Claims

What is claimed is:

1. A push button device, comprising:

a retainer with opposing top and bottom ends ~~having~~ and an axial bore~~,~~ including a square recess section of the axial bore in ~~an upper portion~~the top end of the retainer, and a collar ~~of reduced diameter~~ at a distal portion of the top ~~most~~ end, said ~~retainer~~ axial bore having a central cavity ~~of enlarged diameter~~ with a floor and a roof defining a bottom and a top of the central cavity respectively, said central cavity containing two opposite facing sets of cams, a cam set on the floor and a cam set on the roof;

a plunger slideably operative within the ~~retainer~~ axial bore moveable between extended and retracted positions, said plunger comprising a button which extends upwardly from the top end of the retainer through the collar when in the retracted position and further having a cylindrical pin at the distal bottom end of the plunger extending from the bottom end of the retainer when the plunger is in the extended position; and

~~an enlarged~~a flanged midsection of the plunger of lateral square cross-section configured and constructed such that corners of the flanged~~plunger~~ midsection act upon the cams to rotate the plunger in the same rotational direction for each alternating up and down reciprocal stroke of the plunger.

2. The device of claim 1 wherein the flanged midsection of the plunger ~~closely~~ occupies the square recess section of the retainer when the plunger is in the retracted position.

3. The device of claim 2 wherein the retainer has an end cap at the bottom end which is affixed to a body of the retainer captivating the plunger within the retainer.

4. The device of claim 3 having a spring operative between the end cap and the ~~plunger~~ flanged midsection which urges the plunger upwardly toward the retracted position.

5. The device of claim ~~1~~ 3 wherein ~~each cam has a sharply angled face which is engageable with the corners of the plunger midsection~~the end cap is affixed to the body of the retainer and has a shank extending from the bottom of the retainer, said shank configured to attach to a hole in a supporting structure.

6. The device of claim ~~5~~ 1 wherein each cam has an angled face which is engageable with the corners of the flanged midsection~~the central cavity is cylindrical~~.

7. The device of claim 6 wherein ~~each set of cams comprises cams located along a peripheral wall of~~ the ~~retainer~~ central cavity is cylindrical.

8. The device of claim 7 wherein ~~the cams in~~ each set of cams comprises cams located along a peripheral wall of the central cavity.~~are substantially identical and the cam sets are angularly offset from one another one-half the arc length of each cam.~~

9. The device of claim ~~5~~ 8 wherein the cams in each set are substantially identical and the cam sets are angularly offset from one another one-half the arc length of each cam.~~consist of sharply pointed vertically extending teeth.~~

10. The device of claim ~~1~~ 6 wherein the cams consist of pointed~~plunger midsection abuts the retainer collar when the plunger is in the retracted position~~ vertically extending teeth.

11. The device of claim ~~3~~ 1 wherein the~~ end cap is affixed to the body of the retainer and has a shank extending from the bottom of the retainer, said shank having attachment means for affixing the retainer to a hole in a supporting structure~~ flanged midsection abuts the retainer collar when the plunger is in the retracted position.