

B. BRUNDAGE.

Force-Pumps.

No. 130,620.

Patented Aug 20, 1872.

Fig. 1.

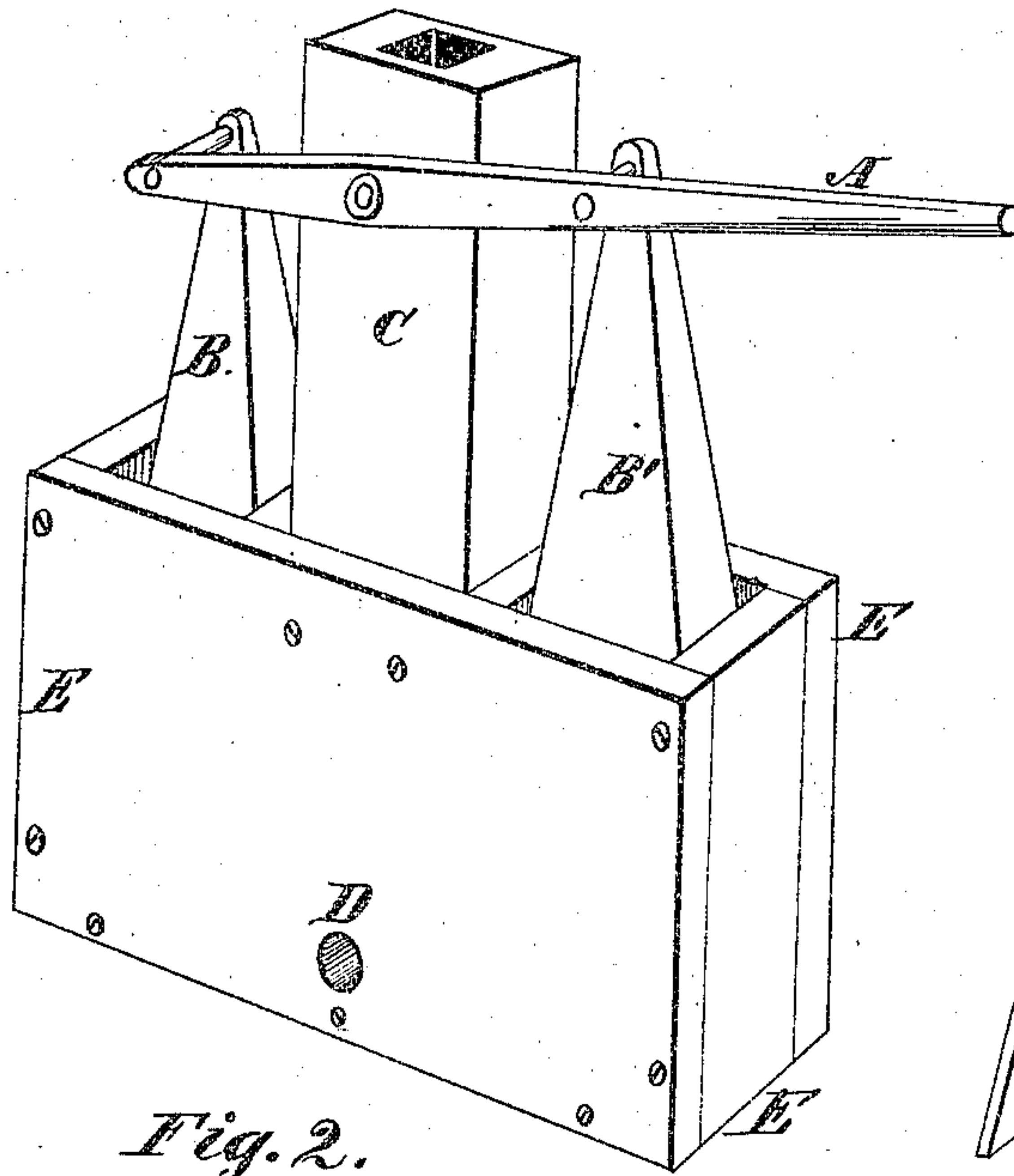


Fig. 3.

