United States Patent [19]

Tausch et al.

[11] **3,786,866**

[45] **Jan. 22, 1974**

[54] **LOCKOUT FOR WELL SAFETY VALVE**

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[73] Assignee: **Camco, Incorporated,** Houston, Tex.

[22] Filed: **Mar. 6, 1973**

[21] Appl. No.: **338,502**

[52] **U.S. Cl.** ..... **166/224 S,** 137/460, 137/495, 251/58

[51] **Int. Cl.** **E21b 43/12**

[58] **Field of Search** 166/72, 224, 226; 137/315, 137/461, 495, 460, 494, 498, 510, 614.11, 614.2, 495; 251/31, 58, 62, 63, 77

[56] **References Cited**

UNITED STATES PATENTS

3,696,868	10/1972	Taylor	166/224 S
3,078,923	2/1963	Tausch	166/224 S
R25,471	11/1963	Fredd	166/224 S
3,126,908	3/1964	Dickens	137/460
3,470,903	10/1969	Scott	137/495
3,398,762	8/1968	Fredd	137/498

Primary Examiner—James A. Leppink

Attorney, Agent, or Firm—Jefferson D. Giller; James F. Weiler; William A. Stout

[57] **ABSTRACT**

In a well safety valve for controlling the fluid flow through a well tubing in which the valve closure means is controlled by a longitudinal movable tubular member, the improvement of a lockout means for locking the valve closure member in the open position by providing a second tubular member telescoping with the first tubular member and initially secured thereto. Means for preventing inadvertently locking out the valve while the valve is in the open position. Tool engaging means on the second telescoping section for moving the second section downwardly for opening the valve closure member, and holding means for engaging the second section downwardly for locking the valve open. The holding means may include coacting ratchet teeth between the first and second tubular sections and may be releasable if desired. Or the holding means may include coacting ratchet means between the second section and the valve housing. Tool engaging means may be provided on both the first and second sections for moving the second section downwardly by engaging only the tool engaging means on the second section. Or the second section may be moved downwardly by a tool engaging both the first and second sections and moving the first and second sections apart.

