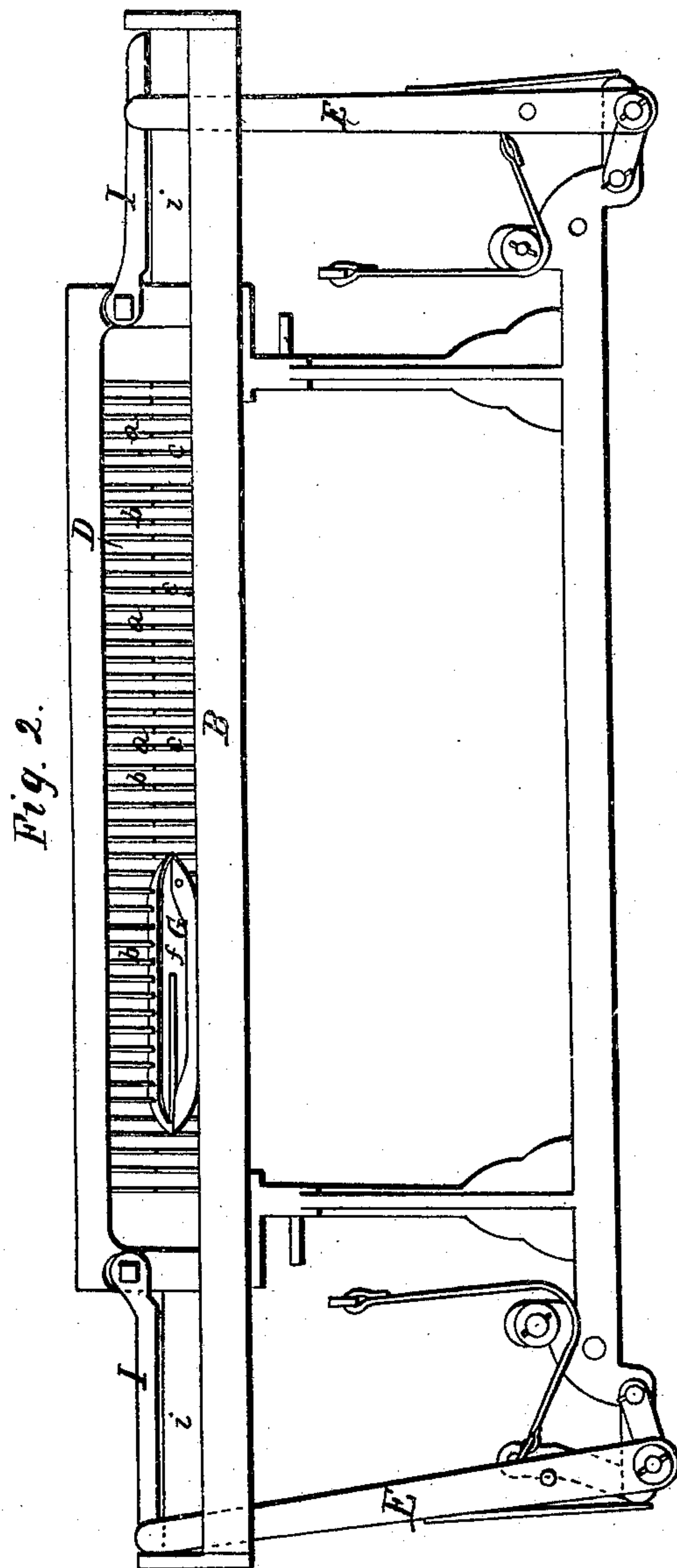
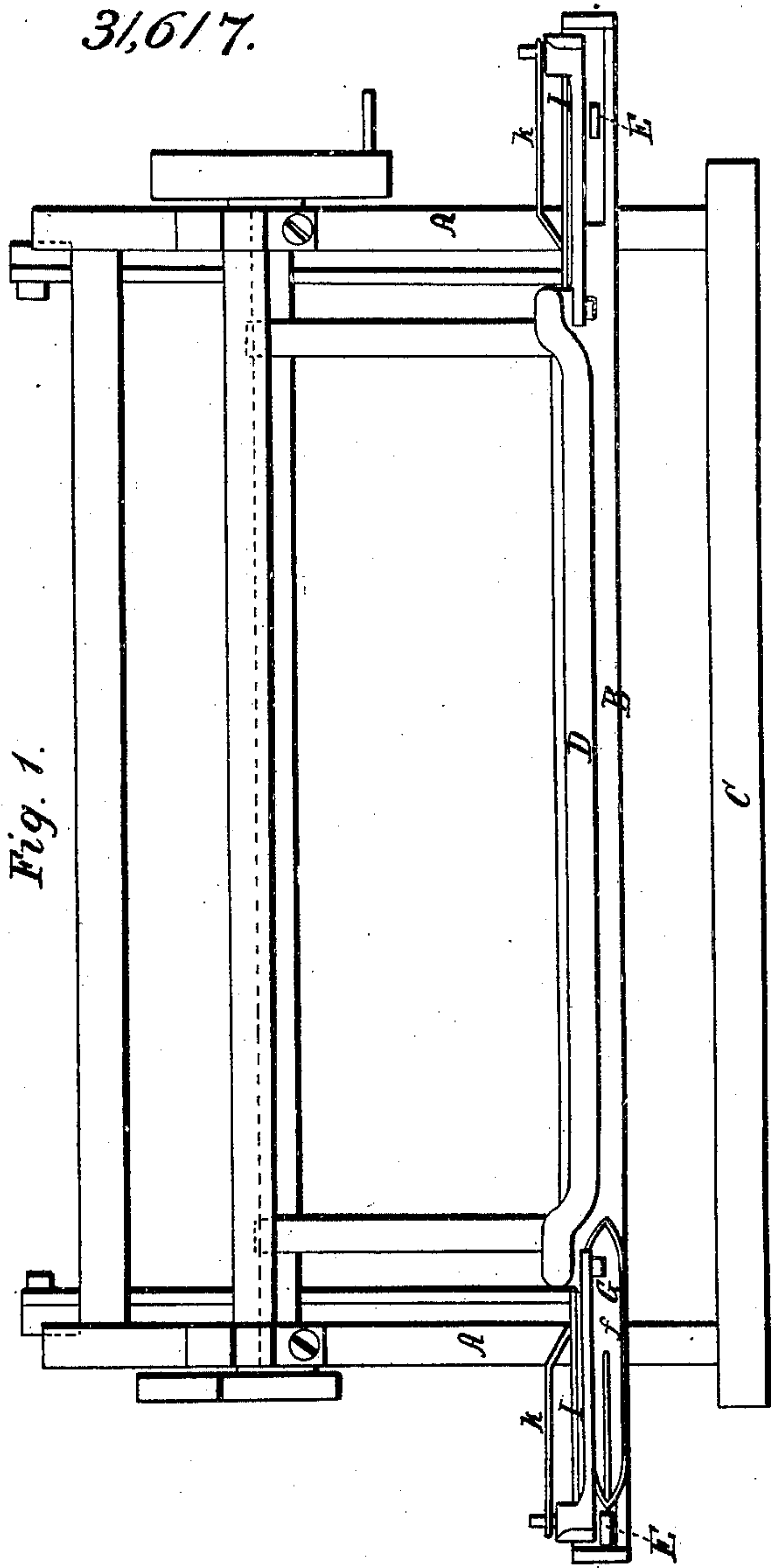


