(No Model.) 2 Sheets—Sheet 1.

J. L. BOGERT.

DEVICE FOR RECIPROCATING THE CUTTER HEADS OF PLANING AND SLOTTING MACHINES.

No. 278,084. Patented May 22, 1883.

Fig. 1.

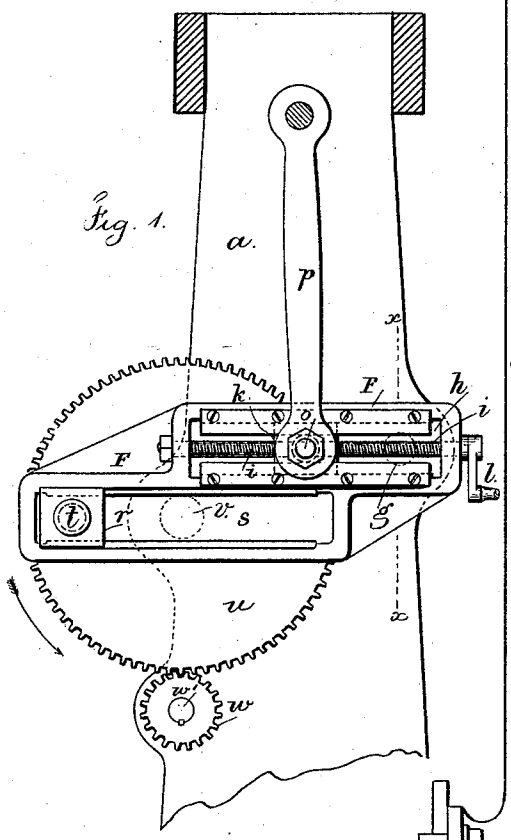


Fig. 2.

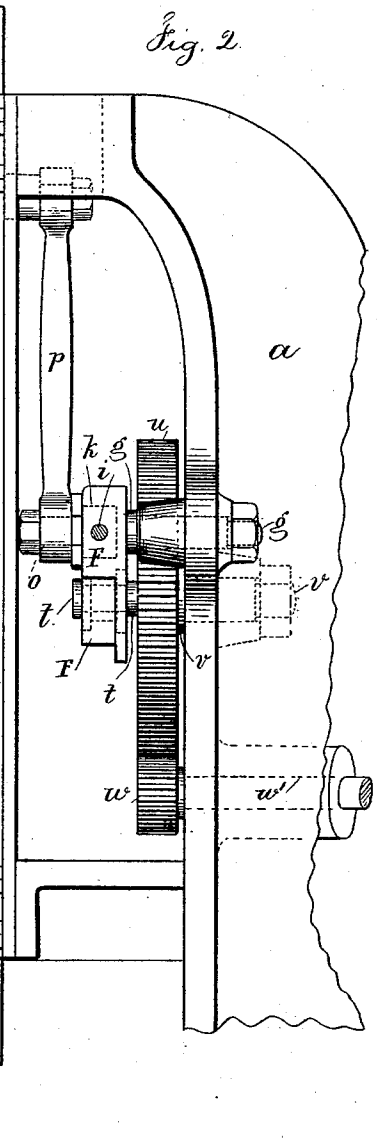
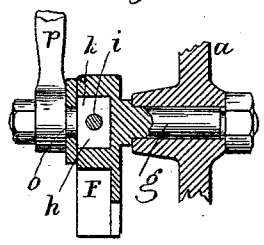


Fig. 3.



b

Witnesses

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J. Stair

Inventor

John. L. Bogert

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N. PETERS. Photo-Lithographer, Washington, D. C.

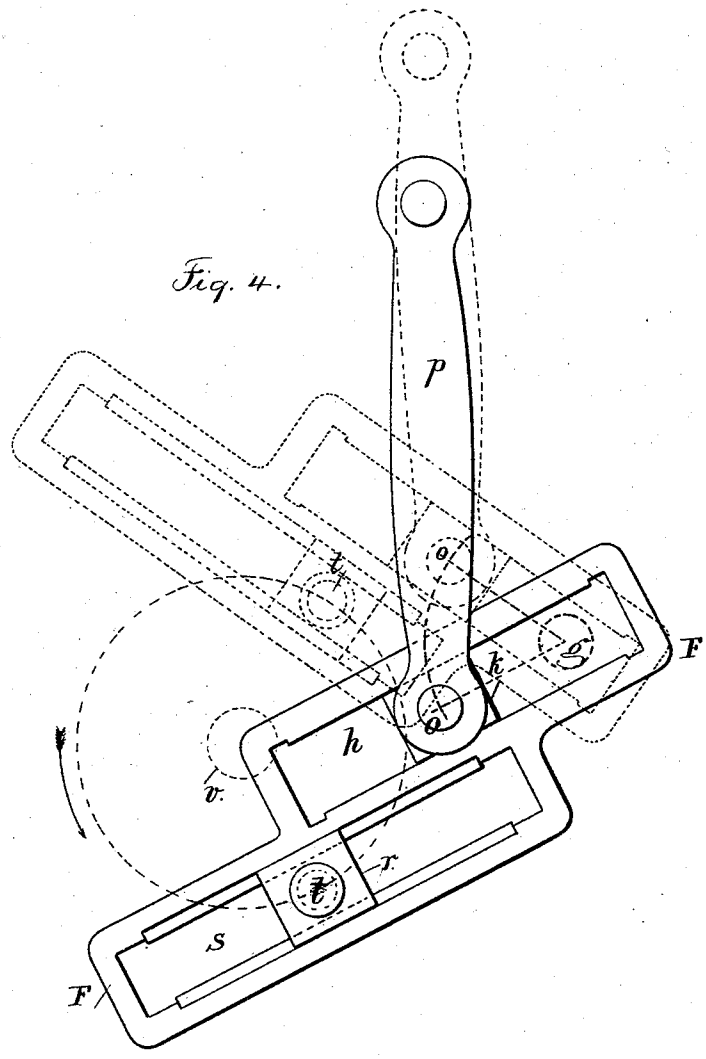
(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN L. BOGERT, OF FLUSHING, NEW YORK.

