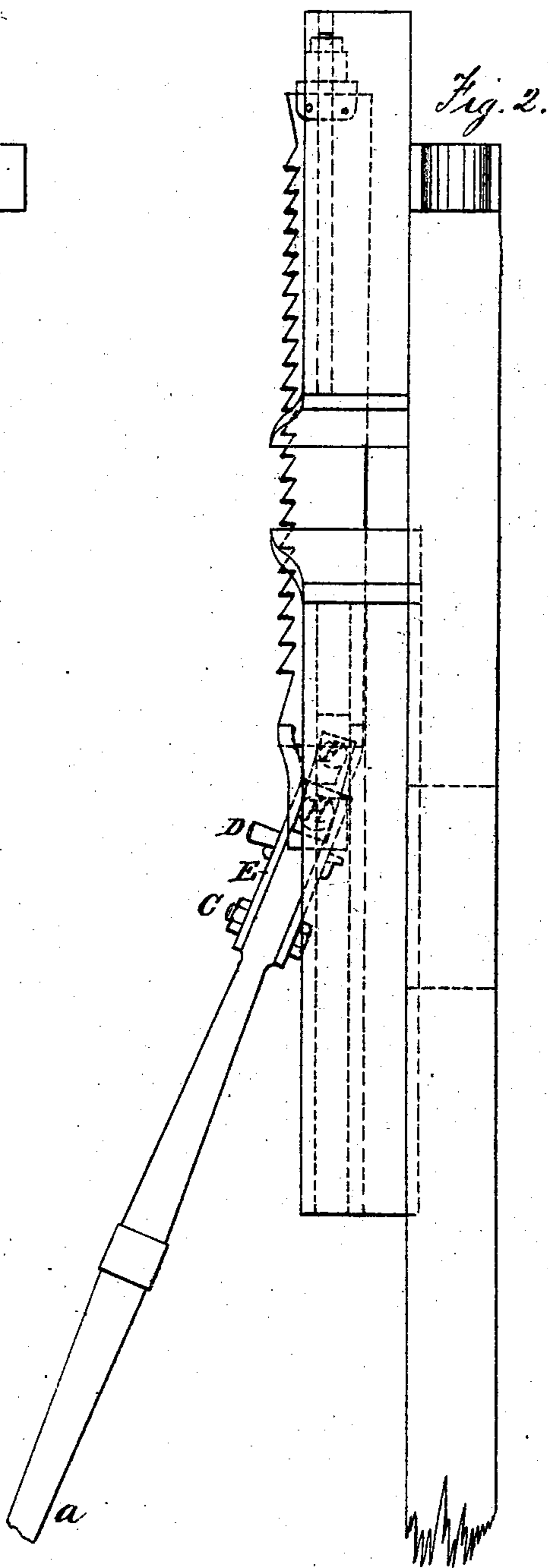
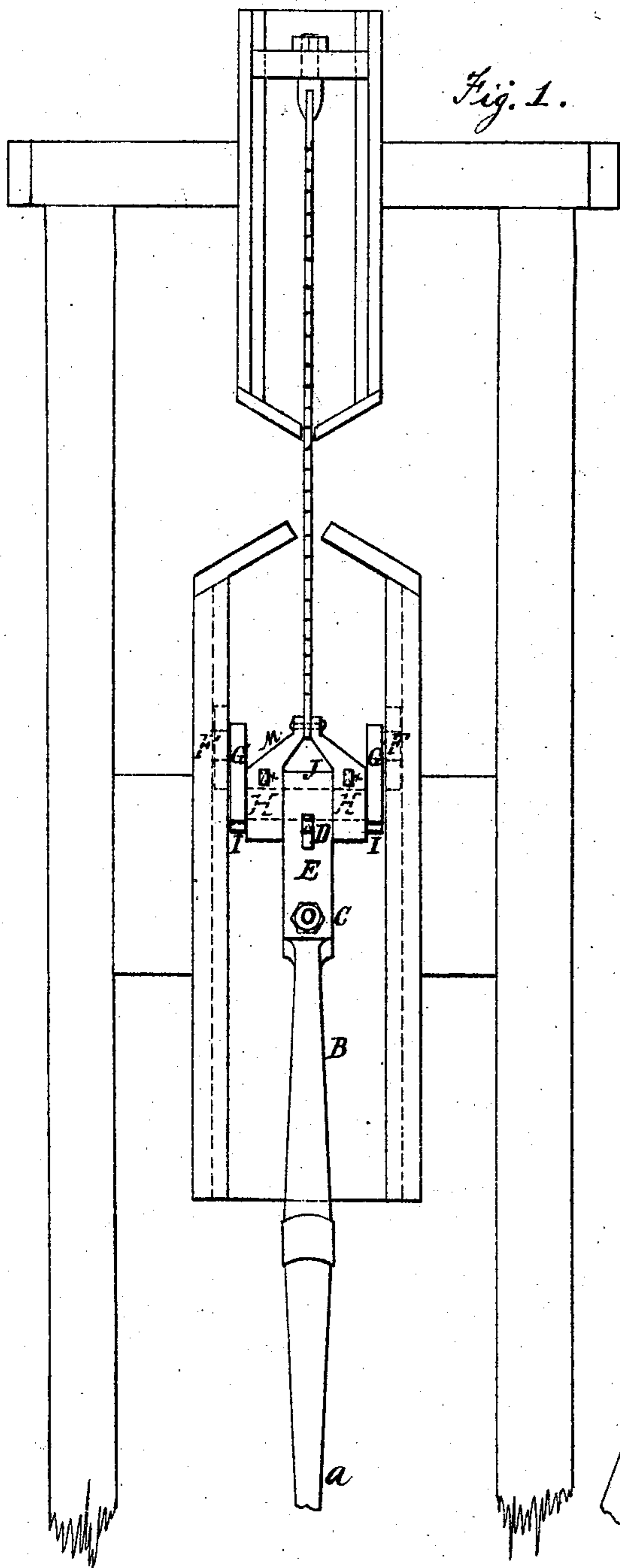


