

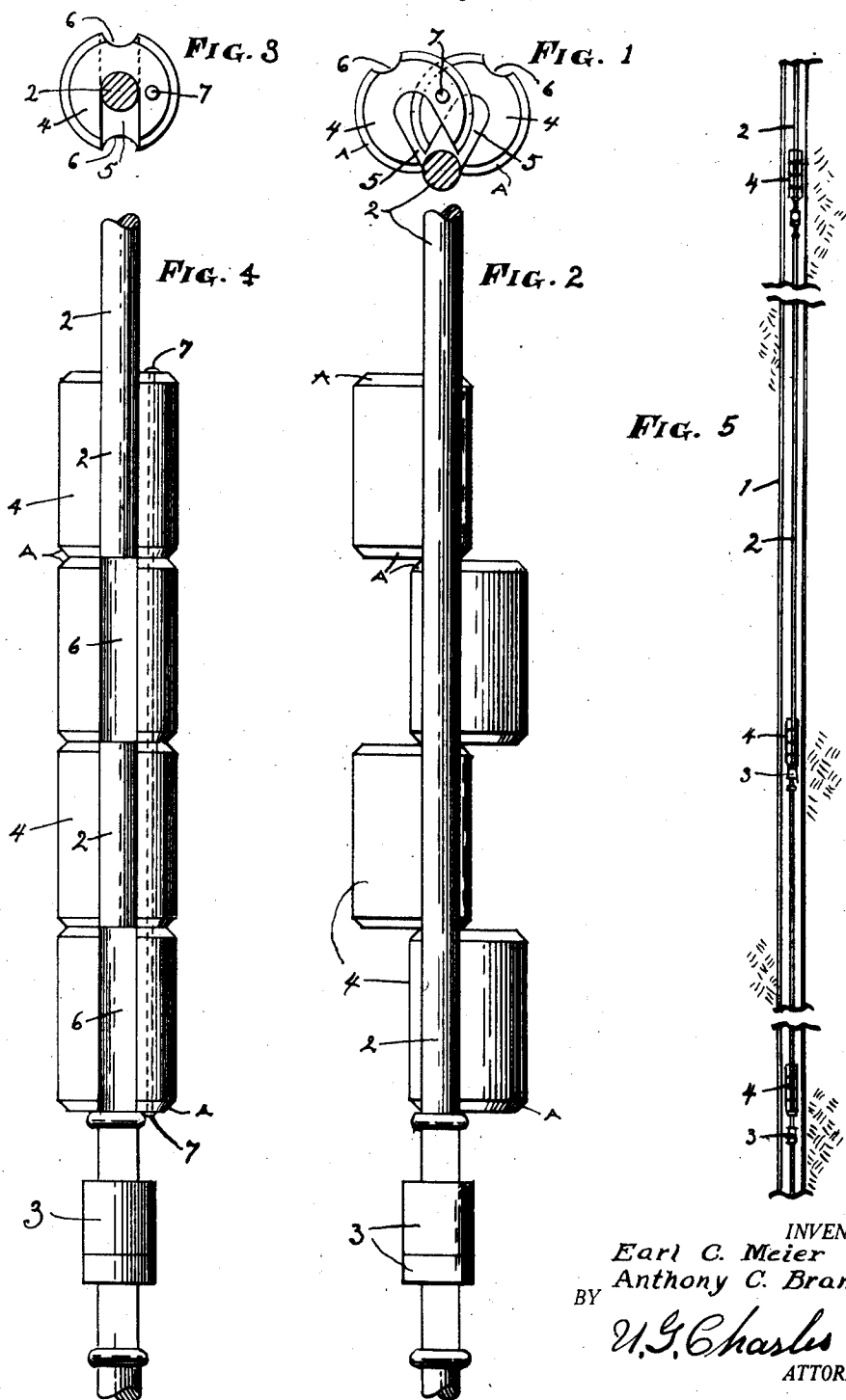
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GUIDING MEANS FOR OIL WELL PUMP RODS

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GUIDING MEANS FOR OIL-WELL PUMP RODS.

