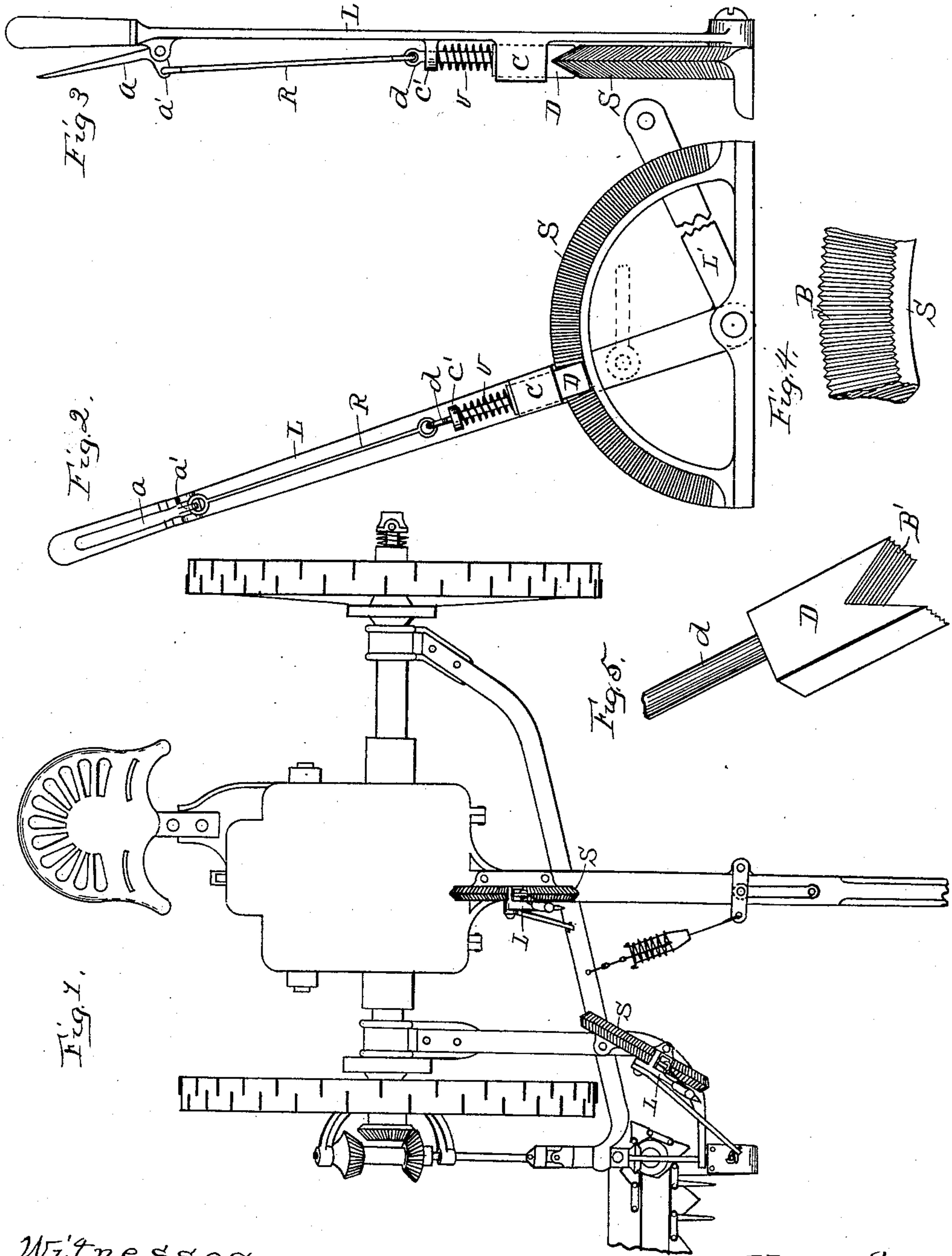


(No Model.)

H. C. STONE.  
LEVER.

No. 435,529.

Patented Sept. 2, 1890.



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# UNITED STATES PATENT OFFICE.

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## LEVER.

SPECIFICATION forming part of Letters Patent No. 435,529, dated September 2, 1890.