14 Claims, 15 Drawing Figures

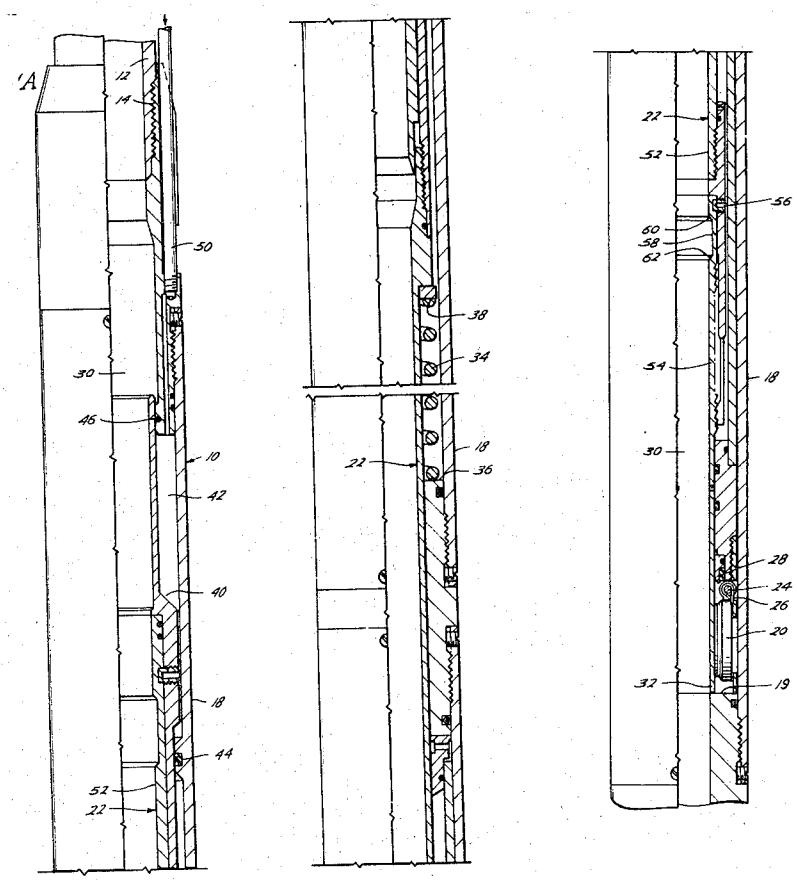


Fig. 1A

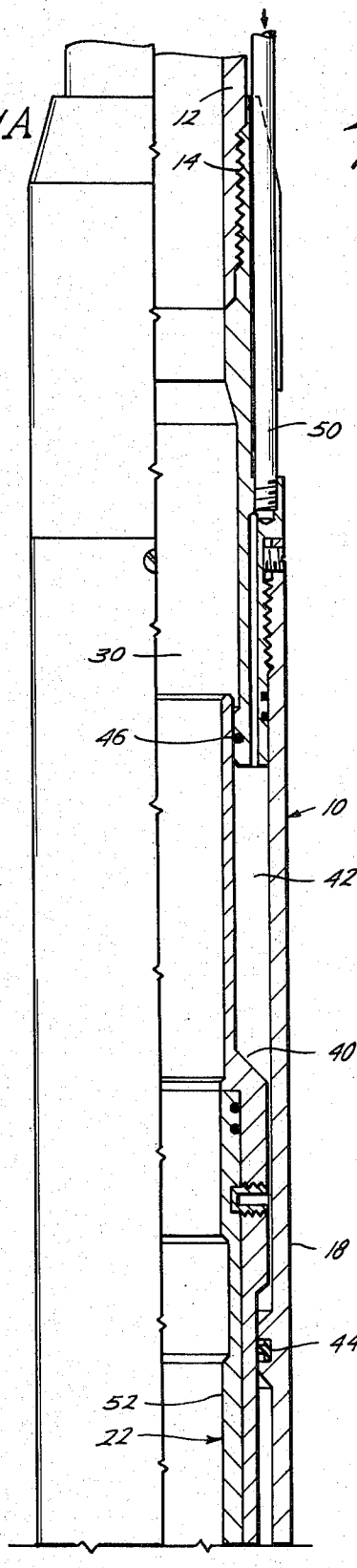


Fig. 1B

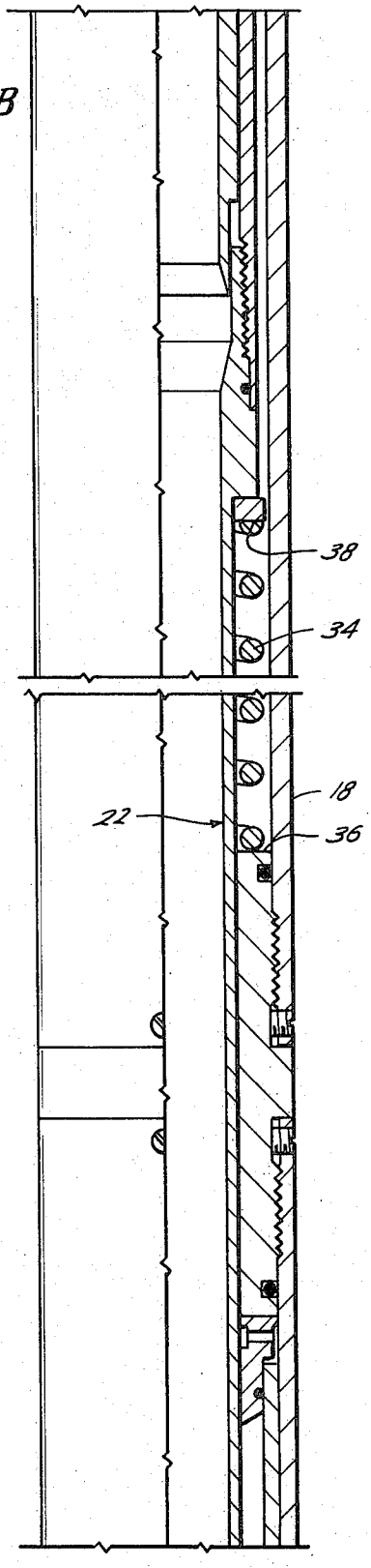


Fig. 1C

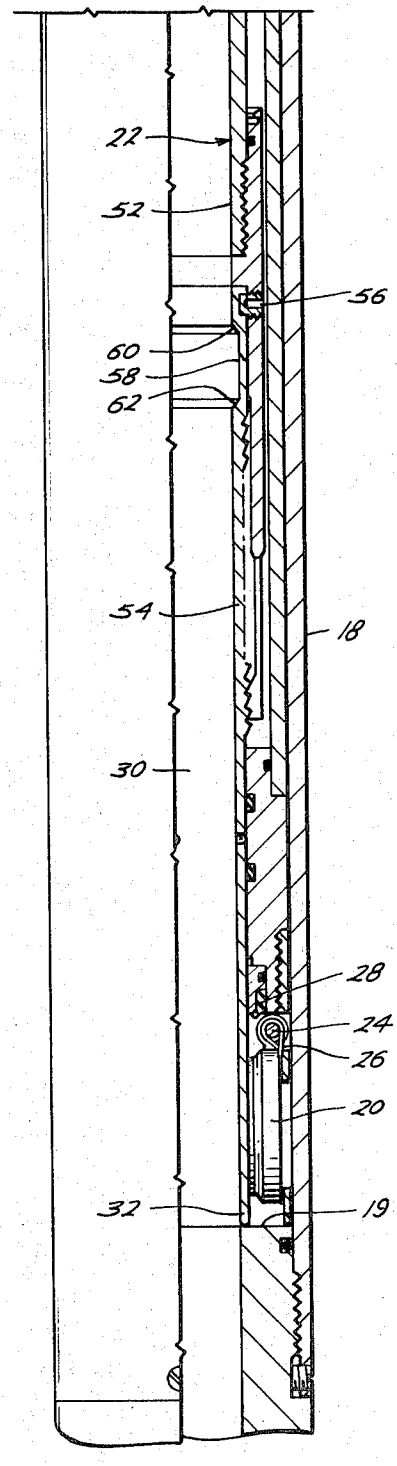


