

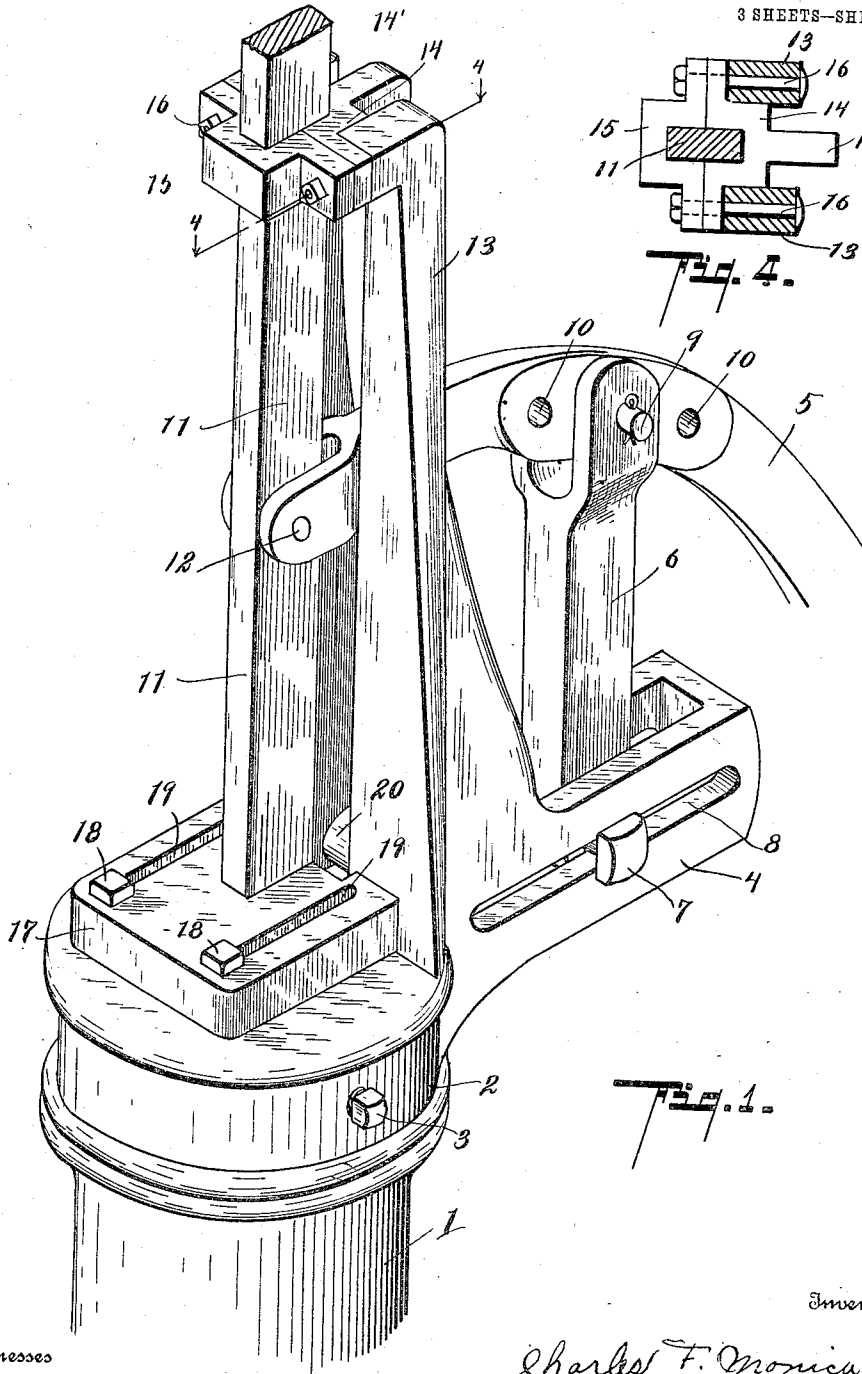
C. F. MONICA.
PUMP.

APPLICATION FILED NOV. 11, 1909.

965,923.

