No. 767,209. PATENTED AUG. 9, 1904.

T. L. DECKER.

DRIVE WELL POINT.

APPLICATION FILED APR. 29, 1904.

NO MODEL.

Fig. 1.

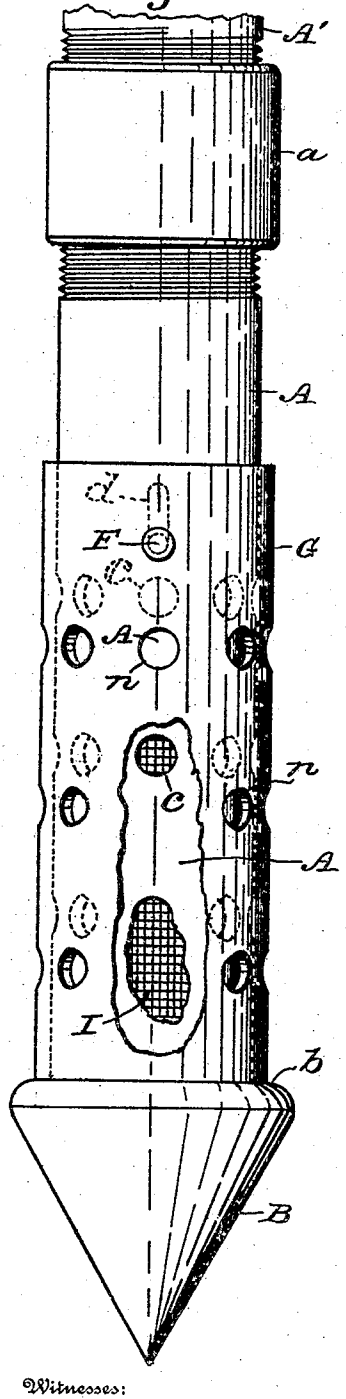



Fig. 2.

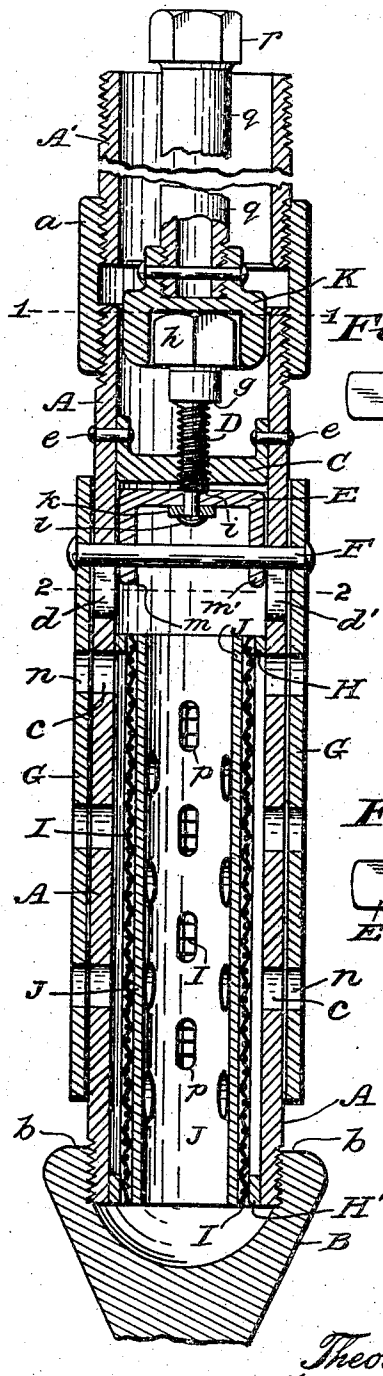



Fig. 3.

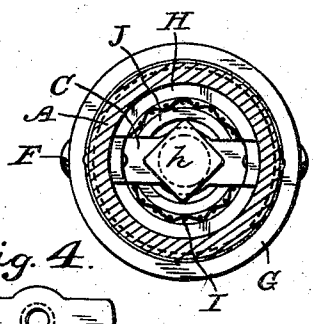



Fig. 4.




Fig. 5.

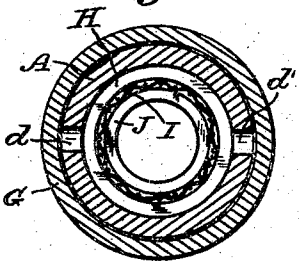



Fig. 6.