# F. Peabody. Shuttle Motion.

Sheet 1-2 Sheets.

N<sup>o</sup> 613.  
31,617.

Patented Mar. 5, 1861.



Witnesses.

Thos. Curtis  
A. C. Hale Jr

Inventor.

F. Peabody

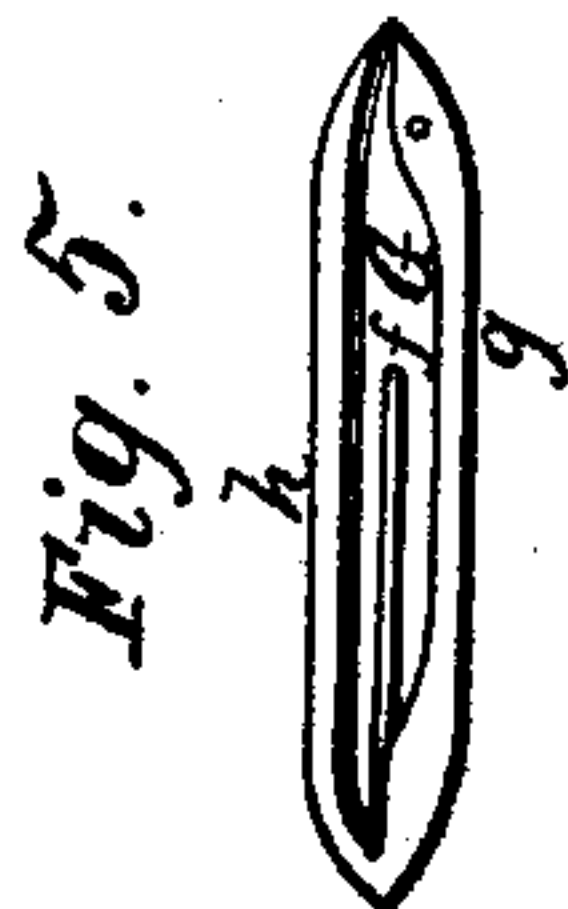