Patented Aug. 2, 1910.

3 SHEETS—SHEET 1.



Witnesses

L. G. Greenfield
F. G. Tallman

By

Charles F. Monica
Chappell & Earl

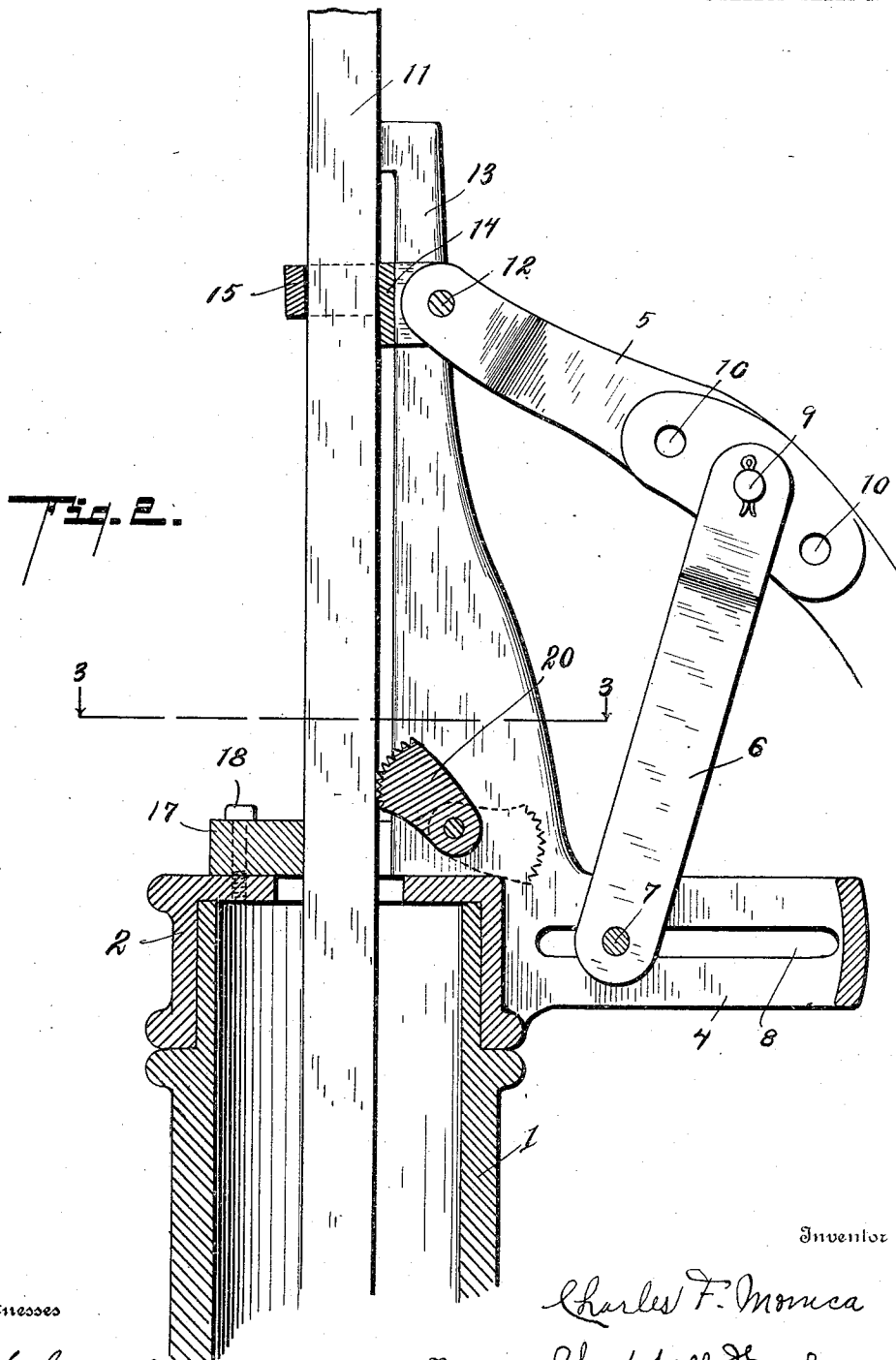
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3 SHEETS—SHEET 3.

