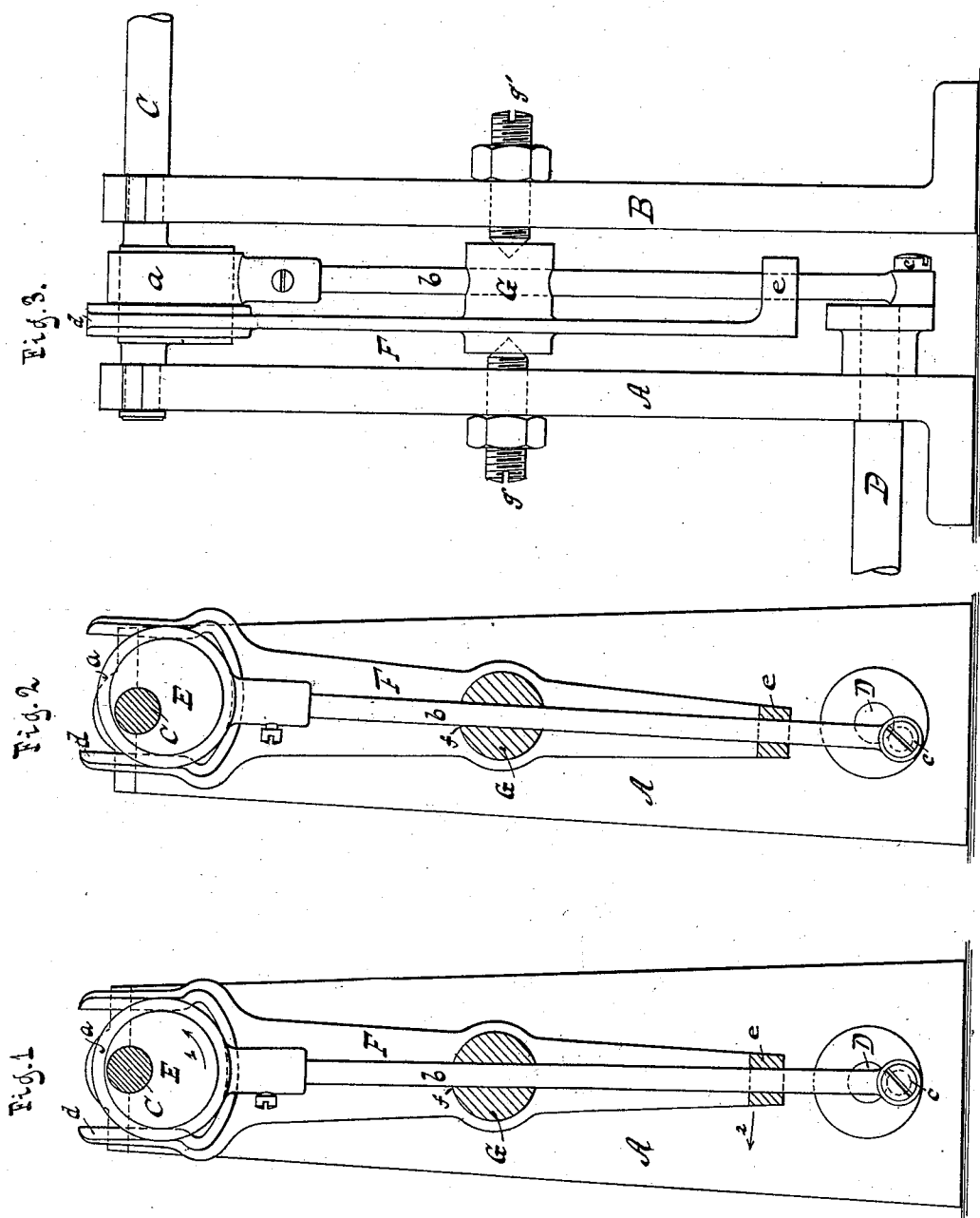


(No Model.)

L. CHEVALLIER.
MECHANICAL MOVEMENT.

No. 323,789.

Patented Aug. 4, 1885.



Witnesses
Otto Hufeland
William Miller

Inventor
Louis Chevallier
by Vase Santorod & Knapp
his att'ys.

UNITED STATES PATENT OFFICE.

LOUIS CHEVALLIER, OF BROOKLYN, NEW YORK.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 323,789, dated August 4, 1885.

Application filed December 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, LOUIS CHEVALLIER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Mechanical Movements, of which the following is a specification.

