

April 3, 1928.

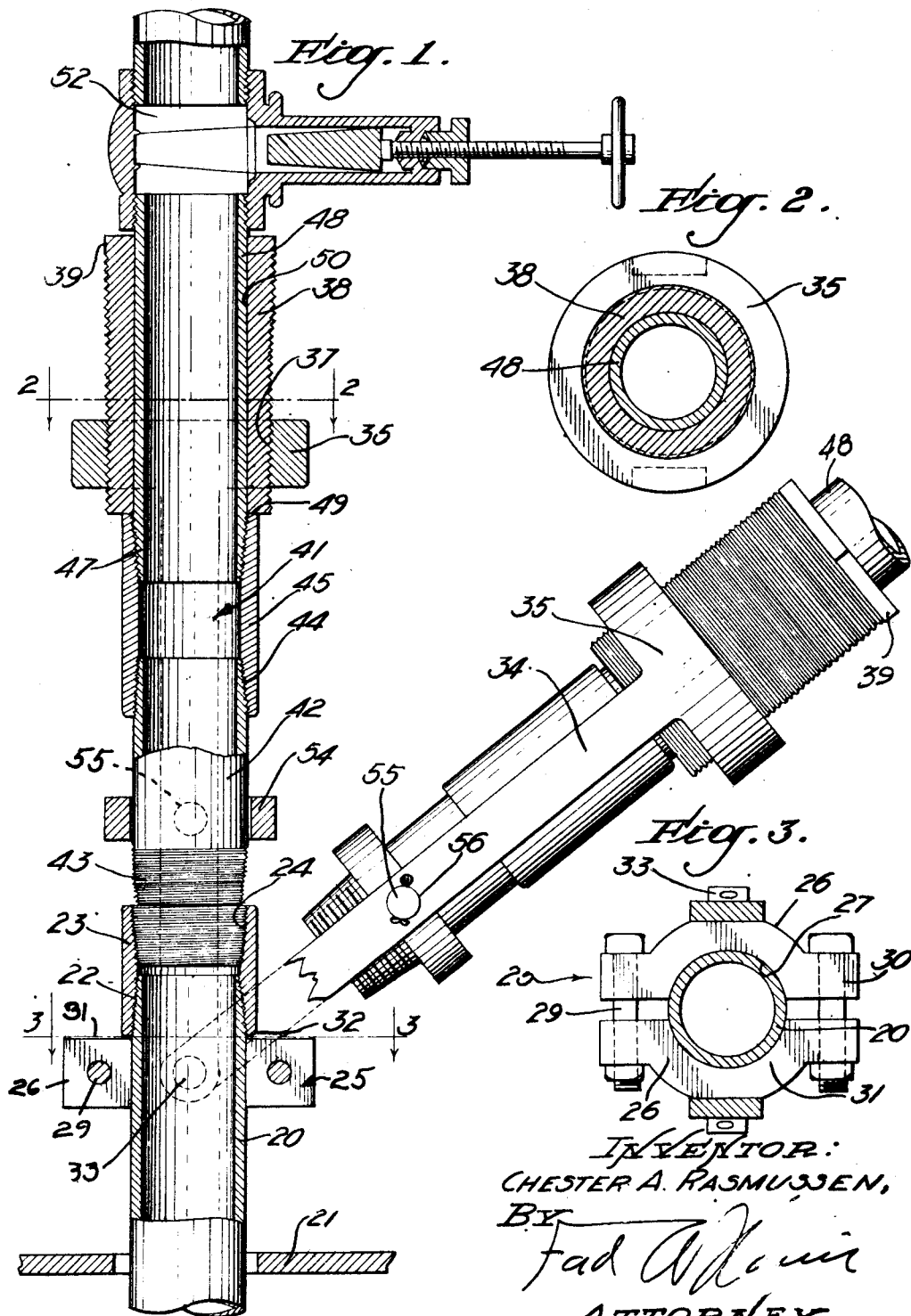
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C. A. RASMUSSEN

CAPPING DEVICE FOR OIL WELLS

Filed June 28, 1926

4 Sheets-Sheet 1



April 3, 1928.

