opposed sides of said ball;

said seal is disposed on an outer surface of said upper seat sleeve to selectively seal against said opposing sealing surface located on said housing.

6. The system of claim **5**, wherein:

said upper seat sleeve defining a clearance with respect to said housing in a path leading from said upper pressure zone to said seal with said

intermediate pressure zone accessible on the opposite side of said seal from said clearance.

7. The system of claim **1**, wherein:

said seal comprises a gapped cross-section defined by spaced legs.

8. The system of claim **7**, wherein:

said gap is oriented toward said intermediate pressure zone.

9. The system of claim **8**, wherein:

said movable member comprises a ball having a flow path therethrough and an upper seat sleeve and a lower seat sleeve in sealing contact with said ball in said passage on opposed sides of said ball;

said seal is disposed on an outer surface of said upper seat sleeve to selectively seal against said opposing sealing surface located on said housing.

10. The system of claim **9**, wherein:

said ball is operated by a rod having a rod seal around it to seal to said housing to separate said high and intermediate pressure zones.

11. The system of claim **10**, wherein:

said ball is operated to rotate in opposed directions to open and close said passage by a force applied to said rod.

12. The system of claim **9**, wherein:

said lower seat sleeve further comprises a lower sleeve seal against said housing to isolate said lower pressure zone from said intermediate pressure zone.

13. The system of claim **9**, wherein:

said lower seat sleeve comprises a lower seat with a resilient seal in said lower seat contacting said ball;

said upper seat sleeve comprises an upper seat with a resilient seal in said upper seat contacting said ball.

14. The system of claim **13**, wherein:

a frame pivotally supports said ball on an axis through its center, said frame retaining said seals on said upper and lower seats to said ball.

15. The system of claim **14**, wherein:

a cage is mounted through said frame and is connected to said ball off center from where said ball is pivotally supported by said frame such that axial movement of said cage rotates said ball.

16. The system of claim **15**, wherein:

said ball is operated by a rod connected to said cage;

said rod having a rod seal around it to seal to said housing to separate said high and intermediate pressure zones.

17. The system of claim **16**, wherein:

said ball is operated to rotate in opposed directions to open and close said passage by a force applied to said rod and transferred to said cage.

18. The system of claim **7**, wherein:

said seal is metallic.

AMENDED CLAIMS
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1. A pressure equalizing system for a subterranean tool operable from a surface through a tubing string, comprising:

a housing having a passage therethrough and a movable member operable in said passage to selectively close said passage while defining a downhole pressure zone and an uphole pressure zone, said zones separated by an intermediate pressure zone such that said movable member is subjected to a positive pressure differential of said lower zone with respect to said intermediate zone;

said upper and intermediate zones separated by at least one seal that is functional for pressure isolation of differential pressure between said upper and intermediate zones when said movable member selectively closes said passage, whereupon pressure buildup in said upper zone above a predetermined value said seal is bypassed as pressure is changed in said intermediate zone as flow from said upper zone into said intermediate zone brings said intermediate zone closer to the pressure in said lower zone to facilitate movement of said movable member to open said passage.

2. The system of claim 1, wherein:

said seal is a resilient ring seal.

3. The system of claim 2, wherein:

said seal has a circular cross section.

4. The system of claim 2, wherein:

said seal is disposed in a groove and extends against an opposed sealing surface until pressure buildup in said upper zone moves said seal from said opposed sealing surface to allow pressure to build in said intermediate zone.

5. The system of claim 4, wherein:

said movable member comprises a ball having a flow path therethrough and an upper seat sleeve and a lower seat sleeve in sealing contact with said ball in said passage on opposed sides of said ball;

said seal is disposed on an outer surface of said upper seat sleeve to selectively seal against said opposing sealing surface located on said housing.

6. The system of claim **5**, wherein:

said upper seat sleeve defining a clearance with respect to said housing in a path leading from said upper pressure zone to said seal with said intermediate pressure zone accessible on the opposite side of said seal from said clearance.

7. The system of claim **1**, wherein:

said seal comprises a gapped cross-section defined by spaced legs.

8. The system of claim **7**, wherein:

said gap is oriented toward said intermediate pressure zone.

9. The system of claim **8**, wherein:

said movable member comprises a ball having a flow path therethrough and an upper seat sleeve and a lower seat sleeve in sealing contact with said ball in said passage on opposed sides of said ball;

said seal is disposed on an outer surface of said upper seat sleeve to selectively seal against said opposing sealing surface located on said housing.

10. The system of claim **9**, wherein:

said ball is operated by a rod having a rod seal around it to seal to said housing to separate said high and intermediate pressure zones.

11. The system of claim **10**, wherein:

said ball is operated to rotate in opposed directions to open and close said passage by a force applied to said rod.