Fig. 2

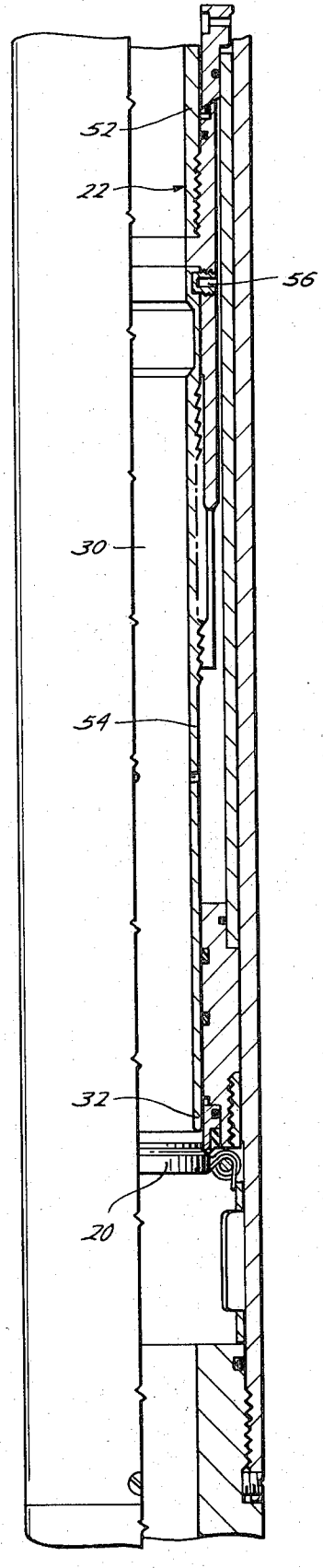


Fig. 6A

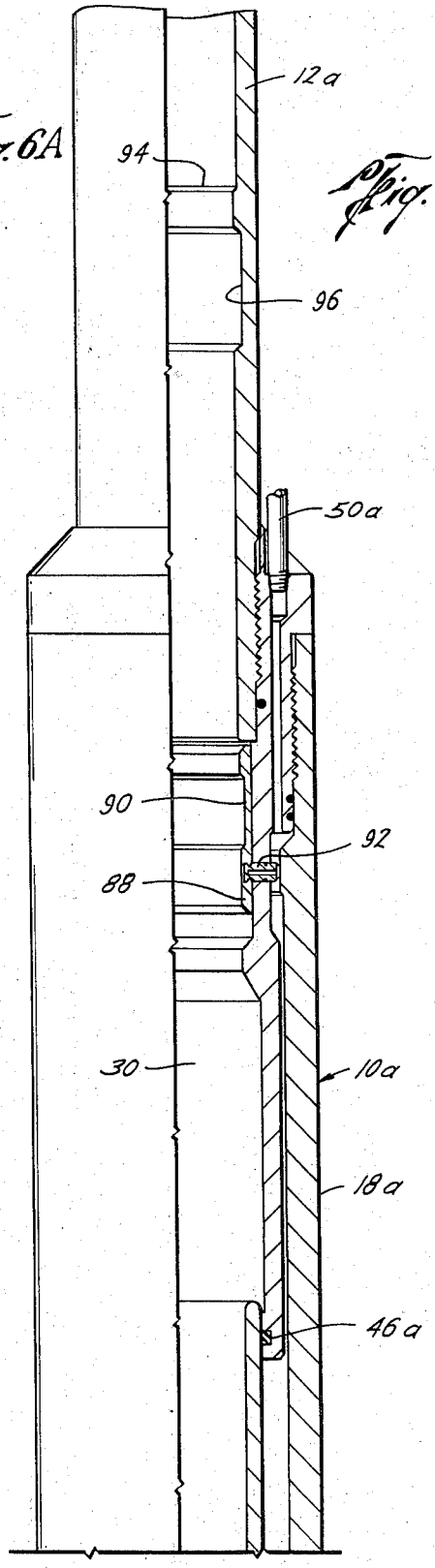

12a
94
96
50a
90
92
88
30
10a
18a
46a

Fig. 6B

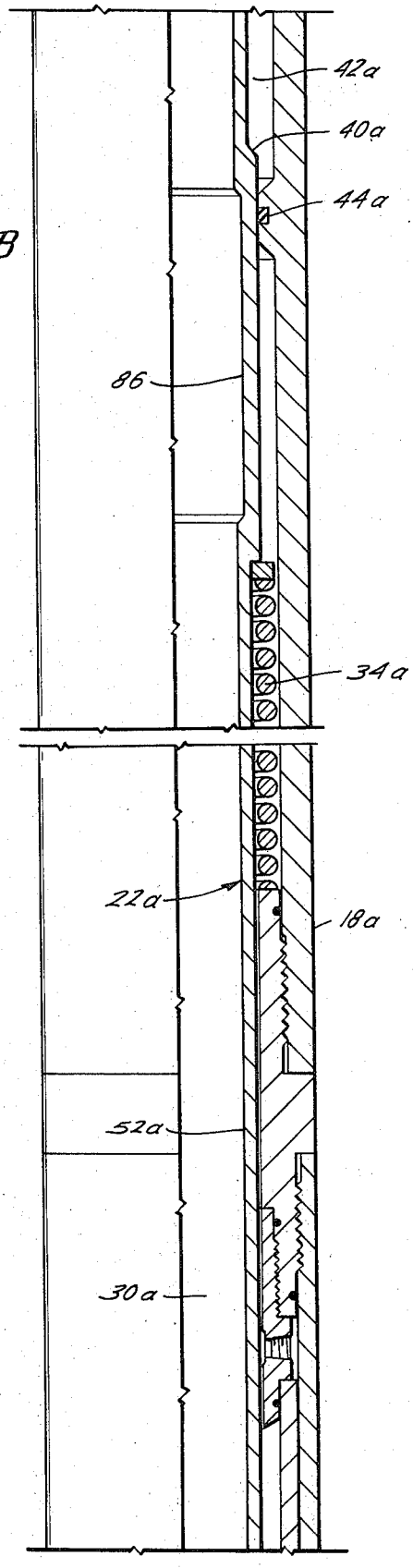
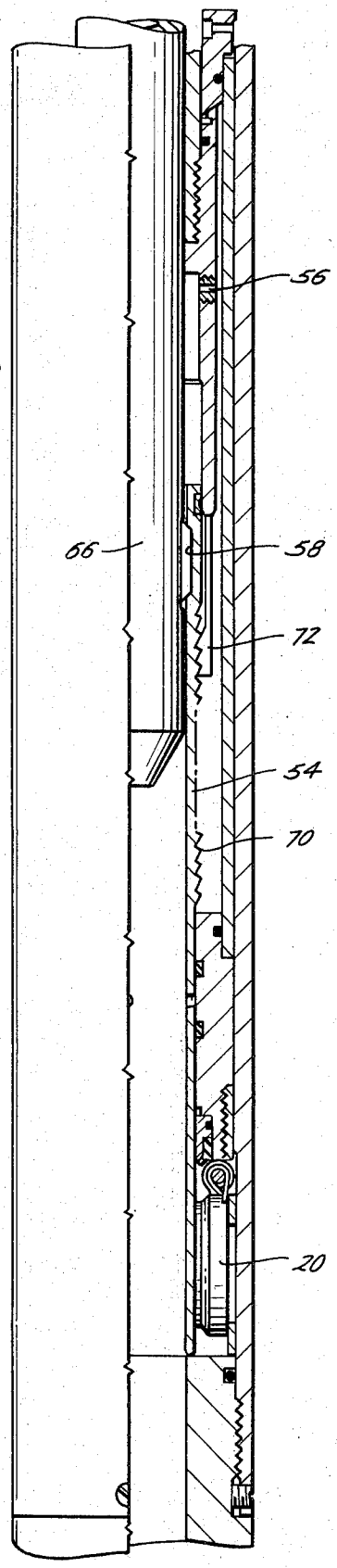

