

G. B. HAMMOND & J. A. TUCKER.

Shuttle-Binders for Looms.

No. 138,020.

Patented April 22, 1873.

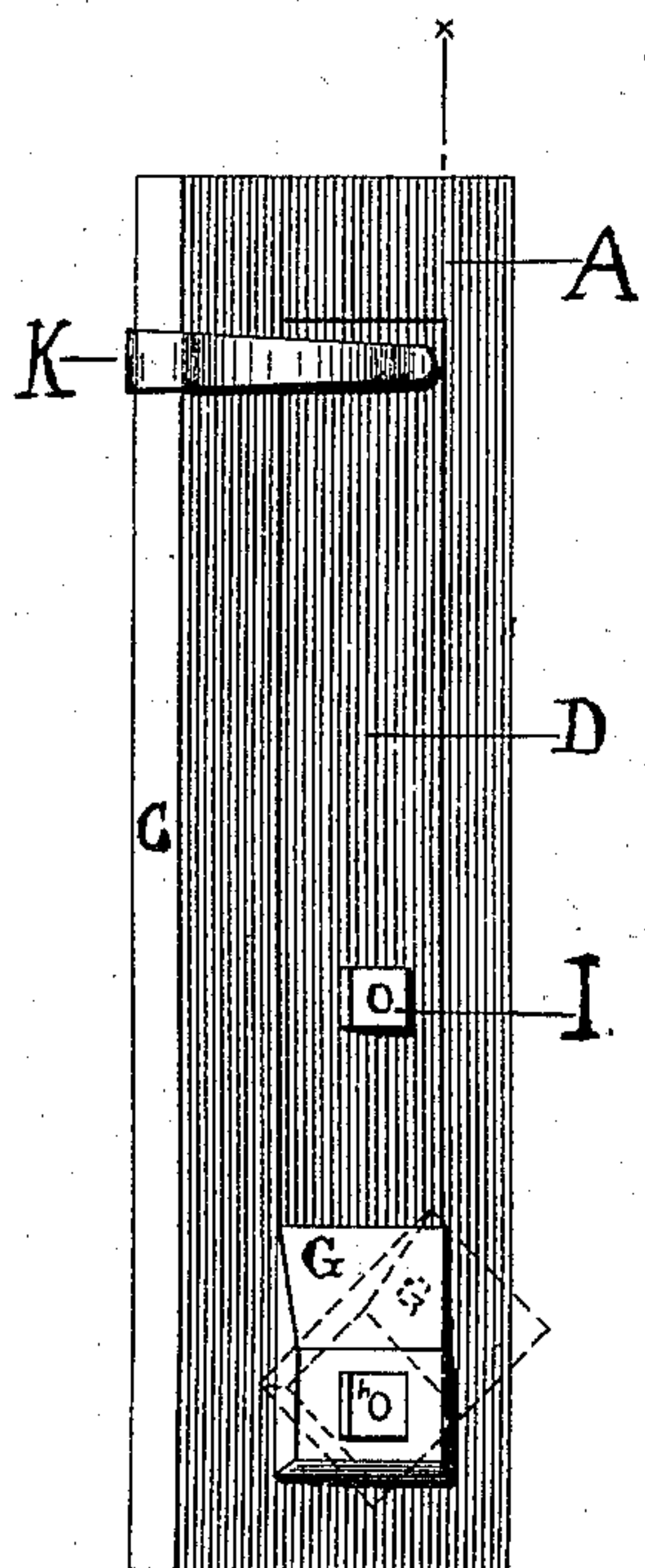


FIG. 1.

