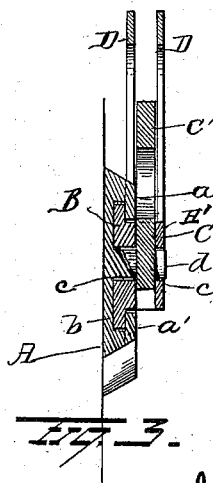
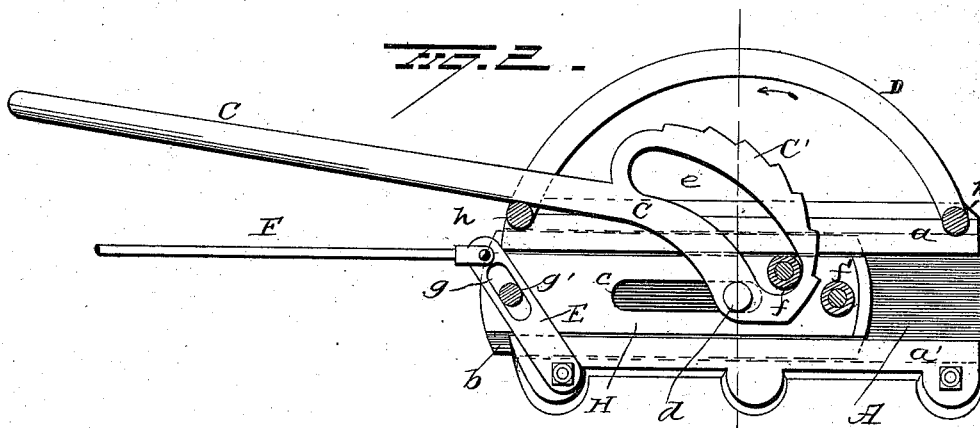
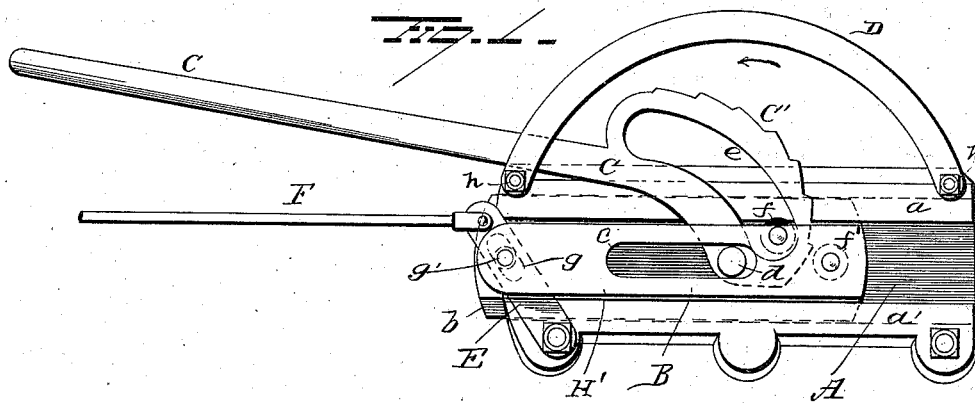


(Model.)

T. R. McKNIGHT.  
MECHANICAL MOVEMENT.

No. 382,101.

Patented May 1, 1888.



Witnesses,  
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# UNITED STATES PATENT OFFICE.

THOMAS RUEL McKNIGHT, OF MOUNT PLEASANT, IOWA.

## MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 382,101, dated May 1, 1888.

Application filed October 24, 1887. Serial No. 253,256. (Model.)

*To all whom it may concern:*

Be it known that I, THOMAS RUEL McKNIGHT, of Mount Pleasant, in the county of Henry and State of Iowa, have invented certain new and useful Improvements in Mechanical Movements; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved mechanical movement.

The object of my invention is to provide a simple, cheap, and effective device which may be used to operate a vehicle-brake, a throttle-valve of a steam-engine, or which may be used for other purposes where a locking adjustment of a lever is required.

With this object in view my invention consists in the novel construction and peculiar combination and arrangement of parts, as will be hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of the device. Fig. 2 is a similar view with the outer portion of the sliding box removed. Fig. 3 is a transverse vertical section.

A indicates a base-plate having two guide-strips, *a a'*, secured thereto or made integral therewith, and slightly removed from the surface of the same to form grooves or ways for a sliding box, B. The base-plate thus constructed is applied to a wagon-body or other object by means of bolts or in any other suitable manner. The sliding box B is preferably an oblong metallic frame, open at two sides and one end, its outer face being provided with outwardly-projecting flanges *b*, adapted to enter the grooves or ways of the base-plate, in which the box B is adapted to have a longitudinal movement.

