(No Model.)

A. W. KNIGHT.

ROD COUPLING DEVICE.

No. 494,208. Patented Mar. 28, 1893.

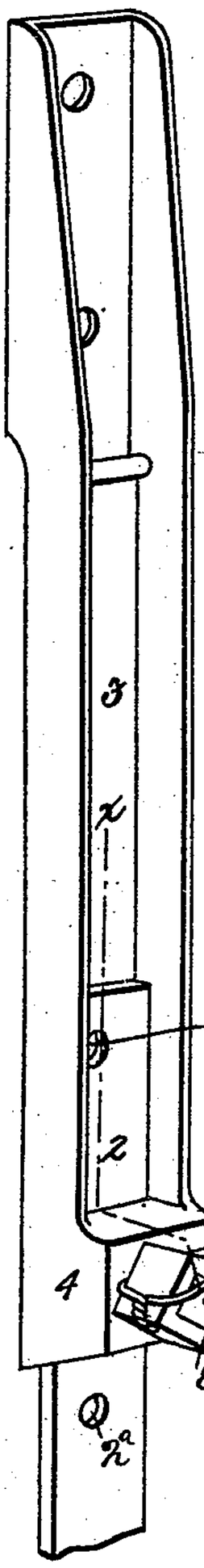

Fig. 2.

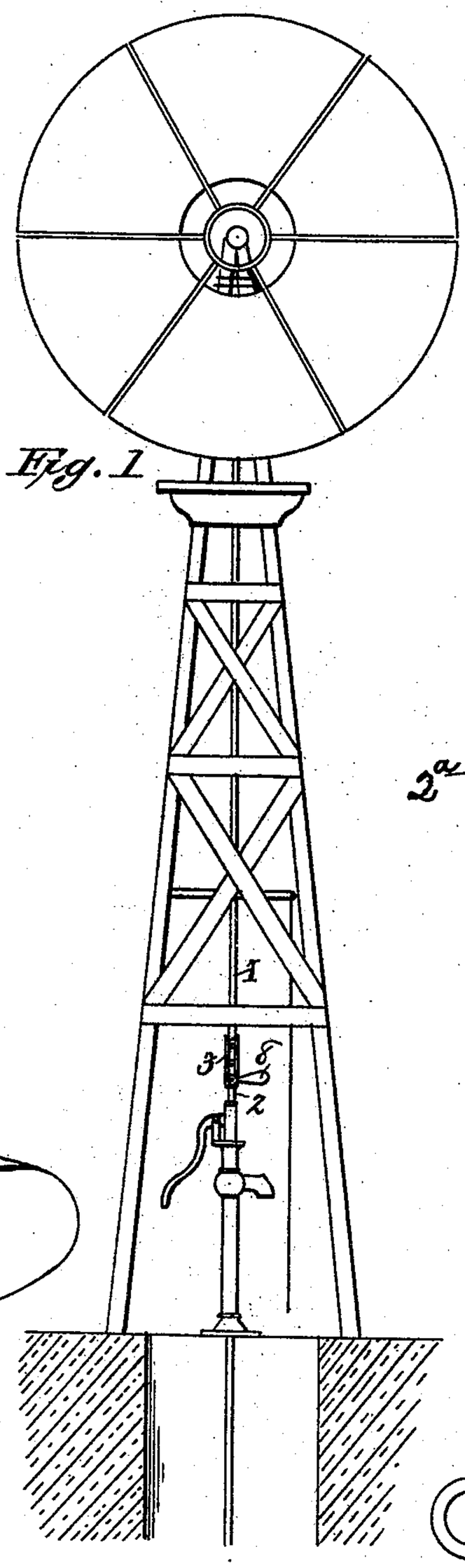

Fig. 1.