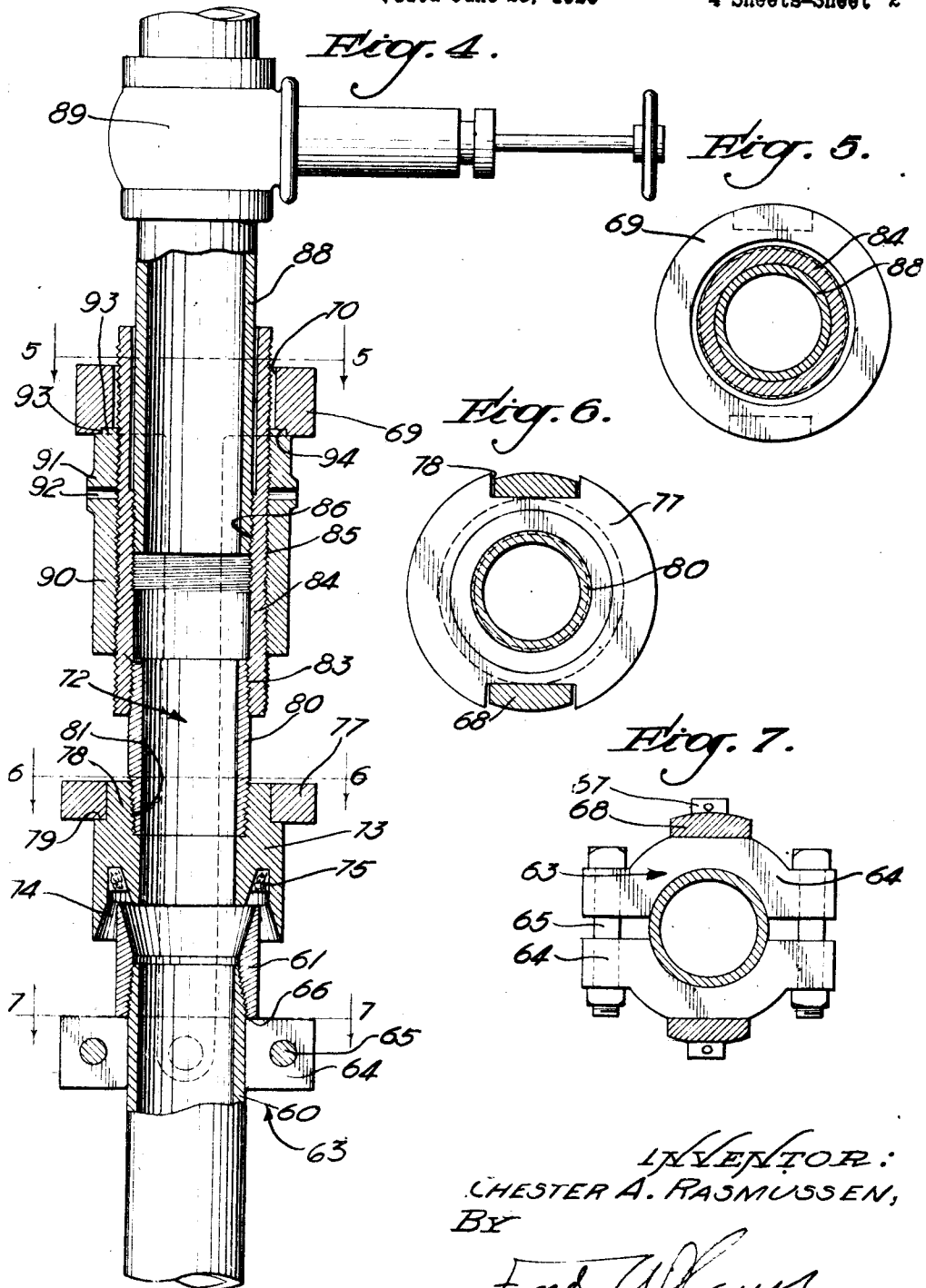
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CAPPING DEVICE FOR OIL WELLS

Filed June 28, 1926

4 Sheets-Sheet 2



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April 3, 1928.

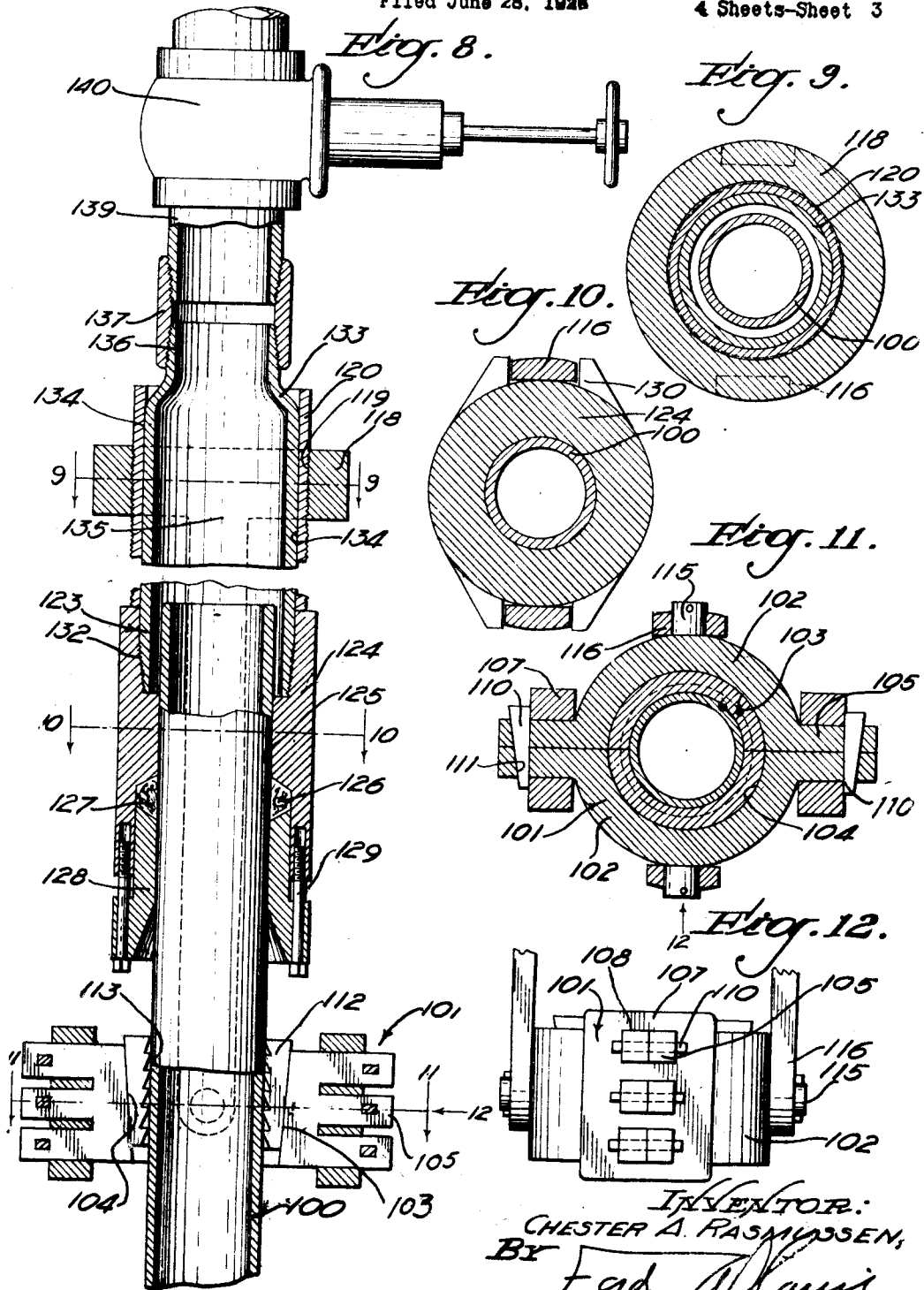
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1,664,643