42a
40a
44a
86
34a
22a
18a
52a
30a

Fig. 3



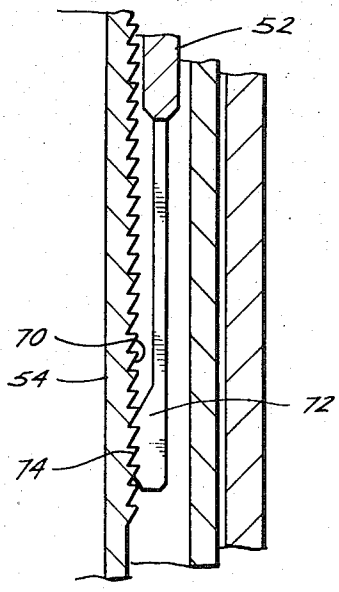


Fig. 4

Fig. 5

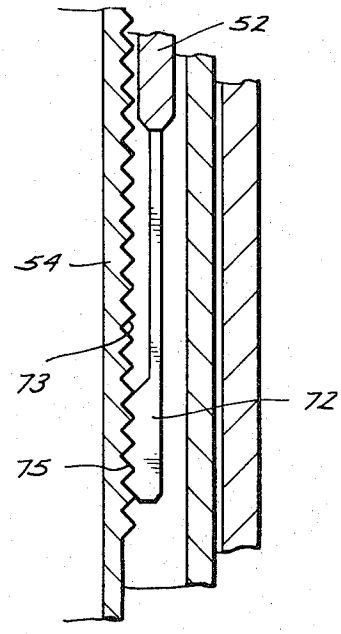


Fig. 6C

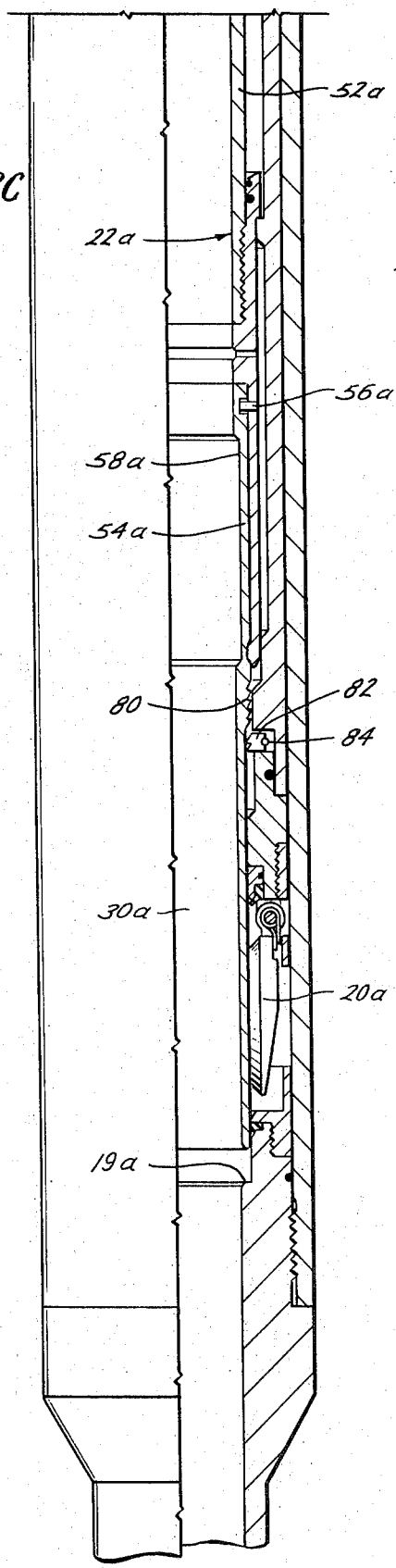

52a
22a
56a
58a
54a
80
82
84
30a
20a
19a

Fig. 7

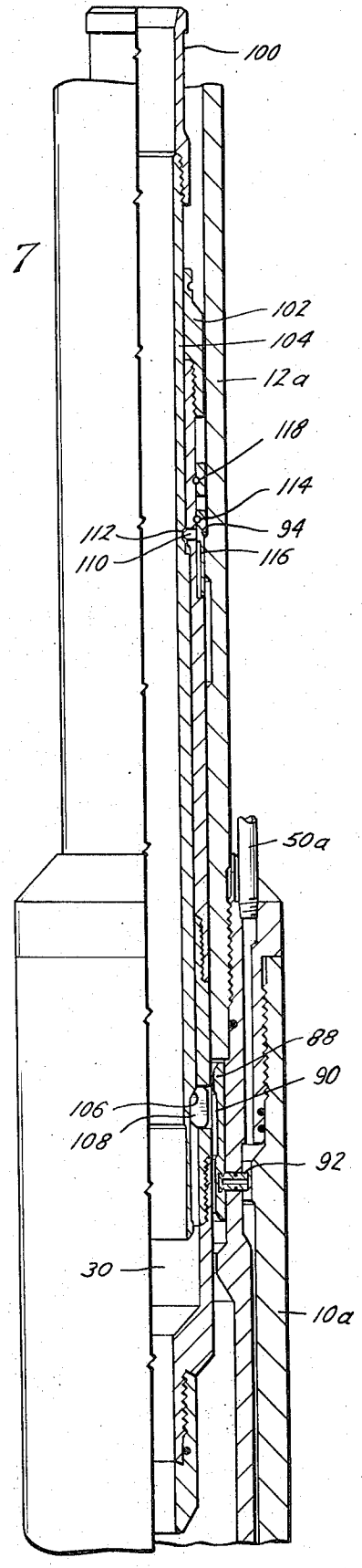

100
102
104
12a
118
114
112
94
110
116
50a
88
90
106
108
92
30
10a

Fig. 8A

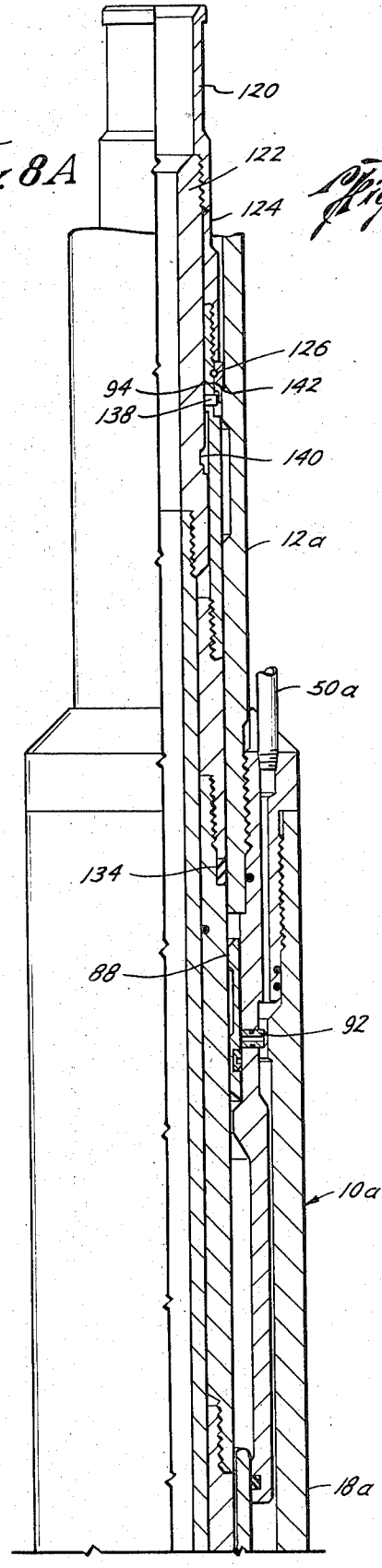

120
122
124
126
94
142
138
140
12a
50a
134
88
92
10a
18a

Fig. 8B

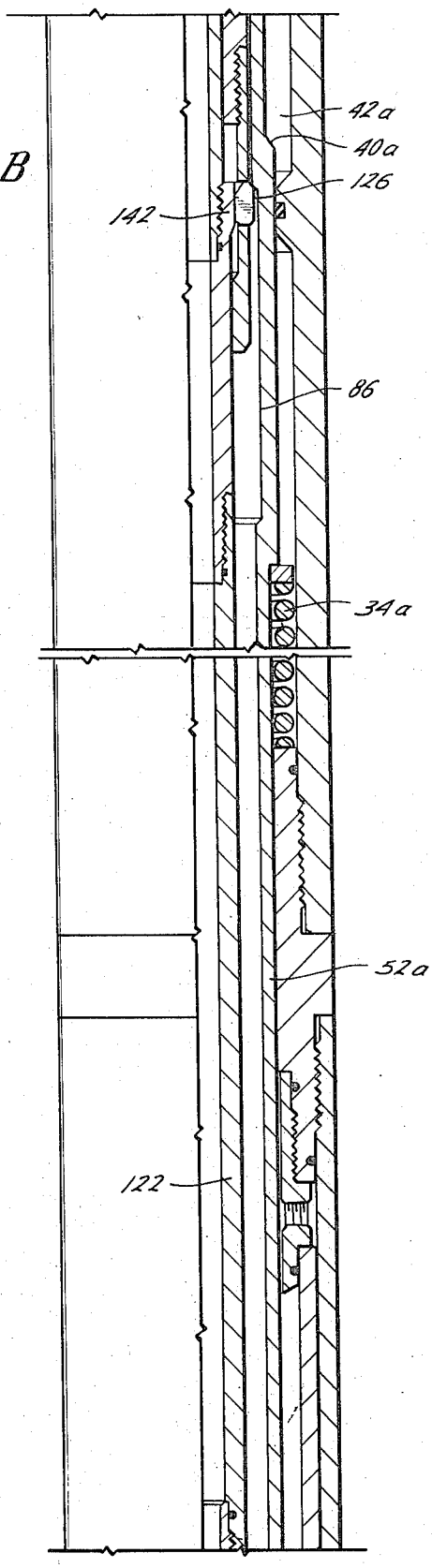

42a
40a
126
142
86
34a
52a
122

Fig. 8C

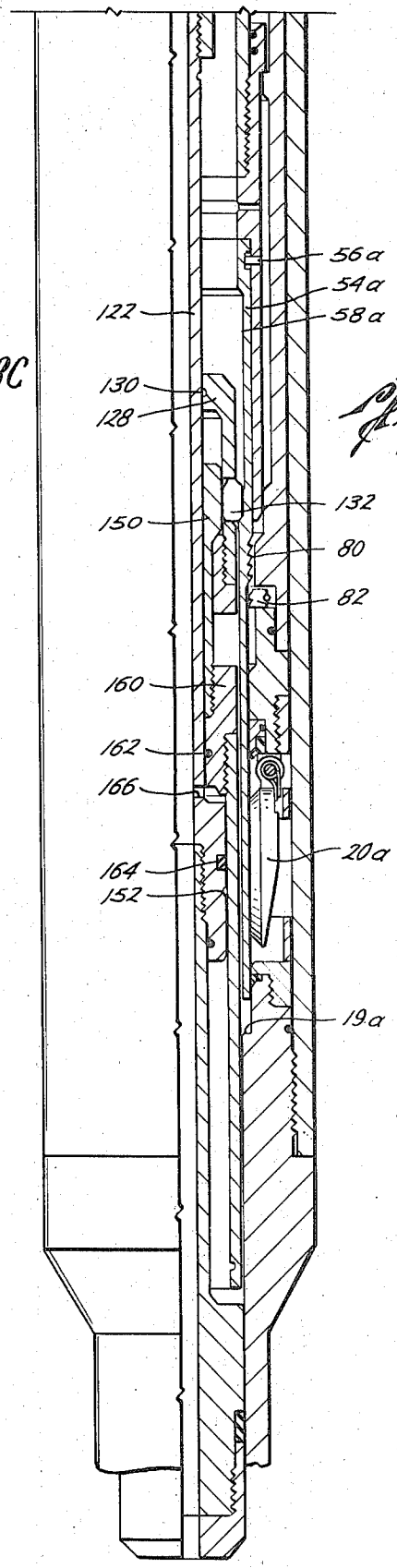
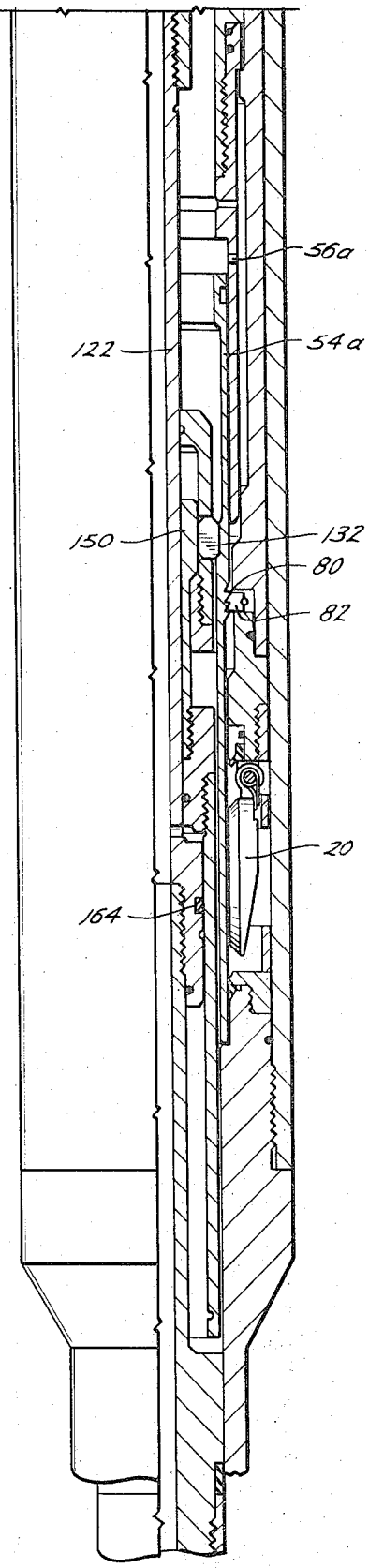

56a
54a
58a
122
130
128
132
150
80
82
160
162
166
20a
164
152
19a

Fig. 9


56a
122
54a
150
132
80
82
20
164

LOCKOUT FOR WELL SAFETY VALVE

BACKGROUND OF THE INVENTION

Various safety valves have been used in the past in a well tubing to shut off the production of well fluids from oil or gas wells such as shown in U.S. Pat. Nos. 3,078,923 and 3,627,042 in which the opening and closing of the valve is controlled by a longitudinal movable tubular member. Generally, the tubular member is pressure actuated and requires close tolerances which are subject to binding by deposits such as sand. One cause of safety valve problems is the inability to operate the safety valve due to the binding of the tubular member as a result of the well deposits including accumulated sand that is often found in produced well fluids. Of course, if the movable tubular member becomes stuck, the valve cannot be actuated. If the safety valve is retrievable, it can be removed and repaired, or if it forms a portion of the well tubing, the tubing string must be pulled to perform any safety valve repairs.

Such operations are costly and time consuming. It is sometimes desirable to delay the repair of the safety valve until a more convenient time. In this event, the safety valve is locked out which means it is moved to a fully opened position, such as for the purpose of producing from the well or performing other work in the tubing below the safety valve. While a lockout of the safety valve will not eliminate the need for pulling the safety valve or