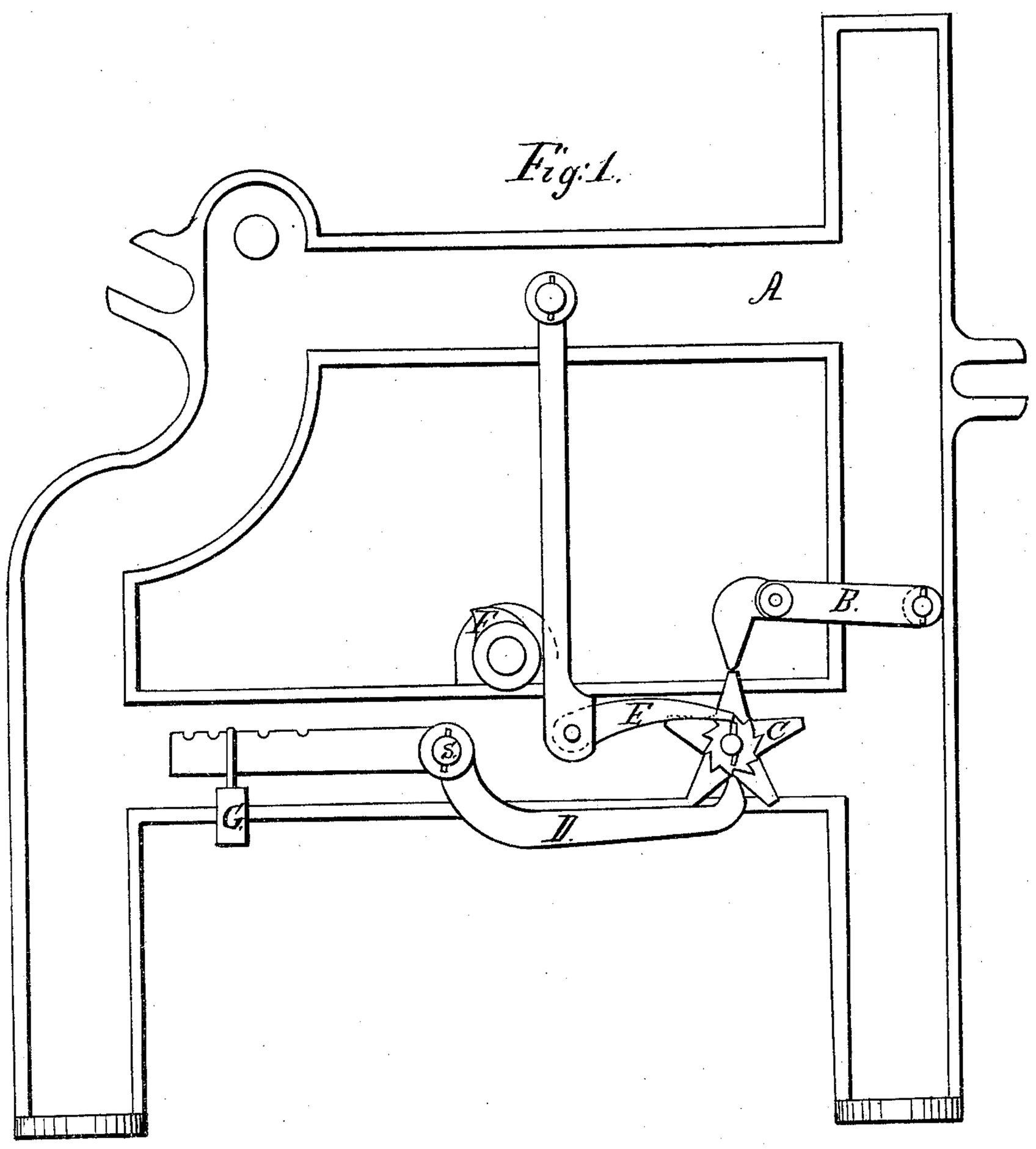
W. Whiteside.

Shuttle Box.

No. 90,212. Patented May 18, 1869.

Fig: 1.



Witnesses:

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United States Patent Office.

WILLIAM WHITESIDE, OF MANAYUNK, PHILADELPHIA, ASSIGNOR TO THOMAS WOOD, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 90,212, *dated May* 18, 1869.

IMPROVEMENT IN MECHANISM FOR OPERATING SHUTTLE-BOXES IN LOOMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM WHITESIDE, of Manayunk, city of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Power-Looms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, and to the letters marked thereon.

The drawing represents an end view of a loom-frame and the improvement.

Similar letters refer to like parts.

The nature of my improvement consists in the combination and arrangement of a weighted lever with the star-cam of a two-box motion of a power-loom for weaving plaids; and the object of said improvement is to balance the shuttle-box, and either one lever or the other, holding the star-cam all the time, preventing the box from falling or changing until acted upon by the wiper F, saving filling, avoiding smashes, and enabling the loom to be run at a greater speed.

To enable others skilled in the art to make and use my improvement, I will proceed to describe the construction and operation of the same.

Referring to the drawings—

A is the loom-frame;

C, the ordinary star-cam;

E, pawl or pusher;

F, a cam, usually called wiper; and

B, a side lever, to connect with the lifting-rod of the box.

All these parts are made in the usual manner.

D is a lever pivoted on the stud *s*. This stud is fastened to the frame A.

On one end of the lever D is hung a weight, G. The other end is turned upward, and rounded to fit between the points of the cam C.

The operation is as follows:

The star-cam is operated by the wiper F, pawl E, and ratchet-wheel on the cam.

The position shown in the drawing is when the box is up.

The next revolution of the wiper moves the ratchet-wheel one tooth, which drops the box. Then the point on lever B will be between the points of cam C, and point on lever D will be on one of the points of cam C. The next movement, the weight G assists in raising the box, and in the drop it prevents rebounding or jarring.

With my improvement, I am enabled to dispense with the friction-pulley and strap; also the retaining-catch used in the ordinary star-motion; furthermore, to run the loom faster, with less rebounding and jarring of the box, and preventing the box dropping at the wrong time, saving filling and preventing smashes; all of which will be readily understood by one acquainted with the star-motion, which is well known in most parts of the States.

I claim, in combination with the box-rod supporting-lever B, and star-cam C, the weighted lever D, for retaining the same in position, substantially as described.

WILLIAM WHITESIDE.

Witnesses:

JOHN SHINN,

JAMES MCKNIGHT.