DEVICE FOR RECIPROCATING THE CUTTER-HEADS OF PLANING AND SLOTTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 278,084, dated May 22, 1883.

Application filed February 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. BOGERT, of Flushing, in the county of Queens and State of New York, have invented an Improved Mechanical Movement for Actuating Cutter-Heads in Slotting-Machines, &c., of which the following is a specification.

The object of this invention is to give a fast movement in one direction and a slow movement in the other direction, and to vary the length of the stroke or movement at will without having to stop the machine. This movement is especially adapted to slotting and metal-planing machines, wherein the work is done by the movement in one direction, which requires to be steady and comparatively slow, and the return movement may be rapid, because the tool or cutter is not in action, and, furthermore, the length of cut can be varied without stopping the machine, thus effecting a great saving of time and enabling the workmen to do better work.

In the drawings, Figure 1 is a sectional elevation, and Fig. 2 is a side view, of the mechanical movement as applied to a metal-slotting machine. Fig. 3 is a section at the line *x x*. Fig. 4 is a diagram illustrating the movement given to the slotted lever.

The frame *a*, bed *b* for the article to be slotted or planed, the sliding stock *c*, tool-holder *d*, and tool *e* are to be of any desired character, and the slotting or planing tool may operate vertically or horizontally, these two forms of machines being well known.

My improvement relates to the means made use of to give the fast and slow movements aforesaid to the tool.

The double-slotted lever F is provided with a pivot shaft or stud, *g*, that passes into the frame of the machine or into a bearing or journal-box, and on which shaft as a pivot the slotted lever rocks. The slot passes across the end of the stud *g*, such slotted portion *h* of the lever F being made with or permanently connected to the pivot-shaft *g*. The block *k* is adapted to slide in the slot *h*, and it is moved back and forth by the screw *i* and handle *l*, the screw being held by bearings near its ends, so that it cannot move endwise; but the screw is free to be rotated by its handle. Although the slotted lever F swings upon its pivot-shaft *g*, the handle *l* can be easily operated while the parts are in motion, because said handle is near to the pivot-shaft and receives but little swinging movement. Upon the block *k* there is a stud or hinge connection, *o*, for the link *p*, that at its other end is connected to the tool stock or slide *c*. The lever F has a second slot, *s*, that preferably is parallel with the slot *h*; but it may be oblique to the same, and in this the block *r* slides by the action of the crank-pin *t*, the slot *s* being of sufficient length to allow the crank-pin to move the block *r* back and forth in the slot as the crank revolves and swings in the lever.

It will be seen by the diagram Fig. 4 that the relative positions of the crank-shaft and its crank to the pivot *g* are such that the crank *t* moves about two-thirds of its revolution while the lever F is swinging in one direction, and that the crank-pin *t* gives the return motion in the other direction in about one-third of its revolution.

The connecting-rod and parts are arranged so that the slow motion is in the proper direction, and the fast motion is during the return-stroke, while the cutter is out of action. By adjusting the position of the block *k* by the screw *i* the same is brought nearer to or farther from the pivot-shaft *g*, and the length of motion given to the cutter will thereby be varied, and when the block is central or in line with the pivot-shaft *g* the cutter will not receive any motion.

The shaft *v* and its crank-pin *t* may be revolved by any convenient means. I have shown the crank-pin *t* as upon the gear-wheel *u*, and a pinion, *w*, and shaft *w'* as the means for actuating the said shaft and crank.

I claim as my invention—

1. The lever F, having the stud or shaft *g* as its pivot, and the slot *h*, crossing at the end of the pivot *g*, and the second slot, *s*, in combination with the crank-pin *t*, and its block sliding in the slot *s* and giving a swinging movement to the lever, and the block *k* and

screw *i* in the slot *h*, and a connecting-rod from the block *k* to the article to be moved, substantially as set forth.

2. In combination with the sliding cutter-stock and cutter in a metal planing or slotting machine, the lever F, having the pivot-shaft *g*, the two slots *h* and *s*, the crank-pin and block to swing the lever, the connecting-rod to the cutter-stock, the block *k* in the slot *h*, and the screw *i* to adjust the position of the same, substantially as set forth.

Signed by me this 3d day of February, A. D. 1883.

JOHN L. BOGERT.

Witnesses:
GEO. T. PINCKNEY,
WILLIAM G. MOTT.