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Our invention relates to guiding means for oil well pump rods.

The object of our invention is to provide a protecting means for what is known in the oil fields as a sucker rod, but herein called pump rod. The jointed members placed on said rod known in the oil fields as spools will herein be termed bushings.

A further object of our invention is to provide means to eliminate the whipping of the pump rod in the casing.

A still further object of our invention is to prevent the pump rod from contacting the casing during the reciprocating motion, eliminating the unusual wear occasioned by the rod on the inner walls of the casing.

These and other objects will hereinafter be more fully explained.

Referring to the drawings:

Fig. 1 is a sectional view of the rod with the bushings positioned to receive the rod concentric thereto.

Fig. 2 is an elevation of Fig. 1.

Fig. 3 is a sectional view of the rod with the bushings closed in their working position.

Fig. 4 is an elevation of Fig. 3.

Fig. 5 is a reduced drawing in section longitudinally showing the oil well casing positioned in the earth and the pump rod with bushings thereon positioned in said casing.

In oil field operations the well while being drilled is cased with metal tubing 1, and the said tubing remains in position when the well is brought in and ready for the pump. The valve mechanism for the pump is placed near the bottom thereof and supported by a pump rod 2, the said rod being in lengths and connected by unions 3, the said unions functioning as a stop for our invention consisting of a plurality of bushings 4 which are positioned on each length of the rod, the said bushings having a slot 5 entering one side and extending to the center thereof, on the opposite side a groove indenture 6 registering with the slot of the adjacent member when the said slots are turned in opposite direction alternately as assembled.

The said members are pivotally connected by a rod 7 extending longitudinally there-through and by rocking said members in position alternately as shown in Figures 1 and 2, the rod 1 will enter said slots passing to the center, causing the members when rotated to register in straight alignment as

shown in Figures 3 and 4; and when so positioned and placed in the casing it will be impossible for them to rock sufficient to allow the rod to pass therefrom, and should the members be inclined to rock outward, note the ends are beveled as at A, eliminating a sharp corner that would tend to catch on the joints of the casing in the ascent or descent during the pumping process.

The said bushings when assembled and placed in position on the pump rod will be checked from descent on said rod by the unions connecting the lengths of rods; therefore it will be understood that any desired number of bushing members may be connected on each length of the pump rod, protecting the rod at intervals, longitudinally and as the said bushings are made of wood or fiber the wear on the rod will not be as severe as when it contacts the walls of the casing. Furthermore the whip of the pump rod being eliminated crystallization of the rod will be practically eliminated, all of which means the prolongation of the durability of an oil well pump rod.

We do not restrict our invention to oil well pump rods, as it may be applied for other similar purposes, neither do we confine the materials to wood or fiber compositions as metal may be employed and such other modifications may be employed as lies within the scope of the appended claims.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

We claim—

1. In a guiding means for oil well pump rods, a rod, a plurality of bushings pivotally connected eccentrically, said bushings provided with radial slots in their respective sides, said slots extending to the center and through the length thereof to receive said rod concentrically, unitary pivotal fastening means for said members so that when rocked to peripheral alignment the slots in each member will alternate radially seating the rod axially as described.

2. In a guiding means for oil well pump rods, a pump rod, a plurality of cylindrical bushings, said bushings being frusto-conical at both ends, and provided with radial slots in their respective sides to receive the pump rod concentric thereto, a groove in the opposite side of the bushing from said slots so that the groove and slot will register when said bushings are rocked to peripheral reg-

istry, all as shown and for the purpose described.

3. In a guiding means for oil well pump rods, in combination with the casing of an oil well, a plurality of bushings having radial slots in their respective sides to receive the pump rod concentrically therein, eccentric unitarial connecting means for said

bushings to eject or receive the pump rod through the radial slots by rocking said members in opposite direction, the said bushings supported in peripheral alignment by the casing when said members are engaged therein, for the purpose described. 10

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