

No. 739,082.

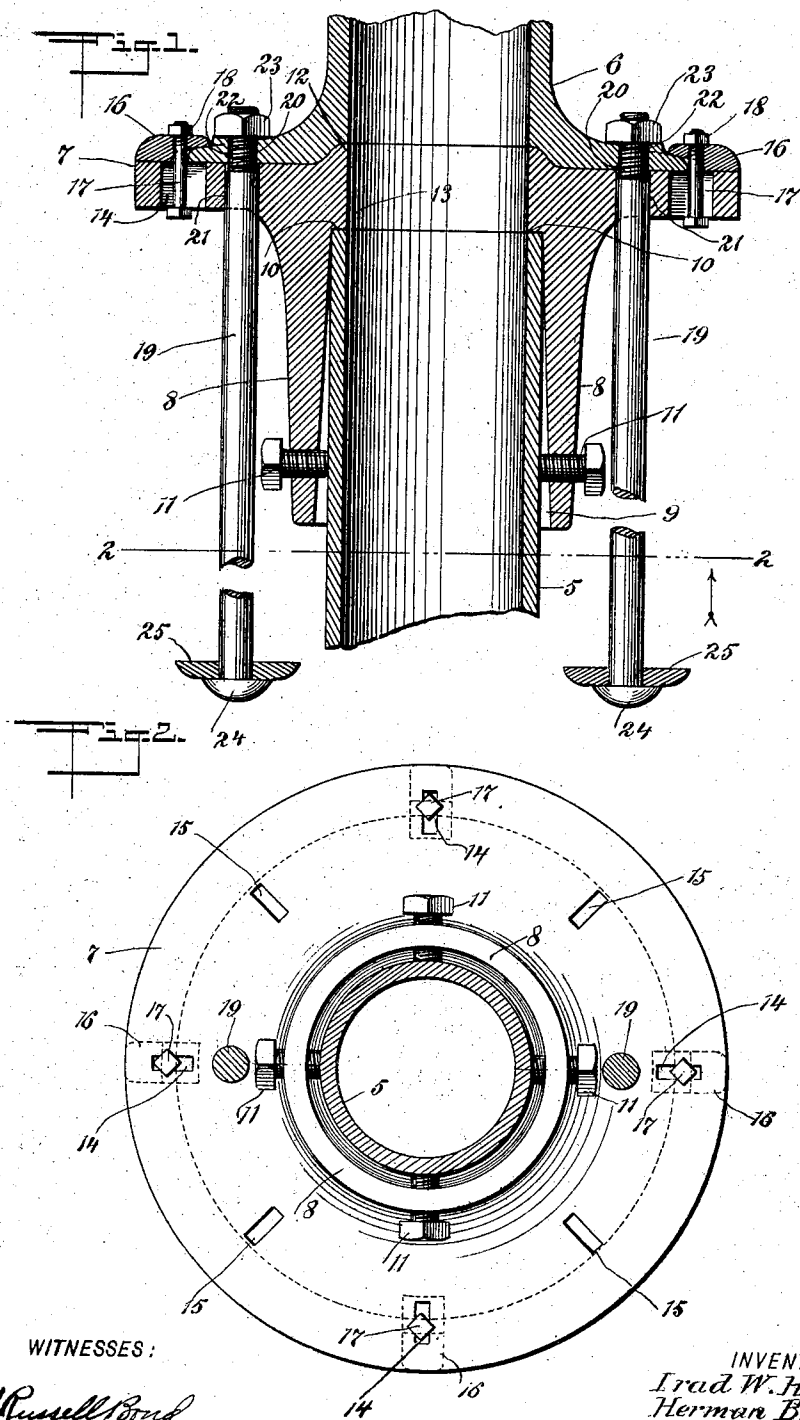
PATENTED SEPT. 15, 1903.

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PUMP.

APPLICATION FILED NOV. 29, 1901.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

IRAD W. HILLS AND HERMAN B. ROSS, OF MEDINA, WISCONSIN; SAID ROSS
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PUMP.

SPECIFICATION forming part of Letters Patent No. 739,082, dated September 15, 1903.

Application filed November 29, 1901. Serial No. 84,041. (No model.)

To all whom it may concern:

Be it known that we, IRAD W. HILLS and HERMAN B. ROSS, both citizens of the United States, and residents of Medina, in the county of Outagamie and State of Wisconsin, have
5 of Outagamie and State of Wisconsin, have invented new and useful Improvements in Pumps, of which the following is a full, clear, and exact description.

Our invention relates to improvements in
10 pumps of that class which employ a tubular casing; and the primary object that we have in view is to dispense with the ordinary platform and to provide a means attachable directly to the well-casing for supporting a
15 pump.

Further objects of the invention are to provide for the adjustment of the stand on the well-casing, to securely and steadily hold the stand in place, to allow the application of
20 different sizes of pumps to the stand, and to firmly anchor the parts in position and against the possibility of displacement by the jerking of the pump, which is sometimes caused by the operation of a driving-motor, such as a
25 windmill, on the pump.

