

No. 671,024.

Patented Apr. 2, 1901.

V. J. LONG.

MOWER.

Application filed July 30, 1900.

(No Model.)

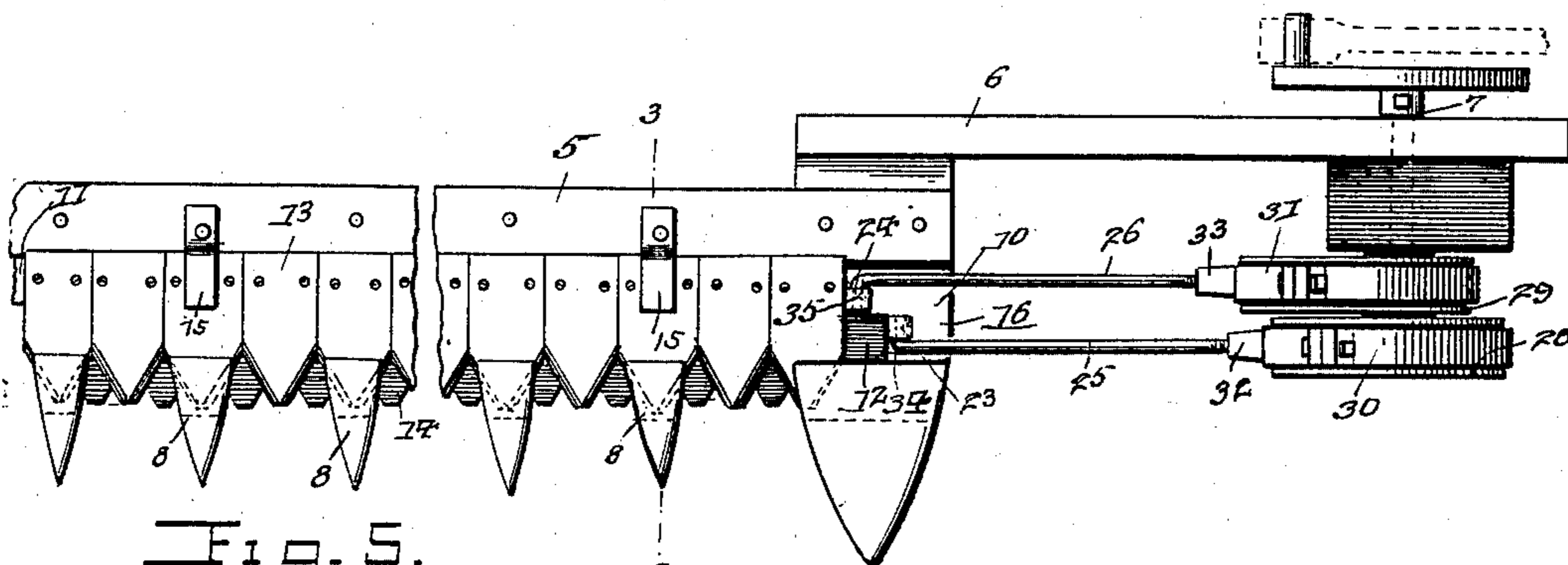


Fig. 5.