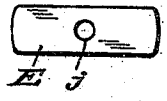
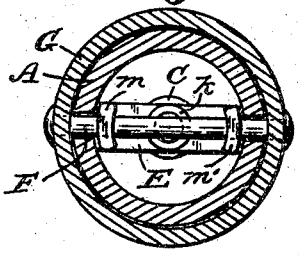



Fig. 7.




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by

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No. 767,209. Patented August 9, 1904.

# UNITED STATES PATENT OFFICE.

THEODORE L. DECKER, OF CHARLOTTESVILLE, INDIANA.

## DRIVE-WELL POINT.

SPECIFICATION forming part of Letters Patent No. 767,209, dated August 9, 1904.

Application filed April 29, 1904. Serial No. 205,463. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE L. DECKER, a citizen of the United States, residing at Charlottesville, in the county of Hancock and State of Indiana, have invented new and useful Improvements in Drive-Well Points; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to well-points that include in one a straining device or devices and a point proper for penetrating the earth; and the invention has reference particularly to both of those features of drive-well points.

The object of the invention is to provide an improved well-point that may be driven without liability to injury or filling of the strainers with earth or sand, a specific object being to provide means whereby the strainers may be closed while the point is being driven and opened after the point has penetrated the earth.

With the above objects in view the invention consists in a drive-well point including strainers provided with a movable external closure for the strainers and means for manipulating and locking the closure in either closed or open positions; and the invention consists, further, in the novel parts and the combinations and arrangements of parts, as hereinafter particularly described, and pointed out in the appended claims.

Referring to the drawings, Figure 1 is an elevation view of a complete drive-well point constructed substantially in accordance with the invention, the screens being closed and portions of the closure being broken away to disclose inner portions of the structure; Fig. 2, a vertical central sectional view of the complete point, showing the screen-closure as being open, so that water may be admitted through the screens to the well-tube, the means for manipulating and locking the closure being also shown; Fig. 3, a horizontal sectional view, as at the line 1 1 in Fig. 2, omitting the coupling for connecting the point to the well-tube; Fig. 4, a plan of the under side of a cross-bar that is employed in the structure; Fig. 5, a horizontal sectional view, as at the line 2 2, looking downwardly; Fig. 6, a top plan of a cross-head that is employed in the structure; and Fig. 7 is a horizontal sectional view, as at the line 2 2, looking upwardly.

Similar reference characters in the drawings designate corresponding parts or features.

The well-point comprises two principal parts—a strong tubular strainer part A, adapted to be attached to well-tubes A′ by a pipe-coupling *a* in the usual manner, and a conical penetrating-point B, suitably secured to the part A and provided with a shoulder *b*, extending about the part A somewhat beyond the outer surface thereof, the external diameter of the base of the point B being somewhat greater than the external diameter of the part A. The part A has a suitable number of apertures *c* in the walls thereof for admitting water thereinto, and beyond the apertures it is provided with two oppositely-disposed slots *d* and *d′*, extending longitudinally of the part or vertically when the point is in operative position and above the apertures. Beyond the slots a cross-bar C is secured permanently to the inner sides of the part A by rivets *e*, the bar having a threaded bore *f*, centrally disposed, in which a screw D is inserted, the screw having a shoulder *g*, adapted to engage the bar C, and also having a head *h*, adapted to be engaged by a socket-wrench. A traveling cross-head E, having a centrally-disposed bore *j*, is swiveled on the end of the screw D, the latter having a shoulder *i* against the top of the cross-head and also provided with a washer *k* at the bottom thereof and a head *l* against the washer. The cross-head is provided with a pair of arms *m* and *m′* at opposite ends thereof, to which a bar F is attached that extends through the slots *d* and *d′*. A movable closure G is formed as a sleeve or tube and extends about the part A for closing or covering the apertures *c* and is provided with a suitable number of apertures *n* for opening the apertures *c* or permitting the water to flow into them. The apertures *n* are so disposed or arranged that they shall be opposite the apertures *c* when the lower end of the sleeve rests on the shoulder *b*, the opposite or upper end portion of the sleeve being

attached to the bar F, which will be at the bottom of the slots *d* and *d'*, the cross-head E being separated from the cross-bar C by means of the screw D, and it will be apparent that by turning the screw D the cross-head will rise in the slots and move the sleeve away from the shoulder *b* and cause the apertures *n* to be opposite the apertures *c*, the sleeve movements being stopped or gaged by the shoulder *b* and also by means of the cross-head E engaging the bar C or by the bar F seating at the upper ends of the slots, the latter being always covered by the sleeve, and thus closed.

