No. 649,831. Patented May 15, 1900.

C. A. FULLER.

COUPLING FOR PUMP RODS.

(Application filed Jan. 6, 1900.)

(No Model.)

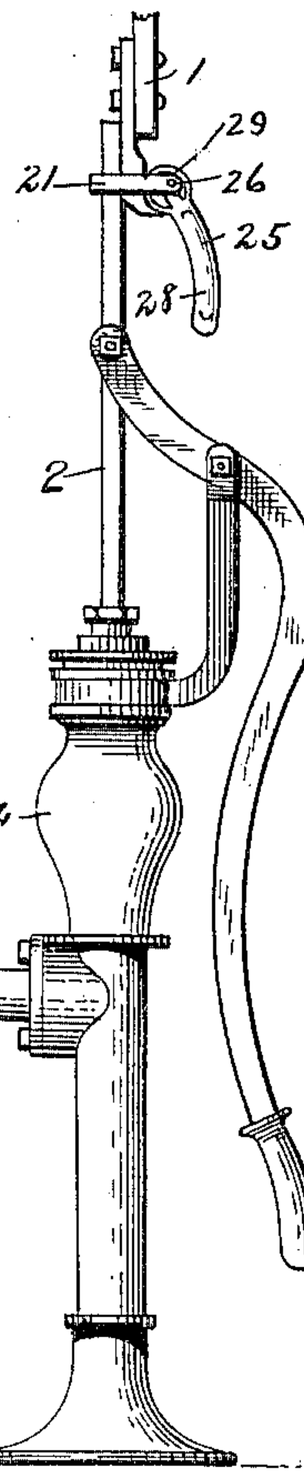

Fig. 1.

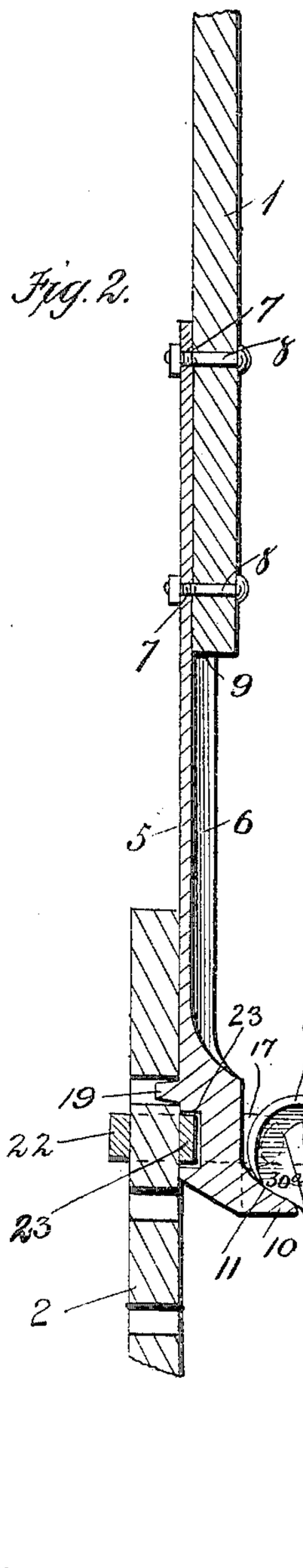

Fig. 2.

