(No Model.)

D. WISER.

DRIVE WELL FILTER.

No. 342,667. Patented May 25, 1886.

Fig. 1.

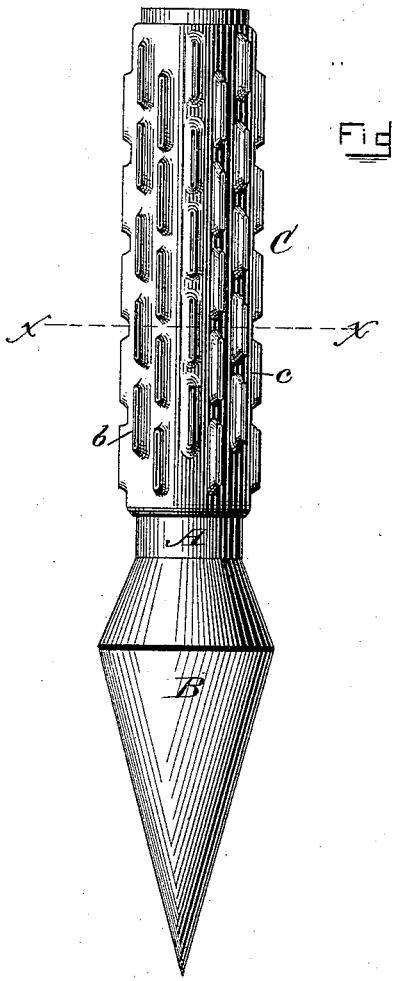


Fig. 2.

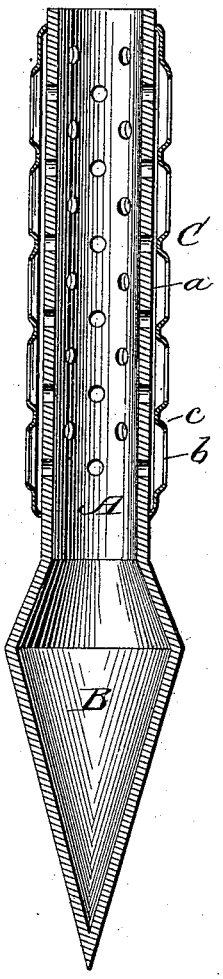
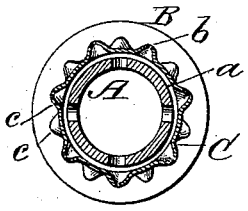


Fig. 3.



WITNESSES

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per Chas. H. Fowler
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UNITED STATES PATENT OFFICE.

DAVID WISER, OF PLYMOUTH, INDIANA, ASSIGNOR OF TWO-THIRDS TO HORACE B. WHITLOCK AND JOHN V. ASTLEY, BOTH OF SAME PLACE.

DRIVE-WELL FILTER.

SPECIFICATION forming part of Letters Patent No. 342,667, dated May 25, 1886.

Application filed February 8, 1886. Serial No. 191,172. (No model.)

To all whom it may concern:

Be it known that I, DAVID WISER, a citizen of the United States, residing at Plymouth, in the county of Marshall and State of Indiana, have invented certain new and useful Improvements in Drive-Well Filters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a side elevation of my invention; Fig. 2, a sectional elevation thereof, and Fig. 3 a horizontal section taken on line *x x* of Fig. 1.

The present invention has relation to that class of filters for drive-well tubes in which an outer shell or casing is used having elongated openings or slots, and connected to the tube so as to leave a space between it and the casing for the water to pass into through the openings or slots. Heretofore it was common to construct this casing of a number of metal strips, which were bent or turned outward at their edges so as to form a triangular cavity which extended the entire length of the strips, the openings or slots being formed by leaving a space between the edges of the strips when attaching the ends thereof to the well-tube. A casing constructed of these narrow strips of metal did not have the necessary strength, the walls thereof not being sufficiently firm or rigid for the perforate end of a drive-well tube; consequently the strips would become bent or twisted out of place and the spaces between them partially closed, besides a continuous opening or slot extending the entire length of the casing is not as effective and practical as a series of them extending longitudinally of the tube.

It is the object of my invention to improve the construction of this class of filters; and it consists in forming the casing of a single or continuous piece of metal having a series of independent openings or passages for the water, braced or strengthened by a raised wall or abutment, as will be hereinafter described and claimed.

In the accompanying drawings, A represents the perforate end of the driven-well tube provided with the point B, and around the perforated portion of the tube is secured the filter C, which forms a casing thereto.

The filter may be either formed of cast or sheet metal, the latter being preferred, and is closed at its ends at the point of attachment to the perforated tube, and the filter is so formed as to provide a space between it and the tube, as shown at *a*, to enable the water to have easy entrance to the tube through the perforations thereof, the water having a free circulation between the tube and filter.

The filter C is formed of a single or continuous piece of metal in contradistinction to a series of narrow strips of metal, as hereinbefore referred to, and has a series of independent openings, slits, or passages, *b*, which are each braced and strengthened by an abutment of the raised metal, as shown at *c*, thereby making it strong and durable and capable of withstanding any twist or wrenching as the tube passes into the ground, and rendering each passage self-supporting and able to sustain any ordinary pressure, either perpendicular or lateral. A further advantage of the walls or abutments around the slits is the fact that the water is allowed to enter freely and at the same time prevents any fine dirt, sand, or deposits of sediment of any kind whatever, thus keeping open the slits or passages of the filter and also the perforation of the tube, and securing a steady flow of cleaned filtered water.

The point B of the tube A as it is driven into the ground makes an advance passage-way for the filter, the water entering the slits or passages *b* and flowing into the space *a*, and in entering the tube A the water is not confined to any one of the perforations therein, but may flow around the tube, entering any perforation it seeks, and if by any means one or more of the perforations should be temporarily stopped up the water is enabled to flow freely about until it passes through the tube.

It will be readily understood that the space *a* is of material advantange, the water flowing therein keeping the perforations in the tube A open and free, while the inlet passages or slits *b* are self-sustaining and durable.

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

1. A filter for driven-well tubes, consisting of a casing formed of a single or continuous piece of metal having a series of inlet-passages for the water surrounded by a raised wall or abutment, substantially as and for the purpose set forth.

2. A filter for driven-well tubes, provided with a series of inlet-passages on the same vertical plane and extending around the filter, each passage having a raised wall or abutment completely surrounding the passages, substantially as and for the purpose specified.

3. The combination, with a driven-well tube, of a filter consisting of a casing surrounding the perforate end of the tube, and connected thereto, as shown, to form a space between it and the tube for the circulation of the water, said casing having a series of independent water-passages arranged on the same vertical plane and extending around the casing, each passage being surrounded by a raised wall or abutment, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DAVID WISER.

Witnesses:
M. A. O. PACKARD,
ORLANDO M. PACKARD.