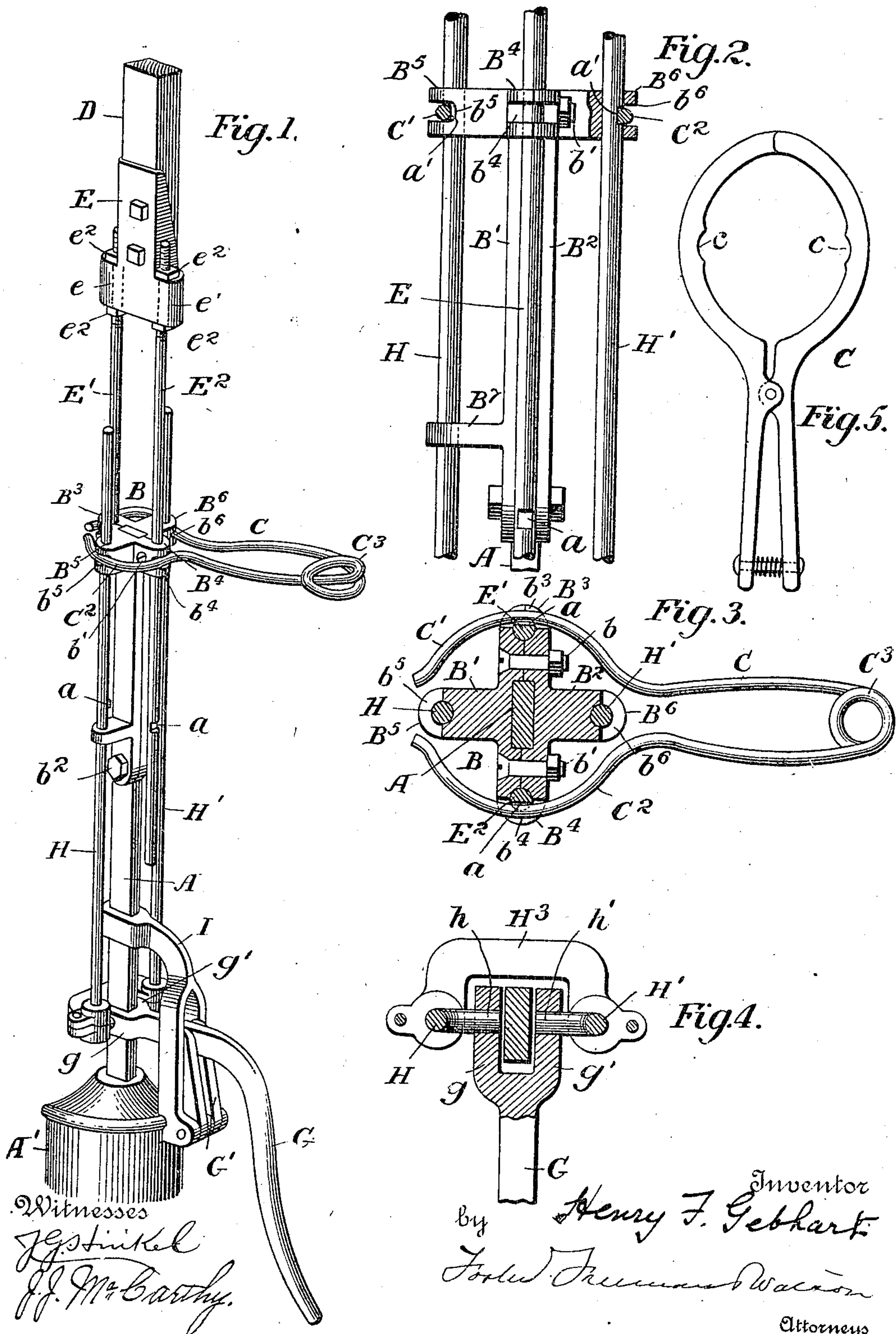


No. 837,461.

PATENTED DEC. 4, 1906.

H. F. GEBHART.  
PUMP ATTACHMENT FOR WINDMILLS.

APPLICATION FILED APR. 30, 1906.





# UNITED STATES PATENT OFFICE.

HENRY F. GEBHART, OF ASHLAND, OHIO.

## PUMP ATTACHMENT FOR WINDMILLS.

No. 837,461.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed April 30, 1906. Serial No. 314,502.

*To all whom it may concern:*

Be it known that I, HENRY F. GEBHART, a citizen of the United States, residing at Ashland, Ashland county, State of Ohio, have invented certain new and useful Improvements in Pump Attachments for Windmills, of which the following is a specification.

My invention relates to windmill - pump couplings, and has for its object to provide a simple, cheap, and effective means whereby the connections to the pump-rod can be readily shifted, so that it can be operated either by the pump-handle or by a windmill or motor pole; and to these ends my invention consists in the various features of construction and arrangement of parts having the general mode of operation substantially as hereinafter more particularly set forth.