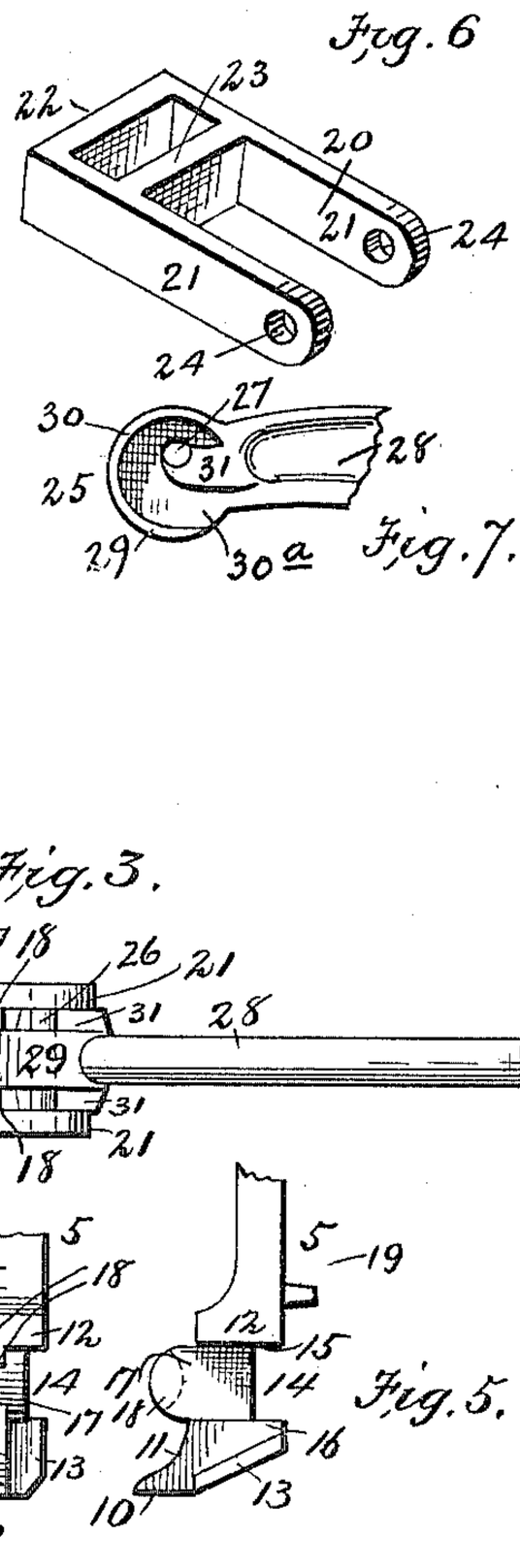

Fig. 6

Fig. 7.

Fig. 3.

Fig. 4

Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

CLARK ANTHONY FULLER, OF EAU GALLE, WISCONSIN.

COUPLING FOR PUMP-RODS.

SPECIFICATION forming part of Letters Patent No. 649,831, dated May 15, 1900.

Application filed January 6, 1900. Serial No. 606. (No model.)

To all whom it may concern:

Be it known that I, CLARK ANTHONY FULLER, a citizen of the United States, residing at Eau Galle, in the county of Dunn and State of Wisconsin, have invented new and useful Improvements in Couplings for Pump-Rods, of which the following is a specification.

My invention relates to couplings for pump-rods and more especially for that class of pumps operated by a windmill.

The objects of my invention are to provide a simple and efficient coupling device to connect the pitman from the windmill with the piston of the pump, said coupling device permitting adjustment of the throw of the piston to the required degree to accomplish the best results, and to provide a secure and reliable coupling of the pitman and piston-rod and one which may be quickly and easily attached and adjusted. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my coupling applied to a pump. Fig. 2 is a longitudinal section of the coupling. Fig. 3 is a plan view of one member of the coupling. Figs. 4 and 5 are detail views. Fig. 6 is a detail perspective of the clamping-bail. Fig. 7 is a detail side view of the cam-head.

Like numerals of reference designate like parts in the different views of the drawings.

The numeral 1 designates the pitman, connected at its upper end to the windmill and reciprocated in the usual way, and 2 is the piston-rod of the pump, said two parts being shown as being connected near their contiguous ends by my coupling device. The pump 4 is of ordinary construction.