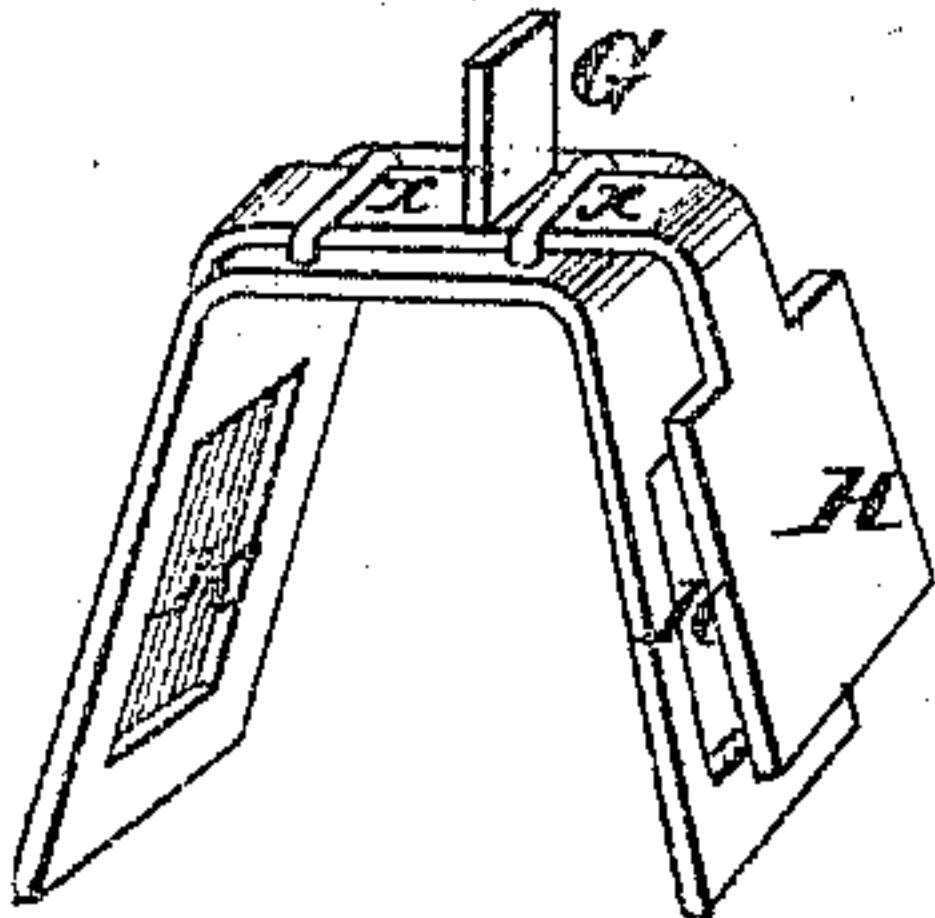


Fig. 3.b.

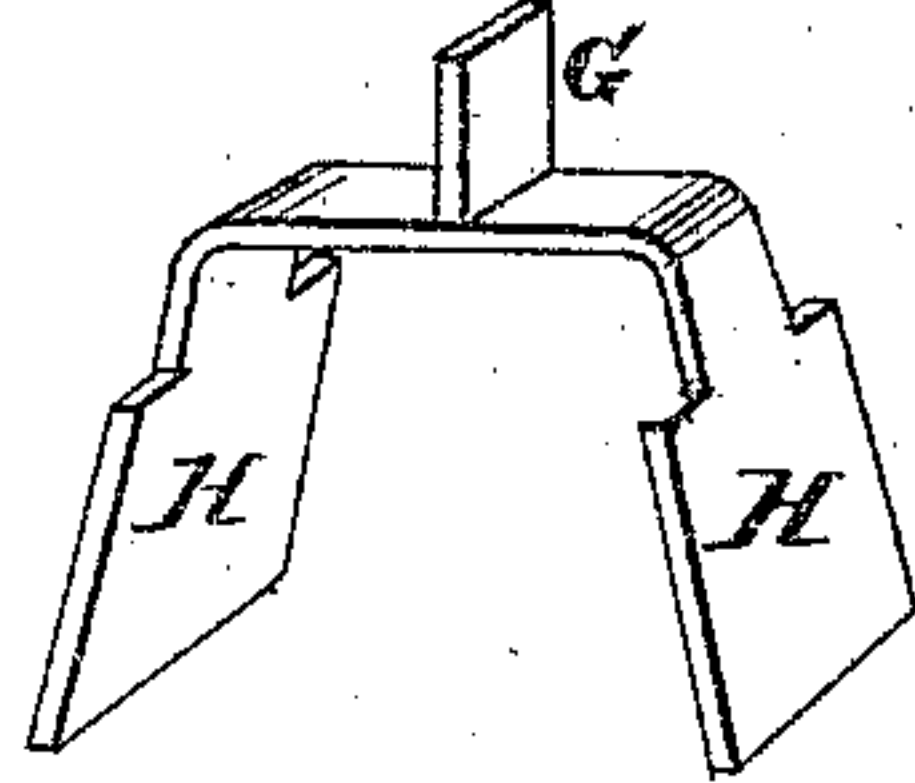


Fig. 2.