12. The system of claim **9**, wherein:

said lower seat sleeve further comprises a lower sleeve seal against said housing to isolate said lower pressure zone from said intermediate pressure zone.

13. The system of claim **9**, wherein:

said lower seat sleeve comprises a lower seat with a resilient seal in said lower seat contacting said ball;

said upper seat sleeve comprises an upper seat with a resilient seal in said upper seat contacting said ball.

14. The system of claim **13**, wherein:

a frame pivotally supports said ball on an axis through its center, said frame retaining said seals on said upper and lower seats to said ball.

15. The system of claim **14**, wherein:

a cage is mounted through said frame and is connected to said ball off center from where said ball is pivotally supported by said frame such that axial movement of said cage rotates said ball.

16. The system of claim **15**, wherein:

said ball is operated by a rod connected to said cage;

said rod having a rod seal around it to seal to said housing to separate said high and intermediate pressure zones.

17. The system of claim **16**, wherein:

said ball is operated to rotate in opposed directions to open and close said passage by a force applied to said rod and transferred to said cage.

18. The system of claim **7**, wherein:

said seal is metallic.

I claim:

1. A pressure equalizing system for a subterranean tool operable from a surface through a tubing string, comprising:

a housing having a passage therethrough and a movable member operable in said passage to selectively close said passage while defining a downhole pressure zone and an uphole pressure zone with respect to the moveable member, said zones separated by an intermediate pressure zone at the moveable member such that said movable member is subjected to a positive pressure differential of said downhole pressure zone with respect to said intermediate zone;

said uphole pressure and intermediate zones separated by at least one seal that is functional for pressure isolation of differential pressure between said uphole pressure and intermediate zones when said movable member selectively closes said passage, whereupon pressure buildup in said uphole pressure zone above a predetermined value said seal is bypassed as pressure is changed in said intermediate zone as flow from said uphole pressure zone into said intermediate zone brings said intermediate zone closer to the pressure in said downhole pressure zone to facilitate movement of said movable member to open said passage.

2. The system of claim **1**, wherein:

said seal is a resilient ring seal.

3. The system of claim **2**, wherein:

said seal has a circular cross section.

4. The system of claim **2**, wherein:

said seal is disposed in a groove and extends against an opposed sealing surface until pressure buildup in said uphole pressure zone moves said seal from said opposed sealing surface to allow pressure to build in said intermediate zone.

5. The system of claim **4**, wherein:

said movable member comprises a ball having a flow path therethrough and an upper seat sleeve and a lower seat sleeve in sealing contact with said ball in said passage on opposed sides of said ball;

said seal is disposed on an outer surface of said upper seat sleeve to selectively seal against said opposing sealing surface located on said housing.

6. The system of claim **5**, wherein:

said upper seat sleeve defining a clearance with respect to said housing in a path leading from said upper pressure zone to said seal with said intermediate pressure zone accessible on the opposite side of said seal from said clearance.

7. The system of claim **1**, wherein:

said seal comprises a gapped cross-section defined by spaced legs.

8. The system of claim **7**, wherein:

said gap is oriented toward said intermediate pressure zone.

9. The system of claim **8**, wherein:

said movable member comprises a ball having a flow path therethrough and an upper seat sleeve and a lower seat sleeve in sealing contact with said ball in said passage on opposed sides of said ball;

said seal is disposed on an outer surface of said upper seat sleeve to selectively seal against said opposing sealing surface located on said housing.

10. The system of claim **9**, wherein:

said ball is operated by a rod having a rod seal around it to seal to said housing to separate said high and intermediate pressure zones.

11. The system of claim **10**, wherein:

said ball is operated to rotate in opposed directions to open and close said passage by a force applied to said rod.

12. The system of claim **9**, wherein:

said lower seat sleeve further comprises a lower sleeve seal against said housing to isolate said lower pressure zone from said intermediate pressure zone.

13. The system of claim **9**, wherein:

said lower seat sleeve comprises a lower seat with a resilient seal in said lower seat contacting said ball;

said upper seat sleeve comprises an upper seat with a resilient seal in said upper seat contacting said ball.

14. The system of claim **13**, wherein:

a frame pivotally supports said ball on an axis through its center, said frame retaining said seals on said upper and lower seats to said ball.

15. The system of claim **14**, wherein:

a cage is mounted through said frame and is connected to said ball off center from where said ball is pivotally supported by said frame such that axial movement of said cage rotates said ball.

16. The system of claim **15**, wherein:

said ball is operated by a rod connected to said cage;

said rod having a rod seal around it to seal to said housing to separate said high and intermediate pressure zones.

17. The system of claim **16**, wherein:

said ball is operated to rotate in opposed directions to open and close said passage by a force applied to said rod and transferred to said cage.

18. The system of claim **7**, wherein:

said seal is metallic.