My coupling device consists of a base-plate 5, having side flanges 6 and perforations 7 in the bottom or base portion of said plate 5. The width of this base-plate is such as to conform to the width of the pitman as near as may be between the flanges 6 6, and in order that the end of the pitman when attached to the base-plate by bolts 8 8 shall not interfere with the operation of the lever a stop 9 is formed in the bottom of the base-plate, the end of the pitman abutting against said stop. At the opposite end of said base-plate a toe or projection 10 is formed, the inner surface of said toe being curved at 11. Two shoulders 12 and 13 are formed on the base-plate, and between these shoulders a guideway 14 is formed between the shoulders 15 16. Extending upward in line with the guideway are the two lugs 17, each having an inwardly-projecting cam-stud 18. A tapering pin or stud 19 projects from the opposite side of the base-plate.

Seated to slide in the guideway 14 is a clamping-bail 20, consisting of the side arms 21, the end bar 22, and the cross-bar 23. The space between the bars 22 and 23 forms a seat for the pump piston-rod. The side arms 21 of the clamping-bail 20 are provided with alined perforations 24, and a cam-lever 25 is pivoted between the side arms 21 on a pintle 26, passing through the perforations 24 and through an aperture 27, formed eccentrically in the cam-head of the lever 25.

The lever 25 consists of a handle 28, having a cam-head 29 at one end thereof, said head being substantially circular in side view and having a flange 30 on each side edge thereof. These flanges 30 do not extend entirely around the cam-head, but are omitted at opposite sides at 30^a for a purpose to be hereinafter referred to.

The cam-head has an enlargement 31 at each side thereof, and the eccentric aperture 27 extends through the upper edges of these enlargements.

When the parts of the lever are to be assembled, the side arms 21 of the clamping-bail 20 are pushed into the guideway 14, and the lever 25 is attached by bringing the web at 30^a between the cam-studs 18, Fig. 2, and turning the lever until the perforations 24 register with the eccentric aperture 27, and the pintle 26 is then inserted. The parts may then be readily separated again when found necessary for repairs or for renewal of worn or damaged parts by removing the pintle and bringing the cam-head into the position shown in Fig. 2.

It will be noticed that the pintle 26 being eccentric to the flanges 30 said flanges engage the cam-studs 18 to move the clamping-bail 20 in one direction, while the outer surface or periphery of the cam-head 29 bears against the curved portion 11 of the toe 10 to move the bail in the opposite direction to clamp the piston-rod.

The operation of my device is as follows: The pitman 1 having been bolted to the base-plate, the piston-rod 2 is inserted into the space between the bars 22 and 23, and the tapering stud 19 is engaged with a perforation in the piston-rod. The handle of the lever is then thrown down to the position shown in Fig. 1, thus effectively coupling the pitman and the piston-rod together. When the lever is thrown upward, the stud 19 is automatically withdrawn from the perforation in the piston-rod, and the said piston-rod may be readily separated from the clamp.

Having thus fully described my invention, what I claim is—

1. In a coupling for pump-rods, a base-plate having side flanges, a tapering stud, a toe having a curved inner surface, and a guideway, a bail seated in the guideway, a cam-lever pivoted to the bail, substantially as described.

2. In a coupling for pump-rods, a base-plate provided with a tapering stud and a curved projection at one end, two shoulders and a guideway between them, lugs in line with the guideway, inwardly-projecting cam-studs on the lugs, a clamping bail seated to slide in the guideway, a lever having a cam-head provided with peripheral flanges, engaging the cam-studs, said head being eccentrically pivoted in the arms of the sliding bail and bearing at its periphery against the curved projection, substantially as described.

3. A coupling device for pump-rods consisting of a base-plate having shoulders at one end and a guideway between them, a clamping-bail mounted to slide in said guideway, a cam-lever pivoted eccentrically in the clamping-bail, and provided with peripheral flanges, cam-studs projecting inward from lugs on the base-plate to engage said flanges, said flanges being cut away to permit the parts to be connected and disconnected, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CLARK ANTHONY FULLER.

Witnesses:
JAMES C. FLEMING,
WILL. J. FRANK.