J. B. MASSEY.

PUMP ROD COUPLING.

APPLICATION FILED MAY 21, 1912.

1,067,998. Patented July 22, 1913.

Fig. 1.

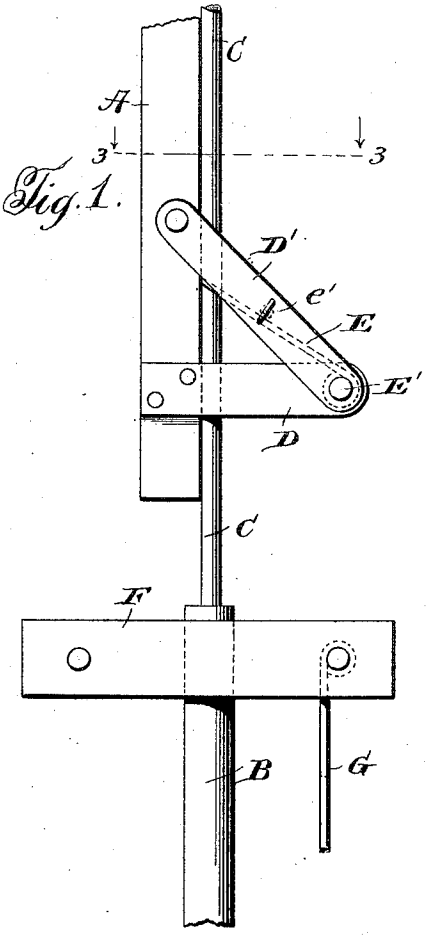


Fig. 4.

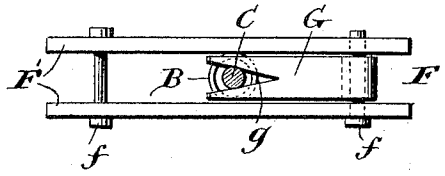


Fig. 2.

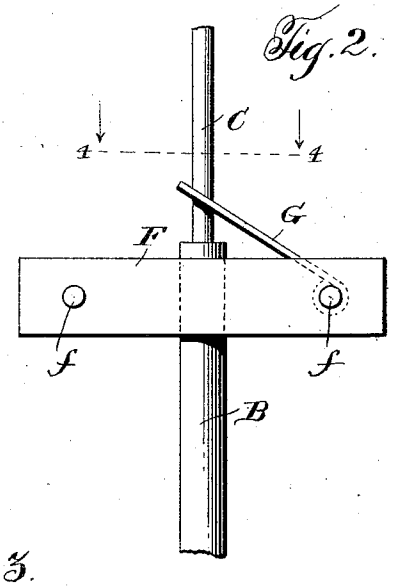
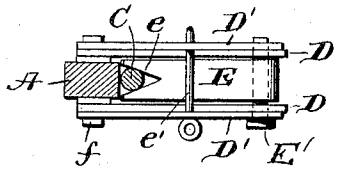


Fig. 3.



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PUMP-ROD COUPLING.

1,067,998. Specification of Letters Patent. Patented July 22, 1913.

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To all whom it may concern:

Be it known that I, JAMES B. MASSEY, citizen of the United States, residing at Odessa, in the county of Ector and State of Texas, have invented certain new and useful Improvements in Pump-Rod Couplings, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to an improved pump rod holder and coupling designed particularly for use in connection with deep well suction pumps.

One of the objects of the present invention is the provision of an improved device of this character by means of which the pump rod may be readily and quickly coupled or uncoupled from the wind mill rod.

A further object of the invention is the provision in a device of this character of improved means for supporting the pump rod in the well tube when the same has been disconnected from the wind mill rod.

A further object of the invention is the provision of a device of this character which is so constructed that it may be readily attached to any deep well suction pump of the ordinary type without in any way weakening any of the parts thereof.

A further object of the invention is the provision of a device of this character which is so constructed that it may be readily employed in connection with wells of various sizes.

Other objects of the invention will be apparent from the detailed description hereinafter when read in connection with the accompanying drawings, forming a part hereof, wherein a convenient embodiment of the invention is illustrated, and wherein like characters of reference refer to similar parts in the several views.

In the drawings: Figure 1 is a side elevation of the device attached to a pump, the parts being shown as occupying positions to permit the reciprocation of the pump rod by the wind mill rod; Fig. 2 is a side elevation of the well casing and the clamp carried thereby for supporting the pump rod when the same is disconnected from the wind mill rod, said clamp being shown in operative engagement with the pump rod; Fig. 3 is a cross section on the line 3—3 of Fig. 1; Fig. 4 is a cross section on line 4—4 of Fig. 2.

Referring now more particularly to the drawings, A designates the wind mill rod, B the well tube or casing, and C the pump rod, all of which parts may be of any well known construction.

