

L. DAME.

Devices for converting Circular into Reciprocating Motion.

No. 135,697

Patented Feb. 11, 1873.

Fig. 1.

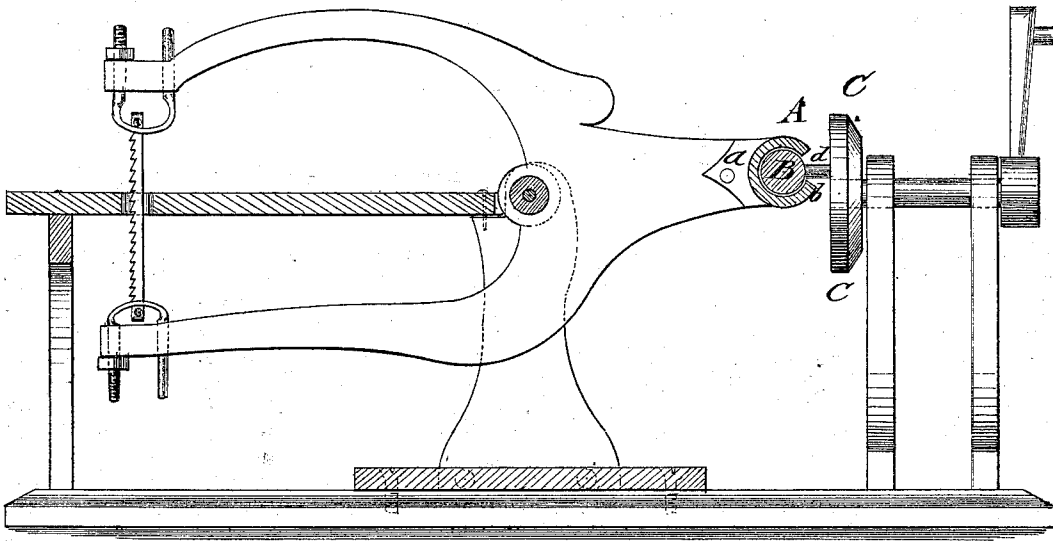


Fig. 2.

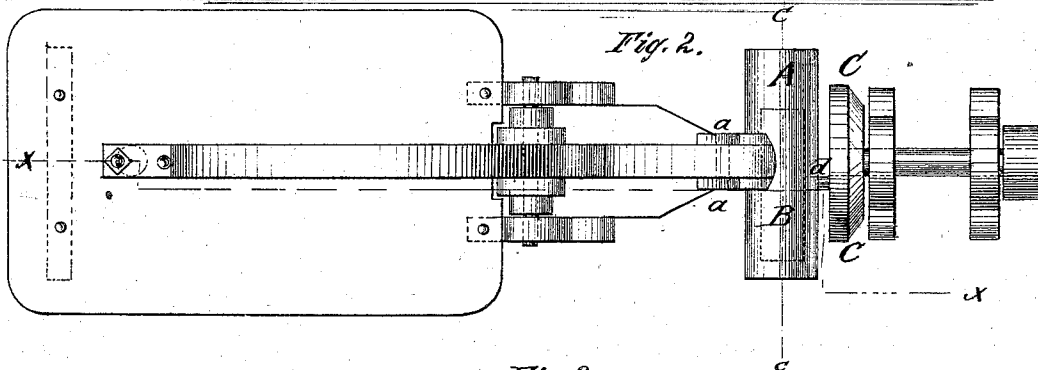
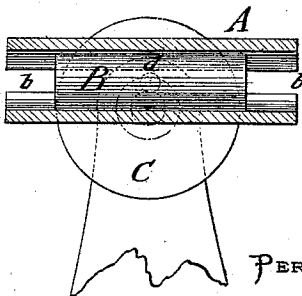


Fig. 3.



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UNITED STATES PATENT OFFICE.

LUTHER DAME, OF NEWBURYPORT, MASSACHUSETTS.

IMPROVEMENT IN DEVICES FOR CONVERTING CIRCULAR INTO RECIPROCATING MOTION.

Specification forming part of Letters Patent No. 135,697, dated February 11, 1873.

To all whom it may concern:

Be it known that I, LUTHER DAME, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and Improved Device for Converting Circular into Reciprocating Motion, of which the following is a specification:

Figure 1 is a vertical section of my invention on the line *xx*, Fig. 2. Fig. 2 is a plan view of the same; and Fig. 3 is a vertical transverse section of the cylinder on the line *cc*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of my invention is to convert circular motion into reciprocating by means of a simple device which works without jar or noise, being at the same time cheap, accurate, and easy in its motion, and producing only a very slight degree of friction. My invention consists of a hollow cylinder with a longitudinal slot, into which a cylindrical core is closely fitted, gliding therein by means of a bolt connected with the core and running in the slot, applied eccentrically to a face-plate or shaft turned by a crank or other suitable arrangement.

In the drawing, A represents a hollow cylinder of suitable metal, connected by wings *a*, cast or otherwise attached to it, with a fret-saw, sewing-machine, or other apparatus re-

quiring reciprocating motion. A longitudinal slot, *b*, of the cylinder, guides the bolt-nipple *d*, which is applied in suitable manner to the solid cylindrical core B, preferably made of wood, to decrease the friction of the same in the cylinder. Core B fits closely into the cylinder A and is carried noiselessly back and forth therein. The bolt-nipple *d* is connected eccentrically to a face-plate or crank C in such manner that it can be adjusted to such a degree of eccentricity as to correspond to the length of stroke desired. The circular motion is transmitted to the shaft of the face-plate or crank C by any convenient power.

It is obvious that by this simple contrivance circular motion is converted into reciprocating in an easy way, by which the different parts are not liable to get out of order, and may last a long time without being replaced.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The conversion of circular into reciprocating motion by means of adjustable eccentric C, connecting bolt-nipple *d*, core B, longitudinal slot *b*, and hollow cylinder A, substantially as and for the purpose described.

LUTHER DAME.

Witnesses:

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