

(No Model.)

M. W. FOSTER.
MECHANICAL MOVEMENT.

No. 414,512.

Patented Nov. 5, 1889.

Fig. 1.

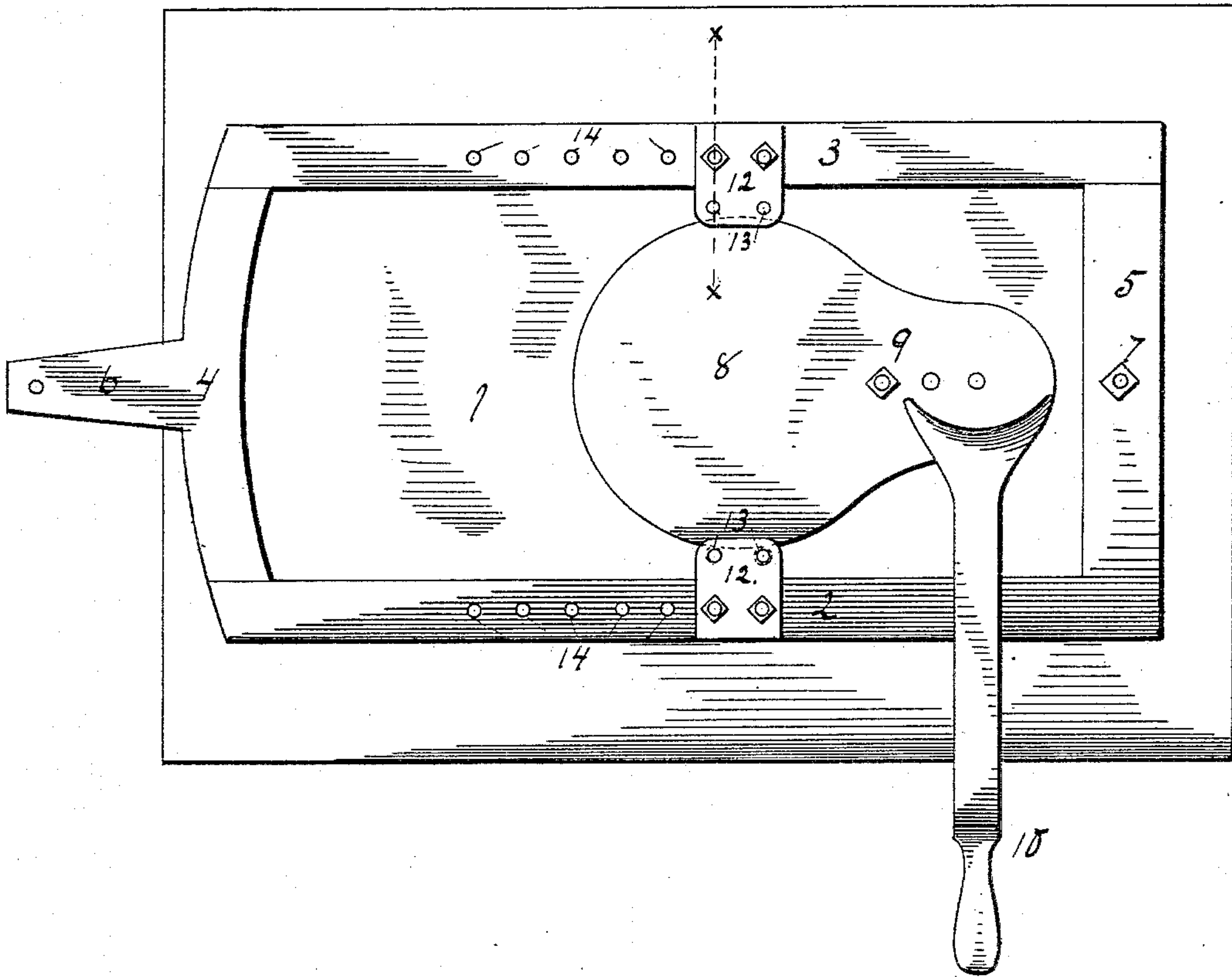


Fig. 2.