Within the part A of the point suitable strainers are arranged and secured, and these preferably comprise a tube-like screen I, composed of fine brass gauze and somewhat less in diameter than the interior of the part A, being connected therewith by rings or bands H and H'. Close inside of the screen is a brass tube J, having perforations *p*. The complete strainers extend from the lower end of the part A at the part B to a plane above the uppermost apertures *c* or nearly to the slots *d* and *d'*.

In order to manipulate the screw D, and thereby adjust and lock the closure-sleeve G, a socket-wrench K is provided that has a stem *q* of suitable length provided with a head *r*, adapted to be engaged and turned by a wrench or lever.

Various minor modifications of course may be made in the several parts of the structure within the scope of the invention.

In practical use the screw D is to be rotated in the proper direction so as to move the closure G against the shoulder *b*, and thus lock the closure against accidental displacement, in which adjustment the apertures *c* will be closed, as will be apparent. The point may be connected to well-tubes and driven in the usual manner, the large base of the point B proper guarding the closure G against undue strains that might otherwise be caused by contact with the earth. After the point has penetrated the earth to the desired distance the wrench may be let down the well-tube and applied to the screw D, and by proper obvious manipulations the closure G may be moved upwardly, so as to open the apertures *c* to admit the water to the well-tube. In case it may be necessary to drive deeper the strainer may be again closed and operations continue until repeated tests prove that water has been found. In this manner the strainers will be protected against being filled during driving by earth or sand. The wrench of course will be dispensed with after the well-point has been satisfactorily located to accomplish its purpose.

Having thus described the invention, what I claim as new is—

1. A drive-well point including an apertured strainer part, a movable closure extending about the strainer part whereby to close or open the apertures therein, and means for shifting and locking the closure.

2. A drive-well point including an apertured strainer part having slots in opposite site sides thereof, a tubular apertured closure extending about the strainer part and covering the slots therein whereby to close or open the apertures in the sides thereof, a cross-head in the strainer part having a bar extending through the slots in the strainer part and attached to the closure, and means for controlling and locking the cross-head and thereby the closure.

3. A drive-well point including an apertured strainer part provided with a pair of stops, a closure extending about the strainer part movable between the pair of stops and having apertures arranged so as to be opposite the apertures in the strainer part when the closure is against one of the stops, and means for forcibly moving the closure from either one of the stops to the other stop and locking the closure against either stop.

4. A drive-well point including an apertured strainer part having a cross-bar therein and also having a pair of slots in opposite sides thereof, a screw connected to the cross-bar, a traveling cross-head swiveled to the screw, an apertured closure extending about the strainer part, a device extending through the slots in the strainer part attaching the cross-head to the closure, and a penetrating-point attached to the strainer part and guarding the lower end of the closure.

5. A drive-well point including an apertured strainer part provided at the outer side thereof with an apertured closure and having a pair of slots in opposite sides thereof covered by the closure, a traveling cross-head in the strainer part having a part or parts extending through the slots and attached to the closure, and a screw supported in the strainer part and coöperating with the cross-head to adjust and lock the closure.

6. A drive-well point comprising an apertured tubular strainer part, a penetrating-point, a tubular screen in the strainer part, an apertured tube in the screen, an apertured movable closure extending about the strainer part and guarded by the base of the penetrating-point, and a screw operatively connected with the closure for controlling and locking the same.

7. A drive-well point comprising a tubular strainer part provided with a closure-sleeve movable on the outer side thereof, a screen within the strainer part, a penetrating-point, a movable cross-head in the strainer part beyond an end of the screen and operatively connected with the closure-sleeve, a cross-bar in the strainer part secured thereto, a screw connected movably with the cross-bar and also

with the cross-head, and a wrench adapted to extend through a well-tube and operate the screw.

8. In a drive-well point, the combination with an apertured strainer part having slots in the sides thereof, of an apertured closure-sleeve movable on the strainer part, a cross-bar secured rigidly in the strainer part, a screw mounted in the cross-bar, a cross-head swiveled to the screw, and a bar extending through the slots in the sides of the strainer part and attached to the cross-head and also to the closure-sleeve.

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

THEODORE L. DECKER.

Witnesses:
THOS. L. WALKER,
FLOYD E. DECKER.