

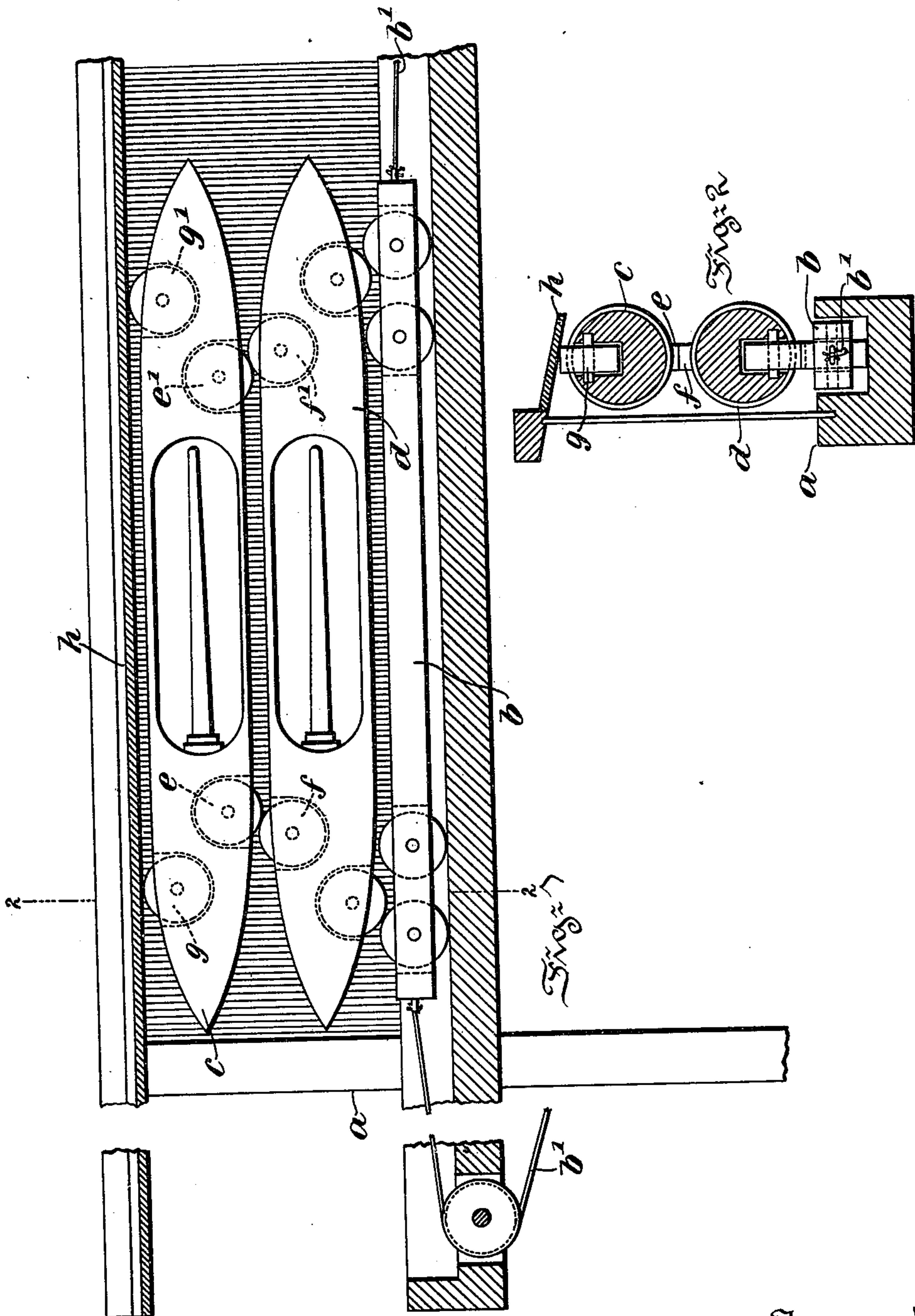
No. 659,405.

Patented Oct. 9, 1900.

R. B. LOYND.
SHUTTLE MOTION FOR LOOMS.

(Application filed Feb. 25, 1897. Renewed Mar. 8, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

RICHARD B. LOYND, OF PHILADELPHIA, PENNSYLVANIA.

SHUTTLE-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 659,405, dated October 9, 1900.

Application filed February 25, 1897. Renewed March 8, 1900. Serial No. 7,929. (No model.)

To all whom it may concern:

Be it known that I, RICHARD B. LOYND, a citizen of the United States, residing at the city of Philadelphia in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Shuttle-Motion, of which the following is a specification.

The object of my invention is to provide simple, durable, and efficient means for operating two or more shuttles simultaneously, as is often desirable, for example, in weaving two fabrics at the same time which are subsequently apart.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a front view of a portion of the lathe, showing two shuttles locked together by rollers between which one division of the warp passes and whereof one shuttle has roller connection with a positively-driven carriage and whereof the other shuttle has roller connection with the top of the lathe; and Fig. 2 is a transverse sectional view taken on the line 2 2 of Fig. 1.

In the drawings, *a* is the lathe, provided with a carriage *b*, that is reciprocated back and forth positively, for example, by means of a cord *b'*. The shuttles, of which two are shown, although my invention contemplates the use of more than two, are designated *c* and *d*. The shuttles *c* and *d* are locked together by rollers, between which a division of the warp passes. *ee'* and *ff'* are the roll-

ers. The axes of the rollers *ff'* are farther apart than the axes of the rollers *ee'*, so that the shuttle *c* is locked to the shuttle *d* by the roller connection, and thus both shuttles must move together, although a division of the warp runs between the rollers *ee'* and *ff'*. The top shuttle is provided with rollers *g g'*, that run on a track *h* on the top of the lathe, which track may be inclined so as to conform to the direction of the warp and also retain the top shuttle in place. The top division of the warp runs between the track *h* and the rollers *g g'*.

It will be obvious to those skilled in the art to which my invention appertains that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction and arrangement of parts hereinabove set forth and illustrated in the accompanying drawings; but,

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination with superposed shuttles, of rollers carried by said shuttles and contacting with each other to connect the shuttles and permit of the passage of warp between them, substantially as described.

In testimony whereof I have hereunto signed my name.

RICHARD B. LOYND.

In presence of—

W. J. JACKSON,
K. M. GILLIGAN.