(No Model.)

G. H. WHITMAN.

BOILER FEEDER.

No. 267,295. Patented Nov. 7, 1882.

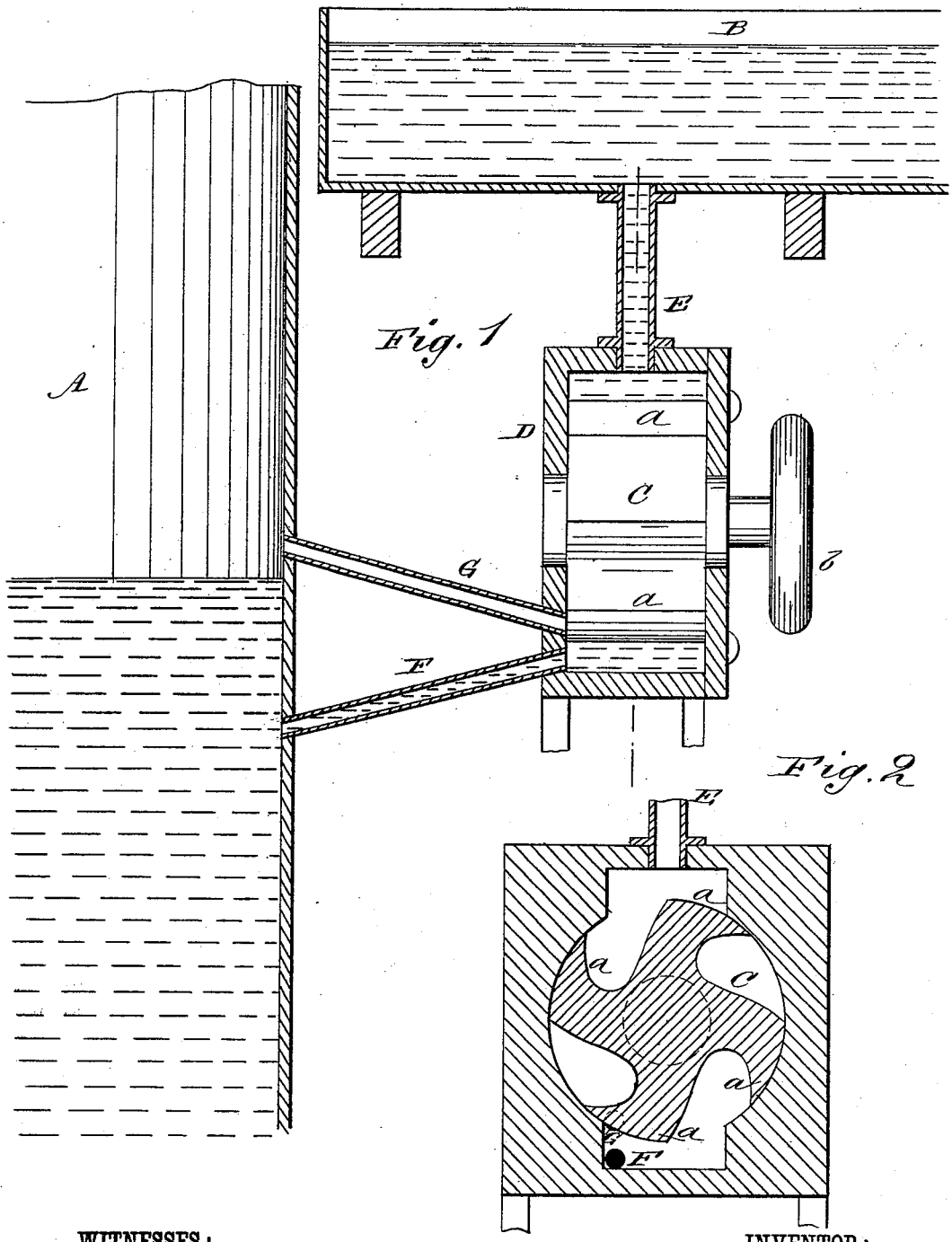

Fig. 1

Fig. 2

WITNESSES:

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C. Bedgwick

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UNITED STATES PATENT OFFICE.

GEORGE H. WHITMAN, OF EUREKA SPRINGS, ARKANSAS.

BOILER-FEEDER.

SPECIFICATION forming part of Letters Patent No. 267,295, dated November 7, 1882.

Application filed June 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. WHITMAN, of Eureka Springs, in the county of Carroll and State of Arkansas, have invented a new and useful Improvement in Boiler-Feeders, of which the following is a full, clear, and exact description.

The object of my invention is to provide a feeder which shall act automatically to retain the water at a uniform height; and to that end my invention consists in a revolving feeder operated by the water and steam pressure to pass the water to the supply-pipe, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional elevation of my improved apparatus, and Fig. 2 is a transverse section of the feed-wheel.

A is the boiler. B is an elevated water-tank. C is the feed-wheel in a case, D. E is a pipe from the water-tank to the upper part of the wheel-case. F is the feed-pipe, extending from the lower part of the wheel-case to the boiler, and G is a steam-pipe from the boiler to the wheel-case.

The water-pipe F is arranged on a downward incline from the bottom of the wheel-case to the boiler, into which the water will flow as soon as the opening in a bucket registers with the bottom of case.

The steam-pipe G rises on an incline from the space at the bottom of the case to the safety-level of boiler, so that as soon as the water sinks below the said level steam forces its way into said bottom space, and thence into the last-discharged bucket, thus pressing the wheel upwardly near its periphery on one side, while the water in the filled buckets presses it down on the other side. The effect is to cause the wheel to turn and empty successive buckets of water into the bottom space of case until the steam is shut off by the rise of the water above the safety-level at which the pipe G enters the boiler. The wheel is fitted to revolve freely in the case, and is formed with buckets or paddles *a*, that fit the interior of the case snugly.

In operation, when the water-level in the boiler falls below the end of pipe G, steam passes to the case D, below the wheel, and the weight of water on the buckets of the wheel, aided by the pressure of steam, starts the wheel, so that the water is carried to the lower part of the case, and from there runs or is forced into the boiler. When the water-level rises again to pipe G the steam is cut off and the wheel stops. By this arrangement the boiler is fed as required, and the risk of the water falling below the safety-point is avoided. I fit the axis of wheel C with a hand-wheel, *b*, for use in starting the wheel in case it should be obstructed.

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

The combination, with a boiler, a wheel having buckets *a*, and a superposed tank, B, of a wheel-case having open space at bottom, connected at top by a pipe with the tank and communicating at the bottom by pipes F G, respectively, with the water and steam spaces of the boiler, as and for the purpose specified.

GEORGE H. WHITMAN.

Witnesses:

CHAS. H. MENMANN,

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