Rigidly secured to opposite sides of the wind mill rod A adjacent the lower end thereof and projecting laterally therefrom are a pair of bars D D the outer ends of which are connected to the wind mill rod A by means of suitable brace rods D′ D′. The pump rod C lies between the bars D D, and a movable clamping member carried by the bars D D is employed for clamping the pump rod against one edge of the wind mill rod A so that it will reciprocate therewith. In the embodiment of the invention illustrated, in the drawings, the clamping means employed for this purpose comprises a plate E which is pivotally supported at its lower end between the outer ends of the bars D by a suitable pivot bolt E′ which is removably supported in the bars D D. When in normal position, the clamping member E extends upwardly at an angle from its pivotal connection with the bars D D and the free end of said clamping member is provided with a substantially V-shaped opening *e* therein which is adapted, when the clamping member is in operative position, to be moved into biting engagement with the pump rod C. When the clamp is in this position, the pump rod C will be held clamped tightly against one edge of the wind mill rod A, and will reciprocate therewith. I have found that the clamp as above described will maintain its operative position during both the up and down movements of the pump rod, but if desired, a positive means may be provided for preventing any upward movement of the clamp during the upward movement of the pump rod. In the embodiment of the invention illustrated, I have shown a locking pin *e′* for this purpose which passes through alined openings in the brace bars D′ D′ and is adapted to directly overlie the clamping member E when the same is in clamping engagement with the pump rod C.

Secured to the upper end of the well tube or casing B and projecting laterally therefrom, is a supporting frame F to which is pivotally connected at its lower end, at one side of the well tube or casing, a clamping member G, the free end of which is provided with a substantially V-shaped notch *g* therein. When in clamping position, the

clamp G extends upwardly at an angle from its pivotal connection with the supporting frame F, and the notch *g* engages the pump rod C with a biting action so that said pump rod will be held against downward movement in the well casing although it can be moved upwardly therein. The supporting frame F may be conveniently formed of two bars or plates F′ F′ which are positioned on the opposite sides of the well tube or casing and are held securely clamped thereto by means of clamping bolts *f f* which pass through the bars F′ F′ adjacent the ends thereof, one of which bolts is preferably utilized as the pivotal bolt for the clamping member G. This construction enables the supporting frame to be secured to well casings of various forms and sizes and also renders the same clamp available for use in connection with wells of various sizes, as the supporting frame F may be secured to the well casing so as to position the pivotal connection of the clamping member G at any desired distance therefrom.

In using the device, the clamping member E is thrown to a position to firmly clamp the pump rod C to the wind mill rod A, while the clamping member G is thrown out of engagement with the pump rod. The parts are allowed to remain in this position as long as it is desired to operate the pump. To disconnect the pump rod C from the wind mill rod A the clamp G is thrown into engagement with the pump rod C to prevent the same from descending into the well casing, and after removing the pin *e′*, the clamping member E is moved out of engagement with the pump rod. By removing the pivot E′ the clamping member E can be entirely removed from between the bars D D, thus enabling the wind mill rod A to be moved laterally a sufficient extent to permit the removal of the pump C from between the bars D D. The pump rod can then be elevated in any desired manner until the same is withdrawn from the well, the clamp G acting to prevent the pump rod from falling downwardly into the casing.

While I have illustrated in the accompanying drawings a convenient embodiment of the invention, it will be understood that many changes may be made to the particular form and construction therein shown without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:—

1. In a device of the character described, a wind mill rod, a supporting member extending laterally therefrom comprising separated bars, a removable cross pin positioned at the outer end of said bars, a brace member having separated bars attached to the wind mill rod above the supporting member and having their opposite ends attached to the free ends of the supporting member by the removable cross pin, said brace member having apertures intermediate its ends, a pump rod parallel with the wind mill rod and passing through the separated bars of the supporting member and brace member, a clamping member pivotally mounted on said cross pin, said clamping member provided with a V-shaped slot at its free end for clamping the pump rod in engagement with the wind mill rod, a removable pin extending through the apertures in the brace member, said pin adapted to pass over the clamping member and hold the same in locking position.

2. In a device of the class described, a wind mill rod, a supporting member having separated bars extending laterally therefrom, said bars being spaced apart at one end by the wind mill rod, a removable cross pin at the outer ends of said bars, a brace member comprising separated bars attached to the supporting member by said cross pin, and extending upwardly at an angle from the cross pin, and secured to the wind mill rod at their opposite ends, a pump rod parallel with and in engagement with the wind mill rod, a clamping member having its free end provided with a V-shaped slot for engagement with the pump rod pivotally secured on the cross pin, and extending upwardly at an angle from its pivot within the brace member, the brace member provided with apertures, and a cross pin passing through said apertures to lock the clamping member in locked position.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES B. MASSEY.

Witnesses:
W. F. Bates,
L. M. Wilson.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."