

(No Model.)

W. E. SULLIVAN.  
PUMP ATTACHMENT.

No. 538,436.

Patented Apr. 30, 1895.

Fig. 1.

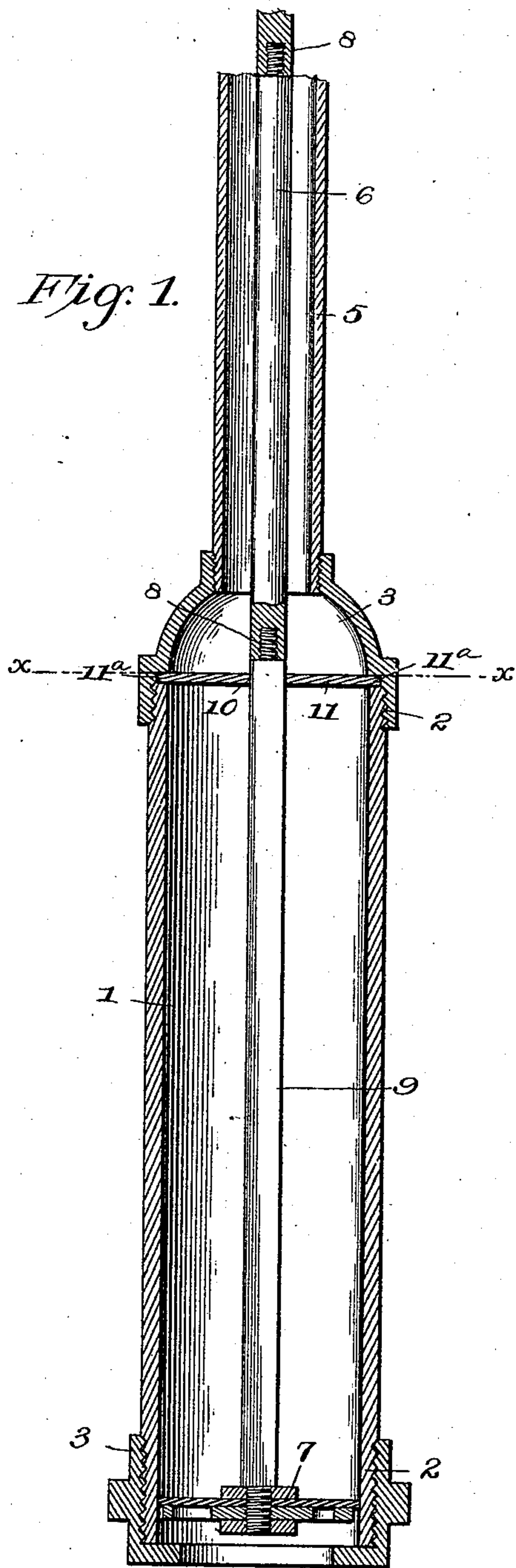


Fig. 2.

