

(No Model.)

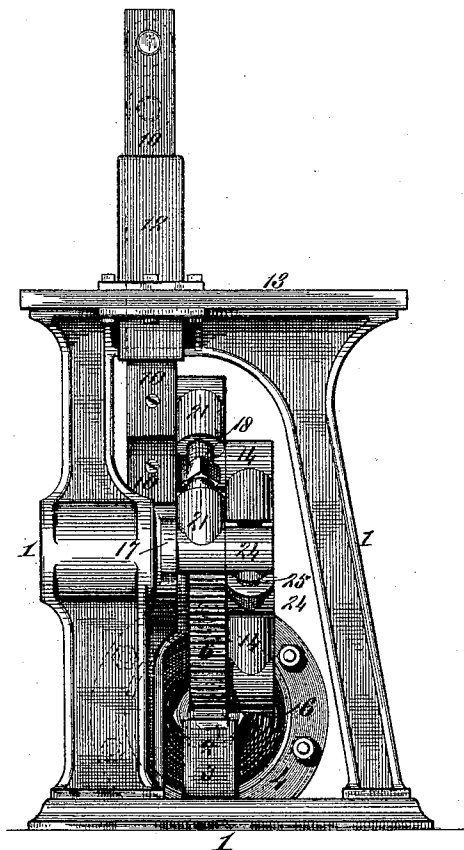
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T. PUETZ, Jr.
MECHANICAL MOVEMENT.

No. 444,016.

Patented Jan. 6, 1891.

Fig. 1.



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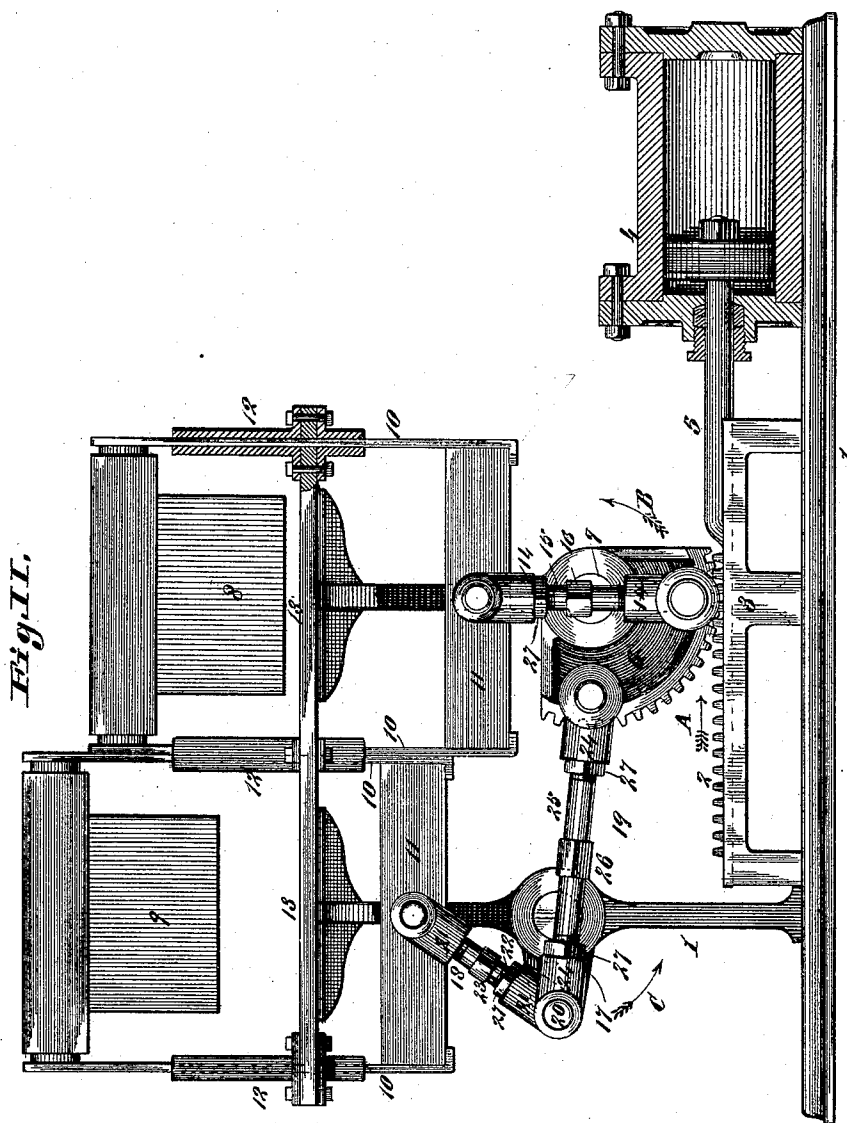
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UNITED STATES PATENT OFFICE.

