

(No Model.)

A. WRIGHT.
AUTOMATIC WELL CLEANER.

No. 306,042.

Patented Sept. 30, 1884.

Fig. 1.

Fig. 2.

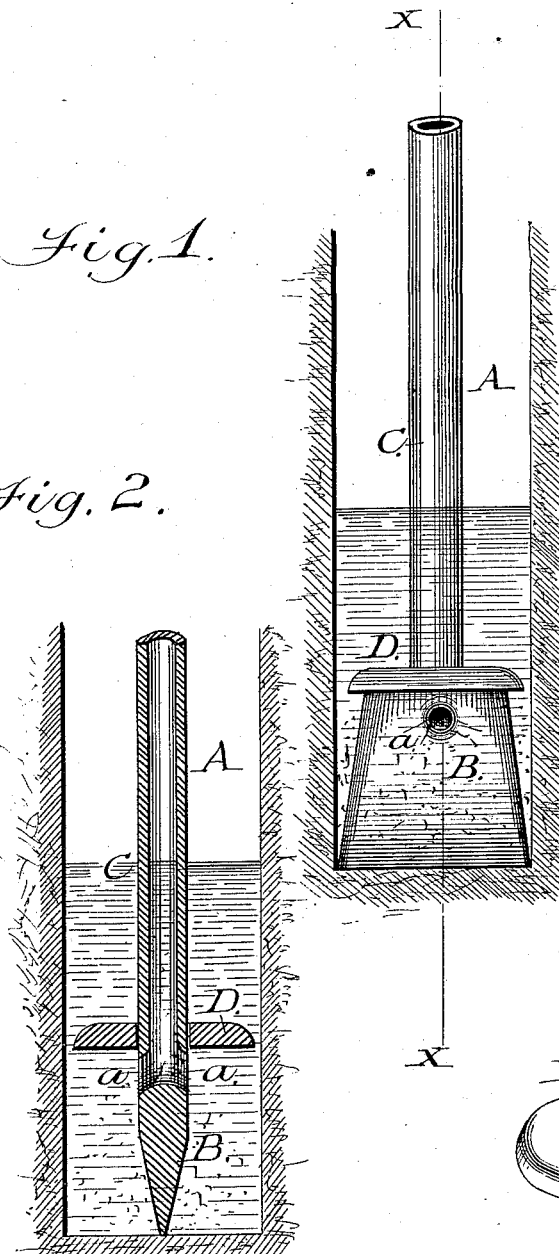


Fig. 4.

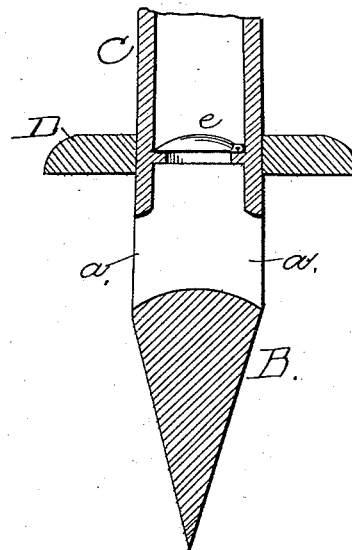
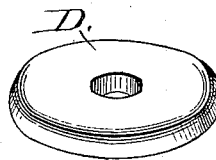


Fig. 3.



Attest;

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UNITED STATES PATENT OFFICE.

ALONZO WRIGHT, OF DENVER, COLORADO.

AUTOMATIC WELL-CLEANER.

SPECIFICATION forming part of Letters Patent No. 306,042, dated September 30, 1884.

Application filed June 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALONZO WRIGHT, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Automatic Well-Cleaners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a drill with my improvements attached. Fig. 2 is a vertical sectional view of the same on line *x x* of Fig. 1. Fig. 3 is a detail of the collar removed. Fig. 4 is a detail of lower end of drill, showing collar and valve, in all of which similar letters of reference indicate corresponding parts.

My invention relates to means for preventing the accumulation of drillings at the bottom of a well, and discharging such drillings at the top of the well; and my invention consists in the novel arrangement, construction, and combination of devices, to be hereinafter more fully set forth, and specifically pointed out in the claims.

To enable others skilled in the art to make and use my invention, I will now proceed to describe the exact manner in which I have carried it out.

Heretofore great difficulty has been experienced in sinking wells by the accumulation of drillings beneath and around the drill, thereby greatly retarding the working of the drill. Various devices have been constructed to overcome this difficulty and to remove these drillings, and my invention, as before stated, is for this purpose.

In the said drawings, A designates a well, and B a drill of any suitable construction, which is secured to a hollow rod, C. In each side of the drill or rod is formed an opening, *a*, which is inclined upward, and these openings communicate with the hollow rod C, above referred to.

Upon the drill-rod B, and mounted so that its under surface rests upon the top of the drill, is a collar, D, whose diameter is slightly less

than the width of the drill at its broadest or cutting edge, in order that some portion of the water may escape around the collar and into the chamber above it as the drill descends. Thus it will be seen that when the drill is raised against the pressure of water in the well above the collar D this water will be forced down, and the collar D, as before stated, being slightly smaller in diameter than the drill, enables the water to pass again to the bottom of the well, and such will be the force of the water in entering the well at the point referred to that the well will be washed by the water mingling with the loose dirt and drillings. When the drill descends, a portion of the water and dirt below the collar D is forced through the openings in the drill or rod, and thence through the hollow rod C, which is provided with a valve, *e*, to prevent the water from flowing back into the well, and finally discharged at the top of the well.

I do not confine myself to any particular form of collar, as it is evident that this may be varied without departing from the spirit of my invention.

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

1. In a device for cleaning wells, and in combination with a drill and hollow rod provided with a valve, a collar whose diameter is smaller than the cutting-point of the drill, with a chamber above said collar, substantially as herein set forth.

2. The drill B, having openings *a* on each side, and a hollow rod, C, provided with a valve, in combination with a collar constructed and arranged so as to permit the water to pass beneath said collar and be discharged through the openings *a* by the descent of the drill, substantially as and for the purpose set forth.

ALONZO WRIGHT.

Witnesses:

W. H. SMITH,
J. H. LANE.