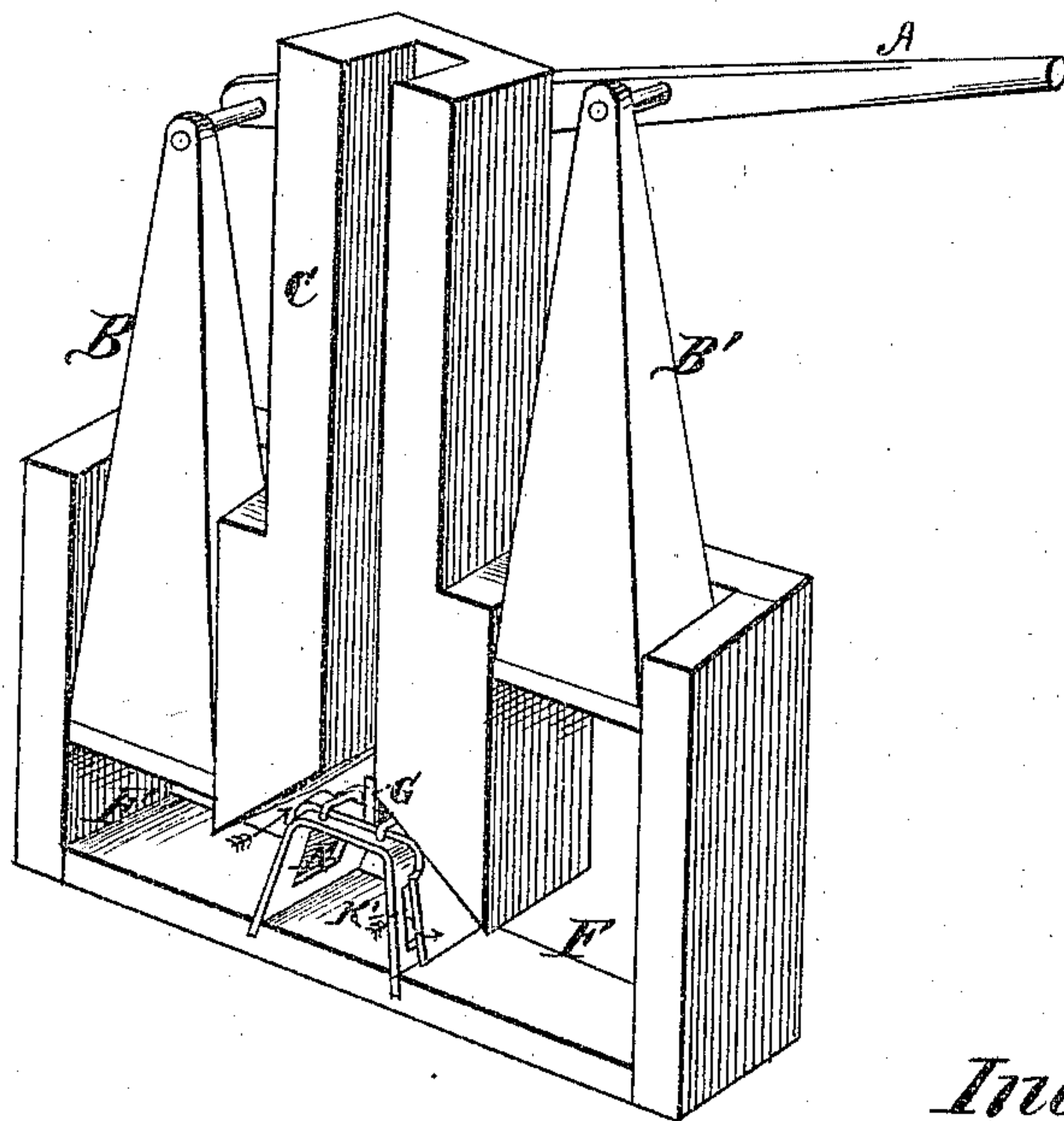
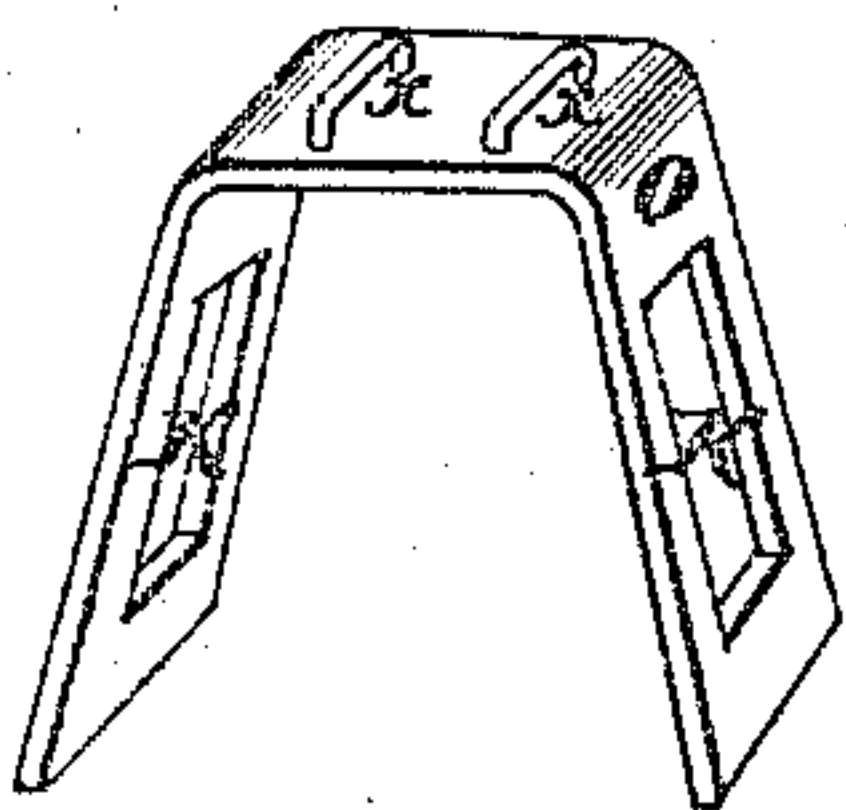