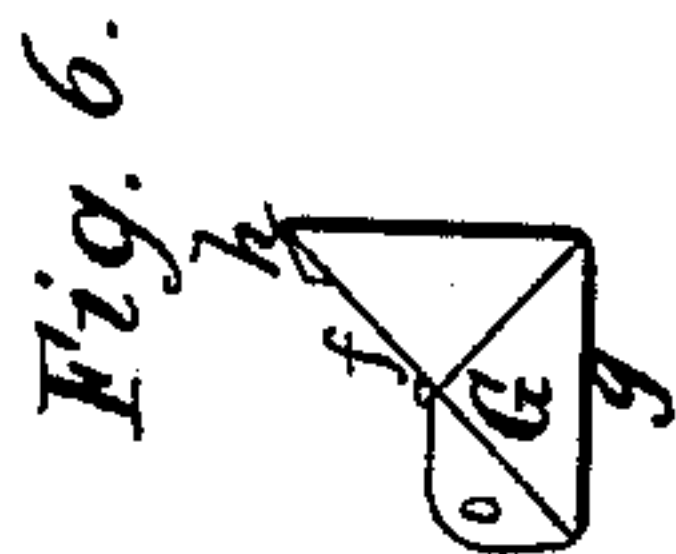
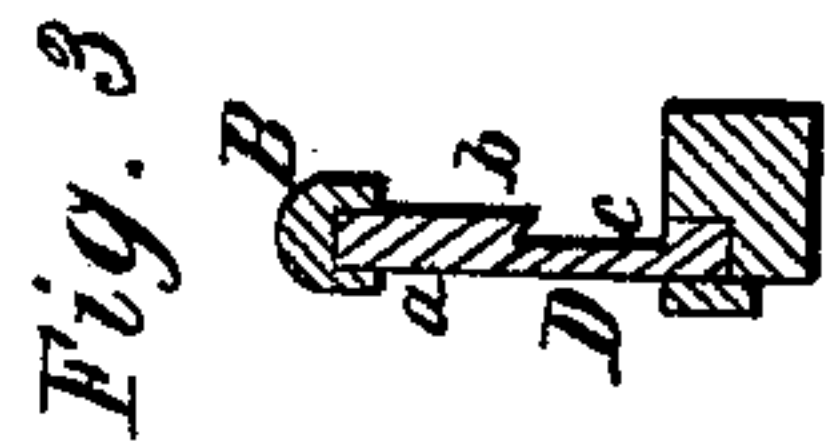
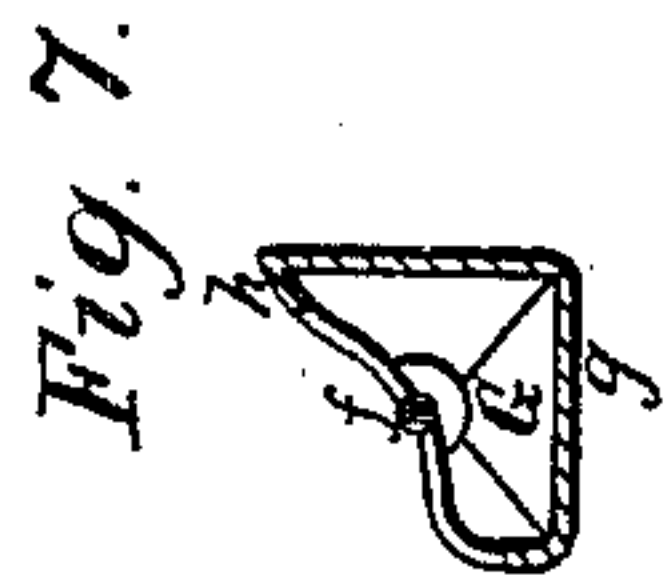
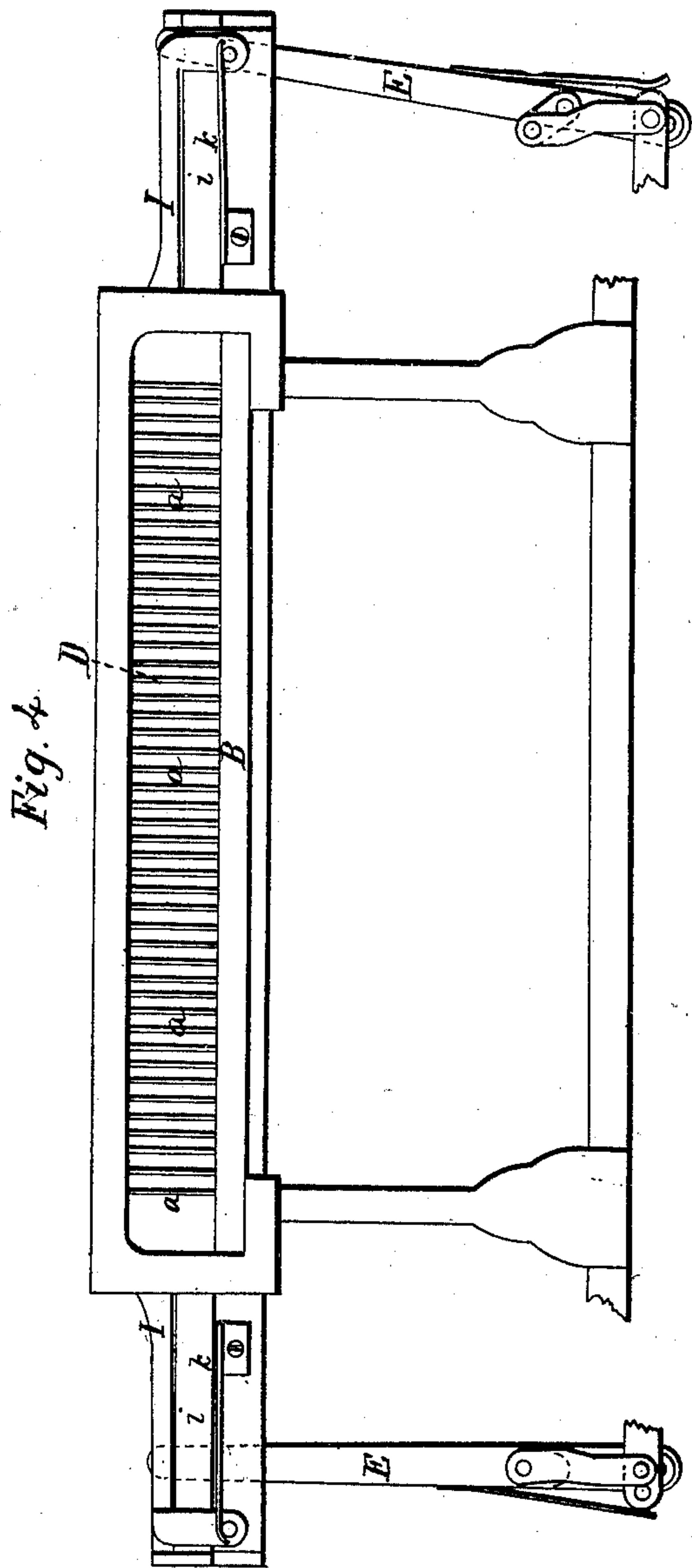
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## Shuttle Motion.