Application filed April 7, 1890. Serial No. 346,990. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY C. STONE, a citizen of the United States of America, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Levers, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a plan view of a mowing-machine, showing the application of the levers thereto. Fig. 2 is a side plan view of the lever and its serrated segment. Fig. 3 is a face view of the same. Fig. 4 is a detail perspective view of a portion of the lever-segment, and Fig. 5 is a detail perspective view of the grip-block of the lever.

This invention relates to certain improvements in machine-levers for use in classes of machines where there are parts to be actuated; and it consists in the particular construction and arrangement of parts, which are fully set forth and explained in the following specification and claims.

Referring to the drawings, S represents the segment having an inverted-V-shaped periphery, which is provided on each inclined face with a series of V-shaped serrations, as shown particularly at B in Fig. 4, and is also provided with a foot or other suitable means of support.

L represents the lever fulcrumed at the center from which the segment curve radiates, and is provided with a handle for grasping and with an extending arm, (shown at L',) which is adapted to be connected with parts of machinery and serve as an actuating medium, or the lever may be otherwise connected—for example, as shown by the link or rod in Fig. 2 by the dotted lines.

C represents a box made integral with or secured to the lever, and is arranged adjacent the segment and open at each end. C' is an eye-lug likewise fixed to the lever a distance upward from box c, with its eye opposite the box.

D represents the grip-block of the lever, and is formed at its engaging end with a V-shaped recess corresponding with the peripheral faces of the segment, and is likewise provided with a series of V-shaped serrations on

its engaging faces, as shown at B' in Fig. 5, which correspond with those of the segment, and is also provided with a stem *d*, having an eye at its terminal, as shown in Fig. 3. This block D is arranged to slide vertically in box c, with its V-shaped end saddled upon the segment and its stem *d* extending up through the eye of lug C'.

A is an ordinary grip-lever fulcrumed to the handle end of the lever, as shown, and is connected, through the medium of link R, with the stem *d*, and is adapted as a means of raising the block D off and disengaged from the segment, when the lever is grasped at the handle and the said grip-lever is pressed to the handle; and as a means for yieldingly holding the block seated upon the segment the coil-spring V, sleeved on stem *d*, is interposed between the block D and lug C', and by reason of the slight required movement of the block to release its serrations from those of the segment the leverage in the grip *a* is increased by diminishing the length and throw of its connected arm, and therefore the spring V is made quite heavy and has considerable tension, which holds the serrations of the block in engagement with those of the segment.

When it is desired to shift the lever, the handle is grasped and the grip-lever compressed, which will raise block D by overcoming the resiliency of spring V, and when the desired adjustment is made the grip-lever is released, when the action of spring V will force the block seated upon the segment and again hold the lever.

The lever is represented in Fig. 1 as applied to a mowing-machine for the purpose of illustrating its application, but is adapted to be applied to other classes of machinery as well.

The object of this invention is to provide a means whereby a very slight and delicate adjustment can be made and the lever held at any point of the serrated portion of the segment within the limit only of the space of a single serration, and for especially delicate machinery the serrations may be very small. In ordinary levers where segments are used the segment is provided with notches at suitable intervals, which are engaged by dogs or pawls for holding the levers, and the levers can be adjusted only at such stations



where there is a notch, and, further, they are not provided with means for, nor can they be given, delicate adjustment, and it becomes necessary in many classes of machines to provide their levers with means, as herein described, for very close and delicate adjustment, in order to attain the best results.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is as follows:

1. The combination, with the segment S, provided with the inverted-V-shaped serrated periphery, of the lever L, provided with the box C and the eye-lug C', the sliding grip-block D, arranged in said box and provided with the V-shaped serrated end seated upon the segment, and with the stem *d* arranged extending through the eye of said lug, the

coil-spring V, interposed between the said lug and grip-block, and the lever mechanism for raising the grip-block, substantially as and for the purpose set forth.

2. A lever-actuating mechanism consisting of a segment provided with an angular serrated periphery having the two faces of opposite angles, a lever fulcrumed at the center from which the segment curve radiates, a grip-block yieldingly seated upon the segment provided with corresponding angular serrated engaging faces, and the mechanism for raising the grip-block from engagement with the segment, substantially as set forth.

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