

H. E. CHLEBORAD.
 COMPRESSED AIR WATER ELEVATOR.
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935,742.

Patented Oct. 5, 1909.

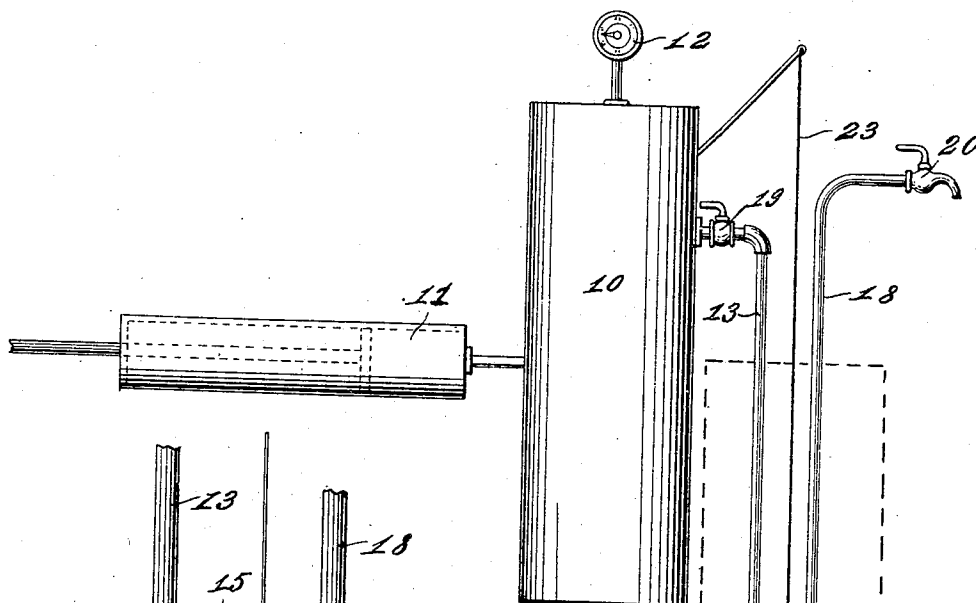


Fig. 1.

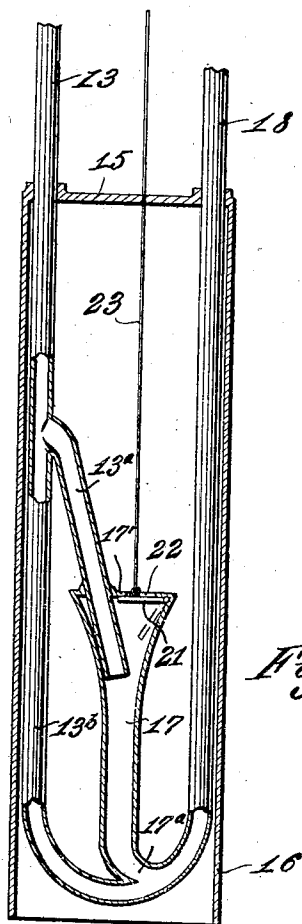


Fig. 2.

Witnesses

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HENRY E. CHLEBORAD, OF ATWOOD, KANSAS.

COMPRESSED-AIR WATER-ELEVATOR.

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To all whom it may concern:

Be it known that I, HENRY E. CHLEBORAD, a citizen of the United States, residing at Atwood, in the county of Rawlins and State of Kansas, have invented certain new and useful Improvements in Compressed-Air Water-Elevators, of which the following is a specification.

This invention relates to compressed air water elevators or pumps and consists particularly in devices hereinafter fully described and claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the device, substantially as it appears when in use in the well, and Fig. 2 is a vertical sectional view of the principal parts of the invention on a larger scale than shown in Fig. 1.

Throughout the following detail description and on the several figures of the drawings similar parts are referred to by like reference characters.

Referring particularly to the figures of the drawings, at 10 is indicated a suitable reservoir for compressed air. Said reservoir is to be charged with air by any convenient type of compressor and indicated conventionally at 11. The tank or reservoir 10 may be located at any convenient place and is preferably provided with a gauge 12 to indicate the pressure upon the inside thereof. A pipe 13 is connected to the reservoir 10 and leads therefrom down into the well 14 and at its lower end extends through the top 15 of a casing 16. The casing has an open bottom located adjacent to the bottom of the well. The pipe 13 conveys compressed air down into the casing, and at its lower end the said pipe is divided, one portion 13^a entering a funnel 17 and the other portion 13^b passing downwardly below said funnel and rigidly connected to the lower or smaller end thereof. After leaving the lower end of the funnel the blast of compressed air will be conveyed upwardly through the pipe 18 to and out of the upper end of the well, the pipe 18 being led to any convenient point. The pipe 13 is provided with a valve or stop cock 19, and the pipe 18 will be provided with a similar valve 20.

As indicated in the drawings the top 15 is rigidly connected to the casing 16 and the pipes 13 and 18 are connected therewith in a substantial manner. By virtue of the casing it will be practically impossible for obstacles or objectionable matter to be intro-

duced into the pipe 18. The funnel 17 extends upwardly within the casing and its top is closed as shown at 17', through which cover the branch pipe 13^a extends. A valve 21 normally closes a hole 22 in said cover 17'. The valve opens inwardly and admits water through said hole 22 when the compressed air is admitted into and through the pipe 13. The lower portion of the funnel is curved as indicated at 17^a in the direction of the pipe 18 into which it merges. The effect, therefore, of the compressed air through and around the funnel is to force the water up through the pipe 18. The position of the valve 21 may be controlled by a flexible connection 23 leading upwardly therefrom to the top of the well, preferably in the vicinity of the reservoir 10.

Having thus described the invention, what is claimed as new is:

1. In a compressed air water elevator for wells, the combination with a compressed air reservoir and means for charging the same, of a casing located adjacent to the bottom of the well and having its lower end open, a funnel within said casing, a pipe leading from the reservoir into said casing and having its lower end divided, one of the divisions of the pipe being extended into the funnel and the other division thereof being connected to the lower end of the funnel, and a pipe leading from the lower end of the funnel through the casing and to the top of the well, substantially as set forth.

2. In a compressed air water elevator, the combination of a casing, having an open bottom, a funnel located within the casing and extending upwardly from the bottom thereof, a compressed air pipe leading downwardly into said casing and having its lower end divided within the casing, one of the divisions extending into the funnel and the other extending downwardly on the outside thereof and connected to the lower end of the funnel, a discharge pipe leading upwardly through the casing and extending from the lower end of the funnel and air pipe, the lower end of the funnel being curved toward said discharge pipe, and means for controlling the flow of water from the discharge pipe.

3. In a compressed air water elevator, the combination of a casing, a funnel within the casing, said funnel having a normally closed top and a curved lower end, a compressed air pipe leading downwardly into said cas-

ing and comprising two branches within the casing, one branch entering the funnel through its top and the other branch passing downwardly on the outside thereof and
5 connected to its curved lower end, a discharge pipe leading from the curved lower end of the funnel upwardly through the casing, and means for controlling the ad-

mission of water into said funnel through its top, substantially as set forth. 10

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

HENRY E. CHLEBORAD.

Witnesses:

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