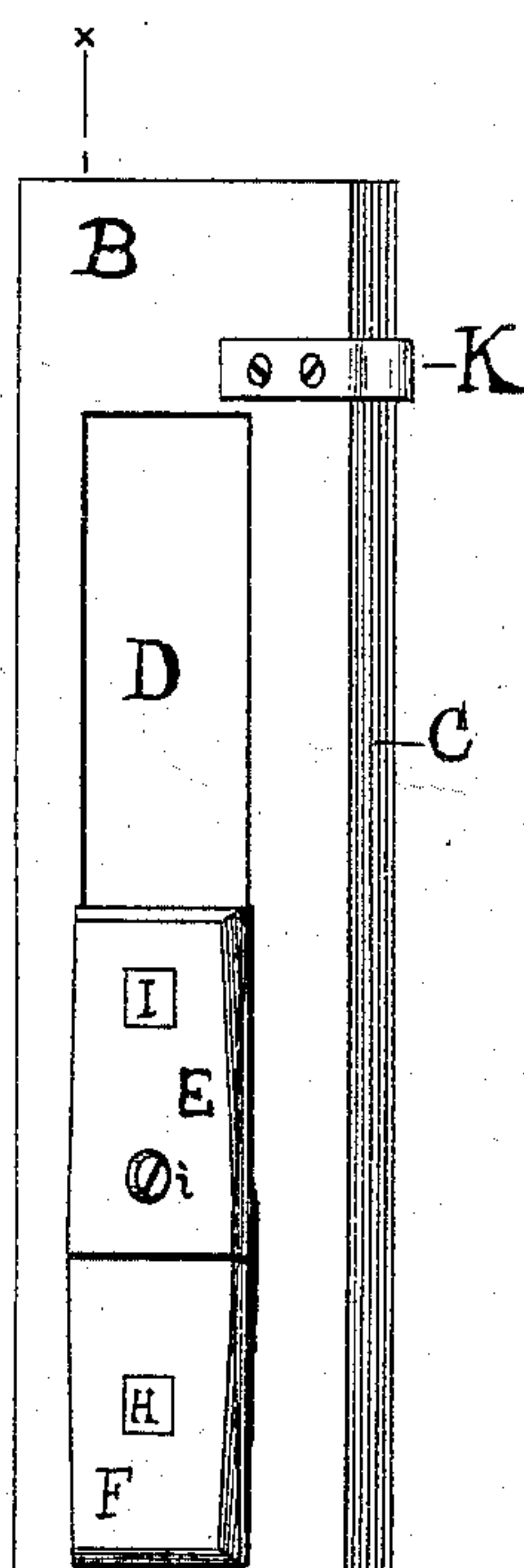


FIG. 2.

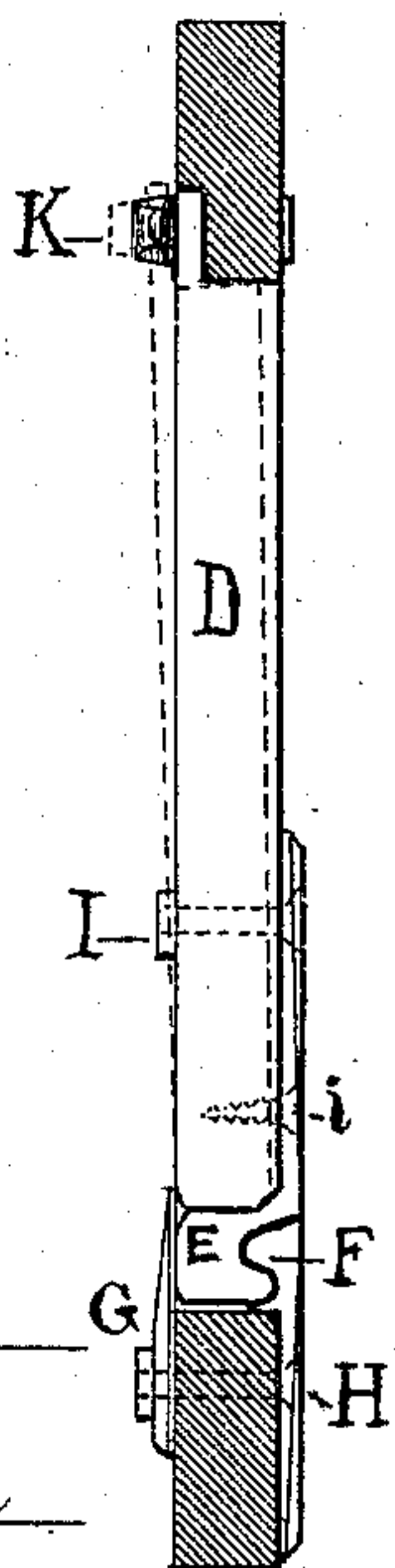


FIG. 3.