The inner and outer plates, H H', of the box B are provided with elongated slots *c*, for the reception of a short post, *d*, which is secured to the base-plate A at about the center of its length, and made to project through the slots *c*, preferably having its outer end flush with the outer face of the box B. The post *d* serves as a pivot for a notched segmental lever, C, which is placed loosely on this post or pin near one end, so that the notched edges of the slot

formed in the portion *e* of the lever will be eccentric with a roller, *f*, journaled between the inner and outer faces of the box B.

The lever C is made in the form shown in the drawings, having a slot between the notched segment C' and the main portion C, the under side of the segment C' being made smooth and adapted to form a track for a roller, *f*, journaled in the box B. Thus it will be seen that the segment C' works between two rollers, *f f'*, journaled in the box B, one being adapted to enter the notches of the segment and retain the lever at the desired adjustment, while the roller *f* makes contact with the inner surface of the segment when the lever is moved from left to right. The free end of the lever C is guided between two parallel semi-elliptical plates, D, which are secured to the base-plate A by bolts *h*.

When the lever C is thrown forward or in the direction indicated by the arrow, the notched segment rides upon the roller *f* of the box B, and thus the latter is caused to slide in its ways or guides in base-plate A and operates the brake or other device attached to rod F, as hereinafter described.

A short bar or link, E, is pivoted at one end to the base-plate A, and extends between the inner and outer plates of the box B at the open end of the latter.

The bar or link E is made with an elongated slot, *g*, for the reception of a pin, *g'*, which connects the plates of the box at its open end, this pin being adapted to work in the slot *g* of the link E when the device is operated. One end of a connecting-rod, F, is attached to the free end of the link E, while the opposite end of said rod is connected to a brake-rod or other device. (Not shown.)

When the lever C is thrown forward, the segment C' rides upon the roller *f*, which enters one of the notches of the segment, and is retained therein by the pulling action of the connecting-rod F upon the box B.

It will be seen that by the simple operation of throwing the lever forward the box B is slid in the base-plate and retained at any desired adjustment without the liability of becoming accidentally released, as the pull of the connecting-rod and the roller *f* are in the same plane, and the box B is prevented from the slightest movement in its seat. While the

parts are thus retained in their rigid locked position, the lever can be easily and quickly operated to release said parts.

If desired, this device may be applied to a steam-engine to operate the throttle-valve or other mechanism where the adjustment of an operating-lever at different points in its throw is desirable.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mechanical movement, the combination, with a base-plate, of a box adapted to slide therein, carrying a roller, and a lever pivoted to the base-plate and provided with a curved slot, in which the roller on the box rests, substantially as set forth.

2. In a mechanical movement, the combination, with a base-plate having grooves or ways, of a box adapted to slide therein, and a notched segmental lever pivoted to operate within the box and engage a roller journaled therein to give the box a sliding movement and retain it in locked adjustment, substantially as set forth.

3. In a mechanical movement, the combination, with a base-plate having ways or guides, of an open box to slide therein, having elongated slots in its inner and outer faces, a post secured to the base-plate and extending through these slots, a notched segmental lever loosely mounted on said post, and a roller journaled in the box, with which the segmental lever engages to operate the box and retain it in locked adjustment, substantially as set forth.

4. In a mechanical movement, the combination, with a base-plate having guides or ways, of an open box to slide therein, a post secured to the base-plate and adapted to work in elongated slots in the box, a lever having a segment notched on one face and smooth on

the other, and rollers journaled in the box to engage the segment on both faces, substantially as set forth.

5. In a mechanical movement, the combination, with a base-plate, of an open box to slide therein, a notched segmental lever pivoted to work in said box, rollers to engage said segment, and a rod connected to one end of the sliding box, substantially as set forth.

6. In a mechanical movement, the combination, with a base-plate, of an open box to slide therein, a notched segmental lever pivoted to work in said box and engage rollers journaled therein, a bar or link pivoted to the base-plate, having a sliding connection with the box, and a rod connected to the free end of the link, substantially as set forth.

7. In a mechanical movement, the combination, with a base-plate, of an open box to slide therein, a segmental notched lever pivoted to work between the plates of the box, a roller journaled in the box to engage the notches of the segmental lever, and a pair of semi-elliptical plates to guide said lever, substantially as set forth.

8. In a mechanical movement, the combination, with a base-plate, of a box to slide therein, a notched segmental lever pivoted to work in said box, a roller journaled in the box and adapted to engage the segmental lever, and a rod so connected to the sliding box that its pulling action will always be in a line at right angles to the axis of said roller, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS RUEL McKNIGHT.

Witnesses:

E. S. HOWARD,  
WM. ALBERTSON.