

J. E. MORRISON.
Driven or Bored Wells.

No. 139,018.

Patented May 20, 1873.

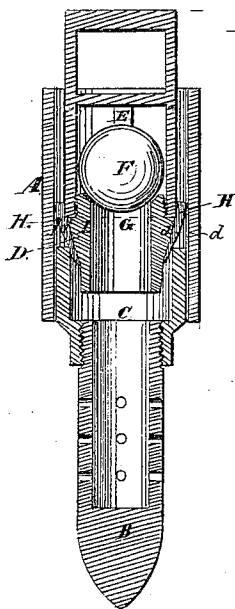


fig. 1.

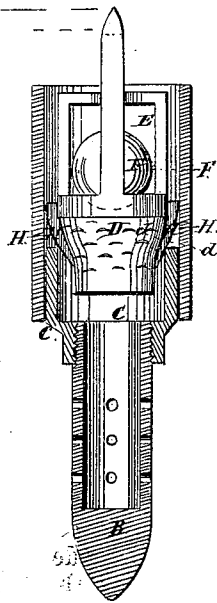


fig. 2.

Witnesses:

Heinrich F. Bruns.
Joseph Lewis

Inventor:

Joseph Edwin Morrison
by Coburn & Munday
Attys

UNITED STATES PATENT OFFICE.

JOSEPH EDWIN MORRISON, OF WILLINGTON, CONNECTICUT.

IMPROVEMENT IN DRIVEN OR BORED WELLS.

Specification forming part of Letters Patent No. **139,018**, dated May 20, 1873; application filed November 18, 1872.

To all whom it may concern:

Be it known that I, JOSEPH E. MORRISON, of Willington, in the county of Tolland and State of Connecticut, have invented certain Improvements in Driven or Bored Wells, of which the following is a specification:

Nature of the Invention.

This invention relates to that class of wells in the construction of which a tube is sunk or driven into the earth, and the water pumped directly from the soil. In such wells the point or strainer is usually passed down through the tube after it is driven down. Great trouble is experienced in repairing the check-valves of such wells, because they are inaccessible until withdrawn, and as the valve is usually screwed to the point, and the threads likely to become crossed, and the point fits closely to the tube, it is frequently impossible to withdraw the valve-seat for inspection and repair until it is drilled out at great labor and expense. This invention seeks to obviate these difficulties by affixing to the upper end of the point or strainer a short sleeve, which is of considerably less diameter than the well-tube, so that it will readily pass down to its place, and employing in connection therewith a valve-seat with a conical or hemispherical base, surrounded by a covering of leather, so that when the valve-seat is passed down the lower and smaller diameter of the leather-covered cone or hemisphere will enter the sleeve, and by a further descent of said seat cause the leather to be driven out to fill and pack against the well-tube, forming a close joint and packing for the valve-seat, while at the same time the valve-seat may be readily and easily removed, as will be more fully described.

In the accompanying drawing, which forms part of this specification, Figure 1 represents a central sectional view of the invention, and Fig. 2 a similar partial section of the same.

Like letters of reference indicate like parts.

I will now proceed to describe my invention with reference to said drawing.

General Description.

In the said drawing, A represents the inclosing or incasing tube, which is sunk into the ground to the proper depth. B C is the point or strainer, fitting loosely within and projecting below it into the earth, the part B being perforated to form the strainer or inlet for the water, while the part C, entering the lower end of the tube A, forms with its upper end a collar, against which rests the valve-seat. D is the valve-seat, made with a frame-work or basket, E, to retain the usual ball of rubber, F, which, resting above the aperture G, forms the valve. The valve-seat D is made with a swell, *d*, which brings it into a partially conical rounded form, or, more properly speaking, partially hemispherical. The surface of this portion *d* is burred with a cold-chisel, so as to form projections to retain a packing, H, of leather or like substance, slipped on over this portion *d*. Now, when the valve-seat is passed down through the well-tube the lower and smaller portion thereof enters the collar C, and this, detaining the leather, forces it up over the swell, and causes it to expand and perfectly fit the tube; to make the valve-seat fit close it is only necessary to drive it down.

By this construction of joint the danger of cross-setting screw-threads, &c., is obviated, and the valve-seat may be removed readily by simply grappling its upper part with a suitable tube.

Claim.

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

The wedge-shaped valve-seat D, surrounded by the leather H, in combination with the tube A and collar C, constructed and operating substantially as and for the purposes specified.

JOSEPH EDWIN MORRISON.

Witnesses:

W. B. SMITH,
MORGAN HUGHES.