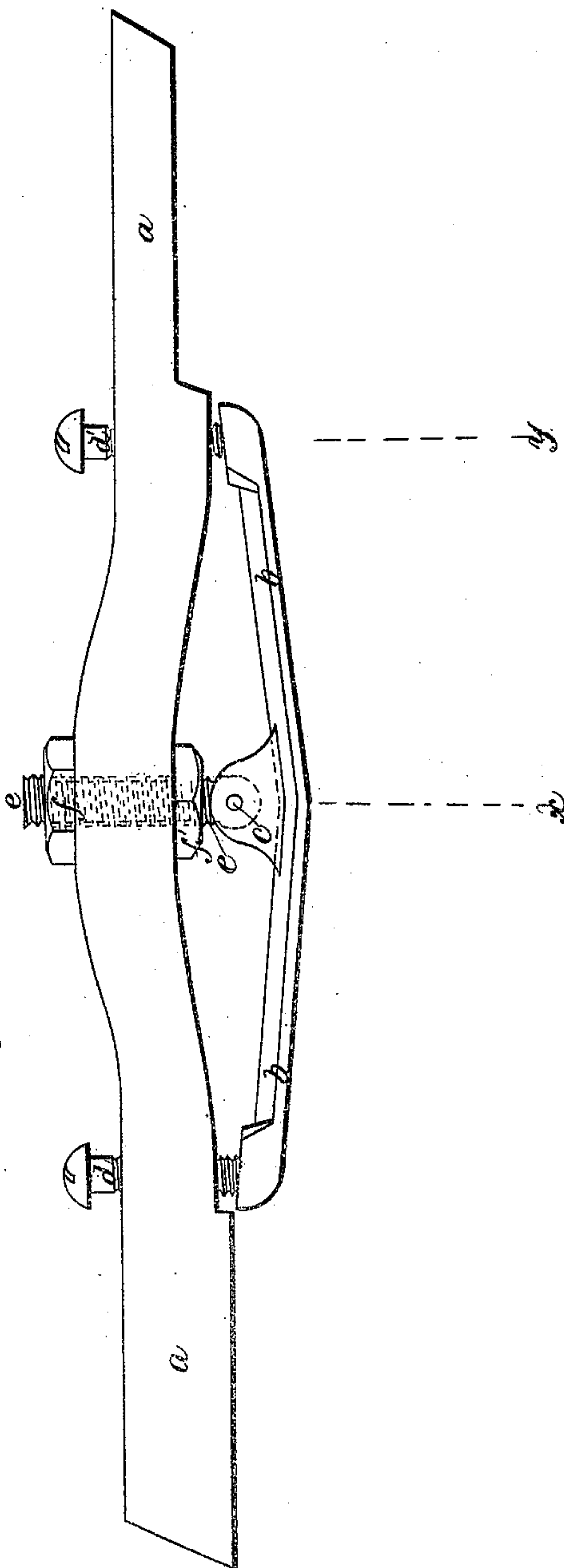


Poland & Cotton.
Shuttle Check.

Nº 61,357.

Patented Jan. 22, 1867.



Witnesses
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M. W. Frothingham.

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By their Attys -
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United States Patent Office.

JOHN C. POLAND, JR., OF AUBURN, AND BENJAMIN R. COTTON, OF
LEWISTON, MAINE.

Letters Patent No. 61,357, dated January 22, 1867.

IMPROVEMENT IN SHUTTLE-BINDER FOR 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 we, JOHN C. POLAND, Jr., of Auburn, and BENJAMIN R. COTTON, of Lewiston, all in Androscoggin county, State of Maine, have invented jointly certain new and useful Improvements in Shuttle-Binders; and we do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of our invention sufficient to enable those skilled in the art to practise it.

Our invention relates to the detail of the construction and arrangement of that part of a loom by which, at the end of the shuttle-race and in the shuttle-box, the shuttle is arrested in its flight, said part being known as a shuttle-binder, and being already constructed in various forms. Our invention consists in making the shuttle-binder in the form of a lever pivoted or fulcrumed between its ends, when these are provided with adjustable set-screws; and it further consists in attaching the pivot or fulcrum of such a lever shuttle-binder to a support made adjustable by having the threads of a screw formed thereupon.

The drawing shows the embodiment of our invention in plan, *a* representing a portion of one side of the shuttle-box with which our binder is connected. The binder itself is marked *b*, and is a lever (preferably of metal) pivoted at *c*, so as to vibrate thereon to any extent permitted by the adjustment of the set-screws *d d'*. The fulcrum *c* is attached to a support, *e*, made adjustable by having screw-threads cut thereon, so that the support *e* may be screwed directly into the side *a* of the shuttle-box, or, as we prefer, and as shown in the drawings, may pass directly through said side, and may then be adjusted with reference thereunto by turning the nuts *f f'*. The ends of shuttles vary somewhat in size or diameter, and also in the taper of their ends, so that it is highly desirable to have binders designed to operate upon said ends arranged to suit the various conditions of diameter and taper of such shuttles as are likely to be used in any given loom, especially as the sizes and taper of shuttle ends vary from the effects of wear. To adjust the inclination of the operative face of our improved shuttle-binder to suit the taper of any given shuttle, the screws *f f'* are manipulated in a way which is sufficiently obvious and to any reasonable extent. The binder-piece *b* is made of such a form as to have the inclination of its operative face correspond to the average taper of the ends of the shuttles to be used there-with. Suppose this operative face to extend between the dotted lines *x* and *y*, and the shuttle employed to have its end somewhat more obtuse than usual; then, by retracting screw *d'* and projecting screw *d*, the angle of the operative face of the binder will be changed with reference to the line of the shuttle's flight. If the ends of the shuttle are a little more acute than usual, then the angle of the operative face of the binder is adjusted by retracting screw *d* and projecting screw *d'*. In any adjustment of the binder, care must be taken to cause one of said screws to force the opposite end of the binder against the other of said screws, so that the binder shall be rigidly held without chance for vibrations or play. To adapt the binder to shuttles of various sizes of diameter or cross-sections, the whole of the binder is retracted from or projected toward the opposite side of the shuttle-box, this being accomplished by turning the whole binder and its supporting-screw, *e*, or by adjusting on the screw *e* the nuts *f f'*, the screws *d d'* being adjusted by manipulation to accord with the changed position of the binder. Though but one end of the binder-lever *b* is directly operative upon the shuttle end, we prefer to make both ends of the lever symmetrical, so that it may be changed end for end, both for convenience and to afford a double wearing surface.

We claim a shuttle-binder made as a lever, pivoted at or near its centre, when arranged with adjusting screws *d d'*, by which the angle of the binder can be changed and the binder can be fixed in position, substantially as described.

Also, in the arrangement claimed above, mounting the pivot of the binder on a screw, by which the distance of the whole binder is adjusted with reference to the opposite side of the shuttle-box.

JOHN C. POLAND, JR.,
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Witnesses:

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