

No. 668,958.

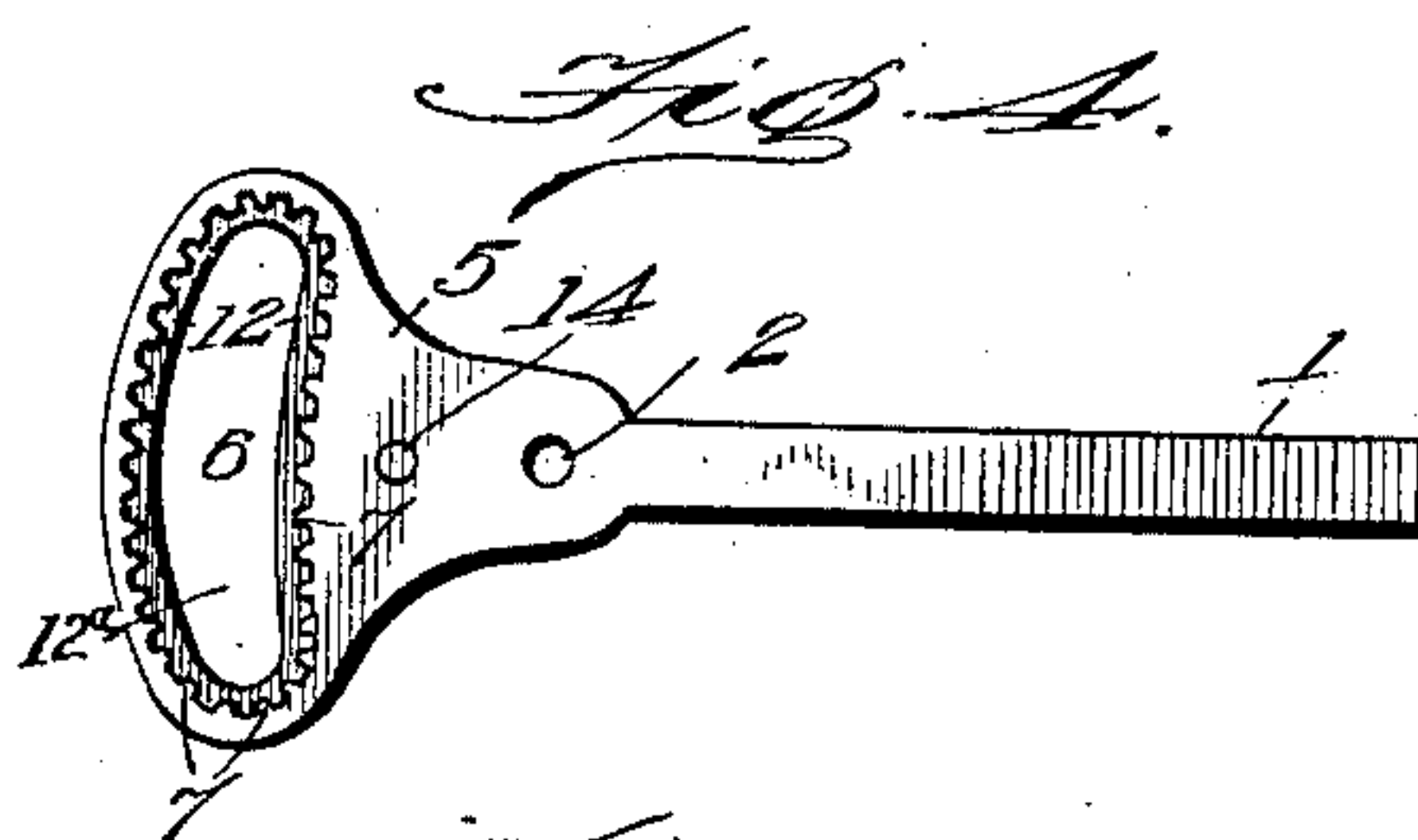