This invention relates to mechanical movements for transmitting continuous rotary motion from one shaft to another; and it consists in the combination of two shafts, one being the driving-shaft and the other the driven shaft, an eccentric mounted on the driving-shaft, an eccentric wrist-pin secured to the driven shaft, a pitman connecting the eccentric of the driving-shaft with the wrist-pin of the driven shaft, a lever which acts upon the pitman, and an eccentric or cam mounted on the driving-shaft and imparting to the lever a vibrating motion; also, in the combination of two shafts, one being the driving-shaft and the other the driven shaft, an eccentric mounted on the driving-shaft, an eccentric wrist-pin secured to the driven shaft, a pitman connecting the eccentric of the driving-shaft with the wrist-pin of the driven shaft, a rock-shaft intermediate between the driving-shaft and the driven shaft, and an opening in the rock-shaft for the passage of the pitman; and, also, in the combination of two shafts, one being the driving-shaft and the other the driven shaft, an eccentric mounted on the driving-shaft, an eccentric wrist-pin secured to the driven shaft, a pitman connecting the eccentric of the driving-shaft with the wrist-pin of the driven shaft, a rock-shaft intermediate between the driving-shaft and the driven shaft, and provided with an opening for the passage of the pitman, a forked lever extending from the rock-shaft, and an eccentric mounted on the driving-shaft and acting on the forked lever.

This invention is illustrated in the accompanying drawings, in which Figure 1 is a side elevation, partly in section, showing the position of the parts when the wrist-pin is on the lower dead-center. Fig. 2 is a side elevation, partly in section, showing the same when the wrist-pin is in an advanced position. Fig. 3 is a front elevation.

Similar letters indicate corresponding parts.

In the drawings, the letters A and B designate the two uprights forming a frame for the

parts. C is the driving-shaft, and D is the driven shaft, both provided with suitable bearings in the uprights A B. On the driving-shaft C is the eccentric E, which may be keyed thereon in the usual manner, or it may be formed integral therewith. The eccentric E is provided with a suitable eccentric-strap, *a*, and is connected by means of the pitman *b* to the eccentric wrist-pin *c*, formed integral with or secured to the driven shaft D.

On the driving-shaft may be mounted another eccentric or cam; or the eccentric E may, as shown in the drawings, be made of sufficient breadth to answer the purpose of both.

F is a lever, formed on its upper end with a fork, *d*, which is engaged by the eccentric E, and on its lower end with a fork, *e*, which engages the pitman *b*.

G is a rock-shaft, to which is secured or may be formed integral therewith the lever F. The rock-shaft is provided with a transverse hole, *f*, for the passage of the pitman *b*, allowing a longitudinal motion of the same, and has its bearings in center points formed on the ends of screws *g g'*, secured in the frame; or other suitable means may be employed.

It is evident that if the eccentric E were directly connected with the eccentric wrist-pin *c* motion of the shafts would be arrested at each of the two dead-centers, making a transmission of rotary motion impossible. The object of this invention is to overcome this difficulty, which is accomplished by the combination of the aforesaid parts.

By the motion of the eccentric E a vibrating motion is imparted to the lever F, and if the parts are in the position shown in Fig. 1, and the driving-shaft C be slightly moved in the direction of arrow 1, the lever F will swing in the direction of arrow 2, and thereby the wrist-pin *c* is moved over the dead-center to the position shown in Fig. 2, and the motion of the shafts C D can be continued. If the pitman fits the hole *f* in the rock-shaft G, the rocking motion of this shaft G will move the eccentric wrist-pin *c* over the dead-centers, and said rocking motion can be produced by the action of the eccentric E on the lever F, or by any other suitable means.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, substantially as herein-

before described, of two shafts, one being the driving-shaft and the other the driven shaft, an eccentric mounted on the driving-shaft, an eccentric wrist-pin secured to the driven shaft, 5 a pitman connecting the eccentric of the driving-shaft with the wrist-pin of the driven shaft, an eccentric or cam on the driving-shaft, and a lever vibrated by the eccentric or cam and loosely connected with the pitman intermediate the eccentric on the driving-shaft and the 10 wrist-pin on the driven shaft.

2. The combination, substantially as hereinbefore described, of two shafts, one being the driving-shaft and the other the driven shaft, 15 an eccentric mounted on the driving shaft, an eccentric wrist-pin secured to the driven shaft, a pitman connecting the eccentric of the driving-shaft with the wrist-pin of the driven shaft, and a rock-shaft supported between the driving and the driven shaft, and having a transverse opening, through which the pitman freely reciprocates. 20

3. The combination, substantially as hereinbefore described, of two shafts, one being the driving-shaft and the other the driven shaft, 25 an eccentric mounted on the driving-shaft, an eccentric wrist-pin secured to the driven shaft, a pitman connecting the eccentric of the driving-shaft with the wrist-pin of the driven shaft, a rock-shaft between the driving-shaft and the 30 driven shaft, and provided with a transverse opening, through which the pitman freely reciprocates, a forked lever extending from the rock-shaft, and an eccentric mounted on the driving-shaft and acting on the forked lever. 35

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

LOUIS CHEVALLIER. [L. S.]

Witnesses:

W. HAUFF,

A. FABER DU FAUR, Jr.