CAPPING DEVICE FOR OIL WELLS

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4 Sheets-Sheet 3



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1,664,643

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CAPPING DEVICE FOR OIL WELLS

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4 Sheets-Sheet 4

Fig. 13.

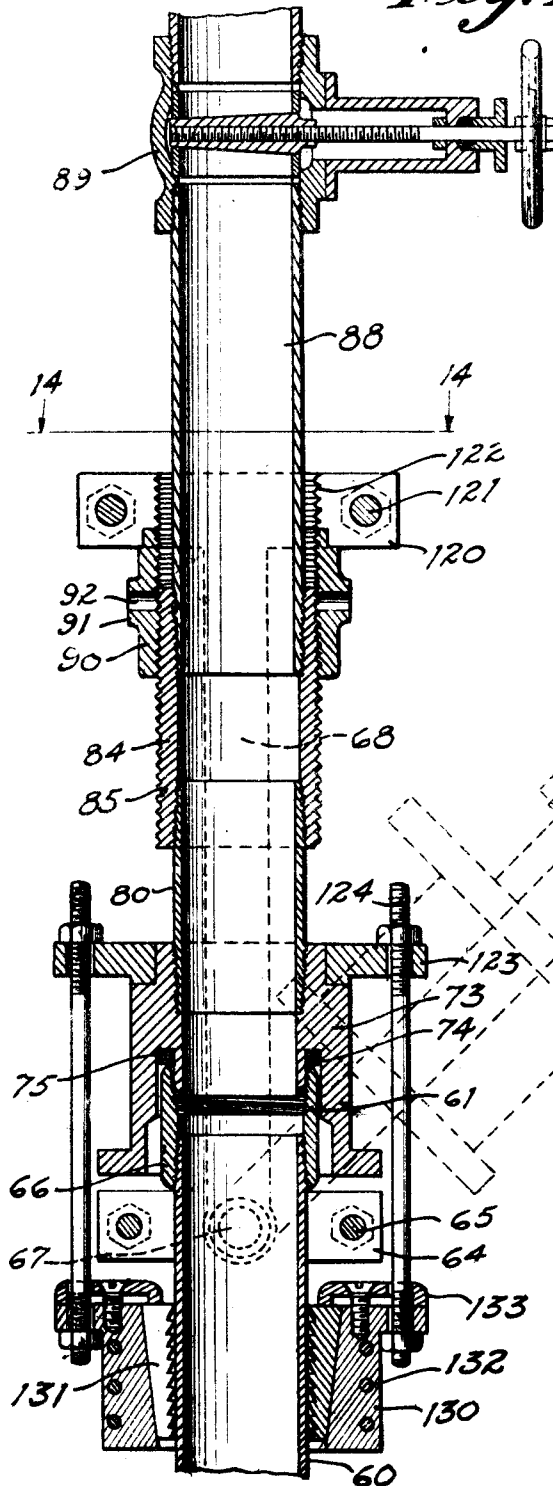
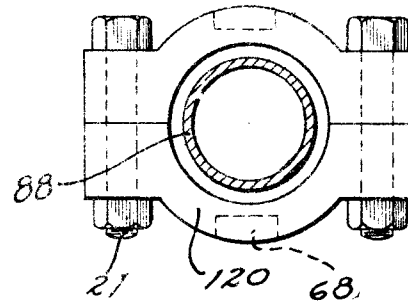


Fig. 14.