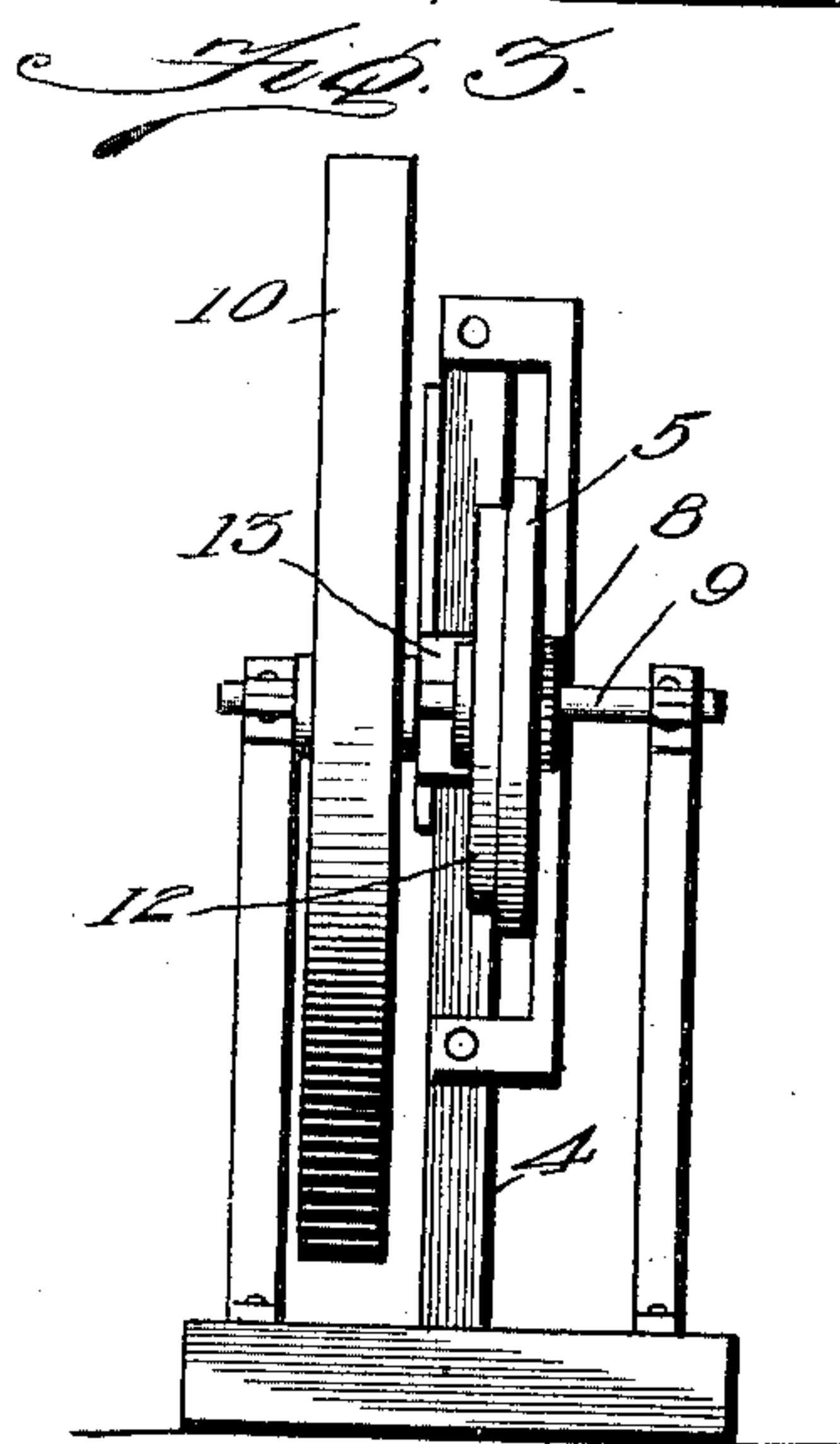
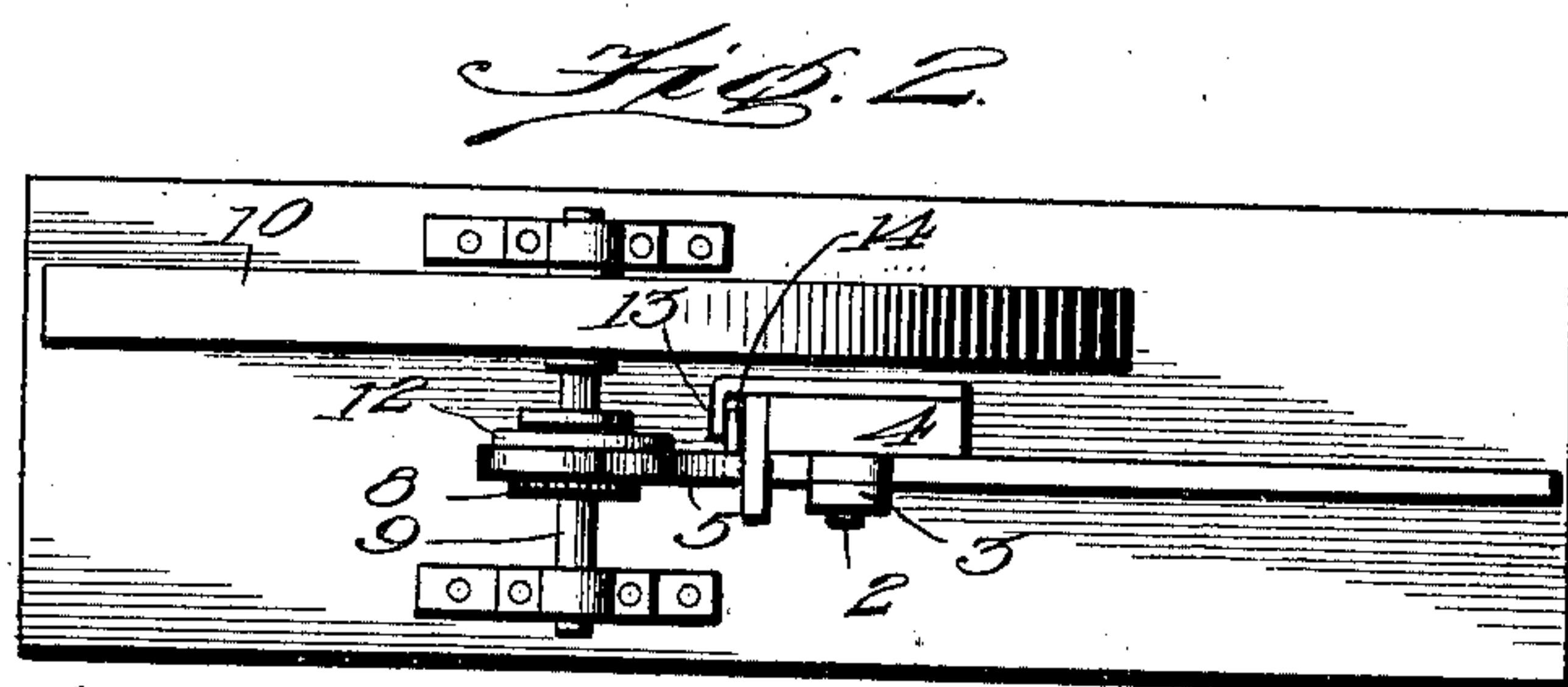