tubing for safety repairs, the lockout will allow the well to stay on production or perform other well functions in the tubing until the safety valve work can be conveniently scheduled. One type of safety valve lockout is shown in U.S. Pat. No. 3,696,868 in which a lockout sleeve is moved downardly against the top of the longitudinal tubular member for moving the tubular member in a direction to open the valve and lock the valve open. However, if the cause of the failure is due to the sticking or binding of the tubular member, it may be difficult to obtain a sufficient movement of the tubular member to provide the desired lockout. That is, the operating tubular member is generally moved in at least one direction by fluid pressure which requires that the tubular member have seals or sealing surfaces and close clearance areas that are conducive to binding in the presence of well deposits.

The present invention is directed to a lockout for a safety valve which cannot inadvertently be locked out while the valve is in the open position, and a lockout member which does not coact with any sealing surfaces so that the clearance between it and other members can be made sufficiently great to prevent binding from well deposits.

SUMMARY

The present invention is generally directed to providing a lockout for a well safety valve that may be actuated even in the event that the longitudinal movable operating member of the safety valve is stuck and immovable.

The present invention is further directed to the improvement in a well safety valve which controls the fluid flow through a well tubing and includes a longitudinal movable tubular member controlling the movement of the valve closure member of a lockout means for locking the valve closure member in the open position by providing a telescoping section on the tubular member with means for initially securing the telescoping section to the tubular member. Tool engaging means are provided on the telescoping section for moving the telescoping section downwardly for opening the valve closure member. Holding means are provided for engaging the section for holding it in the downward position for locking the valve open.