Fig. 3.

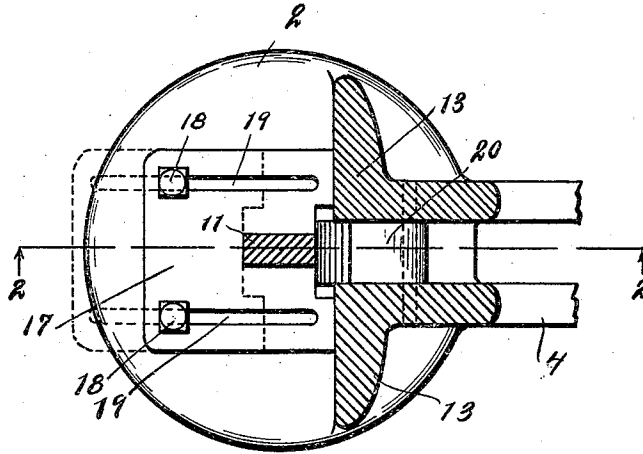
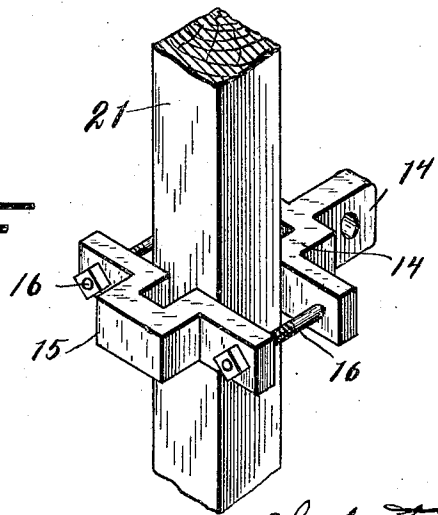


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES F. MONICA, OF CLOVERDALE, MICHIGAN.

PUMP.

Specification of Letters Patent.

Patented Aug. 2, 1910.

965,923.

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To all whom it may concern:

Be it known that I, CHARLES F. MONICA, a citizen of the United States, residing at Cloverdale, Barry county, Michigan, have invented certain new and useful Improvements in Pumps, of which the following is a specification.

This invention relates to improvements in pumps.

It relates more particularly to improvements in hand pumps, such as are often used on farms and also operated by windmill or other power, and the means of controlling and manipulating the same.

The particular object of the invention is to provide an improved connection and construction for the pump handle, and also to provide an improved construction of pump wherein the pump rod and its attached valves and parts can be readily lifted out of the pump by means of the pump handle.

A further object is to provide such a structure which is completely adjustable.

A still further object is to provide a structure which is very economical to manufacture and one which is very effective in use.

I accomplish the objects of my invention by the devices and means described in the accompanying specification. The invention is clearly defined and pointed out in the claims.

A structure embodying a preferred form of my invention is fully illustrated in the accompanying drawing, forming a part of this specification, in which:—

Figure 1 is a perspective view of the head of a pump with my improvements in position, the other parts being broken away. Fig. 2 is a vertical sectional view, showing the pump handle and its connection in detail, the same being taken on a line corresponding to line 2—2 of Fig. 3. Fig. 3 is a horizontal sectional view, taken on a line corresponding to line 3—3 of Fig. 2, looking down. Fig. 4 is a detail transverse sectional view, taken on a line corresponding to line 4—4 of Fig. 1, showing details of the combined pump rod guide and clutch connection in position as a guide. Fig. 5 is a detail perspective view, showing the guide disconnected and coupled to the pump handle to serve as a clutch for elevating the pump rod. The same is here shown in position on the large square part 21 of the rod.