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UNITED STATES PATENT OFFICE.

CHESTER A. RASMUSSEN, OF LONG BEACH, CALIFORNIA.

CAPPING DEVICE FOR OIL WELLS.

Application filed June 28, 1928. Serial No. 118,955.

This invention relates to the oil well industry and relates particularly to the capping of an oil well when it prematurely starts to flow.

- 5 If the subterranean pressures are sufficient a well is liable to start to flow at any time after the oil-bearing formation has been penetrated and before the drilling crew has the well prepared to put on production.
- 10 Very disastrous results may occur if a flowing well gets out of control. The flow consists primarily of gas, oil, and sand. Probably the greatest danger in an uncontrolled well is the fire hazard from which many
- 15 damaging fires and explosions have issued, resulting in loss of life and property. In the case of high pressure flows of oil it is not uncommon to have the derrick or a portion thereof torn away or have the casing cut
- 20 and partially destroyed by the abrasive action of the sand. Because a well is very difficult to cap when once the flow is established, especially when the flow is heavy, it is a primary requisite that the capping device be susceptible of quick and easy installation.

It is accordingly one of the objects of this invention to provide a well capping device which may be easily attached to the casing

30 of the well.

- I am aware that other inventors have endeavored to provide a capping device for capping a well after it has commenced to flow from the upper end of the oil string.
- 35 The devices on the market at the present time may be applied if immediately installed when the flow commences. On the other hand, if the velocity of the flow of fluid becomes considerable the ordinary capping device cannot be applied. This is principally
- 40 due to the fact that the flow of fluid which is traveling at an enormous velocity and a pressure of from 1500 pounds to 2000 pounds per square inch prevents the capping device from being placed over the upper end of the oil tube. I have found that a capping device may be made which can be applied to a well even after a considerable flow has established itself, if the body of the capper
- 50 is provided with an unobstructed opening through which the fluid may flow. When the capping device is moved into a position in which it is engaged by the flow of fluid, the flow of fluid will automatically pull it
- 55 into a centralized position above the upper end of the oil string. Being thus held it is

possible to force it into fluid-tight engagement with the oil string.

It is an object of my invention to provide a capping device which utilizes the flow of oil to hold it in a position ready to be forced down into engaging position.

A still further object of this invention is to provide a capping device which may be readily attached to the well casing.

Sometimes the upper end of the well casing is provided with a collar so that the capping device may be screwed thereto. Sometimes the threads on this collar are damaged to the extent that the capping device cannot be screwed thereto and therefore other attaching means must be employed, such as a packing joint. It is also frequent to have the upper end of the well casing bare without a collar or threads.

It is a still further object of my invention to provide a capping device which may be secured to the well casing whether it be provided with a threaded coupling having damaged threads or a bare pipe.

Other objects and advantages of the invention will be made evident hereinafter.

Referring to the drawings in which I illustrate my invention,

Fig. 1 is a sectional view illustrating the invention when it is to be applied to a well casing having a threaded coupling at the upper end thereof.

Fig. 2 is a section taken on the line 2—2 of Fig. 1.

Fig. 3 is a section taken on the line 3—3 of Fig. 1.

Fig. 4 is a section through a form of my invention adapted to be applied to the upper end of a casing having a collar in which the threads thereof are damaged.

Fig. 5 is a section taken on the line 5—5 of Fig. 4.

Fig. 6 is a section taken on the line 6—6 of Fig. 4.

Fig. 7 is a section taken on the line 7—7 of Fig. 4.

Fig. 8 is a vertical section through a third form of my invention which is adapted for application to a well casing having a bare upper end.

Fig. 9 is a section taken on the line 9—9 of Fig. 8.

Fig. 10 is a section taken on the line 10—10 of Fig. 8.

Fig. 11 is a section taken on the line 11—11 of Fig. 8.

Fig. 12 is a view taken as indicated by arrows 12 of Figs. 8 and 11.

Fig. 13 is a vertical section through still another form of my invention.

Fig. 14 is a section on a plane represented by the line 14—14 of Fig. 13.

Referring to the drawings, I will describe the form of the invention shown in Figs. 1 to 3 inclusive. The numeral 20 represents the upper end of a casing projecting from a well and terminating a short distance above a floor 21 of the derrick of the well. The upper end of the casing 20 has threads 22 upon which a coupling 23 is secured. The upper portion of the coupling 23 has internal threads 24.