Referring to the accompanying drawings, wherein I have illustrated a preferred embodiment of my invention, Figure 1 is a perspective view of the improved coupler and co-operating devices. Fig. 2 is an enlarged side view of a portion of the device, parts being shown in section. Fig. 3 is a transverse section of Fig. 2, the clamping device being shown in a different position. Fig. 4 is a sectional view showing the preferred means of connecting the pump-handle, and Fig. 5 is a modified form of the spring-clamp.

It is well known that in the operation of pumps by windmill or other motor it is desirable to provide for such operation by means of an ordinary pump-handle, which may be used when the windmill or motor is not used, and to accomplish this it is desirable to have a simple, cheap, and effective coupling device by which the connections can be quickly shifted, so that the pump-rod may be operated from the mill or other motor or by the pump-handle, or vice versa. My present invention provides such a coupler and embodies, broadly speaking, the use of a circular clamp, preferably in the form of a spring, which can readily be shifted from one position to another and which coöperates with the coupling-head of the pump-rod to engage either the windmill or motor pump pole or the pump-handle.

Other features of construction and arrangement of my improved device will be disclosed hereinafter, as shown embodied in the preferred form, and it is understood that my invention is not limited to the precise construction and arrangement of the detail parts, as these may be varied by those skilled in the

art to adapt them for particular purposes or uses without departing from the spirit of my invention.

In the drawings, A represents a pump-rod operating in a pump-case A' of any suitable construction. Connected to this pump-rod A in any suitable way is a coupling-head B. This coupling-head may be variously constructed; but, as shown, it comprises a two-part casting, as B' B<sup>2</sup>, adapted to embrace the pump-rod A and to be secured thereto in any suitable way. I have shown in the present instance bolts b b' b<sup>2</sup>, the bolts b b' passing through the projecting sides of the coupler-head, clamping it to the pump-rod, and the bolt b<sup>2</sup> in the present instance passing through the body of the pump-rod in the extensions of the coupler-head, which are shown as embracing the pump-rod to a greater or less distance. Of course these details of attachment may be varied, it only being necessary or desirable to secure the coupling-head and pump-rod together, so that they will be practically rigid, and the extensions of the coupling-head tend to brace the rod and make a permanent and substantial attachment.

I have shown the coupler-head made in two sections as a matter of convenience in manufacture and attachment; but of course it could be made in a single casting.

The head, as shown, has what may be called four "arms" or "projections" B<sup>3</sup> B<sup>4</sup> B<sup>5</sup> B<sup>6</sup>, and in each of these arms or projections is an opening to receive one of the rods or bars or extensions of the pump-rod and pump-pole hereinafter described. Each projection is slotted or cut away, as at b<sup>3</sup> b<sup>4</sup> b<sup>5</sup> b<sup>6</sup>, forming a recess which preferably extends about half-way through the respective openings in the arms and is adapted to receive the clamping device C hereinafter described.

The windmill or motor pump pole D is provided with a coupling-arm E, which may be of any suitable construction and is shown as comprising a casting adapted to embrace the end of the pump-pole and to be secured thereto by bolts and as having openings e e' in the projecting ears of the arm adapted to receive the pump-pole extensions, (shown in the form of bars or rods E' E<sup>2</sup>.) These bars or rods are preferably screw-threaded at their upper ends, so as to be adjustably connected to the coupling-arm E and to be secured therein by locking-nuts e<sup>2</sup> or in any other well-known way. These bars or rods



may be of any suitable length, and at some portion of their length they are provided with notches *a a* on their outer sides to cooperate with the clamp, as hereinafter described. These bars or rods, as best shown in Fig. 3, pass through two of the openings in two opposite arms or projections of the coupling-head B and are adapted to normally move freely in said openings.

The pump-handle G may be mounted in any desired way and is shown as connected to the pump-case A' by links G', and its upper end is bifurcated so that its ears or extensions *g g'* embrace the pump-rod A. This pump-handle is provided with extensions (shown in the form of bars or rods H H') having bent ends *h h'* in sockets in the ears *g g'* of the handle, and these extensions are held in proper position by a bracket or brace H<sup>3</sup>, (shown in the form of a two-part casting for convenience,) secured to the lower ends of the bars or rods in any suitable way, as by bolts or screws, so that it will maintain the bent ends *h h'* of the rods in proper position with relation to the pump-handle G and serve as a secure and rigid connection between the bars and handle and at the same time permitting freedom of motion of the pump-handle. These bars or rods H H' are provided with notches *a'* on their outer surface to cooperate with the clamping device, and the bars normally slide freely through the respective openings in the projections or extensions of the clamping-head.

It is sometimes desirable to provide additional guides for the extensions of the pump-rod, and in the present instance I have shown a lug or projection B' on the coupling-head having an opening through which one of the pump-rod extensions passes, and such a guide manifestly prevents friction between the operating parts.

