

No. 765,559.

PATENTED JULY 19, 1904.

O. C. CRANDALL.
MOWING MACHINE.

APPLICATION FILED JAN. 5, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1

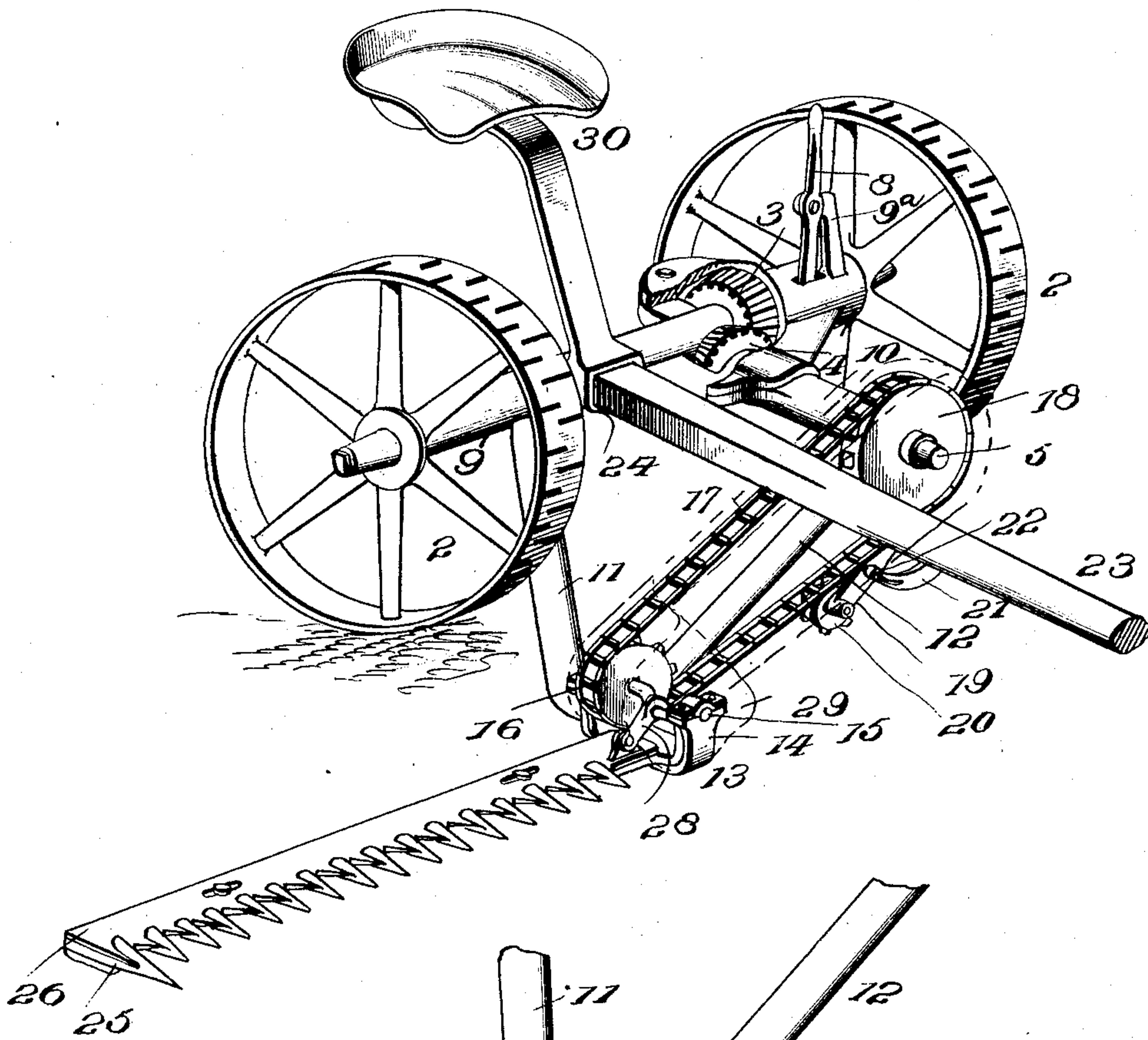
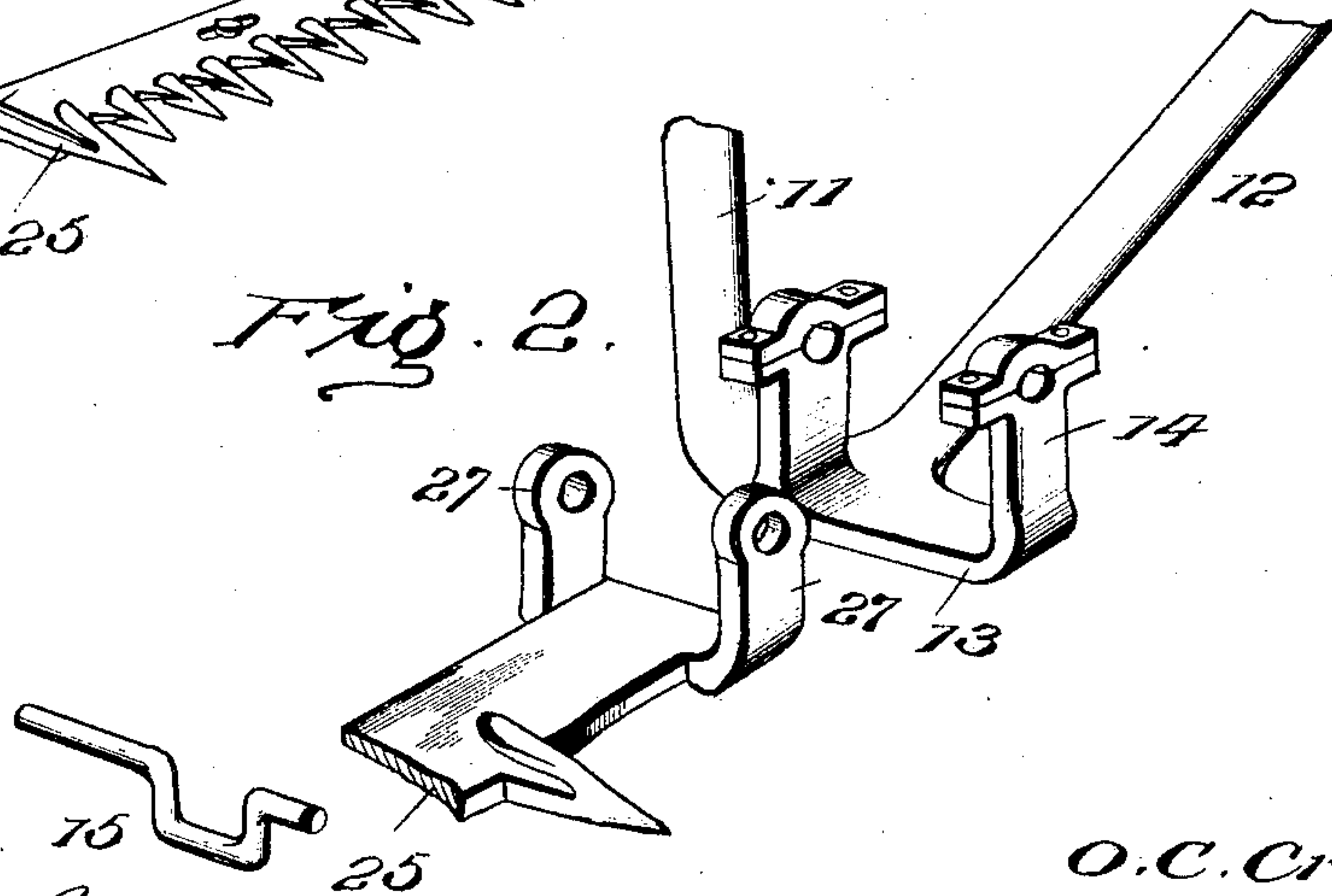