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H. A. Hale Jr

Inventor.

F. Peabody



# UNITED STATES PATENT OFFICE.

FRANCIS PEABODY, OF SALEM, MASSACHUSETTS.

## LOOM.

Specification of Letters Patent No. 31,617, dated March 5, 1861.

*To all whom it may concern:*

Be it known that I, FRANCIS PEABODY, of Salem, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Looms for Weaving Fabrics; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1, exhibits a top view of a loom frame, its lay and reed provided with my invention. Fig. 2, is a front elevation of the lay, the reed and the shuttle. Fig. 3, is a transverse section of the lay and reed. Fig. 4, is a rear elevation of the lay. Fig. 5, is a front elevation, Fig. 6, an end view, and Fig. 7, a transverse section of the shuttle.

The nature of my invention consists, first, in the application, to the reed and race beam of a loom, of a series of projections extending from the reed and over the race beam in such manner as not only to operate, while the shuttle is being driven longitudinally across the race beam, in maintaining the said shuttle in its proper path relatively to the race beam or the reed or both, but to allow the warps to extend and work between them (the said projections) substantially as hereinafter specified; second, in an improved arrangement of each spring stopper, of the race beam, relatively to the upper surface of the said race beam; third, in an improved mode of constructing the shuttle, viz., with its mouth inclined relatively to the base and provided with a retaining lip (or its equivalent,) arranged at its upper edge substantially as and for the purpose as hereinafter specified.