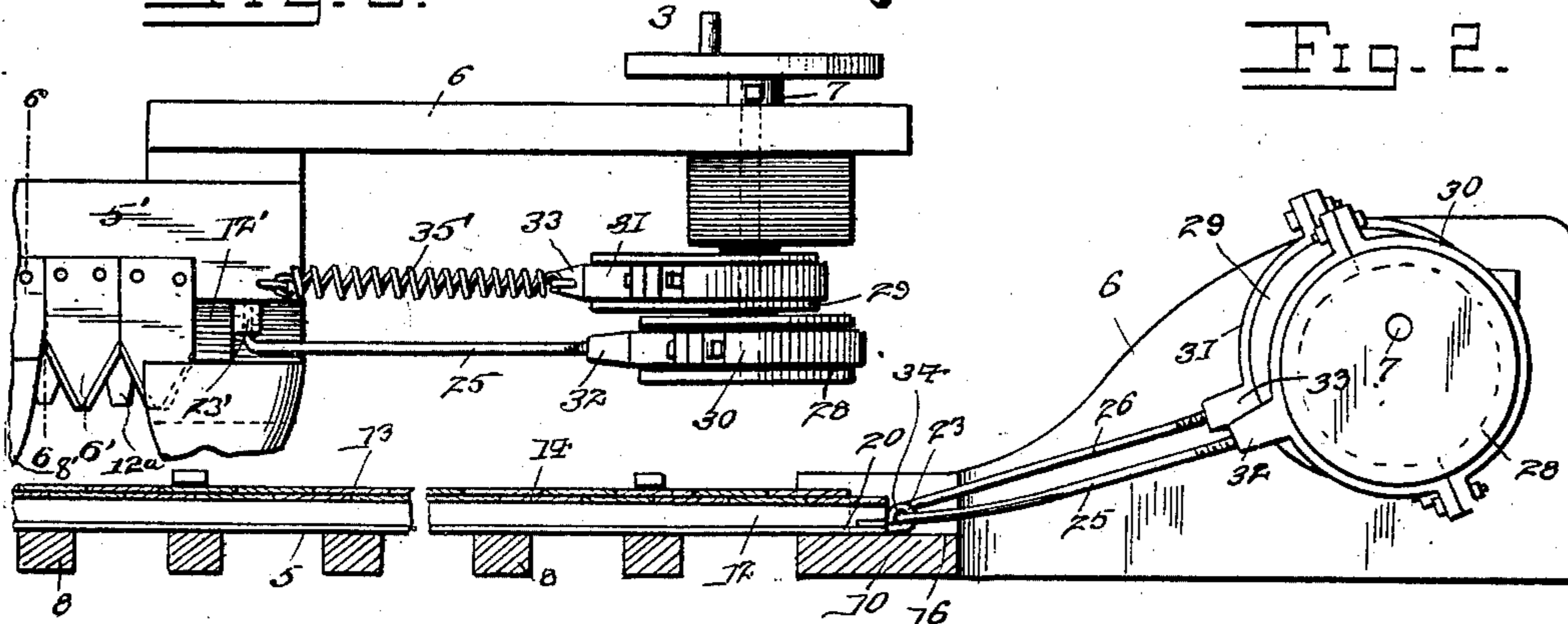


Fig. 2.

Fig. 3.