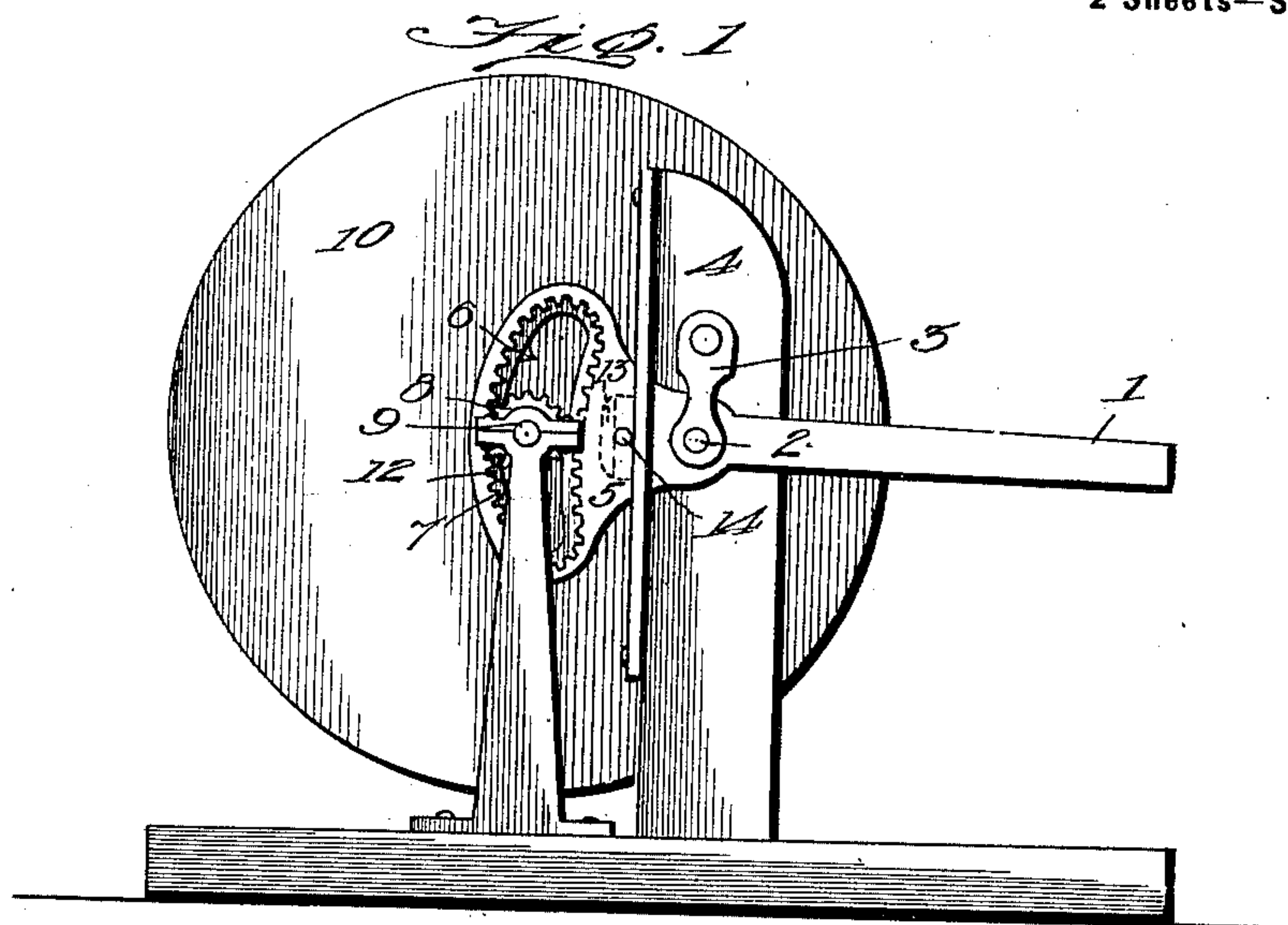
Patented Feb. 26, 1901.