The material advantages resulting from my invention are, first, preservation of the shuttle in its proper path, while such shuttle may be crossing the race beam or be passing through the shed of the warps; second, prevention of wear and injury of the warps by the shuttle; third, ability to use a larger shuttle and bobbin than are usually employed when the fronts of the shuttle boxes are closed; fourth, less amount of stoppage of the loom and particularly in order to supply the shuttle with yarn; fifth, the shuttle boxes are open in front and thereby afford an advantage whether in applying a shuttle to or in removing it from the race beam or either of its shuttle boxes.

In the drawings, A, exhibits the frame of a loom, while B, denotes the lay; C, the

breast beam; D, the reed, and E E, the picker staves thereof, the machinery for operating such part B, D, E, E, being such as is generally made use of in looms.

The dents of the reed are shown at *a a a*, &c., each being furnished or provided with a projection *b*, whose lower edge, as shown in Fig. 3, is arranged over the race beam at an acute angle with the front bearing edge, *c*, of the dent. The said lower edge may stand at a right angle with such front bearing edge, but under such circumstance it would only operate to prevent the shuttle from rising upward during its passage across the race beam. By making the projection to incline downward or in form like a hook the shuttle will not only be prevented from so rising upward but will be kept close to the reed, or from being diverted laterally in a horizontal direction or thereabout out of its proper path. The said projections should be so arranged as to extend over or alongside of the path of the shuttle in such manner as to prevent the shuttle, during a throw of it over the race beam, from deviating from its proper course. And furthermore, the several projections should be so arranged that there may be a space between each two of them, in order that the two warp threads, which are to be crossed in the filling, may extend and work between them, as well as between the dents of the reed. In carrying out my invention I prefer to have the projections (or equivalents therefor,) extend directly from the dents but, it will be evident that instead thereof, they may be separate therefrom and be projected from the reed frame. When the said projections *b, b, b* are extended from the dents, as shown in the drawings, the shuttle G, may be constructed of thin sheet metal and with its mouth *f* inclined to the base or bottom part *g*; the upper part of the shuttle being of an angular form or made with an inclined lip *h*, or its equivalent, to work under the projections, *b, b, b*, and enable them to retain the shuttle in its proper path during the flight of such shuttle across the race beam. The front of each shuttle recess or box, *i, i*, of the lay, I construct open, as represented in Figs. 1, and 2, and I apply to each box and so as to extend over the race beam as shown in such drawings, a brake or stopper I, it being made to play or work vertically or in the plane of the lay, and to be pressed downward by a spring *k*, suit-



ably applied to it. The arrangement of such part I, should be such that the shuttle, while passing into the shuttle box, shall course underneath and against the said stopper and by such be more or less arrested in velocity; the shuttle, by the stopper, being pressed downward toward and upon the upper surface of the lay. When a spring stopper is so arranged in an opening at the back of a shuttle box, that its bearing face may stand at, or about at, a right angle with the top of the race beam the shuttle, while in the box, will be crowded forward; the same requiring the shuttle box to be closed more or less on its front in order that the shuttle may not only be kept in its box but the stopper operate with proper effect. It will readily be seen that such closing of the front of the shuttle box is an impediment to the easy application of a shuttle to as well as its removal from the box. With the shuttle box open on the front not only can a wider shuttle be used than is the case with a shuttle box closed in front, but a shuttle having an inclined mouth, as above described, can be employed, the same admitting a larger bobbin and an easier application of it to the shuttle, as well as a readier removal of it therefrom than results with a shuttle and box as ordinarily constructed.

Having thus described my invention what I claim is as follows:

1. In combination with the reed and the race beam of a loom, a series of projections extending from the reed and over the race beam in such manner as not only to operate, while the shuttle is being driven longitudinally across the race beam, in maintaining the said shuttle in its proper path relatively to the race beam or the reed or both, but to allow the warps to extend and work between the said projections substantially as specified.

2. The improved arrangement of each spring stopper of the race beam, relatively to the upper surface of the said race beam in manner and so as to press the shuttle down upon the said surface substantially as described.

3. My improved mode of constructing the shuttle, viz., with its mouth inclined relatively to the base and provided with a retaining lip (or its equivalent,) arranged at its upper edge substantially as and for the purpose specified.

FRANCIS PEABODY. [L. s.]

Witnesses:

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JOS. CLOUTMAN.