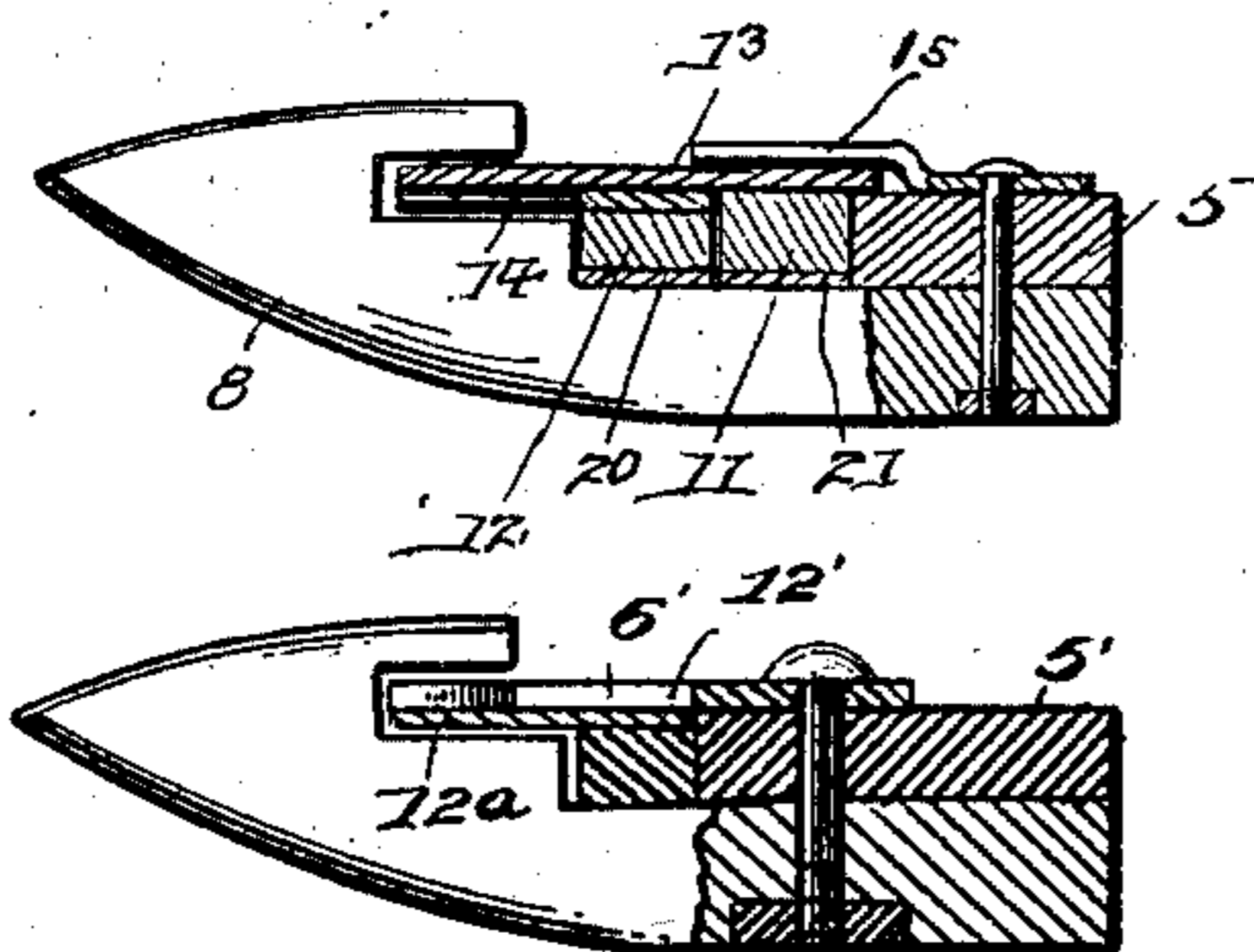
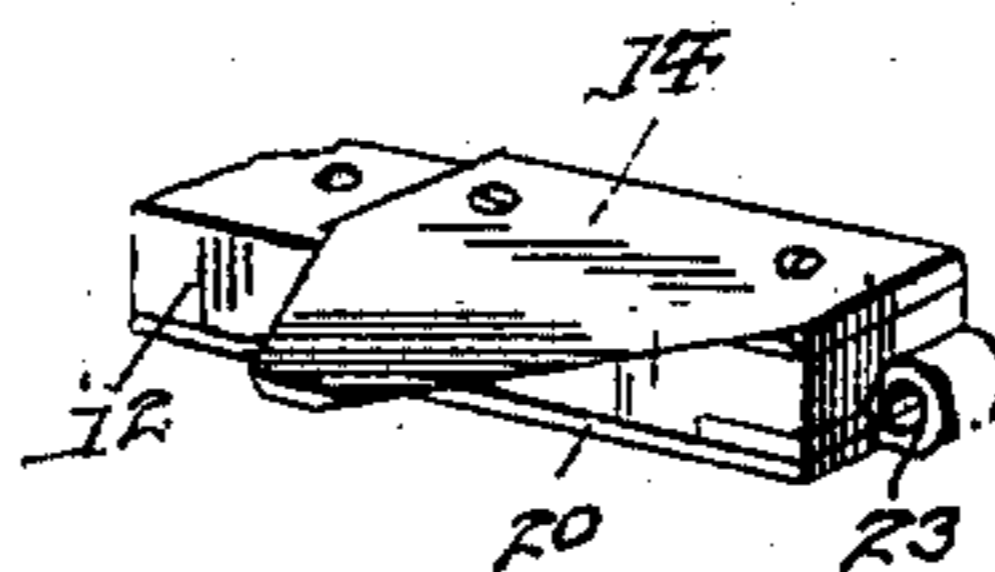


Fig. 4.



Witnesses

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Fig. 6.

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UNITED STATES PATENT OFFICE.

VOLNEY J. LONG, OF SPRAGUE, WASHINGTON.

MOWER.

SPECIFICATION forming part of Letters Patent No. 671,024, dated April 2, 1901.

Application filed July 30, 1900. Serial No. 25,312. (No model.)

To all whom it may concern:

Be it known that I, VOLNEY J. LONG, a citizen of the United States, residing at Sprague, in the county of Lincoln and State of Washington, have invented a new and useful Mower, of which the following is a specification.

This invention relates to mowers in general, and more particularly to reciprocatory mowers, the object of the invention being to provide a simple and efficient construction wherein two cutter bars and knives are employed and are moved alternately in opposite directions to effect the cutting operation, further objects and advantages of the invention being evident from the following specification.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view showing the cutter mechanism of the present invention. Fig. 2 is a longitudinal section of Fig. 1, showing the cutter-knives in section and the operating-eccentrics in elevation. Fig. 3 is a section on line 3 3 of Fig. 1 and showing a portion of a guard in elevation. Fig. 4 is a detail perspective view showing an end of a cutter-bar with the coupling-plate, by means of which the eccentric-rod is connected with the cutter-bar. Fig. 5 is a plan view showing the application of the invention where there is only a single cutter-bar. Fig. 6 is a section on line 6 6 of Fig. 5.