The form of my invention shown in Figs. 1, 2 and 3 has a clamp structure generally represented by the numeral 25. The clamp structure 25 consists of clamp members 26 having arcuated faces 27, which are caused to engage the casing 20 by bolts 29 which extend through lugs 30 of the clamp members 26. Upper faces 31 of the clamp members 26 engage a lower annular shoulder 32 provided by the coupling 23. Extending from the clamp members 26 are trunnions 33 on which the lower end of tension means in the form of reins 34 are pivoted. The trunnions are on a horizontal axis which intersects the vertical axis of the casing 20. The reins 34 extend parallel to each other and the upper ends thereof are formed integrally with a threaded ring 35. If desired, the reins 34 and the threaded ring 35 may be made separate and suitably secured together. The ring 35, as illustrated in Fig. 1, has a threaded opening 37 formed therethrough into which a threaded advancer or nut 38 is screwed. The upper end of the nut 38 has a portion 39 which is adapted to be engaged by a suitable wrench whereby it may be rotated and advanced either up or down in the threaded ring 35.

The numeral 41 indicates the capping means of the invention. The capping means consists of a nipple 42 which is threaded at 43 at its lower end, the threads 43 being of the same size as the threads 24 of the collar 23. The upper end of the nipple 42 is threaded at 44 to the lower end of a collar 45. The upper end of the collar 45 has a lower end 47 of a pipe 48 screwed therein. The pipe 48 is the same size as the nipple 42; therefore, the upper end of the collar 45 provides an annular shoulder 49. The nut 38 has a cylindrical opening 50 through which a portion of the pipe 48 extends, the pipe 48 engaging the nut, thus journaling the nut 38 thereon. The pipe 48 has a gate valve 52 connected therein directly above the nut 38. Surrounding the nipple 42 immediately above the threaded portion 43 at the lower end thereof is a centralizing ring 54. The centralizing ring 54

has trunnions 55 which extend outward through openings 56 formed in the reins 34.

In Fig. 1, I illustrate the position of the parts of the capping device when the capping means 41 is in the position above the upper end of the casing 20 ready to be moved downward so that the threaded end 43 may be screwed into the coupling 23. I also illustrate in inclined position at the right the position of the capping device when it is prepared to be moved into position above the casing 20. The operation of this form of the invention is as follows:

The clamp construction 25 may be attached to the casing 20, as shown in Fig. 1, at any time even though the well is blowing oil, water and sand from the open end of the casing. After the clamp 25 is put in place the reins are attached to the trunnions 33, the parts being in their inclined position as shown in Fig. 1. When it is desired to cap the well, the device is moved through the diagonal position shown in Fig. 1 about the trunnions 33 into a position above and in alignment with the casing 20, this position being shown at the right of Fig. 1. The oil at this time will be flowing violently from the upper end of the casing 20. As the device is moved towards the position vertically above the casing 20 the lower end of the nipple 42 will be struck by the flow of oil and the tendency is to swing it upwardly into a central position. The centralizing ring 54 prevents a substantially relative swinging movement between the nipple 42 and the other parts of the capping device. This arrangement prevents any damage being done by the flow of oil engaging the lower end of the nipple 42. When the capping device has been moved into the position above the casing 20 the flow of oil will pass through the capping means 41 and will serve to centralize the entire capping device. It is understood, of course, that the gate valve 52 is open at this time, as illustrated in Fig. 1, so that the flow of oil passes therethrough. This is a valuable feature of the invention since it is important to a proper engagement of the threads 43 and 24 that they be concentric with each other.

The next operation in capping a well is to rotate the nut 38 so as to advance it downward through the threaded ring 35. The lower end of the nut 38 being in engagement with the annular shoulder 49 of the collar 45 moves the capping means 41 downward therewith and moves the lower threaded end of the nipple into the upper end of the collar 23. When the capping means has been moved downward so that the threads 43 and 24 contact, the whole capping means is rotated as the nut 38 is rotated so that the lower end of the nipple 42 will be screwed into the collar 43. The capping means may be rotated by means of a wrench or by pipe

tongs which can be readily applied to the collar 45. After the nipple has been securely threaded to the collar 23, the gate valve 52 may be closed and the flow of oil from the upper end of the casing 20 arrested.

From the foregoing description the advantages of this form of the invention are apparent. In the first place, the collar 23 is utilized as a means for preventing the clamp construction 25 from being pulled upward from the casing 20 by the force of the oil. The clamping means 41 is restrained from upward movement by reason of its being engaged by the flow of oil by means of the nut 38 which is in engagement with the shoulder 49 of the collar 45, which nut 38 is screwed in the threaded ring 35.

Another feature of the invention is the centralizing ring 54 which centralizes the lower end of the nipple 42. This centralizing means is active principally during the time that the device is being swung into position above the casing 20. Another valuable feature of the invention is that it utilizes the flow of oil for centralizing the capping means above the casing so that the lower end of the nipple 42 may be lowered into the collar 23. All these features of the invention combined serve to produce a capping device which may be easily and quickly attached to the upper end of the well casing having a collar secured thereto, which collar has internal threads as indicated at 24.