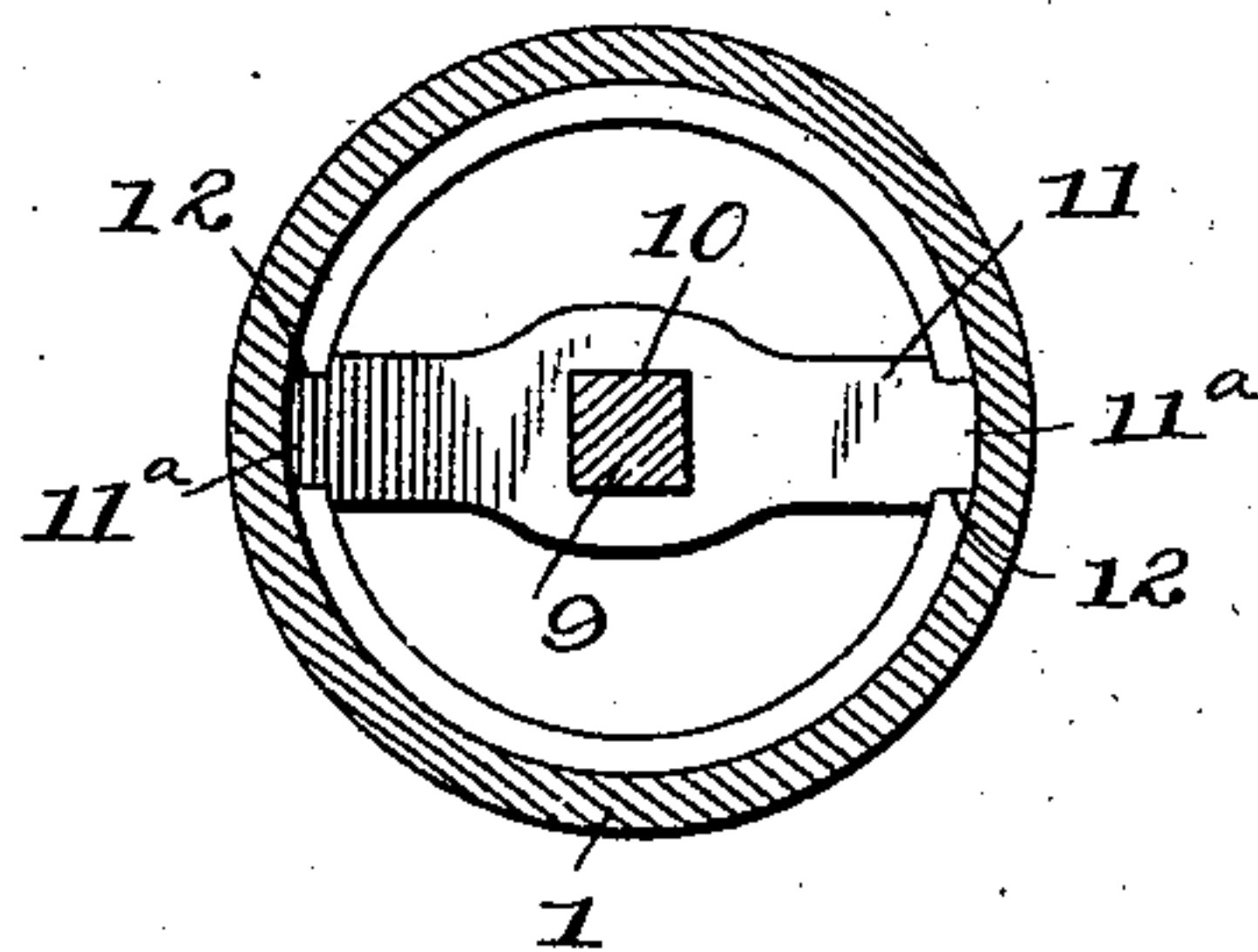


Fig. 4.