In the drawings, similar numerals of reference refer to similar parts throughout the

several views. The sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Considering the numbered parts of the drawings, the barrel 1 of the pump is of the usual construction, having a top 2 with a suitable flange embracing the same and suitably secured in position by set screw 3. The rearwardly-projecting arm 4 serves as the connection for the pivot 7 of the handle 5, which is connected to a suitable link 6. The pivot 7 is an adjustable bolt, which is arranged in the slot 8 in the rearwardly-projecting arm 4. The arm is slotted vertically to receive the lower end of said link.

A series of holes 10—10—10 is provided in the handle for adjustably connecting the link 6 thereto by means of the pin 9. The upper end of the link is bifurcated for that purpose. The pump rod 11 is connected to the handle 5 by means of the pin 12 extending therethrough. The end of the handle or lever 5 is bifurcated to receive the pump rod.

Upright standards 13—13 are at each side of the handle between which the handle plays, and are made integral with the pump cap. To the upper end of these standards 13—13 is secured the combined guide and clutch, consisting of front and back pieces 14 and 15, suitably joined together by bolts 16, which, when the structure is serving as a guide for the pump rod, extends through the upper ends of the standards 13 and bolts the same rigidly thereto. A suitable slotted aperture is formed between these members 14 and 15 to embrace and guide the pump rod, 11. An adjustable cap plate 17 is on the head of the pump and contains slots 19—19 in which are set screws 18 for adjustably clamping the same to the pump top.

Between the lower parts of the standard 13 is pivoted a detent pawl or dog 20 having suitable teeth or a rough surface for engaging the back side of the pump rod 11 and retaining it securely in place when it is desired to make use of the pump handle or lever to elevate the pump rod, as is done for repairs or packing the valve. When this dog is thrown into engagement with the pump rod, the bolts 16—16 are withdrawn and the combination guide and clutch detached from the standards and loosely bolted together by the bolts 16—16, as they appear in Fig. 5.

A rearwardly-projecting ear 14' is on the member 14 containing a perforation for the

connection of the pump handle 5 thereto by means of the pin 12. The link 6 can then be readjusted, if it is desired, or, if found necessary, in order to exert the necessary pull to lift the pump rod. It will be observed that the clutch will effectively grab the rod and enable it to be lifted and that the dog 20 will grasp the same and hold it like the detent pawl of a ratchet and the clutch will take new hold whenever it is lowered down the rod by the motion of the pump handle or lever 5, so that, by merely working the handle, the pump rod will be lifted up out of the pump by a very powerful pressure. When it has been lifted up until the larger portion 21 appears, the clutch can be further opened by loosening the bolts 16, as appear in Fig. 5. When the valve appears, the same can be supported by means of the handle, and the dog or detent pawl 20 thrown out of engagement and the cap plate 17 loosened and backed off to completely open the top of the pump. This is of very great advantage and useful on a farm pump, which is provided with this hand lever. These pumps are often worked to considerable depth and have a long heavy pump rod, particularly where windmills, or other power, as a gasoline engine, are attached, so that there is ample power for operating the same. The bolts 16—16, being quite long, enable the clutch to be opened to take in the large square wooden rod 21, often used.

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

1. In a pump structure, the combination of the barrel of the pump; a cap therefor with a rearwardly-projecting slotted arm; an adjustable fulcrum pivot on the said slotted arm; a pump lever having a series of holes therein; a link connecting the said pump lever to the said fulcrum pivot; an upwardly-extending standard on the said cap; a dog on said cap for engaging the pump rod; a combination guide and clutch with bolts for securing the same rigidly to the upper part of the said standard where it serves as a pump rod guide, and with a pivot connection to attach to the pump lever, whereby the said combined pump rod, guide and clutch can be detached from the standard and connected to the handle to serve as a clutch for raising the rod; and an adjustable cap plate on the said pump cap, with suitable set screws for retaining the same adjustably in place to coact with the said dog and to uncover the top of the pump when it is desired to completely remove the rod, all coacting substantially as described and for the purpose specified.