In Figs. 4, 5, 6 and 7, I illustrate the form of the invention which is adapted to be secured to a casing 60 having a collar 61 which is secured to the upper end thereof, the threads of which have been damaged to such an extent that a pipe cannot be threadedly secured thereto. In this form of the invention I employ a clamp construction 63 similar to the clamp construction 25 which has clamp members 64 which are secured by bolts 65 around the casing 60 immediately below the collar 61 so that the members 64 engage a shoulder 66 provided by the collar 61. Trunnions 67 are formed on the clamp members 64 and the lower ends of reins 68 are pivoted on the trunnions 67. The upper ends of the reins 68 are formed integrally with a ring 69 having a cylindrical opening 70 which is not threaded. The numeral 72 represents the capping means of this form of my invention which has a body 73, the lower end of which is provided with an annular cavity 74 at the upper part of which a packing ring 75 is placed. The cavity 74 has an inside cone of a diameter which is somewhat greater in diameter than the inside of the collar 61, so that when forced down it can enter and close the upper end of the collar. A centralizing ring 77 surrounds an upper cylindrical end 78 of the body 73 and engages an annular shoulder 79 thereof. The centralizing ring 77 has channels 78 formed therein through which the reins 68 extend. A nipple 80 is threadedly secured at 81 to the upper part of the body 73, and threadedly secured at 83 to the upper end of the nipple 80 is a threaded sleeve 84 which is provided with external threads 85. Threadedly secured at 86 to the threaded sleeve 84 is a pipe 88 which extends upward therefrom and in which a gate valve 89 is connected. Screwed on the threaded sleeve 84 is a nut 90. The nut 90 is provided with bosses 91 through which openings 92 extend for the reception of a bar or spanner wrench whereby the nut 90 may be rotated in order to advance the threaded sleeve 84 in either direction. The upper end of the nut 90 is provided with an annular shoulder 93 which rests in an annular cavity 94 formed in the lower part of the ring 69. In this form of the invention when the well blows in and oil flows from the upper end of the casing 60, the capping device is first attached in an inclined position and is then moved into the position shown in Fig. 4. The centralizing ring 77 prevents the lower end of the capping means 72 from being swung relative to the other parts of the device. The ring 77 is constructed so that the capping means may rotate relative thereto. The valve 89 is open as the device has moved into the position shown in Fig. 4, and the oil will flow through the capping means 72, holding it in alignment above the casing 60. The next operation is to lower the capping means 72 so that the packing ring 75 engages the upper annular end of the collar 61. This is done by either rotating the threaded sleeve 84, the nipple 80 and the member 73 together with the pipe 88, which may be accomplished by holding the nut 90 and turning the pipe 88, or by rotating the nut 90 so that the threaded sleeve 84 is advanced downward therewith. The threaded sleeve 84 being a part of the capping means 72 moves the entire capping means down so that the packing ring 75 of the body 73 is brought into fluid-tight engagement with the upper end of the collar 61. After this fluid-tight contact has been made, the valve 89 may be closed and the flow of oil from the well prevented. In this form of my invention I embody substantially the same features as in the first form of the invention. The centralizing ring 77 acts in the same manner as the centralizing ring 54 of the first form of the invention. The flow of oil in the second form of the invention is utilized for centralizing the device in position ready to be lowered so that a tight seal is made between the body 73 and the collar 61. It should be noted, however, that there are structural differences between the first and

second forms of the invention which are necessary by reason of the different problems which must be overcome.

In Figs. 8 to 12 inclusive I illustrate a third form of my invention which is applicable to casings having a bare upper end, which condition is met with in wells that have flowed for some time. Referring to Fig. 8, the numeral 100 represents a casing, the upper end of which is unthreaded as shown. The upper end of the casing 100 is perfectly smooth and therefore a special clamping construction, as indicated by the numeral 101, is required because there is no collar to provide a shoulder which may be engaged by the clamping construction. Referring to Figs. 8, 11 and 12, in particular, the clamp construction 101 has a pair of clamp members 102 having arcuated tapered faces 103 which when they are secured together form a frusto-conical cavity 104. The clamp members 102 have arms 105 which project outward in opposite directions, the adjacent arms 105 of the clamp members 102 being held together by clamp plates 107. The clamp plates 107 have openings 108 through which pairs of arms 105 extend. The clamp plates 107 are placed on the arms 105 from the outer ends thereof. After the clamp members have been placed, as shown in the drawings, wedges 110 are driven through openings 111 of the pairs of arms 105 for securely holding the clamp plates 107 in place. This arrangement is very satisfactory since it rigidly and absolutely holds the clamp members 102 in proper position. The frusto-conical cavity 104 receives the slips 112 as illustrated best in Fig. 8. These slips 112 have internal teeth 113 which are adapted to engage the casing 100. The large end of the frusto-conical cavity 104 is at the upper end of the clamp members 102 so that the slips 112 are inserted from the upper end thereof. If it is attempted to move the members 102 upward, the slips 112 are caused to rigidly clamp the casing 100 and an upward movement of the members 102 is prevented. Formed on the members 102 are trunnions 115 on which the lower ends of reins 116 are pivoted. The reins 116 extend upward parallel to each other and terminate in a threaded ring 118 having a threaded opening 119 formed therethrough. Screwed into the threaded opening 119 is a threaded advancer or nut 120 having an upper end 121 which is prepared to receive a wrench by means of which the nut 120 may be rotated so that it can be advanced upward or downward through the threaded ring 118. The capping means of the invention is indicated by the numeral 123 and includes a stuffing box body 124 having a central opening 125 through which the upper end of the casing 100 may extend. The lower end of the body 124 has an annular cavity 126 in which pack-