With these ends in view the invention consists in the novel construction, combination, and arrangement of parts which will be hereinafter fully described and claimed.

30 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a sectional elevation illustrating
35 the application of our improved pump-stand to a well casing or tube and also showing the base portion of a pump secured upon the stand, and Fig. 2 is a transverse sectional view in the plane of the dotted line 2 2 of
40 Fig. 1.

The pump-stand of our invention is designed to be mounted upon and supported wholly by the upper portion of a well casing or tube 5, thus entirely dispensing with the
45 use of the ordinary pump-platform, because the improved stand is designed as a support for the base portion of a pump, the latter being indicated at 6. The improved stand consists of a base-plate 7 and a sleeve 8, the same

being cast in a single piece of metal. The
50 base-plate 7 is represented in Fig. 2 in the form of a circular disk, and the sleeve 8 is intended to extend in a downward direction from the base-plate for a suitable distance, whereby the sleeve may be operatively fitted
55 or connected to the upper portion of a well tube or casing. As shown by the drawings, the sleeve 8 is provided with an internal tapering passage or socket 9, the latter terminating at its upper extremity in an annular
60 ledge or shoulder 10. The passage or socket 9 tapers from the annular ledge 10 toward the lower extremity of the sleeve, the diameter of the socket being greatest at the lower
65 part of the sleeve.

The improved pump-stand is employed ordinarily in connection with a cylindrical well tube or casing, and in applying the stand upon the casing the latter is adapted to be forced tightly into engagement with the wall
70 of the tapering socket or passage 9, whereby the pump-stand may be wedged upon the well-casing. The downward movement of the stand relatively to the well-casing is limited under some conditions by the annular
75 shoulder 10, engaging with the upper extremity of the casing 5. In addition to the frictional engagement between the sleeve of the stand and the well-casing we may employ means for clamping the sleeve of the stand
80 firmly upon the casing, and in the embodiment of the invention represented by the drawings these clamping devices are shown in the form of set-screws 11, four or more of
85 which may be employed. These set-screws find bearings in threaded openings which are provided in the sleeve 8, near the lower portion thereof, and said set-screws are adjusted to impinge upon the casing 5, whereby the
90 stand may be held securely on the casing, and provision is made for adjusting the stand relative to said casing, so as to level the stand and the pump which is to be supported thereby.

The disk-like base-plate 7 greatly exceeds the diameter of the sleeve 8, and the top face
95 of this base-plate is formed with an annular upstanding collar 12, the latter surrounding a central opening 13, which is provided in the

base-plate, said central opening 13 being concentric with the passage or socket of the sleeve, as clearly shown by Fig. 1.

The base-plate 7 of the improved stand is provided with two series of slots 14 15, the slots of both series being arranged radially in the base-plate and the slots of the series 15 disposed in alternate order or relation to the slots of the other series 14. (See Fig. 2.) The slots 14 extend farther toward the edge of the base-plate 7 than the slots 15, and said slots provide for the application of bolts and suitable clamps in a manner to engage with different sizes of pumps, thus allowing the stand to be used in connection with any ordinary pump on the market. The pump 6 has its base adapted to rest firmly upon the plate 7 of the stand, said base of the pump fitting over the slots 14 or 15, according to the diameter of the pump-base. The clamping-plates 16 rest upon the base-plate 7 and are recessed, as shown by Fig. 1, in a manner to engage with the edge of the pump-base. Said clamping-plates are provided with apertures adapted to receive the fastening-bolts 17, the latter passing through certain slots in the base-plate 7 and receiving the nuts 18. The bolts 17 serve to draw the clamping-plates 16 firmly into engagement with the base-plate and with the pump-base, thereby holding the pump securely and steadily in place upon the stand. It is evident that the bolts 17 may be adjusted within certain limits in the slots 14; but if a pump having a small base is applied to the stand the bolts 17 should be fitted in the slots 15 of the base-plate 7.

The well casing or tube 5 may be extended a short distance above the ground-line, and to the projecting end of said casing is applied the stand, having the pump mounted thereon. Under some circumstances the well-casing may extend a distance of two, three, or more feet above the ground, and when the pump is used in connection with a windmill or other motor the pump is subjected to a jarring or jerking motion, due to the action of the motor thereon. A subsidiary feature of our invention resides in the employment of means for anchoring the pump-stand when it is elevated a distance above the ground-line, and in carrying this part of our invention into practice we employ anchor-rods 19, two or more of which may be employed. These anchor-rods have their upper threaded ends 20 passed through openings 21 22, which are provided in the base-plate 7 and in the pump-base, respectively, said threaded ends of the anchor-rods being furnished with the adjusting-nuts 23. The other ends of the anchor-rods are provided with heads 24, adapted to hold the anchor-plates 25 on the rods. The headed ends of the rods and the anchor-plates are buried in the ground for suitable distances, and these rods serve to firmly anchor and hold in place the upper projecting end of the tube or well-casing and to brace

the stand and the pump, which is mounted upon the stand. The anchor-rods 19 may be arranged in the substantially upright position shown in Fig. 1, although we prefer to spread the anchor-rods in diverging relation to each other. It is evident that the upper ends of the anchor-rods may be attached to the pump-stand without engaging the base of the pump; but we prefer to have said anchor-rods in engagement with both the stand and the pump, so as to brace both of these exposed parts.