Fig. 3.a.



Witnesses.

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IMPROVEMENT IN FORCE-PUMPS.

Specification forming part of Letters Patent No. 130,620, dated August 20, 1872.

To all whom it may concern:

Be it known that I, BENJAMIN BRUNDAGE, of Sumpter, in the county of Wayne, in the State of Michigan, have invented a new and useful Improvement in the Construction of Forcing-Pumps for raising water for any purpose; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in so arranging a single valve to vibrate in the bottom of the tube or cylinder C as to aid in raising the water promptly, and at the same time allow the water to fall through the open throat into the fountain, well, or reservoir as soon as the pumping ceases.

In the drawings, Figure 1 represents the pump properly put together for use. Fig. 2 represents a sectional view of the same, showing the position and shape of the various parts, not shown in Fig. 1. Fig. 3 represents the position of the valve, with the frame on which it rests and in which it works; while Fig. 3^a shows the frame, and Fig. 3^b shows the valve, each separately.

In Fig. 1, A is a lever, connecting and operating the piston-rods B and B'. C is the tube through which the water rises. D is the orifice through which the water enters the water-chamber; and E E E, the box inclosing the valve, chamber, &c.

In Fig. 2, A, B and B', and C represent the same parts as in Fig. 1. F F show the water-chamber. K K' show the frame and its open-

ings, on which the valve rests. G shows the valve, better seen in Fig. 3.

Fig. 3, G is the valve, extended to the wing H.

Fig. 3^a, O shows the frame; K K, its openings; and X X, two staples holding the valve in place; seen also in Fig. 3.

In Fig. 3^b, G is the valve, H H the wings.

The manner of constructing and operating the pump is as follows: All being in place, as seen in Fig. 2, and power being applied to the lever A, the piston B descends upon the water in the chamber F, forcing the valve to the opposite side of the bottom of the tube C, also closing the opening K by the wing of the valve, and causing the water to rise in the tube, in the direction shown by the arrow. The valve is then in the position shown in Fig. 3. The motion of the lever being reversed, the piston B' descends, the valve is forced to the opposite side of the tube, the opening K' is closed, and the water again forced up the tube. When the working of the pump-lever ceases, whether the valve stands at either side the throat of the pump or in the middle, the water remaining in the tube immediately falls to the bottom, leaving the tube entirely clear, avoiding all danger from frost.

What I claim as my invention, and desire to secure by Letters Patent, is—

The sliding valve H, arranged to operate substantially as shown and described.

BENJAMIN BRUNDAGE.

Witnesses:

A. M. GREENE,

G. M. WOODFORD.