Fig. 2.



Witnesses

W. A. Woodson

Inventor

O. C. Crandall

By

R. A. Lacey, Attorneys

No. 765,559.

PATENTED JULY 19, 1904.

O. C. CRANDALL.
MOWING MACHINE.

APPLICATION FILED JAN. 5, 1904.

NO MODEL.

2 SHEETS—SHEET 2.

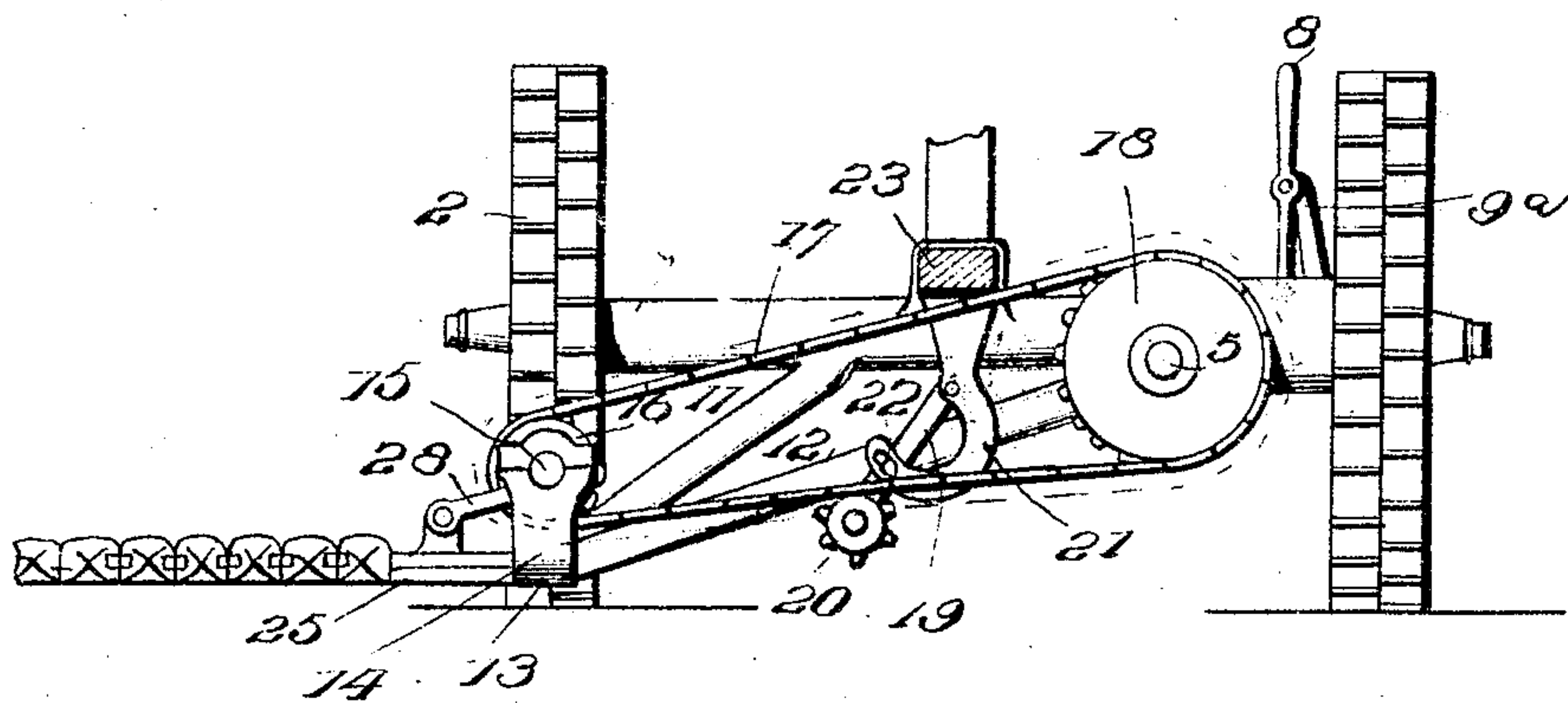
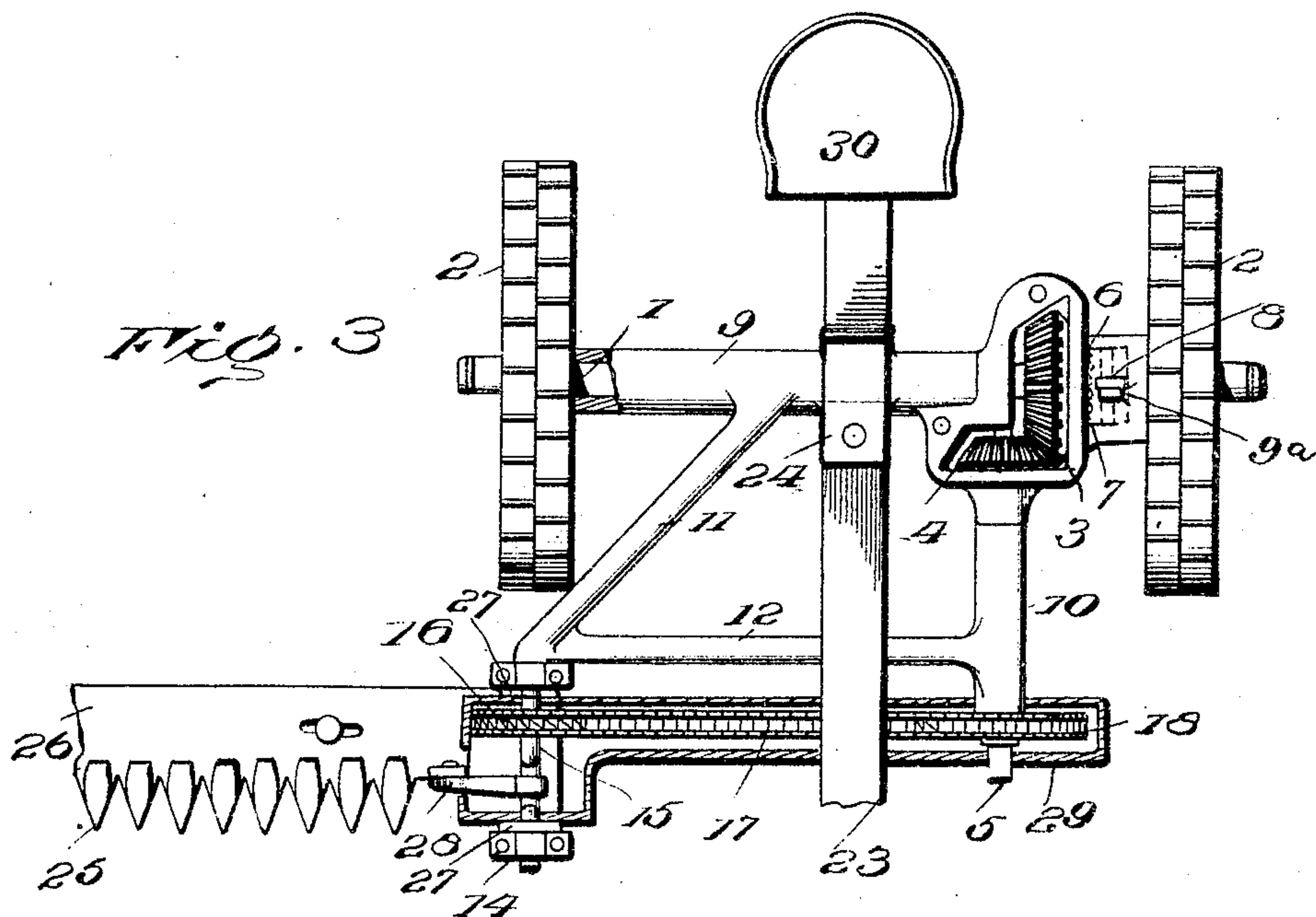