ing 127 may be compressed by means of a gland 128. The gland 128 is secured in place by bolts 129. The stuffing box body 124 is provided with centralizing lugs 130 which are arranged in pairs, between which pairs the reins 116 extend. The upper end of the body 124 is threaded at 132 and the lower end of a nipple 133 is secured thereto. The lower part of the nipple 133 is comparatively large and provides a cavity 135 into which the upper end of the casing 100 may extend. The lower end of the nipple 133 provides a bearing face 134 which engages the inner face of the nut 120. The upper end of the nipple 133 is swedged at 136 and has a collar 137 threadedly secured thereto for the purpose of attaching a pipe 139 thereto. The pipe 139 has a gate valve 140 connected therein.

In Fig. 8 the third form of my invention is shown in the position it occupies after the upper end of the casing 100 has been capped. Previous to this time the nut 120 is advanced upward so that the lower end of the gland 128 may be occupying a position above the upper bare end of the casing 100. When the well blows in and oil flows from the upper end of the casing 100, the capping device is moved into a position above the upper end of the casing 100 in the same manner as in the other two forms of the invention. The centralizing lugs 130 prevent the lower end of the capping means 123 from being swung relative to the other parts of the invention. The valve 140 is opened and the oil flows therethrough, the oil tending to align the capping means 123 with the casing 100. The next operation is to lower the capping means 123 which is accomplished by advancing the nut 120 downward. The lower end of the nut 120 engages the upper end of the stuffing box body 124 and forces the capping means 123 downward therewith. The stuffing box body 124 is moved into the position shown in Fig. 8 so that it surrounds the upper end of the casing 100. When this position has been reached, the gland 128 which is loosened during the lowering operation is moved upward by screwing the bolts 129 into the stuffing box body 124, so that the packing 127 is compressed into fluid-tight engagement with the casing 100. This third form of the invention embodies all the features of the other forms of the invention. The lower end of the capping means 123 is centralized while it is being moved into position above the casing 100, and the flow of oil from the casing 100 is utilized for centralizing the capping device while the capping means 123 is being lowered over the upper end of the casing.

In addition to the features of the other forms of the invention, this form of the invention includes a novel form of clamp construction 101. This clamp construction is

special, by reason of the fact that it has no shoulder to engage in order to hold it in proper position and has no means to rigidly clamp the pipe 100 so that it cannot be moved upward by the force of the flow of oil. This is readily accomplished by the provision of the slips 112. The construction for securing the members 102 together is important to the clamp construction 101. The means shown, which consists of the arms 105, the plates 107, and the wedges 110, are very simple and rigidly and reliably secure the clamp members 102 together.

In the form of the invention shown in Fig. 13, which is somewhat similar to that shown in Fig. 4, I employ clamp members 64 which are secured by bolt 65 about the casing 60 immediately below the collar 61 so that the members 64 engage a shoulder 66 on the collar 61. Trunnions 67 are provided on the clamp members and the lower ends of reins 68 are pivoted thereon. The upper ends of the reins are secured to the two halves of a split ring 120 which is secured together by bolts 121. The split ring 120 is threaded as shown at 122. The capping means is provided with a body 73, the lower end of which has an annular cavity 74 in which a packing ring 75 is seated. A centralizing ring 123 is loosely secured upon the top of the body 73 and is provided with holes through which bolts 124 may pass. The centralizing ring 77 has openings through which the reins 68 extend. A nipple 80 is secured in the body 73, and secured at the upper end of the nipple 80 is a threaded sleeve 84 which is provided with external threads 85. Screwed on the sleeve 84 is a threaded nut 90, the threaded sleeve 84 extending up and engaging the threads 122 in the clamps 120. Threadedly secured in the sleeve 84 is a pipe 88 provided with a gate valve 89. It will be noted that the above construction is somewhat similar to that shown in Fig. 4, except that the clamp 120 is split and threaded so that the sleeve 84 can extend upwardly therein and the flange 123 is provided with openings for the bolt 124. The construction shown in Fig. 13 has an advantage over that shown in Fig. 4 in that with the sleeve in its upper position with the threads engaging the clamp 120, the whole capping device is suspended in such a position that it may be swung from the dotted position A over the well and may then be forced downwardly by applying pipe tongs to the pipe 88, the sleeve 84 then turning in the clamps 120 and moving downwardly. During this period the nut 90 is preferably held stationary and as soon as the sleeve 84 leaves the clamps 120, the sleeve may be forced further downwardly by rotating the nut 90.

In addition to these novel features, Figs. 13 and 14 show an auxiliary clamping device which may be used not only with the

forms shown in Figs. 13 and 14, but also with the other forms.