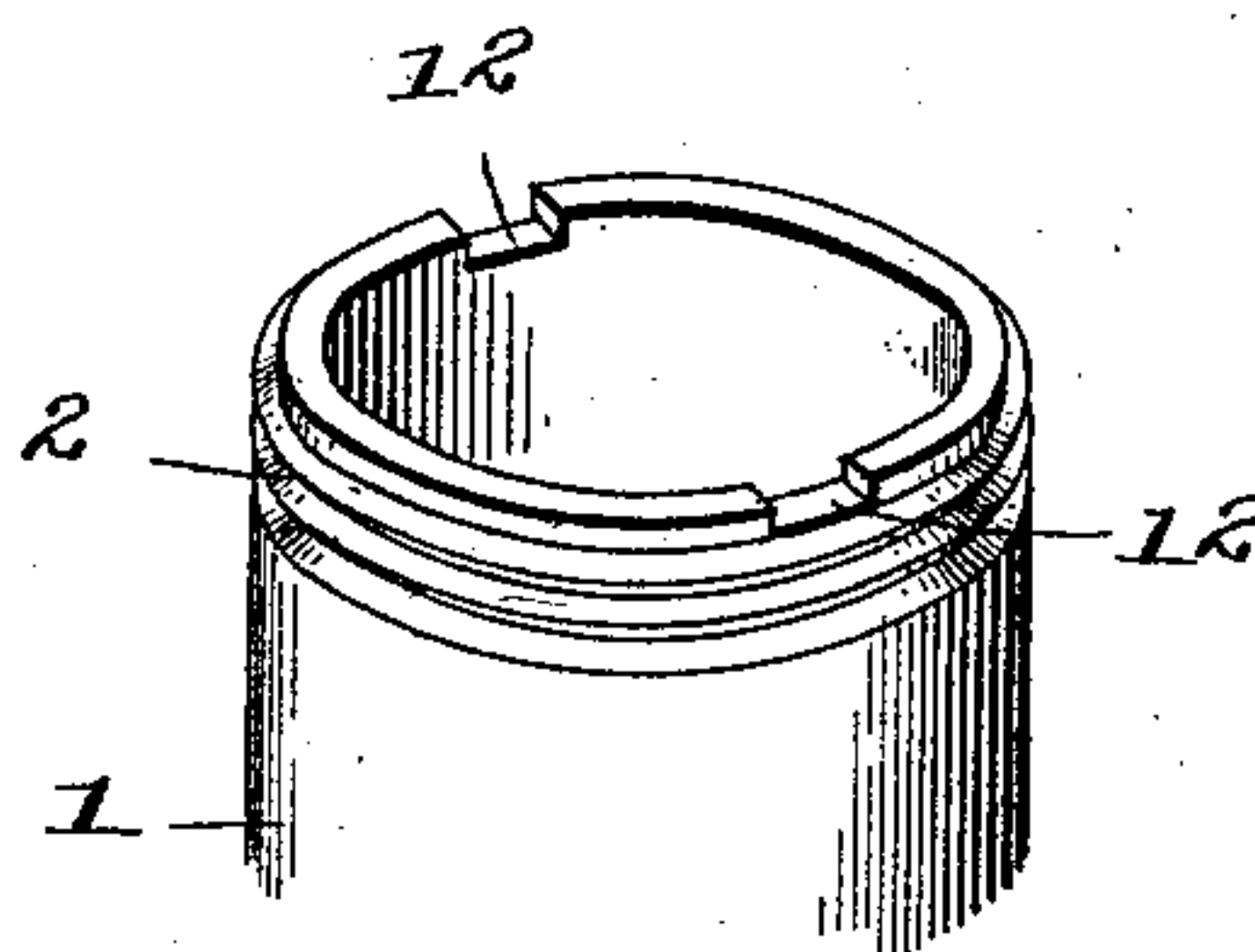
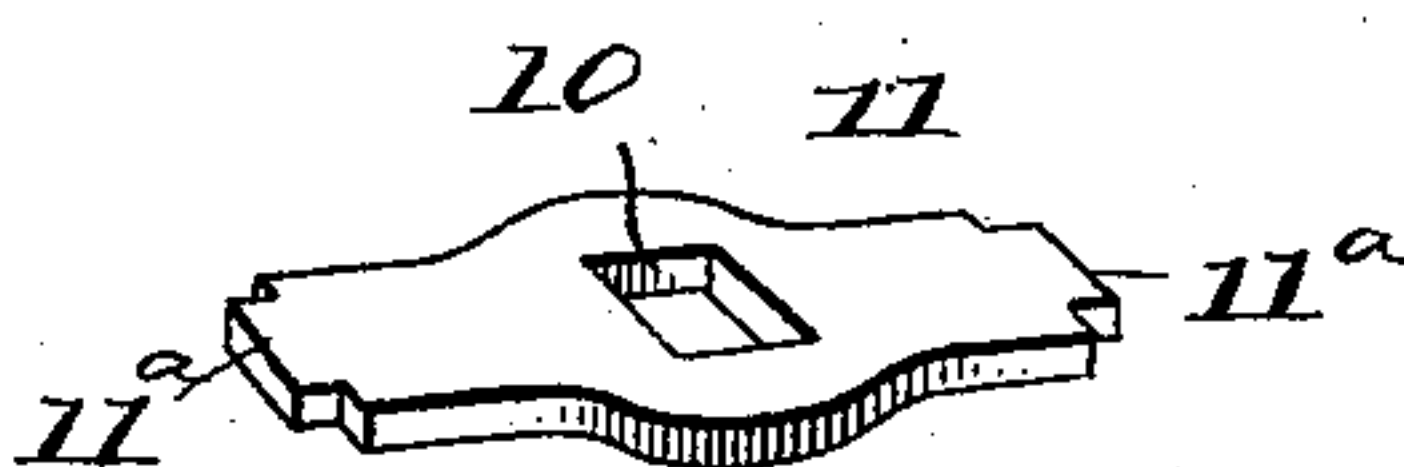


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM E. SULLIVAN, OF ROODHOUSE, ILLINOIS.