It will thus be seen that the coupling-head mounted on the pump-rod receives the extensions of the pump-pole and the pump-handle and that these extensions are all free to move in their respective openings in the coupling-head. When, however, it is desired to connect the pump-rod to the wind-mill or motor pump pole, some means must be provided for clamping or securing the pump-pole extensions in the coupling-head, and, vice versa, when it is desired to operate the pump-rod by the pump-handle the pump-handle extensions must be secured in the coupling-head and the pump-pole extensions be permitted to move freely therein. In order to do this, I provide a simple and at the same time effective clamp C, having bent ends C' C<sup>2</sup>, adapted to embrace the coupling-head and to move in the recesses B<sup>3</sup>-B<sup>6</sup> thereof and to engage either the notches *a* in the pump-pole extensions or the notches *a'* in the pump-handle extensions, so as to clamp the one or the other to the coupling-head.

This clamp is shown as being made of a rod or bar of metal and constitutes practically a circular clamp embracing the head, and it is so made as to form a spring-clamp by being coiled, as at C<sup>3</sup>, or otherwise arranged to accomplish the same general purposes, so that the clamp will embrace the extensions and coupling-head under a spring tension, and thus constitute a safety-clutch which will yield under a certain strain and prevent breaking of the parts, as in case of freezing or otherwise. Thus while the spring-clamp is engaging either the notches *a* or *a'* and coupling their respective extensions to the coupling-head with sufficient force to enable the parts to operate under ordinary conditions if for any reason there is a strain upon the parts beyond a certain predetermined limit the spring-clamp will yield and uncouple the parts connected thereby before the parts reach a breaking strain. This clamp being circular in its operating parts, embracing the coupling-head, can readily be shifted from one position to another, so as to couple the pump-pole extensions to the head, allowing the pump-handle extensions to move freely therein, or vice versa, as coupling the pump-handle extensions to the head, allowing the pump-pole extensions to move freely, and all that it is necessary to do to accomplish this is to turn the circular clamp a quarter of the way around or through an arc of ninety degrees. Thus in Fig. 2 the clamp is shown as engaging the notches *a'* of the pump extensions, while in Fig. 3 it is shown engaging the notches *a* of the pump-pole extensions.

The circular portion of the clamp may have recesses *c* at the points where they are adapted to engage the notches in the extensions or rods, which will tend to prevent the clamp from being displaced by jars or otherwise.

In the construction shown there is a guide-arm I mounted on the case A' and embracing the pump-rod, as is common in such devices.

Such being the preferred construction of my improved device, its operation will be understood by what has been stated above, and it will be seen that by simply turning the circular clamp from one position to another the pump-rod can be coupled or connected either to the pump-handle or the pump-pole or may be disconnected from both, if desired, by bringing the clamp into midway position between the extensions on the coupling-head. Furthermore, the parts are so arranged and constructed that they are not liable to get out of order and at the same time can be simply made and provide against accidents by overstraining the parts.

What I claim is—

1. In a device of the character described, the combination with the pump-rod, of a



coupling-head adapted to receive the extensions of the pump-pole and pump-handle, and a circular clamp adapted to connect and disconnect the respective extensions with the coupling-head.

2. In a device of the character described, the combination with the coupling-head adapted to receive the pump-pole and pump-handle extensions, of a spring-clamp adapted to engage the respective extensions and couple them to the head.

3. In a device of the character described, the combination with the clamping-head having openings for the reception of the pump-pole and pump-handle extensions and having recesses in its sides, of a circular clamp fitting said recesses adapted to engage the pump-pole or pump-handle extensions.

4. In a device of the character described, the combination with a coupling-head having openings, of pump-pole and pump-handle extensions fitting the openings, the extensions being provided with notches, and a circular clamp adapted to engage said notches to secure the respective extensions to the head.

5. In a device of the character described, the combination with a pump-rod, of a coupling-head made in two parts secured to the rod and provided with openings to receive the pump-pole and pump-handle extensions and with recesses in its side adjacent the openings, pump-pole and pump-rod extensions having notches, and a circular clamp fitting said recesses and adapted to engage the notches of the respective extensions.

6. In a device of the character described, the combination with a coupling-head adapted to receive the pump-pole and pump-handle extensions, of a spring-clamp comprising a rod having curved ends and a spring portion.

7. In a device of the character described, the combination with a pump-pole, of a coupling-arm secured thereto having openings and pump-pole extensions in the form of bars, and means for adjustably attaching said bars to the coupling-arm.

8. In a device of the character described, the combination with the pump-handle having extensions in the form of bars having bent ends, of a bracket connecting said bars and embracing the end of the pump-handle.

9. In a device of the character described, the combination with a pump-handle having bifurcated ends, of pump-handle extensions having bent ends in the form of bars, and a bracket connecting the bars and embracing the bifurcated end of the pump-handle.

10. In a device of the character described, the combination with a pump-rod, of a coupling-head secured thereto, and adapted to receive extensions of the pump-handle and pump-pole, said coupling-head having extensions provided with a guide-lug also adapted to receive one of the extensions.

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

HENRY F. GEBHART.

Witnesses:

A. A. CARSON,  
W. A. SHORID.