# J. B. Hyzer,

## Windlass Water Elevator.

No. 45,412. Patented Dec. 13, 1864.

Fig. 1.

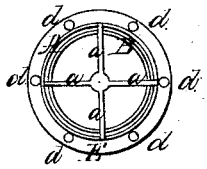


Fig. 5.

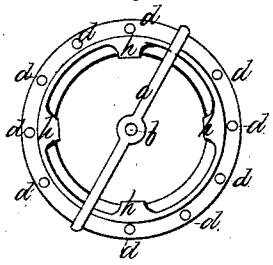


Fig. 2.

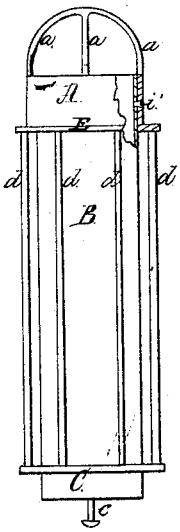


Fig. 6.

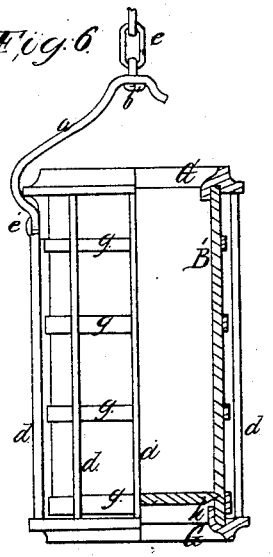


Fig. 4.

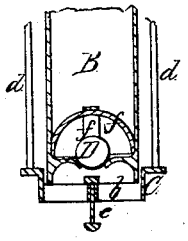
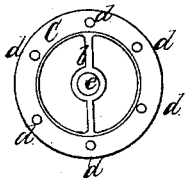


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN METALLIC GUARDS FOR WATER-BUCKETS.

Specification forming part of Letters Patent No. **45,412**, dated December 13, 1864.

*To all whom it may concern:*

Be it known that I, JACOB B. HYZER, of the city of Janesville, in the county of Rock and State of Wisconsin, have invented a new and improved mode of protecting all kinds of water-buckets from injury by means of a metallic guard attached to or inclosing the buckets; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, like characters refering to like parts in each figure.

The nature of my invention consists, generally, in inclosing a water-bucket in a metallic casing, having suitable heads attached to each end of the bucket, and connected together by means of metallic rods, substantially as shown by the drawings, and hereinafter more fully described and set forth.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation by referring to the accompanying drawings, in which—

Figure 1 is a top view of a metallic bucket for a drilled well. Fig. 2 is a side view or elevation of the same, having a part of the top head or flange and the thimble or casing to which is attached the bail broken away, so as to show the manner of connecting the bail to the frame inclosing the bucket and the device securing it to the same. Fig. 3 is a bottom view of the bucket, Fig. 2. Fig. 4 is a vertical section through the bottom of the bucket and guard, showing their connection and the adjustment of the valve and its accompaniments. Fig. 5 is a top view of a common bucket, showing the guard attached thereto. Fig. 6 is a vertical half-section and half-elevation of the same.

In Figs. 1, 2, 5, and 6, *a* represents the bail of the bucket.

*b*, Figs. 3 and 4, is a support for the trip-bolt *c*.

*c*, Fig. 6, represents a part of the draft-chain attached to the swivel *b'*.

*d* in the several figures represents rods forming a part of the guard to the bucket, and serve to connect the heads together.

*e*, Figs. 2 and 4, is a trip-bolt used to raise the ball-valve D, Fig. 4, and is operated by resting it on the water-spout when the bucket descends by its own gravity, and brings the valve D in contact with it, raising the same and permitting the discharge of the water from the bucket, which being raised, the valve D immediately resumes the position shown by the drawings, being carried to place by its own gavity, operating in conjunction with the peculiar form of the bucket-bottom, forming the valve-seat.

*f*, Fig. 4, are curvilinear pieces placed at right angles to each other, and secured in the bottom of the bucket, and represent the manner of securing the valve from rising in the bucket when the same is being filled from the opening of the valve D.

*g*, Fig. 6, represents the hoops of a common water-bucket.

*h*, Figs. 5 and 6, represent clasps attached to and forming a part of the guard-heads, and take hold of the bucket-chines, securing it in place, as shown.

A, Fig. 2, is a metallic thimble, to which is attached the bail *a*, and is secured to the head or flange E by means of the screw (or equivalent device) *i*, by the removal of which the thimble may be taken off, and the bucket withdrawn for repairs or other purposes.

B, Figs. 2, 4, and 6, represents the body of the bucket.

B', Fig. 6, represents a section of the bucket for a common well.

C, Figs. 2, 3, and 4, designates the bottom head of the bucket-guard.

D, Fig. 4, is a ball-valve.

E, Figs. 1 and 2, designates the flange of the top head of the bucket-guard.

F, Fig. 6, designates the bottom of the water-bucket in section.

G designates the top head of the guard.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. Inclosing a water-bucket in a metallic guard, substantially as described.

2. Constructing a metallic guard for water-buckets so as to admit of the removal of the bucket B from the guard by taking off the bale-thimble A, as herein described and set forth.

3. Constructing a metallic guard for a water-bucket and adapting it to the bucket so as to admit of the attachment of the trip-bolt *e* to the guard instead of to the bucket proper, substantially as herein described and set forth.

JACOB B. HYZER.

Witnesses:

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