## PUMP ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 538,436, dated April 30, 1895.

Application filed October 13, 1894. Serial No. 525,836. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. SULLIVAN, a citizen of the United States, residing at Roodhouse, in the county of Greene and State of Illinois, have invented a new and useful Pump Attachment, of which the following is a specification.

This invention relates to pump attachments; and it has for its object to provide a new and useful attachment of this character which shall positively and effectually prevent the plunger and plunger rod or stem from turning around within the cylinder of the pump, and thereby causing the couplings to be unscrewed in time.

The attachment not only prevents the pump couplings from becoming unscrewed from the plunger turning within the cylinder, but at the same time provides means whereby the portions of the plunger rod or stem above the cylinder can be unscrewed without taking the entire pump apart, as is necessary in most pumps in order to make any repairs whatever.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the drawings, Figure 1 is a central longitudinal sectional view of a pump equipped with the herein-described attachment. Fig. 2 is a cross-sectional view on the line  $x x$  of Fig. 1. Fig. 3 is a detail in perspective of the removable guide-bar. Fig. 4 is a detail in perspective of the upper end of the cylinder.

Referring to the accompanying drawings, 1 designates a pump cylinder of an ordinary construction adapted to be used in connection with either shallow or deep wells. The said pump cylinder 1, is provided with the usual exteriorly threaded opposite ends 2, on which are removably screwed the interiorly threaded upper and lower cylinder caps 3, and to the upper of said cylinder caps is connected the lower end of the usual pump pipe 5 leading to the top of the well and accommodating therein the reciprocating plunger rod or stem 6. The plunger rod or stem 6, works through the upper cylinder cap and carries at its lower end within the cylinder the usual valved

plunger 7. The said plunger rod or stem 6, is provided above the cylinder with the usual screw joints 8, that serve to connect the sections of the rod or stem together in the usual way, and that section of the rod or stem which reciprocates through the upper cylinder cap and the upper portion of the cylinder, is squared as at 9, in order to complete the function of the attachment contemplated by the present invention. In the present invention, the squared portion 9, of the plunger rod or stem 6, is adapted to work through the squared guide opening 10, formed centrally in the removable guide bar 11.

The removable guide bar 11, constitutes the main part of the attachment and is provided with the reduced or shouldered opposite ends 11<sup>a</sup>, that are adapted to loosely and snugly register in the diametrically opposite squared notches 12, formed in the upper edge of the pump cylinder 1, and thereby not only preventing the guide bar 11, from turning, but also disposes the upper face thereof flush with the upper edge of the cylinder. With the reduced or shouldered ends of the guide bar fitted into the notches at the upper edge of the cylinder, the upper cylinder cap is adapted to screw tight down onto the said upper edge of the cylinder and therefore onto the opposite ends of the guide bar to securely yet detachably fasten the same within the upper end of the cylinder, to form a guide for the squared portion of the plunger rod or stem.

By reason of the construction just described, it will be obvious that the plunger and the plunger rod or stem will be positively prevented from turning within the cylinder so as to cause a wearing of the plunger and an unscrewing of the couplings, while at the same time the different sections of the plunger rod or stem above the cylinder may be readily unscrewed without disturbing the cylinder part of the pump.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

In a pump attachment, the combination with the cylinder having diametrically opposite notches in the upper edge thereof, the upper cylinder cap adapted to work onto the upper edge of the cylinder, and the sectional screw pointed plunger rod or stem having a square section; of a removable guide bar provided with a central square guide opening to receive the square section of the rod or stem, and reduced or shouldered opposite ends adapted to register in the notches in the up-

per edge of the cylinder and adapted to be detachably held therein by said upper cylinder cap, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. SULLIVAN.

Witnesses:

MARK HEATON,  
R. S. FEW.