We claim:

1. A pressure equalizing system for a subterranean tool, comprising:

a movable component in a housing having a housing passage extending from an uphole end to a downhole end, said component having at least two positions and configured in said passage to trap pressure in a first zone of said housing when said movable component is placed in a first position where said trapped pressure is at a lower pressure than pressure isolated adjacent said downhole end by said movable component in said first position;

a selectively opened pressure responsive bypass with flow access to said uphole end that extends into said zone so that pressure delivered to said uphole end will enter said zone to equalize pressure in said zone with pressure near said isolated downhole end to facilitate moving said movable member to a second position.

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

said bypass further comprises at least one check valve.

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

said at least one check valve comprises a plurality of check valves.

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

said check valves are disposed in series in said bypass.

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

said bypass extends through a wall of said housing.

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

said bypass extends axially in the wall of said housing having an inlet between said uphole end and said movable member and an outlet into said zone.

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

said movable member comprises a ball having a flow passage therethrough;

said zone is defined in part by said flow passage when said ball is positioned to close said housing passage.

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

said bypass comprises at least one check valve.

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

said at least one check valve comprises at least two check valves.

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

said check valves are disposed in series in said bypass.

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

said bypass comprises at least one screen.

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

said at least one screen comprises two screens with one screen near said inlet and the other near said outlet.

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

said bypass further comprises at least one check valve between said screens.

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

said bypass comprises at least one screen.

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

said at least one screen comprises two screens with one screen near said inlet and the other near said outlet and said check valves in between.

16. The system of claim **15**, further comprising:

an upper seat sleeve located between said uphole end and said ball and a lower seat sleeve located between said downhole end and said ball;

said sleeves each presenting a seat in contact with said ball when said ball is in a first position defining said zone with said flow passage therethrough with pressure in said lower sleeve isolated from pressure in said upper sleeve with said zone in between;

said sleeves externally sealed to said housing passage.

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

said inlet to said bypass located between said uphole end and said upper seat sleeve,

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

said bypass comprises at least one screen.

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

said at least one screen comprises two screens with one screen near said inlet and the other near said outlet.

20. The system of claim **19**, wherein:

said check valves are located between said screens.

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

said check valve comprises a valve member having an elongated stem leading to a tapered surface that further comprises a seal, said check valve further comprising a housing to guide said stem and an opposing tapered surface to said tapered surface on said valve member and a biasing member to push said tapered surfaces toward each other.

22. The system of claim **21**, wherein:

said stem defines a flow path that upon application of pressure therein displaces said valve member against said biasing member to permit flow in one direction only.

We Claim:

1. A pressure equalizing system for a subterranean tool, comprising:

a movable component in a housing having a housing passage extending from an uphole end to a downhole end, said component having at least two positions where said passage is open and closed and configured in said passage to trap pressure in a first zone of said housing when said movable component is placed in a first position where said passage is closed and where said trapped pressure is at a lower pressure than pressure isolated adjacent said downhole end by said movable component in said first position;

a bypass within a wall of said housing having an inlet in said passage with access to said uphole end and ending in said zone so that pressure at a predetermined level delivered to said uphole end from within said passage selectively opens a re-closable valve mounted wholly in said bypass to equalize pressure in said zone with pressure near said isolated downhole of said passage to facilitate moving said movable member to a second position, said valve automatically closing on reduction of uphole end pressure below said predetermined level.

2. A pressure equalizing system for a subterranean tool, comprising:

a movable component in a housing having a housing passage extending from an uphole end to a downhole end, said component having at least two positions where said passage is open and closed and configured in said passage to trap pressure in a first zone of said housing when said movable component is placed in a first position where said passage is closed and where said trapped pressure is at a lower pressure than pressure isolated adjacent said downhole end by said movable component in said first position;

a bypass within a wall of said housing having an inlet in said passage with access to said uphole end and ending in said zone so that pressure at a predetermined level delivered to said uphole end from within said passage selectively opens a re-closable valve mounted wholly in said bypass to equalize pressure in said zone with pressure near said isolated downhole end of said passage to facilitate moving said movable member to a second position, said valve automatically closing on reduction of uphole end pressure below said predetermined level;

said passage further comprises at least one check valve.