J. E. HALLETT.
MECHANICAL MOVEMENT.

(Application filed Apr. 13, 1900. Renewed Jan. 31, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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Herbert A. Larson

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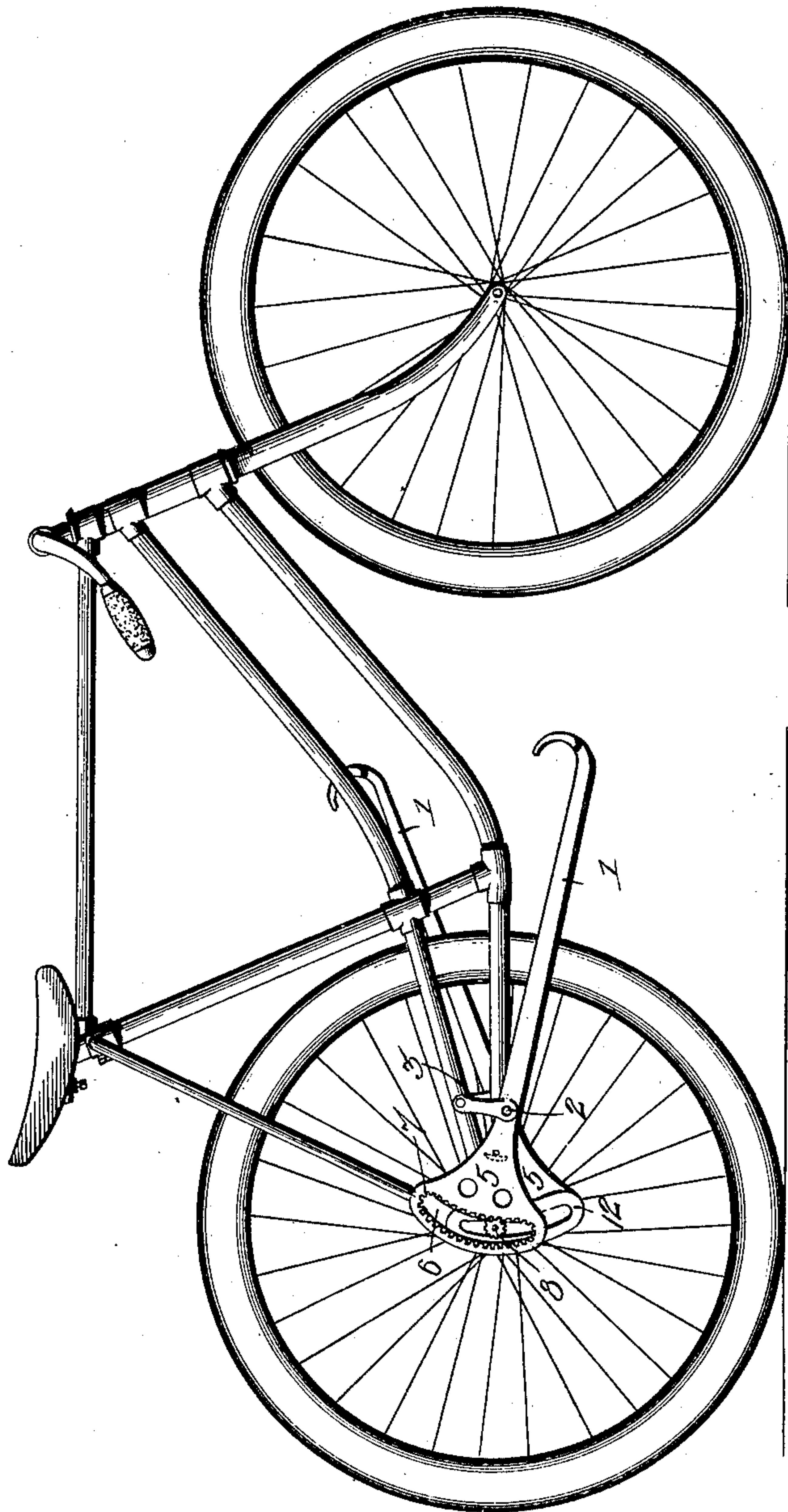
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2 Sheets—Sheet 2.

Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN E. HALLETT, OF SAC CITY, IOWA.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 668,958, dated February 26, 1901.

Application filed April 13, 1900. Renewed January 31, 1901. Serial No. 45,511. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. HALLETT, a citizen of the United States, residing at Sac City, in the county of Sac and State of Iowa, have
5 invented certain new and useful Improvements in Mechanical Movements, of which the following is a specification.

This invention relates to a new and useful mechanical movement especially adapted for
10 use upon velocipedes and other vehicles; and its primary object is to provide a device of simple construction whereby power may be transmitted to a shaft continuously and positively.

15 To these ends the invention consists in providing a lever pivotally secured to a link which is suspended from a suitable support, and said lever is provided with a toothed slot, within which is mounted a gear adapted to
20 mesh with the teeth upon the sides and ends of the slot successively and automatically.

The invention also consists in providing means of novel construction whereby said lever is swung backward and forward and held
25 in such position until reaching the limit of the up and down strokes, respectively.

The invention also consists in the further novel construction and combination of parts hereinafter more fully described and claimed,
30 and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a side elevation of the device. Fig. 2 is a plan view thereof. Fig. 3 is an
35 end view. Fig. 4 is a detail view of the lever. Fig. 5 is a similar view of the gear, and Fig. 6 is a side elevation of the device applied to a bicycle.

Referring to said figures by numerals of
40 reference, 1 is a lever of suitable construction having a stud 2 projecting therefrom at a point between its ends and pivotally mounted within the lower end of a link 3, which is pivoted to and suspended from a suitable support 4. One end of the lever 1 is enlarged,
45 as shown at 5, and is provided with a slot 6, having teeth 7 projecting from its sides and ends, said teeth meshing with teeth formed upon the gear 8, which is secured to the
50 shaft 9 of a wheel 10 or other suitable driving mechanism. The gear is provided at one side with an annular groove 11, which is adapted to receive the walls of a slot 12,

formed within a plate 12, and which is slightly smaller than, but concentric to, the slot 6, said
55 plate being secured to the enlarged portion 5 of the lever 1. Projecting from the support 4 to a point adjacent to the inner wall of the slot 6 is a cam 13, upon which is adapted to bear a pin 14, which projects from the inner
60 face of the lever 1.

In operation it will be seen that when the lever 1 is pressed downward the teeth upon one of the walls of the slot 6, which engage with the gear within said slot, will cause
65 said gear to revolve. When the gear reaches the end wall of the slot, it will engage with the teeth thereof and force the lever backward or forward, according to the direction in which the shaft is revolving, thereby draw-
70 ing the pin 14 over the end of the cam 13, which will guide the same in its upward and downward movement and hold the teeth of the slot into engagement with the gear. By means of the groove 11 and the plate fitting
75 therein lateral movement of the lever is prevented and the same is held at all times in engagement with the gear. It will be understood that when the said lever is thrown backward and forward by means of the cam
80 13 it will swing upon the link as a pivot.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made without depart-
85 ing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus fully described my invention, 90 what I claim as new, and desire to secure by Letters Patent, is—

The combination with a support, of a cam secured thereto, a link pivoted to the support, a lever mounted upon the link and having a
95 toothed slot therein, a shaft within the slot, a gear thereon meshing with the teeth of the slot, said gear having an annular groove, and a slotted plate secured to the lever and mounted within said groove. 100

In testimony whereof I affix my signature in presence of two witnesses.

JOHN E. HALLETT.

Witnesses:

E. N. BAILY,
J. Y. CAMPFIELD.