A further object is the provision of a lockout which cannot inadvertently lock out the valve while the valve is in the open position and prevent normal operation of the safety valve.

Yet a further object of the present invention is a provision of holding means on the telescoping section which is releasable for resetting the lockout member and closing the valve.

Still a further object of the invention is the provision of a lockout means in which the lockout member is positioned out of engagement with any fluid seals so that it may be easily moved in the valve in spite of well deposits.

Still a further object of the present invention is the provision of tool engaging means on both the tubular actuating member and the lockout member for utilizing a tool which moves the lockout member relative to the tubular operating member.

Other and further objects, features and advantages will be apparent from the following description of presently preferred embodiments of the invention, given for the purpose of disclosure and taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1A is an elevational view, partly in cross section, of the top portion of a tubing retrievable safety valve,

FIG. 1B is a continuation of FIG. 1A,

FIG. 1C is a continuation of FIG. 1B showing one form of the lockout means of the present invention in its inoperative position but with the safety valve in the open position,

FIG. 2 is a fragmentary elevational view, partly in cross section, of the lower portion of the safety valve of FIGS. 1A, 1B and 1C, shown in the closed position,

FIG. 3 is a fragmentary elevational view, partly in cross section of the lower portion of the safety valve showing the actuation of the lockout section for holding the valve in the open position,

FIG. 4 is an enlarged fragmentary view showing one form of the holding means for holding the lockout section in a lockout position,

FIG. 5 is an enlarged fragmentary view of a modified type of holding means for holding the lockout section in a lockout position,

FIG. 6A is an elevational view, partly in cross section of the top portion of a safety valve with another embodiment of the present invention,

FIG. 6B is a continuation of FIG. 6A showing the intermediate portion of the safety valve,

FIG. 6C is a continuation of the FIG. 6B showing the lower portion of the safety valve with the lockout member inoperative and the valve in the open position,

FIG. 7 is an elevational view, in cross section, of the top portion of the safety valve of FIGS. 6A, 6B and 6C with a tool for actuating a fluid control,

FIG. 8A is an elevational view, partly in cross section, of the top portion of the safety valve of FIGS. 6A, 6B and 6C and including the top portion of a lockout setting tool,

FIG. 8B is a continuation of FIG. 8A showing the intermediate portion of the safety valve and lockout setting tool,

FIG. 8C is a continuation of FIG. 8B showing the lower portion of the setting tool and safety valve, and

FIG. 9 is a fragmentary elevational view, partly in cross section, of the lower portion of the valve of FIGS. 6A, 6B and 6C with the lockout tool shown in position for moving the lockout member to the lockout position.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

For the purpose of illustration only, the present invention will be described in connection with a tubing retrievable flapper type safety valve. However, it is to be recognized that the present lockout mechanism may be used with other types of safety valves including those having different valve closure means.

Referring now to the drawings, and particularly to FIGS. 1A, 1B and 1C, the reference numeral **10** generally indicates a well safety valve of the tubing retrievable type adapted to form a portion of a well tubing **12** by being connected therein by suitable threaded connections **14** (FIG. 1A) at the top and a suitable threaded connection at the bottom (not shown). The safety valve **10** is provided to control the fluid flow through the bore **30** of the well tubing **12** and the safety valve **10.** Under normal flow conditions, the safety valve **10** is in the open position. The valve **10** is closed in the event of equipment failure or other undesirable conditions to shut off well production through the bore **30.**

The safety valve **10** generally includes a valve body **18,** a valve closure member such as a flapper valve **20** (FIG. 1C), a longitudinal movable tubular operating member generally indicated by the reference numeral **22** for controlling the movement of the flapper valve **20.** The flapper valve **20** is carried about a pivot **24** and may include a spring **26** for yieldably urging the flapper valve **20** about the pivot **24** and onto an annular valve seat **28** for closing the valve **10** and blocking upward flow of fluid through the bore **30** of the valve **10** and tubing **12.**

The tubular member **22** is longitudinally movable in the valve body **18.** When the lower end **32** contacts the flapper **20,** the flapper **20** is moved off of the valve seat **28** and into a downward and open position, as best seen in FIG. 1C, thereby permitting fluid flow through the bore **30.** However, when the tubular member **22** is moved upwardly and its lower end **32** is moved above the valve seat **28,** the spring **26** and/or fluid flow upwardly through the valve **10** closes the flapper **20.**

Any suitable control means for controlling the movement of the tubular member **22** may be used. For example, a biasing spring **34** (FIG. 1B) may be provided positioned between a shoulder **36** on the valve body **18** and a shoulder **38** on the tubular member **22** for biasing the tubular member **22** upwardly and in a direction allowing the flapper **20** to close. In order to provide means for moving the tubular member **22** in a downward direction, a piston **40** (FIG. 1A) may be provided on the tubular member **22** for movement in a cylinder **42** formed by seals **44** and **46.** A control line **50** may be provided leading to the well surface for supplying a fluid therein which communicates with the cylinder **42** for controlling the movement of the piston **40** and thus of the tubular member **22.** If fluid pressure is applied through the line **50** and into the cylinder **42,** the piston **40** and the tubular member **22** is moved downwardly overcoming the spring **34** and opening the flapper **20,** as best seen in FIG. 1C. The flapper **20** is closed, as best seen in FIG. **2,** by reducing the fluid pressure in the control line **50** and thus in the chamber **42** allowing the spring **34** to move the tubular member **22** upwardly releasing the flapper valve **20.** The above operation of the safety valve is generally conventional.

However, the safety valve **10** may fail for some reason. Of course, if it fails with the tubular member **22** held in the downwardly extended position, there is no need to use a lockout.

However, in the event the safety valve becomes inoperative when the tubular member **22** is in the upward or partially upward position, it may be desirable to lock out the safety valve until it can be conveniently retrieved. To lock out the safety valve **10** is to hold the valve closure member **20** in the fully opened position for purposes of providing well production therefrom or performing through tubing work until the safety valve **10** may be retrieved or repaired. One cause of safety valve problems is the inability to operate the safety valve **10** due to the binding or sticking of the tubing **22** relative to the seals **44** and **46,** then it is difficult to utilize a lockout which requires movement of the tubular member relative to the seals **44** and **46** for opening and locking out the valve **20.**

As best seen in FIG. 1C, the present invention includes a telescoping lockout section incorporated as part of the tubular member **22.** Therefore, the tubular member **22** is provided with a first section **52** and a second lockout section **54** telescopically positioned relative to each other. The first section **52** is positioned relative to the body **18** and seals **44** and **46** with the necessary close tolerances required to enclose the pressure chamber **42.** However, the second section **54** is not required to engage any high pressure seals and therefore the clearance between section **54** and the mating bore of the valve body **18** may be sufficiently great to prevent binding even in the pressure of well deposits, such as sand. The first and second tubular sections **52** and **54** are initially secured together by any suitable releasing means, such as a shear pin **56.**

