WHAT IS CLAIMED IS:

1. An improved machine-actuated removable safety closure for a tubular member, the closure including a plurality of cam-actuated leaves residing above a cam plate of a plug body of the closure, the cam plate including drive holes for receiving respective drive pins of a rotatable plug holder, the drive pins of the rotatable plug holder engaging the drive holes of the cam plate and moving the plurality of cam-actuated leaves between a retracted first position and an expanded second position as the rotatable plug holder rotates between a start position and an end position, the improvement comprising:

the rotatable plug holder having a latch;

the plug body having a central hub with means for receiving the latch;

a bypass valve located within the plug body; and

a first and a second anti-rotation slot, the first anti-rotation slot being located on an external circumferential surface of the plug body, the second anti-rotation slot being located on an internal circumferential surface of a flange of a tubular member which receives the plug body;

wherein the latch when received by the receiving means aligns at least one of the drive pins of the rotatable plug holder above a respective drive hole of the cam plate, the first and second anti-rotation slots arranged to interlock with one another and prevent relative rotation of the plug body relative to the flange when the plug body is in a final sealing position;

and wherein the bypass valve when in a closed position interferes with movement of the plurality of cam-actuated leaves.

2. An improved machine-actuated removable safety closure for a tubular member, the closure including a plurality of cam-actuated leaves residing above a cam plate of a plug body of the closure, the cam plate including drive holes for receiving respective drive pins of a rotatable plug holder, the drive pins of the rotatable plug holder engaging the drive holes of the cam plate and moving the plurality of cam-actuated leaves between a retracted first position and an expanded second position as the rotatable plug

holder rotates between a start position and an end position, the improvement comprising:

the rotatable plug holder having a latch;

the plug body having a central hub with means for receiving the latch; and

a bypass valve;

wherein the latch when received by the receiving means aligns at least one of the drive pins of the rotatable plug holder above a respective drive hole of the cam plate

and wherein the bypass valve when in a closed position interferes with movement of the plurality of cam-actuated leaves.

3. An improvement according to claim 2 further comprising a rotational stop, wherein the rotational stop aligns at least one of the drive pins of the rotatable plug holder above a respective drive hole of the cam plate prior to the latch engaging the receiving means.

4. An improvement according to claim 3 wherein the rotational stop is located on an upper surface of the cam plate.

5. An improvement according to claim 3 wherein the rotational stop is located on an upper surface of the plug body.

6. An improvement according to claim 2 wherein the latch is a static latch.

7. An improvement according to claim 2 further comprising means for temporarily securing the rotatable plug holder to a boring bar of a tapping machine.

~~8. An improvement according to claim 2 further comprising a bypass valve, the bypass valve when in a closed position interfering with movement of the plurality of cam-actuated leaves.~~

~~9~~8. An improvement according to claim ~~8~~2 wherein the bypass valve is not concentric with the plug body.

~~10~~9. An improvement according to claim 2 further comprising a first and a second anti-rotation slot;

the first anti-rotation slot being located on an external circumferential surface of the plug body;

the second anti-rotation slot being located on an internal circumferential surface of a flange of a tubular member which receives the plug body;

the first and second anti-rotation slots arranged to interlock with one another.

~~11~~10. An improved machine-actuated removable safety closure for a tubular member, the closure including a plurality of cam-actuated leaves residing above a cam plate of a plug body of the closure, the cam plate including drive holes for receiving respective drive pins of a rotatable plug holder, the drive pins of the rotatable plug holder engaging the drive holes of the cam plate and moving the plurality of cam-actuated leaves between a retracted first position and an expanded second position as the rotatable plug holder rotates between a start position and an end position, the improvement comprising:

a first and a second anti-rotation slot;

the first anti-rotation slot being located on an external circumferential surface of the plug body;

the second anti-rotation slot being located on an internal circumferential surface of a flange of a tubular member which receives the plug body;

the first and second anti-rotation slots arranged to interlock with one another and prevent relative rotation of the plug body relative to the flange when the plug body is in a final sealing position; and

a bypass valve, the bypass valve when in a closed position interfering with movement of the plurality of cam-actuated leaves.

~~12~~11. An improvement according to claim ~~11~~10 further comprising:

the rotatable plug holder having a latch; and

the plug body having a central hub with means for receiving the latch~~.~~; and

wherein the latch when received by the receiving means aligns at least one of the drive pins of the rotatable plug holder above a respective drive hole of the cam plate.

~~13~~12. An improvement according to claim 11 further comprising a rotational stop, wherein the rotational stop aligns at least one of the drive pins of the rotatable plug holder above a respective drive hole of the cam plate prior to the latch engaging the receiving means.

~~14~~13. An improvement according to claim ~~13~~ 12 wherein the rotational stop is located on an upper surface of the cam plate.

~~15~~14. An improvement according to claim ~~13~~ 12 wherein the rotational stop is located on an upper surface of the plug body.

~~16~~15. An improvement according to claim 11 wherein the latch is a static latch.

~~17~~16. An improvement according to claim ~~11~~ 10 further comprising means for temporarily securing the rotatable plug holder to a boring bar of a tapping machine.

~~18. An improvement according to claim 11 further comprising a bypass valve, the bypass valve when in a closed position interfering with movement of the plurality of cam-actuated leaves.~~

~~19~~17. An improvement according to claim ~~16~~ 10 wherein the bypass valve is not concentric with the plug body.