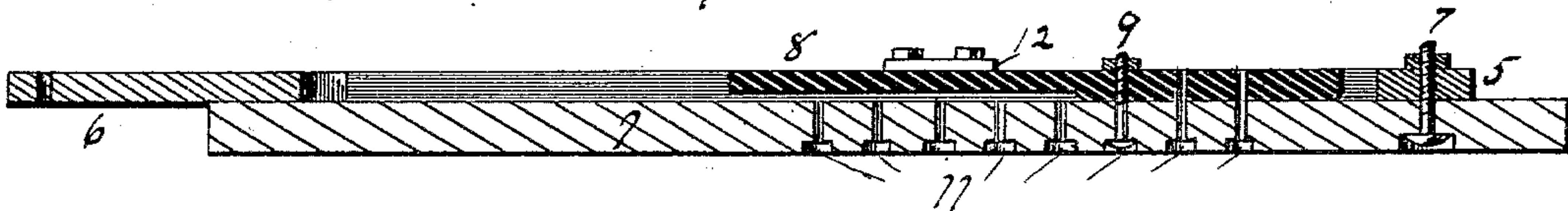
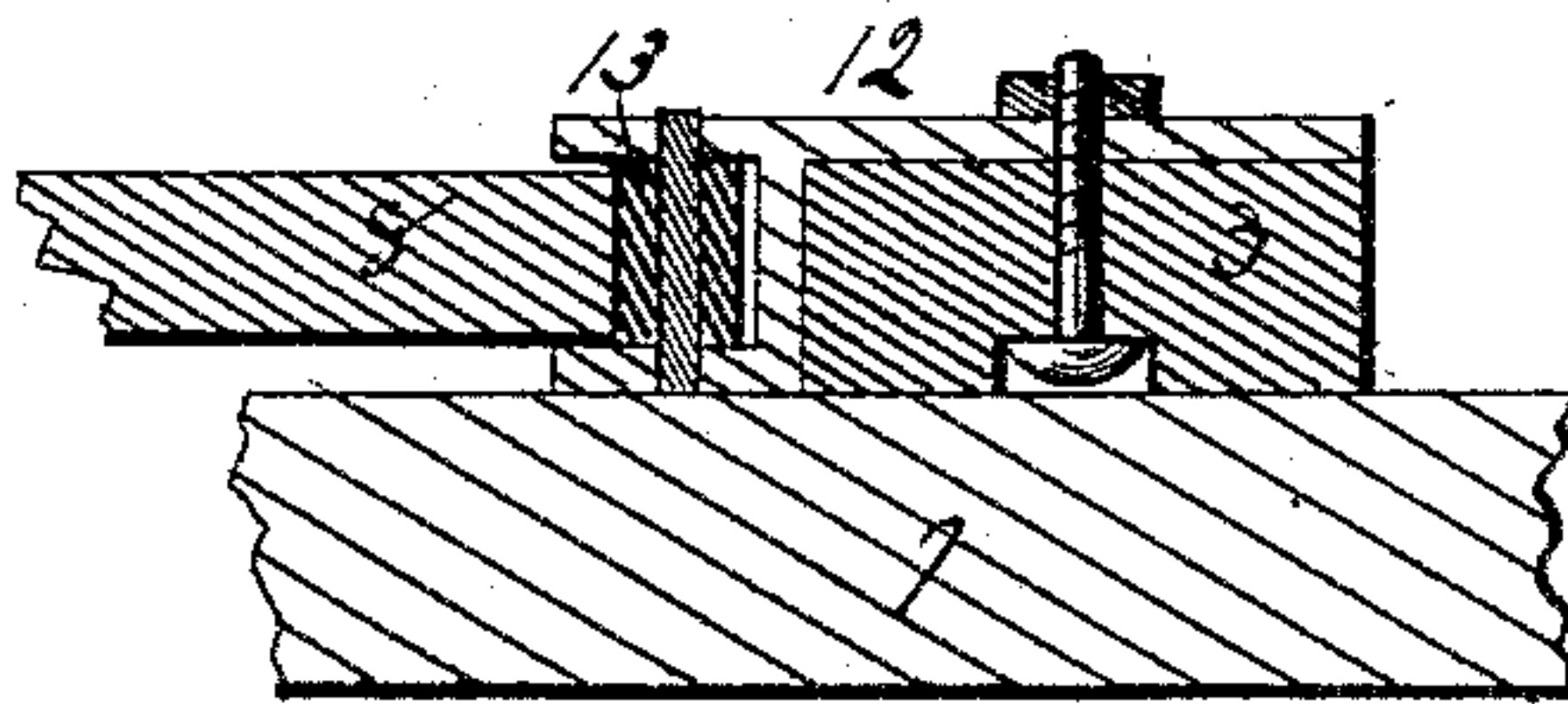


