

G. WORDEN.
Car-Couplings.

No. 150,454.

Patented May 5, 1874.

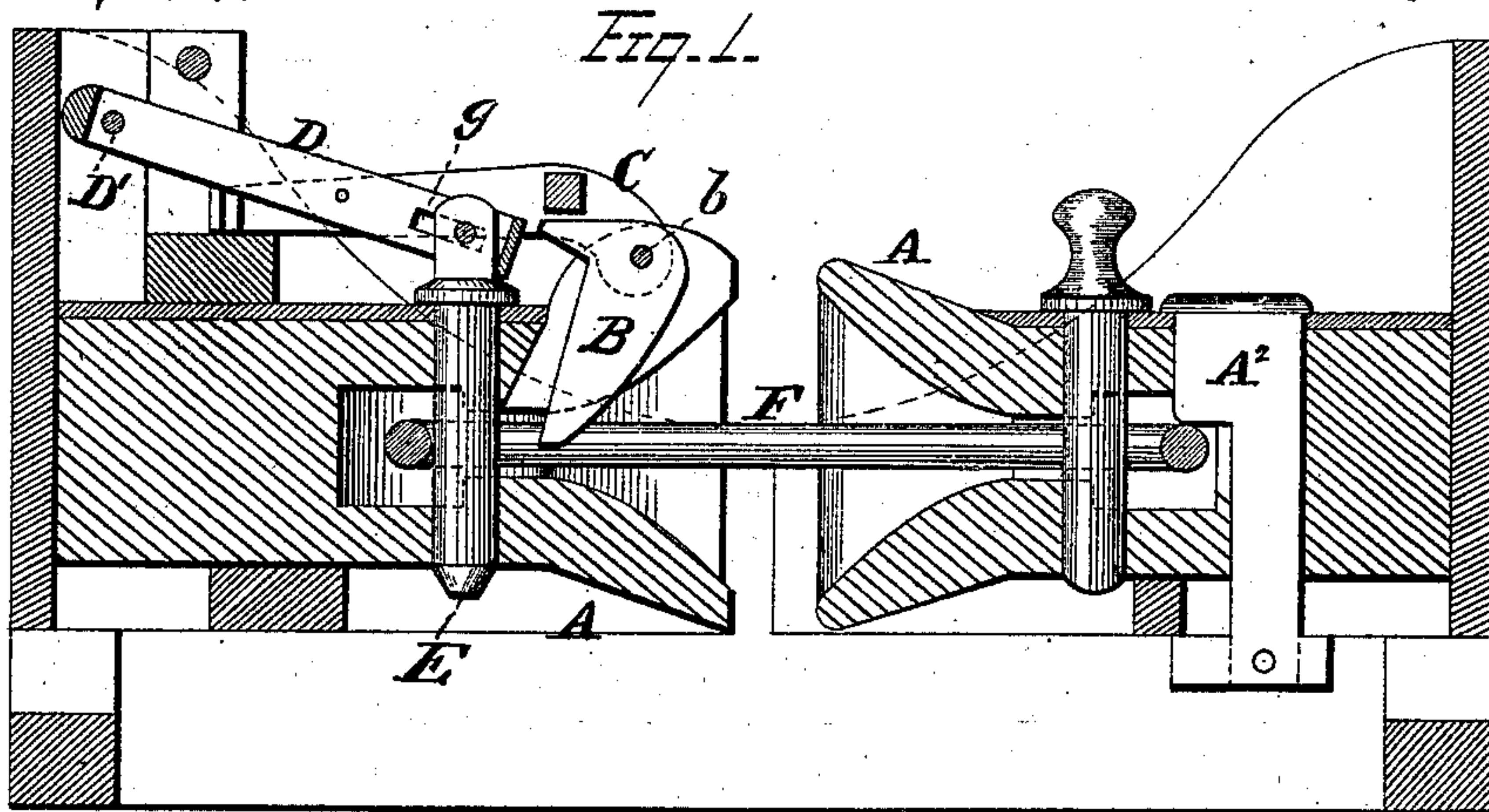
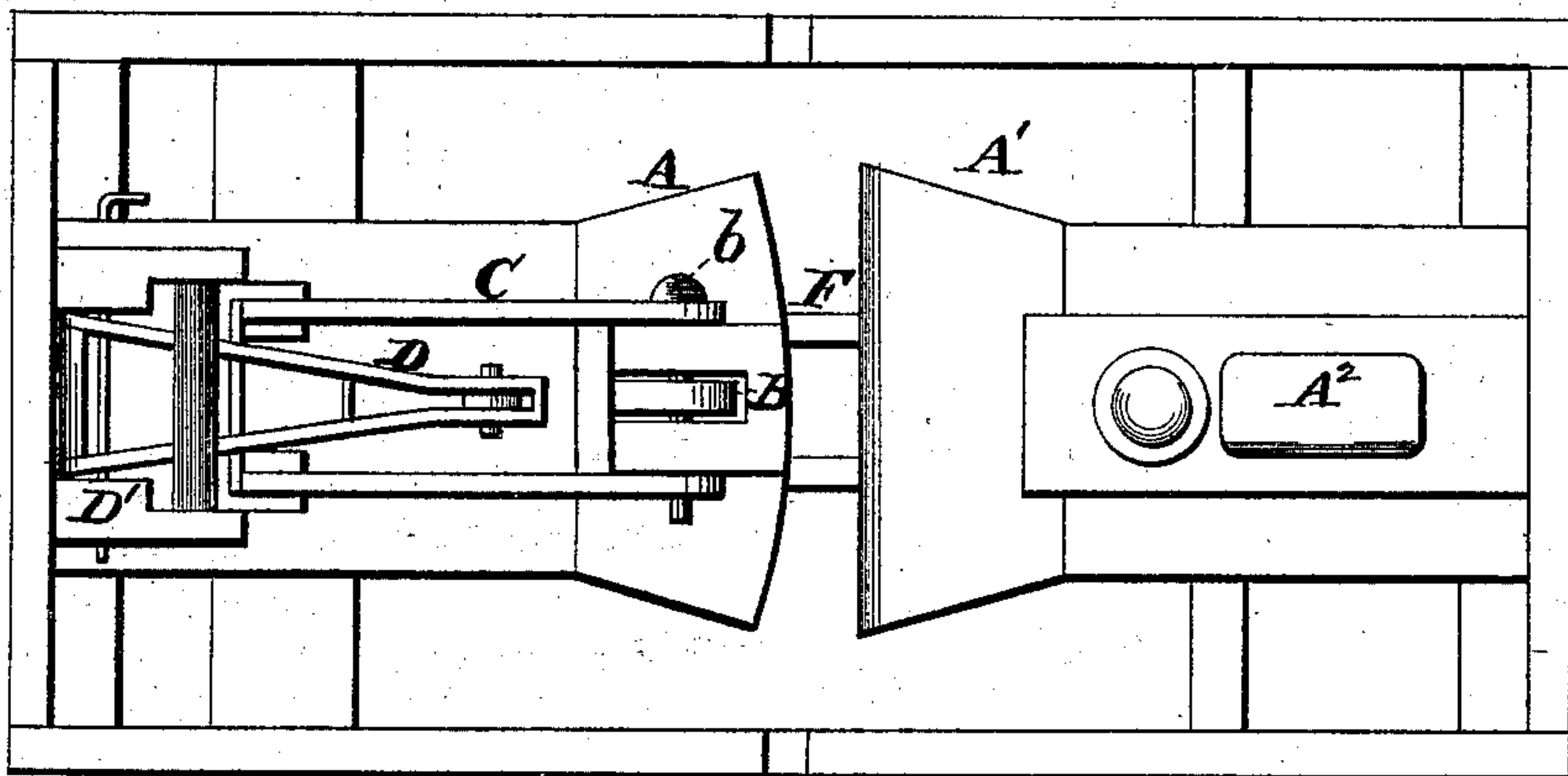