The inside of the second telescoping section **54** includes a suitable tool engaging means such as a recess **58** having a beveled upper edge **60** and a beveled lower edge **62** for suitable engagement by any conventional sliding sleeve actuating tool such as a Z-lock manufactured by Camco, Incorporated. The upper and lower beveled shoulders **60** and **62** eliminate any sharp corners upon which tools used in wireline or pump-in operations may become engaged and cause undesirable actuation of the locking section **54.**

As best seen in FIG. **3,** a suitable sleeve setting tool **66** is shown engaged in the recess **58** which may be jarred downwardly shearing the pin **56** and allowing the second locking section **54** to be moved downwardly against and opening the valve **20.**

Suitable holding means are provided for engaging the second lockout section **54** and holding it in the set or downward position so that the section **54** may in turn engage and hold the valve **20** in the open position. For example, such means may include buttress threads **70,** as best seen in FIGS. **3** and **4,** that may allow easy

downward shifting of the lockout sections **54**, but prevent the return to the upper position of the lockout section **54**. The teeth **70** are formed for a sufficient length along the exterior of the member **54** to allow the telescoping section **54** to reach and bottom off against the flapper **20** should the upper section **52** be fully up at the time the lockout operation is actuated. Of course, should the section **52** be in any other position, the telescoping section **54** would still be able to bottom out against the flapper **20** and the teeth **70** will hold the section **54** relative to section **52**.

Coacting with the teeth **70** for providing the desired means for holding the section **54** downwardly is a collet section **72** connected to the upper telescoping section **52**. The inside tips of the collet sections **72** include coacting threads **74** to coact with the teeth **70** for completing the holding mechanism. The buttress type teeth **70** and **74** provide a permanent type lockout. That is, the lockout sleeve **52** is securely held in a downward position and is not reset upwardly to allow the valve **20** to reclose.

If desired, the holding means, such as the threads **70** and **74**, could be profiled so that the lockout section **54** may be shifted downwardly to provide a lockout against the valve **20** or can be moved up to allow the valve **20** to close with the ease or difficulty of movement being controlled by the angle of the teeth. For example, as best seen in FIG. **5**, in a modification, teeth **73**, on the section **54**, may be provided to coact with teeth **75** on the collet sections **72**. The teeth **73** and **75** are generally standard threads which allow either upward or downward movement of the lockout section **54** relative to the section **52**. In addition, it is to be noted that the various holding means previously described for holding the lockout section **54** in the downward position, such as the teeth **70** and **72**, can, if desired, perform the function of shear pin **56** for initially securing the telescoping sections together.

Thus, the present lockout device can be utilized whether or not the hydraulic pressure in the chamber **42** is able to provide full movement of the operating tubular member **22** for opening of the valve **20**. The lockout section **52** may be a permanent or a resettable lockout as desired, and since the telescoping section **52** is not subjected to high pressure seals, the clearance between it and its mating bore in the valve **10** may be made sufficient to prevent binding by well deposits; and in the absence of square shoulders on the lockout section **54**, reproduces the likelihood of accidental actuation of the member **54** on being encountered by any square shoulders on normal tubing tools. Furthermore, the safety valve **10** still retains its straight through bore configuration without adding sections that may generate turbulence.

Referring now to FIG. **1C**, it is to be noted that the lower end **32** of the lockout section **54** abuts a shoulder **19** of the valve body **18** when the tubular member **22** is in the fully extended downward position holding the valve **20** in the open position. Therefore, with the valve in open position, the lockout section **54** cannot be inadvertently actuated into the lockout position because of the shoulder **19**.

Of course, other and further modifications of the present invention may be utilized. Referring now to FIGS. **6A**, **6B** and **6C**, a further embodiment of the present invention is shown wherein like parts to those in FIGS. **1–4** are shown with like numbers and the addition of the suffix "*a*." Referring now to FIG. **6A**, **6B** and **6C**, the valve **20***a* is controlled by the operating tubular member **22***a* consisting of upper section **52***a* and lower section **54***a*. The member **22***a* is biased upwardly by the spring **34***a* for closing the valve **20***a* and fluid pressure may be exerted into conduit **50***a* and into the chamber **42***a* for acting on the piston **40***a* for moving the tubular member **22***a* downwardly and opening the valve **20***a*. The lockout section **54***a* is initially secured to upper section **52***a* by shear pin **56***a* and includes a tool engaging recess **58***a* for moving the lockout member **54***a* downwardly for engaging and holding the valve **20***a* in the locked out position.

Suitable means for engaging and holding the second section **54***a* downwardly for locking out the valve **20***a* is provided, as best seen in FIG. **6C**, by a plurality of teeth **80** on the exterior of the locking section **54***a* for coacting with teeth on ratchet clutch **82**, which is generally urged inwardly by a quarter spring **84**. As best shown in FIG. **6C**, the valve **10***a* is in the open position in normal operation. In the event a setting tool is engaged in the recess **58***a* and driven downwardly shearing the pin **56***a*, the teeth **80** on the member **54***a* would engage the ratchet clutch **82** for holding locking section **54***a* downwardly and the valve **20***a* open. However, in normal operation, as best seen in FIG. **6C**, in which the locking member **58***a* is not actuated, the locking teeth **80** do not contact the ratchet clutch **82**.

While the lockout mechanism shown in FIG. **6C** may be actuated by a tool as previously described with the embodiments of FIGS. **1–3**, it is to be noted, referring to FIG. **6B**, that the upper telescoping section **52***a* also includes a recess **86**. If instead of merely having a tool engage the recess **58***a* of locking member **54***a* and driving member **54***a* downwardly, a suitable tool may be provided having suitable engaging lugs, one of which engages recess **58***a* on section **54***a*, and recess **86** on section **52***a* in which the tool would move the sections **52***a* and **54***a* telescopically apart for setting the lockout section **54***a*. While such a tool may be mechanically actuated, it is preferable that it be hydraulically actuated such as by the hydraulic control fluid in line **50***a*. Referring now to FIG. **6A**, a sliding sleeve **88** is provided having an actuating notch **90** which is connected to a shear plug **92** which is normally closed, but which is sheared upon movement of the sliding sleeve **88** to open fluid communication between the bore **30** of the tool **10***a* and the fluid control line **50***a* for supplying control fluid to the interior of the valve **10***a* for actuating a hydraulic setting tool which will be more fully described hereinafter.

Referring now to FIGS. **6A** and **7**, a no-go shoulder **94** is provided above the sleeve **88** with a recess **96** therebelow which are provided for positioning a suitable shifting tool for shifting the sleeve **88**. The shifting tool **100** includes an outer body **102** and an inner mandrel **104**. When mandrel **104** is driven downwardly with respect to the body **102**, a wedge face **106** on the mandrel **104** moves setting dogs **108**, carried by body **102**, outwardly into engagement with the notch **90** on the sleeve **88**. Further downward movement of the shifting tool **100** will move the sleeve **88** and shear the plug **92**. Normally, the mandrel **104** is held upwardly relative to the body **102** by a detent **110**, carried by body **102**, protruding into notch **112** in the mandrel **104**. Downward movement of the tool **100** causes the body **102** to contact the no-go shoulder **94** in the tubing **12** shearing

a first shear pin **114** allowing the detent **110** to be moved downwardly into a slot **116** in the body **102** and further downward movement of the body **102** shears a second shear pin **118** allowing the outer body **102** to be further moved downwardly for positioning the dogs **108** opposite the notch **90.** Further downward movement of the tool **100** carries the mandrel **104,** and moves the wedges **106** against the back of the dogs **108** moving dogs **108** into locking position. When the dogs **108** are locked in the notch **40,** further downward movement of the tool **100** shifts the sleeve **88** shearing the plug **92.** A straight upward pull on the tool **100** releases the dogs **108** and the tool **100** may be withdrawn.