It will be understood that in capping the well the valve 89 is ordinarily left open until after the device has been swung into place above the casing and forced downwardly into engagement therewith. During this time there is an upward force exerted on the capping device due to the friction of the fluid flowing therethrough. As soon, however, as the valve 89 is closed the upward pressure on the capping device is very greatly increased, since the full well pressure is then exerted to force the capping device upwardly. It is highly desirable and generally necessary to provide additional means for resisting this excess upward pressure. Such a means is shown in Fig. 13 in which I provide a spider 130 having a plurality of slips 131, the spider 130 being preferably split and secured together by bolts 132. The slips 131 are then forced downwardly and are then held in place by clamping rings 133. The spider and slips provide a very great anchorage so that the bolts 124 which pass through flanges on the spider 130 and through the flange 123, provide a very substantial anchorage tending to hold the capping device in place. In practice I use from six to twelve of these bolts equally spaced around the ring.

I claim as my invention:

1. A control means for capping the tubing of a flowing oil well comprising: securing means adapted to be secured to said tubing below the upwardly projecting open end thereof; reins pivoted at their lower end to said securing means so that they can swing about a horizontal axis passing through said tubing near the axis thereof; a threaded member carried by the upper end of said reins; capping means; and a rotatable member through which said capping means extends threaded in said threaded member and engaging said capping means to force it downwardly into a position where it may be secured in fluid-tight relationship with said tubing.

2. A control means for capping the tubing of a flowing oil well comprising: securing means adapted to be secured to said tubing below the upwardly projecting open end thereof; reins pivoted at their lower end to said securing means so that they can swing about a horizontal axis passing through said tubing near the axis thereof; a threaded member carried by the upper end of said reins; capping means; a rotatable member through which said capping means extends threaded in said threaded member and engaging said capping means to force it downwardly into a position where it may be secured in fluid-tight relationship with said tubing; and means for preventing said capping means from swinging relative to said reins.

3. A control means for capping the tubing of a flowing oil well comprising: securing means adapted to be secured to said tubing below the upwardly projecting open end thereof; reins pivoted at their lower end to said securing means so that they can swing about a horizontal axis passing through said tubing near the axis thereof; a threaded member carried by the upper end of said reins; capping means; and a rotatable member threaded in said threaded member and engaging said capping means to force it downwardly into a position where it may be secured in fluid-tight relationship with said tubing, said capping means being rotatable with respect to said reins and said rotatable member.

4. A control means for capping the tubing of a flowing oil well comprising: securing means adapted to be secured to said tubing below the upwardly projecting end thereof; reins pivoted at their lower ends to said securing means so that they can swing about a horizontal axis passing through said tubing near the axis thereof; a supporting member joining the upper ends of said reins; capping means carried by said supporting member; and a forcing element through which said capping means extends and which is operably movable relative to said supporting member and said capping means and adapted to engage and force said capping means downwardly into engagement with the open end of said tubing.

5. A control means for capping the tubing of a flowing oil well comprising: securing means adapted to be secured to said tubing below the upwardly projecting end thereof; reins pivoted at their lower ends to said securing means so that they can swing about a horizontal axis passing through said tubing near the axis thereof; a supporting member joining the upper ends of said reins; capping means carried by said supporting member; a forcing element through which said capping means extends and which is operably movable relative to said supporting member and said capping means and adapted to engage and force said capping means downwardly into engagement with the open end of said tubing; and means for preventing said capping means from swinging relative to said reins.

6. In a control means for capping the tubing of a flowing well, the combination of: securing means adapted to be secured to said tubing below the upwardly projecting end thereof; retention means pivoted to said securing means and having a fixed support-

ing member at its free end; and capping means extending through said supporting member and at all times restrained against swinging relative to said retention means, so that as said retention means is swung upward the capping means is brought into axial alignment with the tubing, said capping means having an unobstructed opening through which fluid from said well may pass, thus holding said capping means in axial alignment with the open end of said well tubing.

7. A combination as defined in claim 5, in combination with: means for securing said capping means in fluid-tight relation with said tubing.

8. A combination as defined in claim 6, in combination with: means for securing said capping means in fluid-tight relation with said tubing; and means for controlling the flow of fluid through said capping means after it has been secured.

9. In a control means for capping the tubing of a flowing well, the combination of: securing means adapted to be secured to said tubing below the upwardly projecting end thereof; retention means pivoted to said securing means and having a fixed supporting member at its free end; and capping means extending through said supporting member and having near its lower end centralizing means preventing said capping means from swinging relative to said retention means, so that as said retention means is swung upward the capping means is brought into axial alignment with the tubing, said capping means having an unobstructed opening through which fluid from said well may pass, thus holding said capping means in axial alignment with the open end of said well tubing.

10. A combination as defined in claim 9, in combination with: means for securing said capping means in fluid-tight relation with said tubing.

11. A combination as defined in claim 6, in combination with: means for moving said capping means axially relative to said supporting member to bring said capping means into fluid-tight engagement with said well tubing.

12. A combination as defined in claim 6, in which said capping means is rotatable and is provided with screw-threads adapted to engage said well tubing.

In testimony whereof, I have hereunto set my hand, at Los Angeles, California, this 22nd day of June, 1926.

CHESTER A. RASMUSSEN.