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

GEORGE WORDEN, OF PITSTON, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **150,454**, dated May 5, 1874; application filed January 14, 1874.

To all whom it may concern:

Be it known that I, GEORGE WORDEN, of Pittston, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in car-couplings, and is designed as an improvement upon patents granted to me January 2, 1872, No. 122,509, and December 31, 1872, No. 134,503.

In the drawings, Figure 1 represents a longitudinal section of my invention, and Fig. 2 a plan view of the same.

My invention consists in the following parts in combination, wherein—

A¹ are draw-heads of opposing cars. These draw-heads are constructed substantially in the manner as shown in my previous inventions referred to. Upon the draw-head A are arranged suitable supports and bearings for levers and other mechanism, as will hereinafter appear. B is a primary lever, against which impinges the coupling-link F. This lever B moves in a slot made in the upper portion of the draw-head, and swings upon a pivot, *b*. C is the secondary lever, fulcrumed at *b*, and operated by the primary lever B. D is a pin-lever, operated by the secondary lever C. The pin-lever D swings in a suitable casing placed upon the draw-head A, in which it is fulcrumed at D', and operated by the secondary lever C. At the extremity of the pin-lever D is provided a slot, *g*, in which is hung the coupling-pin E. The construction of the draw-head A¹, with its weighted slide A², is substantially the same as shown and claimed in my patent of December 31, 1872, before mentioned.

The link F is held in proper position in the draw-head A¹ by the action of the weighted slide A², which enables said coupling-link to properly enter the flaring mouth of the draw-head A. As the link F enters said draw-head A it impinges against the primary lever B,

which, in its action, lifts the secondary lever C, which, in its turn, elevates the pin-lever D and the coupling-pin E. This leaves the passage free for the introduction of the coupling-link into the draw-head A. When the link F has passed behind the pin E, its operation upon the primary lever B ceases, and the pin, by its gravity and that of its lever D, drops into position, and the cars are automatically coupled. To uncouple, it is only necessary to elevate pin-lever D, which may be done directly, or by any suitable mechanical device. This disengages the coupling-pin E, and the link F may be drawn out, the primary lever B being so constructed as to swing free from said link.

It will be seen that, in this invention, I have improved on the devices in my previous patents referred to in the following points, viz: A decrease in the number of parts, and consequent decrease in friction; a decrease in cost of construction; greater simplicity; more direct action, and less liability to derangement. I have also placed my primary lever B in the roof of the draw-head A, instead of the floor, as shown in my previous patents. By this, the coupling-link is less liable to be obstructed in its entrance by the coupling-pin E.

By this system of levers it will be observed that a much shorter draw-head can be used, whereas, when a single lever is used, it necessarily requires a long lever-arm, and also a correspondingly long draw-head in which to operate said lever and its pin. It is obvious that, by my invention, a short draw-head may be employed, thus affording the advantages of economy of room, cheapness of construction, and greater strength.

What I claim is—

The combination of the draw-head A, primary lever B, secondary lever C, pin-lever D, and pin E, substantially as and for the purposes specified.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of January, 1874.

GEORGE WORDEN.

Witnesses:

M. W. MORRIS,
PATK. HYNES.