

F. CLARK.
MECHANICAL MOVEMENT.
APPLICATION FILED MAY 21, 1920.

1,354,955.

Patented Oct. 5, 1920.

Fig. 1.

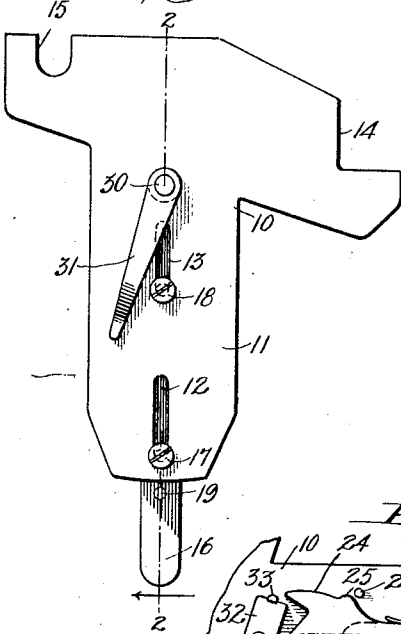


Fig. 2.

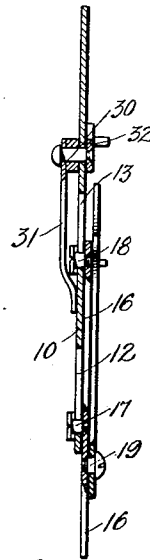


Fig. 5.

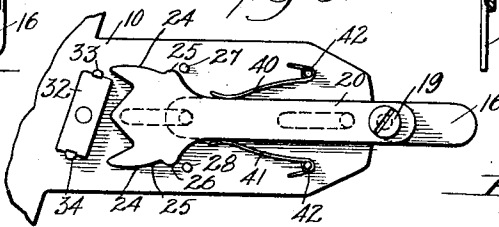


Fig. 3.

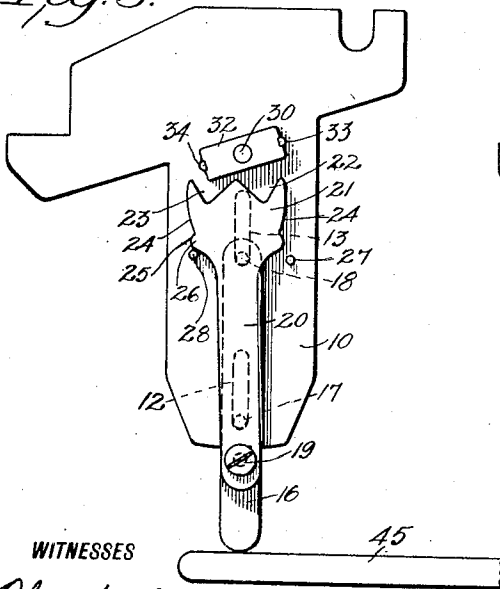
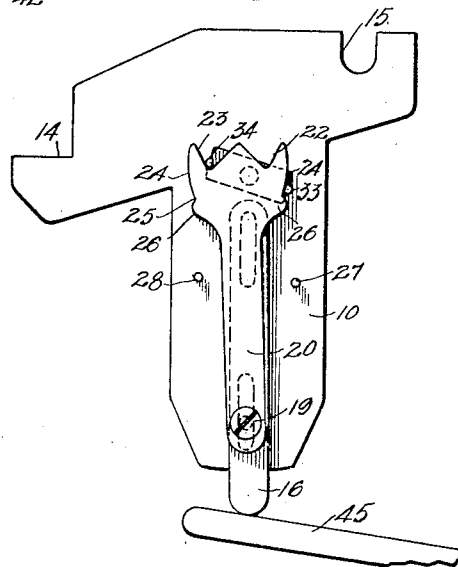


Fig. 4.



WITNESSES

Oliver H. Holmes
P. J. Patterson.

INVENTOR

F. CLARK

BY

Mumma & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

FREDERICK CLARK, OF JERSEY CITY, NEW JERSEY.

MECHANICAL MOVEMENT.

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To all whom it may concern:

Be it known that I, FREDERICK CLARK, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Mechanical Movement, of which the following is a full, clear, and exact description.

The present invention relates to new and useful improvements in mechanical movements, and it pertains more particularly to a mechanism of this type especially adapted for the conversion of reciprocating motion into oscillating motion.

It is the primary object of the present invention to provide a device operated by one of the elevators of a type-setting machine to indicate certain conditions in the work being set up by the machine.

It is a further object of the invention to so construct a device of this character that it may be readily attached to machines of this type as commonly constructed.

With the above and other objects in view, reference is had to the accompanying drawings, in which—

Figure 1 is a front view of a device constructed in accordance with the present invention;

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a rear view with the operating mechanism in one position;

Fig. 4 is a similar view with the operating mechanism in another position;

Fig. 5 is a view in elevation showing a slightly modified form of the invention in which form it is adapted to operate in a horizontal plane.

Referring more particularly to the drawings, the reference character 10 designates a substantially T-shaped body member, the stem 11 of which is slotted as indicated by the reference characters 12 and 13. One of the arms of the T-shaped body portion is cut out as indicated by the reference character 14, and the other arm is notched on its upper edge as indicated by the reference character 15.

Mounted on the rear face of the T-shaped body portion 10, is a reciprocating member 16, and said reciprocating member 16 is provided with spaced bolts or rivets 17 and 18. These bolts or rivets 17 and 18 are adapted to engage in the slots 12 and 13 respectively, of the T-shaped body member

10, and form the means by which the reciprocating member 16 is carried by the T-shaped body portion 10 and guided in its movements relative thereto.