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

said at least one check valve comprises a plurality of check valves.

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

said check valves are disposed in series in said bypass.

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

said bypass extends through a wall of said housing.

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

said bypass extends axially in the wall of said housing having an inlet between said uphole end and said movable member and an outlet into said zone.

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

said movable member comprises a ball having a flow passage therethrough;

said zone is defined in part by said flow passage when said ball is positioned to close said housing passage.

8. A pressure equalizing system for a subterranean tool, comprising:

a movable component in a housing having a housing passage extending from an uphole end to a downhole end, said component having at least two positions where said passage is open and closed and configured in said passage to trap pressure in a first zone of said housing when said movable component is placed in a first position where said passage is closed and where said trapped pressure is at a lower pressure than pressure isolated adjacent said downhole end by said movable component in said first position;

a bypass within a wall of said housing having an inlet in said passage with access to said uphole end and ending in said zone so that pressure at a predetermined level delivered to said uphole end from within said passage selectively opens a re-closable valve mounted wholly in said bypass to equalize pressure in said zone with pressure near said isolated downhole end of said passage to facilitate moving said movable member to a second position, said valve automatically closing on reduction of uphole end pressure below said predetermined level;

said bypass extends through a wall of said housing;

said bypass extends axially in the wall of said housing having an inlet between said uphole end and said movable member and an outlet into said zone;

said movable member comprises a ball having a flow passage therethrough;

said zone is defined in part by said flow passage when said ball is positioned to close said housing passage;

said passage comprises at least one check valve.

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

said at least one check valve comprises at least two check valves.

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

said check valves are disposed in series in said bypass.

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

said bypass comprises at least one screen.

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

said at least one screen comprises two screens with one screen near said inlet and the other near said outlet.

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

A pressure equalizing system for a subterranean tool, comprising:

a movable component in a housing having a housing passage extending from an uphole end to a downhole end, said component having at least two positions where said passage is open and closed and configured in said passage to trap pressure in a first zone of said housing when said movable component is placed in a first position where said passage is closed and where said trapped pressure is at a lower pressure than pressure isolated adjacent said downhole end by said movable component in said first position;

a bypass within a wall of said housing having an inlet in said passage with access to said uphole end and ending in said zone so that pressure at a predetermined level delivered to said uphole end from within said passage selectively opens a re-closable valve mounted

wholly in said bypass to equalize pressure in said zone with pressure near said isolated downhole end of said passage to facilitate moving said movable member to a second position, said valve automatically closing on reduction of uphole end pressure below said predetermined level;

said bypass extends through a wall of said housing;

said bypass extends axially in the wall of said housing having an inlet between said uphole end and said movable member and an outlet into said zone;

said bypass comprises at least one screen;

said at least one screen comprises two screens with one screen near said inlet and the other near said outlet;

said passage further comprises at least one check valve between said screens.

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

said bypass comprises at least one screen.

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

said at least one screen comprises two screens with one screen near said inlet and the other near said outlet and said check valves in between.

16. The system of claim **15**, further comprising:

an upper seat sleeve located between said uphole end and said ball and a lower seat sleeve located between said downhole end and said ball;

said sleeves each presenting a seat in contact with said ball when said ball is in a first position defining said zone with said flow passage therethrough with pressure in said lower sleeve isolated from pressure in said upper sleeve with said zone in between;

said sleeves externally sealed to said housing passage.

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

said inlet to said bypass located between said uphole end and said upper seat sleeve,

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

said bypass comprises at least one screen.

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

said at least one screen comprises two screens with one screen near said inlet and the other near said outlet.

20. The system of claim **19**, wherein:

said check valves are located between said screens.

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

said check valve comprises a valve member having an elongated stem leading to a tapered surface that further comprises a seal, said check valve further comprising a housing to guide said stem and an opposing tapered surface to said tapered surface on said valve member and a biasing member to push said tapered surfaces toward each other.

22. The system of claim **21**, wherein:

said stem defines a flow path that upon application of pressure therein displaces said valve member against said biasing member to permit flow in one direction only.