Fig. 4

Witnesses

W. H. Woodson
W. H. Woodson

Inventor
O. C. Crandall

By

R. H. B. Lacy, Attorneys

UNITED STATES PATENT OFFICE.

ORLANDO C. CRANDALL, OF STANWOOD, MICHIGAN, ASSIGNOR OF ONE-HALF TO LYMAN E. CRANDALL, OF STANWOOD, MICHIGAN.

MOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 765,559, dated July 19, 1904.

Application filed January 5, 1904. Serial No. 187,758. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO C. CRANDALL, a citizen of the United States, residing at Stanwood, in the county of Mecosta and State of Michigan, have invented certain new and useful Improvements in Mowing-Machines, of which the following is a specification.

This invention appertains to the class of agricultural machinery designed primarily for cutting standing grain, the purpose being to improve and simplify the general construction, to lighten the draft, and to dispose the parts so as to minimize side draft and enable the machine to be under perfect control at all times.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a mowing-machine embodying the invention. Fig. 2 is a detail perspective view of the pivotal end of the finger-bar, the corresponding end portion of the frame to which the finger-bar is pivoted, and the crank-shaft, the parts being separated and disposed in a group. Fig. 3 is a top plan view of the machine, parts being broken away. Fig. 4 is a front view of the machine, the tongue being in section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The axle is indicated at 1 and is provided with ground-wheels 2 of ordinary construction and mounted upon the spindles or axle-arms in the accustomed manner, so as to cause forward rotation of the axle as the machine is advanced over the field, but admit of backward movement of the ground-wheels without imparting motion to the operating parts. A bevel gear-wheel 3 is loosely mounted upon

the axle 1 and is in mesh with a bevel-pinion 4, secured to the inner end of the longitudinal shaft 5. A half-clutch 6 is provided upon the outer side of the bevel gear-wheel 3 and coöperates with a companion half-clutch 7, slidably mounted upon the axle 1 and keyed thereto for rotation therewith. The half-clutch 7 is movable upon the axle 1 by means of the lever 8, fulcrumed to the standard 9^a, projected upward from the frame.

The frame carrying the operating parts is loosely mounted upon the axle 1 and comprises the rear bar 9, longitudinal bar 10, and brace-bars 11 and 12, the latter inclining laterally and downwardly toward its juncture with the brace-bar 11, which likewise has a downward inclination toward the point of juncture with the bar 12. The bars 9 and 10 are tubular, the former receiving the axle 1 and the latter receiving the shaft 5. A shoe 13 is provided at the juncture of the brace-bars 11 and 12 and extends forward and is provided with vertically-disposed standards 14, to which are journaled the crank-shaft 15, from which a cutting mechanism receives motion. The crank-shaft has secured thereon a sprocket-wheel 16, which is connected by sprocket-chain 17 with a sprocket-wheel 18, fastened to the outer end of the shaft 5. The sprocket-chain 17 is maintained under proper tension by a tightener, which consists of a pivoted arm 19, provided with a pulley 20, and a bracket-arm 21, having the pivoted arm 19 secured thereto in the adjusted position by the fastening 22. The bracket-arm 21 is stationary and is slotted or provided with a series of openings to receive the fastening 22, by means of which the pivoted arm is held in position. The arms 19 and 21 are attached to a convenient portion of the frame and in the present instance are shown connected to the pole or tongue 23, which is attached at its inner or rear end to the bar 9, the latter being provided with a spur or socket 24 for its reception.

The cutting mechanism comprises the finger-bar 25 and the cutter-bar 26, the finger-bar being provided at its inner end with ears 27, apertured to receive end portions of the

crank-shaft 15, upon which the finger-bar is pivotally mounted. The finger-bar 25 is provided with the usual guard-fingers and ledger-cutters for coöperation with the cutters of the
5 plate or bar 26. A short pitman 28 connects the crank portion of the crank-shaft 15 with a lug projected upward from the cutter-bar 26 and transmits reciprocating motion thereto. By having the cutting mechanism mounted
10 in coaxial alinement with the crank-shaft it may be turned into a vertical position or folded upon the machine so as to reduce the width of the implement, thereby enabling it to readily pass through a gate or over a road
15 or to be conveniently stored, so as to occupy the smallest amount of space possible. It will be observed that the cutting mechanism may be turned upward or downward without affecting the tension of the sprocket or drive
20 chain 17, this being due to its center of motion coinciding with the axis of the crank-shaft. A housing 29 is arranged to inclose the lower portion of the crank-shaft, sprocket-wheel 16, and pitman 28, thereby preventing
25 grain or other matter choking and interfer-

ing with the free operation thereof. The driver's seat 30 is connected to the rear portion of the frame and is located in the rear thereof, thereby enabling the weight of the driver to be utilized as a counterbalance for
30 equalizing the weight upon the axle 1, which is of material advantage.

Having thus described the invention, what is claimed as new is—

In a mowing-machine, the combination of 35 the frame having a portion laterally and downwardly inclined and terminating in a shoe, standards projected upward from said shoe, a shaft mounted in said standards, means for imparting movement to the shaft from a
40 ground-wheel, and cutting mechanism pivotally mounted upon said shaft and receiving motion therefrom, substantially as set forth.

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

ORLANDO C. CRANDALL. [L. s.]

Witnesses:

BURT W. JONES,

JOHN GREEN.