Carried by the reciprocating member 16 in such a manner as to move therewith, and pivotally secured thereto by means of a bolt 19, is a member 20, the upper end of the member 20 being provided with an enlarged head portion 21, as best shown in Figs. 3, 4 and 5. The upper portion of this enlarged head 21 is provided with two notches 22 and 23, and the walls of these notches 22 and 23 are angularly disposed with respect to each other as shown. The side edges of the enlarged head 21 of the member 20 are curved as indicated by the reference character 24, and said curved portion terminates in a notch 25 and a shoulder 26.

Carried by the T-shaped body portion on the rear face thereof, are spaced pins 27 and 28, and said pins serve to limit the oscillating movement of the reciprocating member 16. The pins 17 and 18 of the reciprocating member engage the ends of their respective slots 12 and 13, to limit the reciprocating movement of the member 16.

A bolt or rivet 30 extends through the T-shaped body member 10, and mounted on the front of said T-shaped body member and carried by the bolt or rivet 30, is an index pointer 31. On the rear end of the bolt or rivet 30, is mounted a plate 32, and said plate is provided on each of its ends with outstanding lugs or ears 33 and 34. The plate 32 is rectangular in shape and has its longest dimension extending transversely of the T-shaped body portion 10 in such a manner that the lugs or ears 33 and 34 of the plate 32 will lie in the path of their respective notches 22 and 23.

In Fig. 5 it will be seen that the member 20 is maintained in a true central position with respect to the T-shaped body portion 10 by the springs 40 and 41 secured to the T-shaped body portion 10 by means of the pins 42 in such a manner that the free ends of the springs 40 and 41 will engage the opposite sides of the reciprocating member 16.

The device operates in the following manner:

The reference character 45 designates an arm or similar projecting member adapted for reciprocating motion, and in its move-

ment, it is adapted for engagement with the lower end of the reciprocating member 16, as best shown in Figs. 3 and 4. As the member 16 is elevated, dependent upon the position of the plate 32, one of the recesses 22 or 23 will receive its respective pin 33 or 34 and will rock the bolt or rivet 30 in its bearing in the T-shaped body portion 10 and move the index pointer 31 to one side or the other of the front face of the T-shaped body member 10.

Assuming that the parts are in the position shown in Fig. 3 and the reciprocating member 16 is raised, the notch 23 will receive the projection or lug 34 and will move the plate 32 to the position shown in Fig. 4, thus rocking the bolt or rivet 30 to move the index pointer 31 to the right in Fig. 1. As the arm 45 descends, the member 16 through gravity, will descend to the position shown in Fig. 3, and as the reciprocating member 16 is again raised, the notch 22 of the member 20 will receive the projection 33 and will rock the plate 32 back to the position shown in Fig. 3 and correspondingly move the index pointer 31.

By this construction it will be seen that upon each reciprocation of the reciprocating member 16, an oscillation of the index pointer 31 will be had, and that an indication of each reciprocation of a movable part, such as the member 45, may be readily determined.

In Fig. 5 the invention is shown as adapted for operation in a horizontal plane as heretofore stated, and it will be seen in said figure, that as the member 16 is reciprocated each time it is withdrawn so that the recesses 22 and 23 disengage their respective lugs or projections 33 and 34, the reciprocating member 16 and the member 20 will be automatically retained in the central position by means of the oppositely disposed springs 40 and 41, in a manner similar to the action of the pins 27 and 28 in the other forms of the device.

What is claimed is:

1. A device of the character described comprising a slotted base, an oscillating member carried by said base, a plate carried by said oscillating member, a reciprocating member mounted on said base, a member pivotally carried by said reciprocating member and adapted to move the oscillating member about its pivotal point, and means carried by said plate for guiding the reciprocating member in its movement relative to the plate.

2. A device of the character described comprising a slotted base, an oscillating member mounted in said base, a plate carried by said oscillating member, reciprocating

means carried by the plate and adapted for engagement with the oscillating means to oscillate the latter, and means for guiding the reciprocating means in its movement on the base.

3. A device of the character described comprising in combination, a slotted base, an oscillating member carried by the base on one side thereof, a plate carried by said oscillating member on the opposite side of said base, a plurality of spaced projections carried by said plate, a reciprocating member mounted on the base, and means carried by the reciprocating member for alternately engaging the projections of the plate to effect an oscillation of the oscillating member.

4. A device of the character described comprising in combination, a slotted base, an index pointer mounted for oscillation on said base, a plate carried by the index pointer on the opposite side of said base, a reciprocating member carried by the base and mounted for movement in the slots thereof, and means carried by said reciprocating member and adapted for engagement with the plate to operate the oscillating member upon each reciprocation of the reciprocating member.

5. A device of the character described comprising in combination, a slotted base, an oscillating member carried by the base on one side thereof, a plate carried by said oscillating member on the opposite side of the base, a plurality of spaced projections carried by said plate, and means for alternately engaging said spaced projections to effect an oscillation of the oscillating member.

6. A device of the character described comprising in combination, a slotted base, an oscillating member carried by the base on one side thereof, a plate carried by said oscillating member on the opposite side of the base, a plurality of spaced projections carried by said plate, and reciprocating means for alternately engaging said spaced projections to effect an oscillation of the oscillating member.

7. A device of the character described comprising a slotted base, an oscillating member carried by said base on one side thereof, a plate carried by the oscillating member on the opposite side of the base, a plurality of spaced projections carried by said plate, a reciprocating member slidably mounted in the slots of said base, and means carried by said reciprocating member and adapted upon each reciprocation thereof to alternately engage the spaced lugs of said plate to effect an operation of the oscillating member.

FREDERICK CLARK.