After the sleeve **88** is moved shearing the plug **94,** as best described in connection with FIG. **7,** fluid from the control line **50***a* is free to flow into the interior bore **30** of the safety valve **10***a*. Referring now to FIGS. **8A, 8B** and **8C,** a hydraulic actuated setting tool **102** is shown for actuating the lockout section **54***a* of the safety valve **10***a* which has been fully described in connection with FIGS. **6A, 6B, 6C** and **7.** The tool **120** includes an inner mandrel **122** and an outer body **124** telescopically slideable on the mandrel **122** and initially secured therety by a shear pin **126.** The body **124** carries a set of first setting dogs **126** (FIG. **8B**) for being set in and coacting with the recess **86** in the tubular member section **52***a*. A second body **128** (FIG. **8C**) is telescopically carried by the mandrel **122** at the lower end and is initially secured thereto by a shear pin **130.** The second body **128** carries a second set of setting dogs **132** for coaction with the recess **58***a* in the lockout member section **54***a*. The upper body **124** includes a seal **134** for sealing against the interior of the safety valve **10** on one side of the shear plug **92,** and the mandrel **122** includes a seal **136** for sealing against the interior of the valve **10***a* on a second side of the sheared plug **92** (FIG. **8C**).

Initially, the upper body **124** is held downwardly with respect to the mandrel **122** by a detent **138** engaging a notch **140** in the mandrel **122.** On downward movement of the tool **120,** a shoulder **142** on the body **124** engages the no-go shoulder **94** in the tubing **12***a* locating the upper setting dogs **126** opposite the groove **86** in the upper tubular member section **52***a*. Further downward movement of the tool **120** moves the mandrel **122** downwardly carrying a wedge **142** behind the dogs **126** locking the dogs **126** in the groove **86.**

After the dogs **126** are engaged in the notch **86,** hydraulic fluid is supplied through the control line **50***a* between the seals **134** on the upper body **124** and the seal **136** on the mandrel **122.** A lower wedge **150** is connected to a piston **160** acting between seals **162** and **164.** Initially, the wedge **150** is held above the dogs **132** by a shear ping **152.** The back of the piston **160** is open to the low pressure in the tubing through port **166.** The introduction of control fluid from line **50***a* into the interior of tool **120** acts against piston shearing pin **152** moving wedge **150** downwardly. Downward movement of wedge **150** contacts dogs **132** shearing pin **130** and carries the dogs **132** downwardly until the dogs **132** become aligned with slot **58***a* in the lockout member **54***a* at which time dogs **132** move into slot **58***a* and wedge **150** locks behind dogs **132.** Continued application of hydraulic pressure moves the upper body **124** upwardly and the lower body **128** downwardly forcing the tubular member sections **52***a* and **54***a* apart to move the lockout section **54***a* downwardly into a position holding the valve **28***a* open until, as best seen in FIG **9,** the teeth **80** on the lockout member **54***a* engages the ratchet clutch **82** to secure the lockout member **54***a* in the locked out position.

The present invention, therefore, is well adapted to carry out the objects and attain the ends and advantages mentioned as well as others inherent therein. While presently preferred embodiments of the invention have been given for the purpose of disclosure, numerous changes in the detail of construction and arrangement of parts, may be provided, without departing from the spirit of the invention and the scope of the appended claims.

What is claimed is:

1. In a well safety valve for controlling the fluid flow through a well tubing, the valve adapted to be positioned in the well tubing and having a valve closure member moving between open and closed positions, a longitudinally movable tubular member for controlling the movement of the valve closure member, first means for moving the tubular member in a first direction, second means for moving the tubular member in a second direction, the improvement in lockout means for locking the valve closure member in the open position comprising,

said tubular member including first and second telescoping sections,

releasable means initially securing the telescoping sections together,

tool engaging means on the second telescoping section for moving said second section downwardly for opening the valve closure member, and

holding means for engaging the second section for holding the second section downwardly and locking said valve open.

2. The apparatus of claim **1** wherein the second section is connected to the lower part of the first section, and one of the means for moving the tubular member including a piston and cylinder assembly including coacting seals, but in which the seals are positioned out of engagement with the second section whereby said second section may be easily moved downwardly without binding in seals.

3. The apparatus of claim **1** wherein the holding means includes coacting ratchet teeth between the first and second sections.

4. The apparatus of claim **3** wherein the holding means is releasable.

5. The apparatus of claim **1** wherein said valve includes a shoulder positioned below the closure member and adjacent the bottom of the downward extent of travel of the tubular member whereby said second section will not be inadvertently moved to the lockout position while the valve is open.

6. The apparatus of claim **1** wherein the holding means includes coacting ratchet means between the second section and the valve housing.

7. The apparatus of claim **1** including tool engaging means on the first section for moving the sections apart.

8. The apparatus of claim **7** wherein the tool engaging means on the first and second sections include a recess in each section.

9. The apparatus of claim **2** including a normally closed passageway leading from the communication with the cylinder to the interior of the valve housing, and

a sliding sleeve positioned internally of the housing for opening said passageway on longitudinal movement.

10. The apparatus of claim **1** wherein the second section is positioned internally of the first section.

11. In a well safety valve for controlling the fluid flow through a well tubing, the valve adapted to be positioned in the well tubing and including a housing and a valve closure member moving between open and closed positions, a longitudinally movable tubular member for controlling the movement of the valve closure member, spring means for biasing the tubular member in a first direction for opening the valve closure member, a piston and cylinder assembly including coacting seals for receiving fluid for moving the tubular member in a direction for closing the valve closure member, the improvement in lockout means for locking the valve closure member in the open position comprising,

said tubular member including first and second telescoping sections, said second section telescoping internally of the first section and positioned out of engagement with said seals,

releasable means initially securing the telescoping sections together,

a tool engaging recess positioned on the interior of the second section for moving said second section downwardly for opening the valve closure member, and

holding means for engaging the second section for holding the second section in a downward position and locking said valve open.

12. The apparatus of claim **11** wherein the holding means includes coacting engaging means between the first and second sections.

13. The apparatus of claim **11** wherein the holding means includes coacting engaging means between the second section and the valve housing.

14. The apparatus of claim **11** wherein said valve includes a shoulder positioned below the closure member and the adjacent the bottom of the downward extent of travel of the tubular member whereby said second section will not be inadvertently moved to the lockout position while the valve is open.

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