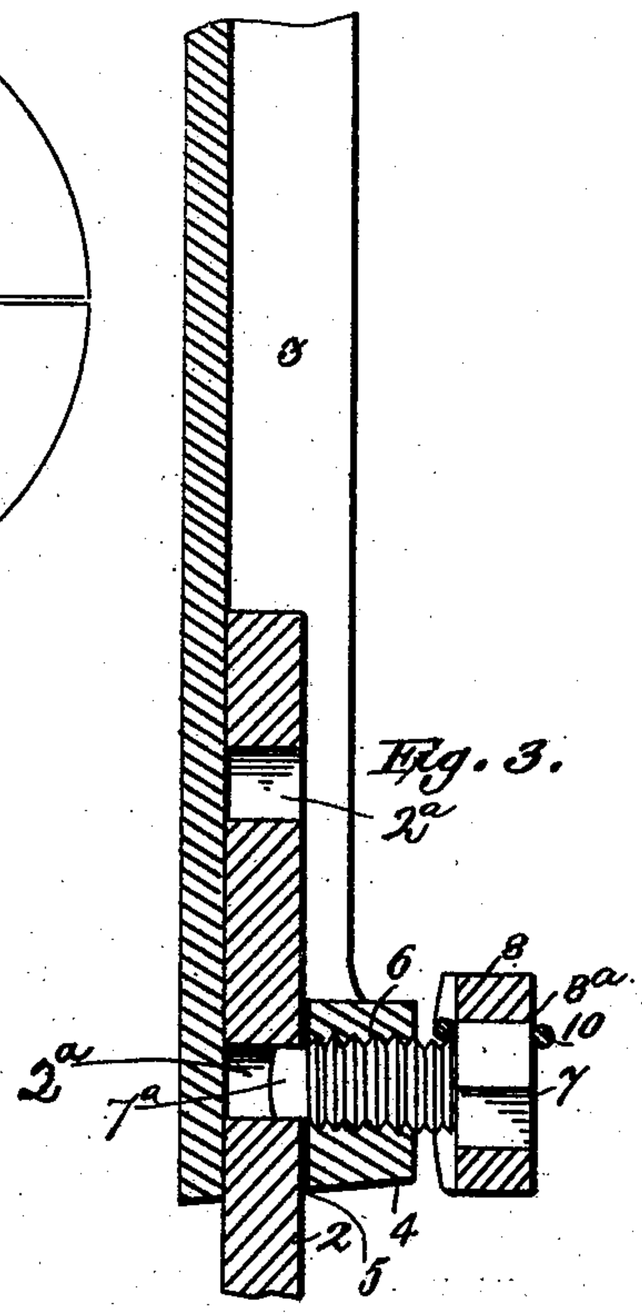

Fig. 3.

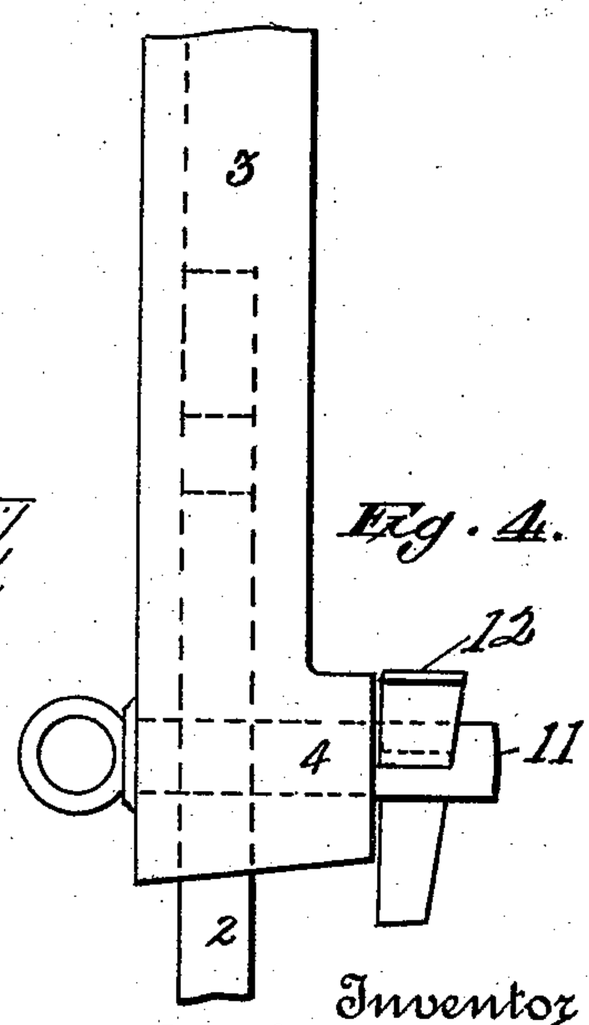

Fig. 4.

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UNITED STATES PATENT OFFICE.

ALBERT W. KNIGHT, OF ARMSTRONG, ILLINOIS.

ROD-COUPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 494,208, dated March 28, 1893.

Application filed November 5, 1892. Serial No. 451,074. (No model.)