The pump may be of any suitable character, and it may be equipped with an education-pipe adapted to extend into the well casing or tube 5, or said pump may communicate with the well-casing, as shown by Fig. 1. The employment of the collar or shoulder 10 within the pump-stand enables the latter to be centered on the upper end of the well-casing. The upstanding collar 12 of the base-plate 7 serves to position the base of the pump upon the stand.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In an Artesian or deep well pump, the combination of a stand provided with an integral sleeve having an internal tapering socket which terminates in an abutment or shoulder, a well tube or casing fitting in the socket of said sleeve and having a wedging frictional engagement therewith and abutting the shoulder, said stand being supported by the tube or casing in a position raised above the ground or a platform, and means for clamping a pump to the upper face of said stand.

2. In an Artesian or deep well pump, the combination of a stand provided with a sleeve which depends below a plate and is formed with an internal tapering socket, the latter terminating in a shoulder, a well tube or casing fitted in said socketed sleeve and having a wedging frictional engagement therewith and abutting the shoulder, independent clamping means for tightly holding the stand on said tube or casing, said stand having at its upper end a broad surface adapted to receive the base of the pump, and means for clamping a pump to the broad surface of the stand.

3. As a new article of manufacture, a pump-stand for Artesian and deep well pumps, comprising a slotted plate, a sleeve depending from said plate and provided with an internal tapering socket, clamping devices fitted to the sleeve below the plate, and pump-attaching devices on the slotted plate of the stand.

4. As a new article of manufacture, a pump-stand for Artesian and deep well pumps, comprising a plate, a sleeve depending from said plate and having an internal tapering socket which terminates in a shoulder, and clamping-screws fitted in the sleeve below said shoulder thereof.

5. As a new article of manufacture, a stand

for Artesian and deep well pumps, comprising a plate having on its under side means for attachment to a well casing or tube, and radially-adjustable pump-clamping devices fitted to the upper face of said plate, whereby the clamps may be adjusted to engage with pumps of different sizes.

6. As a new article of manufacture, a stand for Artesian or deep well pumps, comprising a plate having means for attachment to a well casing or tube, radial slots in said plate and disposed beyond the plane of the plate-attaching means, and pump-clamping devices adjustable radially in said slots.

7. As a new article of manufacture, a stand for Artesian and deep well pumps, comprising a plate having means for attachment to a well tube or casing, a series of slots in said plate and occupying positions radial to and outside of the plate-attaching means, certain of said slots terminating at greater distances from the center of the plate than other adjacent slots of the series, and pump-clamping devices adjustable in the slots and interchangeable in the long and short slots.

8. In an Artesian or deep well pump, the combination of a stand having a plate provided with radial slots, a pump resting on said plate and extending across the slots therein, and clamps fitted in the slots and engaging with the pump-base to hold the latter firmly on said stand.

9. In an Artesian or deep well pump, the combination with a well-casing, of a pump-stand supported thereby in a position raised above the ground or a platform, a pump mounted on said elevated stand, and anchors engaging with said pump-stand and the lower part of the pump.

10. In an Artesian or deep well pump, the combination with a projecting end of a well tube or casing, of a pump-stand supported thereby in a position raised above the ground or a platform, a pump clamped to said ele-

vated stand, and anchors engaging with the stand and serving to brace the elevated pump and said stand.

11. The combination with a well casing or tube, of a pump-stand supported in an elevated position thereby, a pump mounted on the stand, and anchor-rods adapted to be buried in the ground and having their upper ends passing through both the stand and the pump-base, the points of attachment of the anchors being independent of the engagement between the stand and the pump.

12. As a new article of manufacture, a pump-stand substantially as herein shown and described, comprising a base having an upstanding collar on its upper face, a sleeve integral with the base and depending therefrom, a tapering socket formed within the said sleeve and terminating in a shoulder, slots in the base outside of and radial to the upstanding collar thereon, and pump-attaching clamps adjustable in said slots.

13. The combination, with a cylindrical well-tube which is fixed in position vertically, of the pump-stock having its lower portion enlarged from the upper end downward, the same being provided with an internal shoulder at a point where the interior diameter is the same as the exterior diameter of the well-tube, the said head extending downward from the end of the well-tube and gradually diverging therefrom, and clamp-screws inserted through the lower portion of the head and bearing against the cylindrical body of the well-tube, as shown and described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

IRAD W. HILLS.
HERMAN B. ROSS.

Witnesses:

ALLEN EARL,
I. COLE.