Fig. 3.



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UNITED STATES PATENT OFFICE.

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MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 414,512, dated November 5, 1889.

Application filed February 23, 1889. Serial No. 300,883. (No model.)

To all whom it may concern:

Be it known that I, MARK W. FOSTER, a citizen of the United States, residing at Pecatonica, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Mechanical Movements, of which the following is a specification.

The object of this invention is to obtain movement by means of a frame of trapezoidal form, within which is placed a cam which engages the sides of the frame, thereby imparting to the frame an alternate back-and-forth movement in any plane required.

In the accompanying drawings, Figure 1 is a face view of my improved movement. Fig. 2 is a lengthwise central section of the same. Fig. 3 is a transverse section of the frame on dotted line X X, showing the roller.

The movement represented in the accompanying drawings consists of a base-plate 1, upon which is mounted a frame of trapezoidal form, consisting of the side pieces 2 and 3 and end pieces 4 and 5 secured together. An arm 6 projects from the end pieces 4 for a purpose to appear hereinafter. This frame is pivoted to the base-frame 1 by a pivot-bolt 7 passing through the end piece 5 into the base-frame. This frame by means of its pivot-connection with the base-frame has an alternate back-and-forth oscillating movement.

Within the opening of the trapezoidal frame is located a cam 8 of a size nearly equal to the least diameters of the opening. The cam is pivoted at 9 to the base-frame and has a series of perforations, by means of which the leverage may be changed. An operating-lever 10 extends from the cam outside of the frame and by means of which the cam is oscillated on its pivot. This lever is bent so as to bring the handle portion on the same plane as the cam, thereby preventing all tendency of the cam to sidewise movement. The base-plate 1 is provided with a series of holes 11 for the

purpose of adjustment of the cam to increase or diminish the movement of the frame. On the inside of the side pieces 2 and 3 are secured brackets 12. Between these brackets are held rollers 13, having a pivot-connection therewith. A series of perforations 14 are for the purpose of adjusting the brackets, as the cam is adjustable in the lengthwise direction of the frame. The object of the rollers is to decrease the friction of the cam against the side pieces of the frame. The projecting end 6 may be of any desired length, and the machine or device to be operated has a connection therewith.

In operating my improvement the operator will impart motion to the cam by means of the lever. In the movements of the cam it will engage the rollers on the side piece of the frame, thereby causing the frame to oscillate on its pivot-connection with the base-frame. A back-and-forth movement imparted to the cam will impart a like movement to the frame, and the movement of the arm 6 will be greatly increased. By means of the various adjustments the movement of the parts will be increased or diminished as required.

I claim as my invention—

1. A mechanical movement consisting of a base-plate, a trapezoidal frame, a cam within the frame, and a lever for imparting motion to the cam and frame, said cam made adjustable in its connection with the base-plate, substantially as set forth.

2. A mechanical movement consisting of a base plate, a trapezoidal frame, a cam within the frame, a lever for imparting motion to the cam and frame, and rollers against which the cam moves, said rollers made adjustable in the lengthwise direction of the frame, substantially as set forth.

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