2. In a pump structure, the combination of the barrel of the pump; a cap therefor with a rearwardly-projecting slotted arm;

a fulcrum pivot on the said slotted arm; a pump lever having a series of holes therein; a link connecting the said pump lever to the said fulcrum pivot; an upwardly-extending standard on the said cap; a dog on said cap for engaging the pump rod; a combination guide and clutch with bolts for securing the same rigidly to the upper part of the said standard where it serves as a pump rod guide and with a pivot connection to attach to the pump lever, whereby the said combined pump rod, guide and clutch can be detached from the standard and connected to the handle to serve as a clutch for raising the rod, an adjustable cap plate on the said pump cap, with suitable set screws for retaining the same adjustably in place to coact with the said dog and to uncover the top of the pump when it is desired to completely remove the rod, all coacting substantially as described and for the purpose specified.

3. In a pump structure, the combination of the barrel of the pump; a cap therefor with a rearwardly-projecting slotted arm; a fulcrum pivot on the said slotted arm; a pump lever; a link connecting the said pump lever to the said fulcrum pivot; an upwardly-extending standard on the said cap; a dog on said cap for engaging the pump rod; a combination guide and clutch with bolts for securing the same rigidly to the upper part of the said standard where it serves as a pump rod guide, and with a pivot connection to attach to the pump lever, whereby the said combined pump rod, guide and clutch can be detached from the standard and connected to the handle to serve as a clutch for raising the rod; an adjustable cap plate on the said pump, with suitable set screws for retaining the same adjustably in place to coact with the said dog and to uncover the top of the pump when it is desired to completely remove the rod, all coacting substantially as described and for the purpose specified.

4. In a pump structure, the combination of the barrel of the pump; a cap therefor with a rearwardly-projecting slotted arm; a fulcrum pivot on the said slotted arm; a pump lever; a link connecting the said pump lever to the said fulcrum pivot; an upwardly-extending standard on the said cap; a dog on said cap for engaging the pump rod; a combination guide and clutch with bolts for securing the same rigidly to the upper part of the said standard where it serves as a pump rod guide, and with a pivot connection to attach to the pump lever, whereby the said combined pump rod, guide and clutch can be detached from the standard and connected to the handle to serve as a clutch for raising the rod; and an adjustable cap plate on the said pump cap to coact with the said dog to uncover the top of the pump when it

is desired to completely remove the rod, all coacting substantially as described and for the purpose specified.

5. In a pump structure, the combination of the barrel of the pump; a cap therefor with a rearwardly-projecting slotted arm; a fulcrum pivot on the said slotted arm; a pump lever; a link connecting the said pump lever to the said fulcrum pivot; an upwardly-extending standard on the said cap; a dog on said cap for engaging the pump rod; a combination guide and clutch with bolts for securing the same rigidly to the upper part of the said standard where it serves as a pump rod guide and with a pivot fulcrum to attach to the pump lever, whereby the said combined pump rod, guide and clutch can be detached from the standard and connected to the handle to serve as a clutch for raising the rod, all coacting substantially as described and for the purpose specified.

6. In a pump structure, the combination with the pump cap or head, of a pump handle connected thereto by a suitable fulcrum link; a combined rod guide and clutch, made up of a pair of oppositely-arranged members secured together by suitable bolts, which bolts serve to clamp the same to the pump standard when the same is used as a guide and a pivot connection on one of said mem-

bers for connecting it to the pump handle, when the same has been detached from the standard so that it serves as a clutch to elevate the pump rod; and a suitable detent for holding the pump rod when it has been elevated by the action of the clutch, coacting for the purpose specified.

7. In a pump structure, the combination with the pump head, of a handle having a link fulcrum; a combined clutch and guide with bolts for attaching it to the pump standard, and a pivot connection for attaching it to the handle when the same is detached from the standard, whereby the same structure serves both as a guide and as a clutch, coacting for the purpose specified.

8. In a pump structure, the combination with the pump handle; a pump rod; and a detachable pump rod guide, adapted for attachment to the pump handle when not arranged as a guide whereby it serves both as a guide and as a clutch, all coacting for the purpose specified.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

CHARLES F. MONICA. [L. S.]

Witnesses:

WILLIAM L. THORPE,
WILLIAM E. JOHNCOCK.