

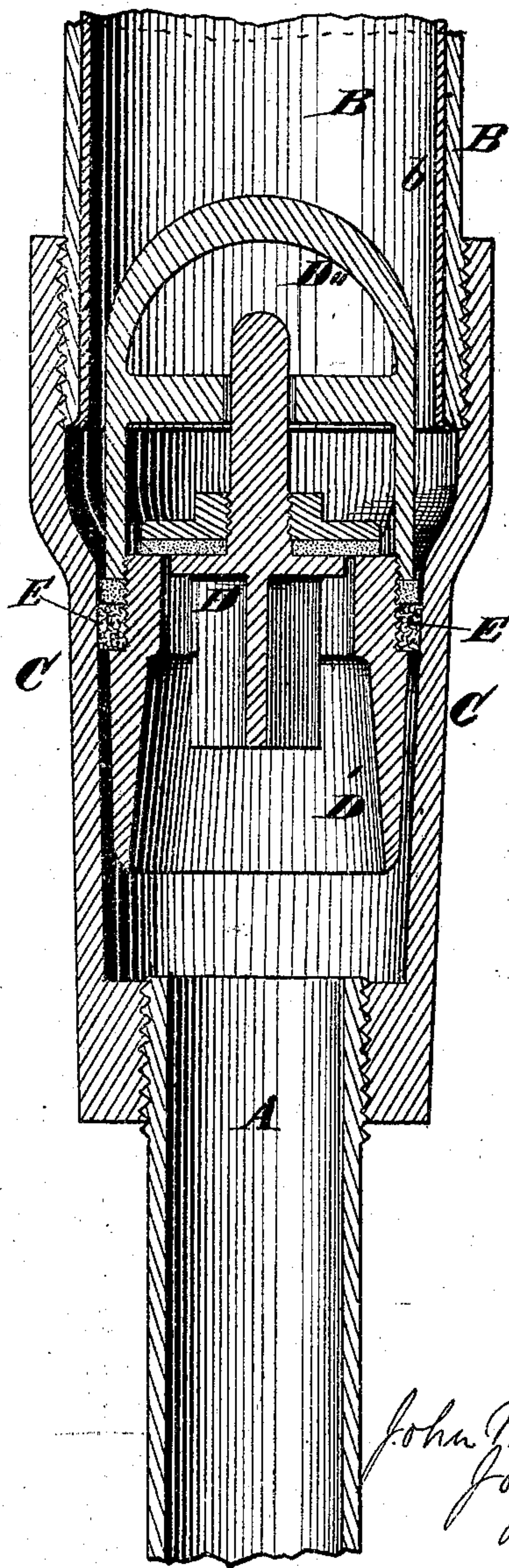
J. W. HARRINGTON & J. A. YINGLING.

Pumps for Driven Wells.

No. 143,345.

Patented September 30, 1873.

Fig. 1.



Attest

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PUMPS FOR DRIVEN WELLS.

Specification forming part of Letters Patent No. 143,345, dated September 30, 1873; application filed  
July 23, 1873.

*To all whom it may concern:*

Be it known that we, JOHN W. HARRINGTON, of Cincinnati, Hamilton county, State of Ohio, and JOSEPH A. YINGLING, of Hamilton, Butler county, State of Ohio, have invented a certain new and useful Improvement in Pumps for Bored, Drilled, Driven, and other Wells, of which the following is a specification:

Our invention consists, in connection with the sectional pipes of a drive-well or other pump, of a conically-formed coupling or sleeve joining two sections together and fitted with a check-valve, which can be lowered into its place and tightly secured after the well is driven, and which can be removed conveniently and at any time from the wells for repairs, the valve-seat being fitted exteriorly with a packing-ring to make a tight joint by crowding down into the conical bore of the sleeve, and constructed with a bail over the valve for the attachment of a hooked rod to withdraw it from the sleeve. The object of this coupling and valve is, by the cylinder and working parts of the pump, to be driven in and located at any required depth in the pipe, and thereby obviate the necessity of digging down any part of the distance to place the cylinder where atmospheric pressure will suffice to supply the pump with water, for without this device and by the ordinary method of making wells for driving pumps, where the water is low in the ground, it is necessary to dig a well or pit down within, say, twenty to thirty feet of where the water is expected to be found, and when the pipes are driven in the bottom of this pit until water is reached, then the cylinder or working parts of the pump are attached to the pipe at the bottom of this pit.

The accompanying drawing is a section of the part of a drive-well pump embodying our invention.

As is customary with drive-well pumps the pipes are driven into the ground after preparatory boring, drilling, or otherwise, the lower

end of pipe A having the customary screen or perforated end attached thereto. The pipe B, which forms the barrel of the pump in which is the usual lining *b*, of brass pipe, in which the piston operates, is attached to pipe A by the coupling C. This coupling is formed interiorly for the occupation of and proper connection with a check-valve and seat, D D'. Over the seat a bail, D'', is formed, which can be suspended upon a hooked rod, by which the valve-seat may be lowered into place in the well after the driving or other adjustment of the pump-pipes, and by which the hooked rod may draw out the valve-seat for repairs. Upon the exterior of the seat an annular ring of elastic substance is fitted and provided to form a packing, E, to make a tight joint between the valve-seat and the conical coupling, the seat in use being forced down so that the packing-ring is so tightly bound between the surface of the seat and coupling as to prevent the passage of air or water at this joint.

An obvious modification of this device, which is simply a reversion of parts, is one in which the packing-ring is secured in the coupling, and the smooth conical surface of the seat forced down into it to make the joint.

We claim—

The internally-tapered coupling C, which rigidly connects the suction-pipe A and barrel B of the pump, in combination with the check-valve and seat D D' D'' and the protruding packing-ring E, which is permanently secured in an annular recess of either the valve-seat or the coupling C, substantially as and for the purpose specified.

In testimony of which invention we hereunto set our hands.

JOHN W. HARRINGTON.  
JOSEPH A. YINGLING.

Witnesses:

J. L. WARTMANN,  
FRANK MILLWARD.