Referring now to the drawings, 5 represents a finger-bar, carried by a bracket 6, connected with the frame of the mower in the usual manner, and in which bracket is journaled the drive-shaft 7, from which the cutter-bars are reciprocated.

The finger-bar 5 has fingers 8 connected thereto and extending forwardly therefrom, and at its inner end is a shoe 10, which bears upon the ground and supports the inner end of the finger and cutter-bars. The fingers and shoe are of usual form exteriorly; but the recesses in their upper faces are formed larger than usual to accommodate two cutter-bars 11 and 12, which are slidably disposed in these recesses and in mutual contact. The knife 13 of the rear cutter-bar 11 lies upon the knife 14 of the forward cutter-bar 12, the upper knife being held down upon the lower

knife by means of plates 15, which are attached to the finger-bar and rest against the upper face of the upper knife.

The transverse slot or recess 16 of the shoe 10 is of such length that as the cutter-bars are reciprocated during the cutting operation their inner ends will lie at all times in this slot, the adjacent faces of these inner ends of the cutter-bars being held in slidable contact by reason of the contact of the outer faces of the bars with the side walls of the slot.

Upon the under side of each of the cutter-bars and longitudinally thereof is fixed a plate 20 and 21, respectively, which plates have ears 23 and 24 thereon, which are bent to form bearings for the outer ends of the operating eccentric-rods 25 and 26, hereinafter described, the ears lying adjacent the inner sides of the bars, as shown.

Upon the shaft 7 are fixed two eccentrics 28 and 29, having straps 30 and 31 engaged therewith, and to which straps are connected the eccentric-rods, said rods being screwed into threaded perforations in radial lugs 32 and 33 upon the straps. The outer ends of the rods 25 and 26 are bent toward each other at their outer ends, as shown at 34 and 35, and these laterally-bent portions are engaged with the bearings of the ears 23 and 24, the outer faces of the rods lying against the side walls of the slot 16, so that the inturned ends of the rods are held from displacement from their bearings. With this construction it will be seen that as the shaft is rotated the cutter-bars will be reciprocated and that while the connection of the eccentric-rods with the cutter-bars is simple it is efficient and displacement of the eccentric-rods is absolutely prevented.

It will be understood that in practice various modifications of the construction shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

At times it may be desirable to remove the double-cutter attachment from the part 6 and to substitute for it an attachment of common form having only a single movable cutter, in which event the parts are disposed as shown in Fig. 5 of the drawings. In this figure and Fig. 6, 5' represents a supporting-bar for the

fixed knives 6', while 12' represents the reciprocatory cutter-bar carrying the movable knives 12^a, which shear against the fixed knives. In this arrangement a helical spring 35' is connected at one end to the bar 5' and at the opposite end to the strap 31 to prevent the strap 31 from flying around as its eccentric is rotated, this strap 31 in this arrangement having no function. The connecting-rod 25 of strap 30 is connected with the reciprocatory cutter-bar by engagement of its laterally-turned end with the ear 23', and thus as shaft 7 rotates the movable knives are reciprocated. In this arrangement 8' represents a guard-finger.

What is claimed is—

1. A mowing-machine comprising a finger-bar, a shoe connected with the finger-bar and having a transverse slot, cutter-bars disposed slidably in the slot, each bar having a bearing at its end and adjacent its inner face, and operating-rods having inturned ends engaging the bearings and resting adjacent their inturned ends against the side walls of the

slot to prevent displacement of the rods from the bearings. 25

2. A mowing-machine comprising a bracket having a shaft mounted thereon, eccentric carried by the shaft, a finger-bar extending from the bracket, a shoe connected with the bracket and having a transverse slot, cutter-bars disposed slidably in the slot, plates connected with the bars and having ears bent to form bearings, said ears being separated from the side walls of the slot by interspaces, and eccentric-rods connected adjustably with the eccentrics and having their outer ends bent toward each other and engaged with the ears, said bars adjacent the ears lying against the side walls of the slot to hold their inturned ends in engagement with the ears. 30 35 40

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

VOLNEY J. LONG.

Witnesses:

T. M. COOPER,
B. HENDERSON.