To all whom it may concern:

Be it known that I, ALBERT W. KNIGHT, a citizen of the United States, residing at Armstrong, in the county of Vermilion and State of Illinois, have invented certain new and useful Improvements in Rod-Coupling Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

My invention consists in a new and improved attachment or device for connecting the vertically-reciprocating shaft or rod of a wind-mill with the piston-rod of a pump; and the invention will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a side elevation showing my invention in its operative position. Fig. 2 is a perspective detail view, on an enlarged scale, illustrating my invention. Fig. 3 is a sectional view taken on line *x*—*x*, Fig. 2. Fig. 4 illustrates the old style of coupling for connecting the wind-mill shaft with the pump-rod.

The same numerals of reference indicate corresponding parts in the several figures.

Referring to the several parts by their designating numerals, 1 indicates the wind-mill rod and 2 the pump-rod to which my invention is shown applied.

3 indicates a casting, or "slide," to the upper end of which the wind-mill rod is bolted; while the lower end of the casting is formed with a head, 4, having a vertical slot, 5. The upper end of the pump-rod, which rises above the pump-handle, passes up through this slot 5 within the flanged casting, as shown. The outer side of the head 4 is formed with a transverse threaded opening, 6, extending through it; and a set-screw, 7, is mounted in this opening, and is formed with a square head at its outer end, upon which is fitted the automatic tension or locking piece, 8. The inner end, or point, 7^a, of the set-screw is formed plain, without threads, and is smaller in diameter than the threaded part of said screw, so that this inner end can enter any one of a series of holes 2^a formed in the pump-rod 2, which the threaded body of the screw is too large to enter. This locking-piece is formed at one end with a square opening to adapt it to fit upon the square head of the set-screw, while its other end is weighted; and the inner end of the locking-piece is formed with a retaining lip, 9, with which one end of a wire loop, 10, is engaged, the sides of this loop crossing the end-opening 8^a and the head of the screw, while the twisted ends of the loop assist in retaining the loop in position.

In operation, the flattened end of the pump-rod having been passed up through the slot 5 of the casting, the set-screw is screwed in firmly against it, the end 7^a of the set-screw entering the hole 2^a in the pump rod, while the threaded part of the screw bears against the pump-rod, pressing the pump-rod firmly against the side of the casting, 3, and thus tightly binding it in the casting. When the set-screw has been tightened up as far as possible, the piece 8 is "set" or adjusted with its weighted end extending out to one side, when, as will be readily seen, its weight will tend to keep the set-screw always screwed up tight against the pump-rod, automatically taking up any wear or looseness.

In the old form of coupling, which I have shown in Fig. 4, a transverse pin 11 was used, passing through the casting and the upper end of the pump-rod; a wedge-key, 12, passing through a transverse opening in the end of the pin, as shown, thus holding it in place. This of course did not hold the end of the pump-rod tightly against the side of the casting, and the reciprocating motion soon wore the pin-hole in the pump-rod larger, thus allowing a great deal of jarring and lost motion. My invention prevents all jarring and consequent wear, and all lost motion; the set-screw binding the upper end of the pump-rod firmly against the side of the casting, while the locking-piece 8 automatically turns the screw to take up all wear; the pump-rod being lifted both by the end, 7^a, of the screw, and by the pressure by which it is forced against the side of casting 3; and by thus preventing this jarring and jerking I prevent a great deal of the former wear on the machinery above the wind-mill mechanism. The wire loop 10 holds the locking-piece 8 to its place while the wind-mill is in motion, and can be readily removed to turn the weighted end of the locking-piece

in a horizontal position, so that its weight will continually keep the set-screw tight. My invention is also much more convenient in changing from the use of the wind-mill to the use of the pump-handle, a change which is frequently made, as it is only necessary to raise the weighted end of the locking-piece 8, when the screw is loosened and the pump-rod is freed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, of the casting 3 formed at its lower end with the vertical slot 5 and the transverse threaded opening 6, the threaded binding-screw mounted in said opening and having a rectangular outer end, and a detachable locking-weight or piece, as 8, formed at its inner end to fit detachably upon the outer end of said binding-screw, to adapt it to be fitted thereon at the desired angle, substantially as and for the purpose set forth.

2. The combination, of the casting 3 formed at its lower end with the vertical slot 5 and the transverse threaded opening 6, the set-screw mounted in said opening and having the square head, the locking-piece 8 formed at its inner end with the square opening and the retaining-lip 9, and having the weighted outer end, and the retaining loop 10; substantially as set forth.

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

ALBERT W. KNIGHT.

Witnesses:
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