S. W. HARRIS.

Improvement in Saw-Mills.

No. 116,181.

Patented June 20, 1871.



Witnesses.
L. O. Brown
Wm Howard

Inventor.
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UNITED STATES PATENT OFFICE.

SAMUEL W. HARRIS, OF JAMESTOWN, NEW YORK, ASSIGNOR TO HIMSELF
AND JOSEPHUS H. CLARK, OF SAME PLACE.

IMPROVEMENT IN SAW-MILLS.

Specification forming part of Letters Patent No. 116,181, dated June 20, 1871.

To all whom it may concern:

Be it known that I, SAMUEL W. HARRIS, of the village of Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Oscillating Cross-Head, with a new and useful mode of connecting it with the pitman by means of an iron strap the same width of the pitman, and attached thereto with bolts and a key; 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 of reference marked thereon making a part of this specification, in which—

Figure 1 is a perspective or front view; Fig. 2, a side view; Fig. 3, a full front view.

Letter A is the fly-wheel connection; Letter B, the pitman; Letter C, the bolt or bolts; Letter D, the key; Letter E, an iron strap, width of pitman; Letter F, the gibs; Letter G, the arm of the crank; Letter H, the oscillating cross-head; Letter I, the stirrup-journal; Letter J, the strap-seat. Letter M represents the stirrups by which the saw is connected to the cross-head. The stirrup journals I are round, and the strap-seat J is square. The stirrups M are constructed in such a manner as to brace the head of the pitman B, and are secured to the cross-head H by the keys *x*, as shown.

To enable others skilled in the art to make and use my invention, I will further describe its construction and operation.

I construct my power, fly-wheel, pitman, and grooves in any of the known forms. I then attach the iron strap, marked E, to the pitman B by means of an iron bolt or bolts, marked

C, and an iron key, marked D. The iron strap E passes along the pitman B, over and around the strap-seat J, and returns along the pitman on the other side in same manner. Apply the power, and the oscillating cross-head H, with its connection with the pitman B, in the manner above described; the gibs F, passing up and down in the grooves, produce an oscillating or oscillatory motion to the oscillating cross-head H, thereby giving the same motion to the lower end of the saw, or whatever may be attached to the upper side of the oscillating cross-head H. The degree of said motion may be diminished or increased by the length of the arms G. Apply the said iron strap E to the crank cross-head H when it is up, and the same oscillating or oscillatory motion is produced as when the application of the iron strap E is made, when the oscillating cross-head H is down—or, in other words, the oscillating cross-head H may be put onto the pitman, either side up, so as to accommodate the running of the fly-wheel.

This oscillating cross-head, among its uses, is designed to be used in a saw-mill for sawing lumber, producing an oscillating motion to the lower part of the saw or saws.

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

The stirrups M, in combination with the oscillating cross-head H, gibs F F, strap E of the pitman B, and the keys D and *x x*, all constructed and operating substantially as and for the purposes herein shown and described.

SAMUEL W. HARRIS.

Witnesses:

F. A. FULLER,
ALBERT POTTS.