WITNESSES.

INVENTORS.

*Chas. C. Sears*  
*John C. Chapman*

*Gardiner B. Hammond*  
*John A. Tucker*

# UNITED STATES PATENT OFFICE.

GARDINER B. HAMMOND, OF PUTNAM, CONNECTICUT, AND JOHN A. TUCKER,  
OF ATTLEBOROUGH, MASSACHUSETTS.

## IMPROVEMENT IN SHUTTLE-BINDERS FOR LOOMS.

Specification forming part of Letters Patent No. 138,020, dated April 22, 1873; application filed  
March 26, 1873.

*To all whom it may concern:*

Be it known that we, GARDINER B. HAMMOND, of Putnam, in the State of Connecticut, and JOHN A. TUCKER, of Attleborough, in the State of Massachusetts, have invented certain Improvements to be attached to and used with Shuttle-Binders for Looms, of which the following is a specification:

The object of our said invention is to provide a knuckle or lock joint for the shuttle-binders of looms, to take the place of the bolt or pin commonly used for the double purpose of, first, fastening an end of said shuttle-binder in the shuttle-box; and, second, of a swivel for the play of said shuttle-binder when in operation.

The accompanying drawing is hereby made a part of this specification, the indicating letters always referring to the same parts when repeated.

Of said drawing, Figure 1 is a view of the outside front and top of a shuttle-box having our said invention attached to it. Fig. 2 is a corresponding view of the inside and top of the front of said shuttle-box, the same having our said improvements attached, as aforesaid. Fig. 3 is a sectional view through the the lines X X of Figs. 1 and 2.

A is the outside front of the shuttle-box. B is the inside front, and C the top, of said shuttle-box. D is the shuttle-binder. E and F are the jointed pieces of metal, which together form the knuckle-joint or lock-joint aforesaid. The piece E is fastened to the shuttle-binder by the bolt I and screw *i*. The piece F is fastened to the front side of the shuttle-box by the bolt H and nut *h*. G is a button, holding the jointed end of the shuttle-binder in place. K is a representation of the finger on the protecting-rod as commonly used.

The pieces E and F are made of iron or other suitable material. They may be in the form substantially as indicated in the drawing, or with such modifications thereof as may be necessary in the application of the princi-

ple of our said invention to the different kinds of looms.

The heads of the bolts H and I and of the screw *i* are sunk into the inside surfaces of said pieces E and F, respectively, so that said inside surfaces shall be smooth and level.

When the shuttle-binder is placed in the shuttle-box the peculiarly-grooved end of the piece E fits into the corresponding grooves of the piece F. The button G is then turned upward until it squarely covers the jointed end of said shuttle-binder; and said button is then securely fastened in place by tightening the nut *h*. The opposite end of said shuttle-binder is held in place by the said finger on the said protecting-rod K.

Said shuttle-binder may be easily and quickly removed, when desired, by loosening the nut *h* and reversing the button G.

By this means the shuttle-binder is firmly held in its place, and the knuckle-joint resulting from the conjunction of the grooved ends of the pieces E and F forms an easy, safe, and durable hinge for the oscillation of said shuttle-binder.

It is intended that such modifications shall and may be made in the external form of the pieces E and F and of the button G as may be necessary in applying our said invention to the different kinds of looms now or hereafter used or made.

### *Claim.*

We claim as our invention and desire to secure by Letters Patent—

A fastening for a shuttle-binder, consisting of the jointed pieces E and F and the button G, constructed and used substantially in the manner and for the purpose set forth.

GARDINER B. HAMMOND.  
JOHN A. TUCKER.

Witnesses:

CHAS. E. SEARLS,  
JOHN C. CHAPMAN.