TILLMAN PUETZ, JR., OF ST. LOUIS, MISSOURI.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 444,016, dated January 6, 1891.

Application filed February 18, 1890. Serial No. 341,216. (No model.)

To all whom it may concern:

Be it known that I, TILLMAN PUETZ, JR., of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Mechanical Movements, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved movement which may be applied to different kinds and classes of machines; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is an end elevation illustrative of my invention. Fig. II is a side elevation of same, part in section.

Referring to the drawings, 1 represents a suitable frame, and 2 represents a rack sliding on a support 3 and operated through means of any suitable motive power. I have shown the rack operated by means of a cylinder and piston 4, to which it is connected by the piston-rod 5; but other means for imparting a movement to the rack may be employed. The rack engages a cog-segment 6 and imparts movement thereto. The segment is pivoted at 7, and is moved by the rack in the direction shown by the arrow, Fig. II, and back to the position shown in Fig. II, oscillating or turning on its pivot 7.

8 9 represent two plungers of a brick-machine, a tobacco-press, or other apparatus. These plungers are connected by strips 10 to cross-heads 11, the strips passing through guides or ways 12.

13 represents platens or plates, against which the plungers press the material.

The segment 6 is connected to the cross-head 11 of the plunger 8 through means of a pitman consisting, preferably, of short sleeves 14, pivoted, respectively, to the cross-head and segment and connected by a rod 15, which has a right and left thread and fits into tapped ends of the sleeves 14. The rod is provided with a non-circular portion 16 to receive a wrench, by which it may be turned to lengthen or shorten the pitman. The segment 6 is also connected to the cross-head 11 of the plunger 9 through means of a pivoted crank or link 17, connected by a pitman 18 to the cross-

head 11 and by a pitman 19 to the segment, the crank or link having a wrist-pin 20, which passes through the adjacent ends of the pitmen. The pitman 18 consists of short sleeves 21, connected, respectively, to the cross-head 11 and crank 17, and united by a rod 22, having a right and left thread and fitting in the tapped ends of the sleeves 21. This rod has a non-circular portion 23 to receive a wrench, by which the rod can be turned to lengthen or shorten the pitman. The pitman 19 consists of short sleeves 24, connected, respectively, to the crank and segment, and which are united by a rod 25, having a right and left thread entering the tapped ends of the sleeves, and which is provided with a non-circular portion 26, by which the rod may be turned to shorten or lengthen the pitman. The rods 15, 22, and 25 may be provided with jam-nuts 27 to prevent their turning when adjusted.

The operation is as follows: The rack being moved in the direction of the arrow A, Fig. II, moves the segment 6 in the direction of the arrow B, which produces the upward movement of the plunger 8 and the downward movement of the plunger 9, the crank or link 17 moving in the direction of the arrow C. Then as the rack is moved in the reverse direction the segment is swung back again, causing the plunger 8 to descend and the plunger 9 to ascend, and thus as the segment oscillates back and forth the plungers alternately rise and fall.

While I have described my invention as applied to a press having plungers, it is evident that it can be applied to various purposes and objects other than plungers, to be operated through the medium of the mechanism I have described.

I claim as my invention—

1. The combination of a rack, a motor for moving the rack, a pivoted segment engaging the rack and moved thereby, objects to be moved, and adjustable pitmen connecting said segment to said objects, substantially as described.

2. In a mechanical movement, the combination of a pivoted segment, means for moving the segment, such as a rack, cylinder, and piston, an adjustable pitman connected to the

segment and to an object to be moved, a second adjustable pitman connected to the segment and to a pivoted crank or link, and a third adjustable pitman connected to the
5 crank or link and to an object to be moved, substantially as set forth.

3. In a mechanical movement, the combination of a pivoted segment, a rack engaging the segment, a cylinder and piston for moving the rack, a pitman connecting the rack
10 to an object to be moved and consisting of tapped sleeves and a rod having right and

left threads, a second pitman connecting the segment to a pivoted link or crank and consisting of tapped sleeves and a rod having
15 right and left threads, and a third pitman connecting the crank or link to an object to be moved and consisting of tapped sleeves and a rod having right and left threads, substantially as set forth.

TILLMAN PUETZ, JR.

In presence of—

THOS. KNIGHT,
E. S. KNIGHT.