

No. 763,068.

PATENTED JUNE 21, 1904.

J. MUSSELL.

SWATH CUTTING ATTACHMENT FOR MOWING MACHINES.

APPLICATION FILED JULY 30, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

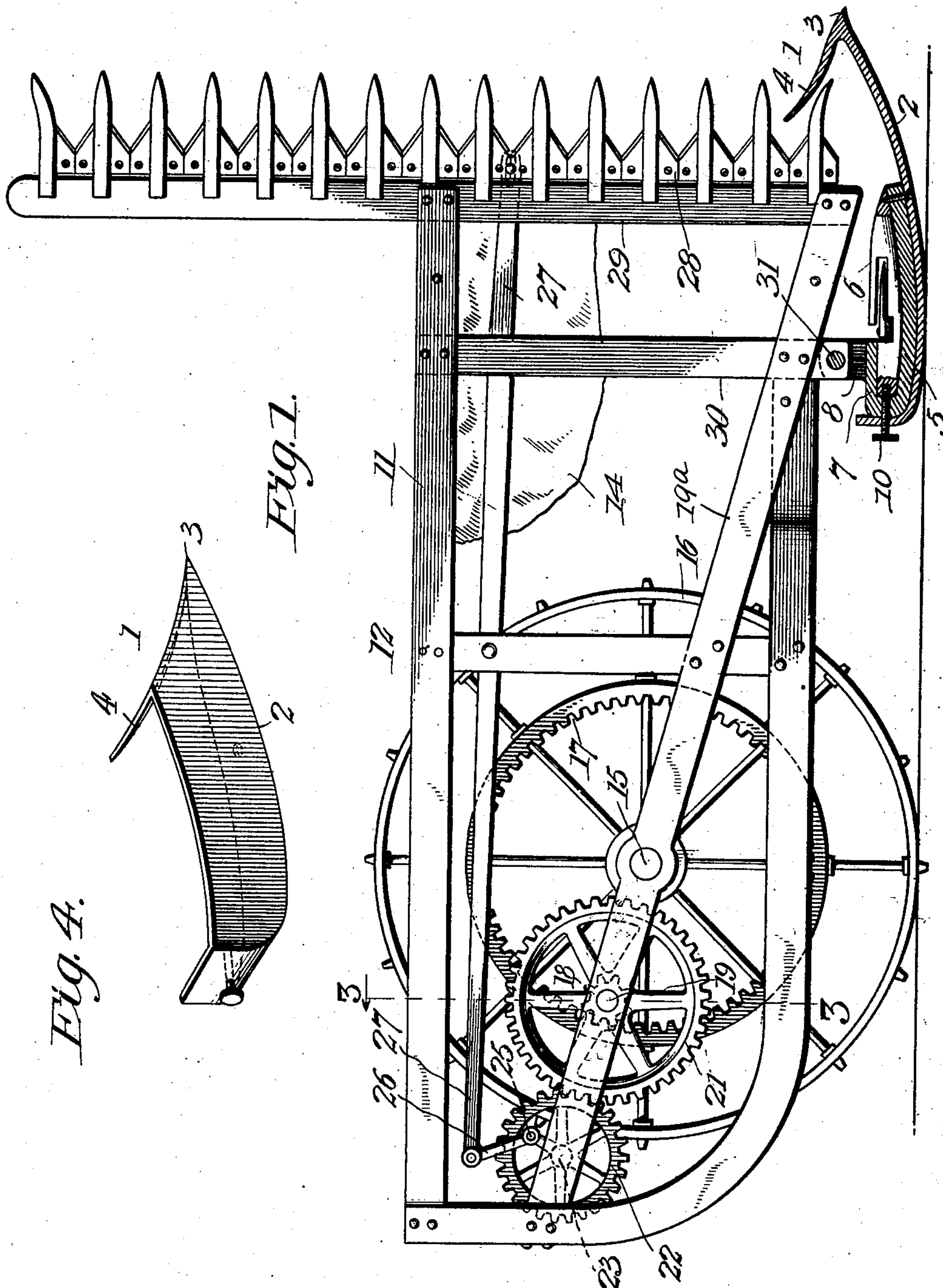


Fig. 4.

Fig. 1.

Witnesses
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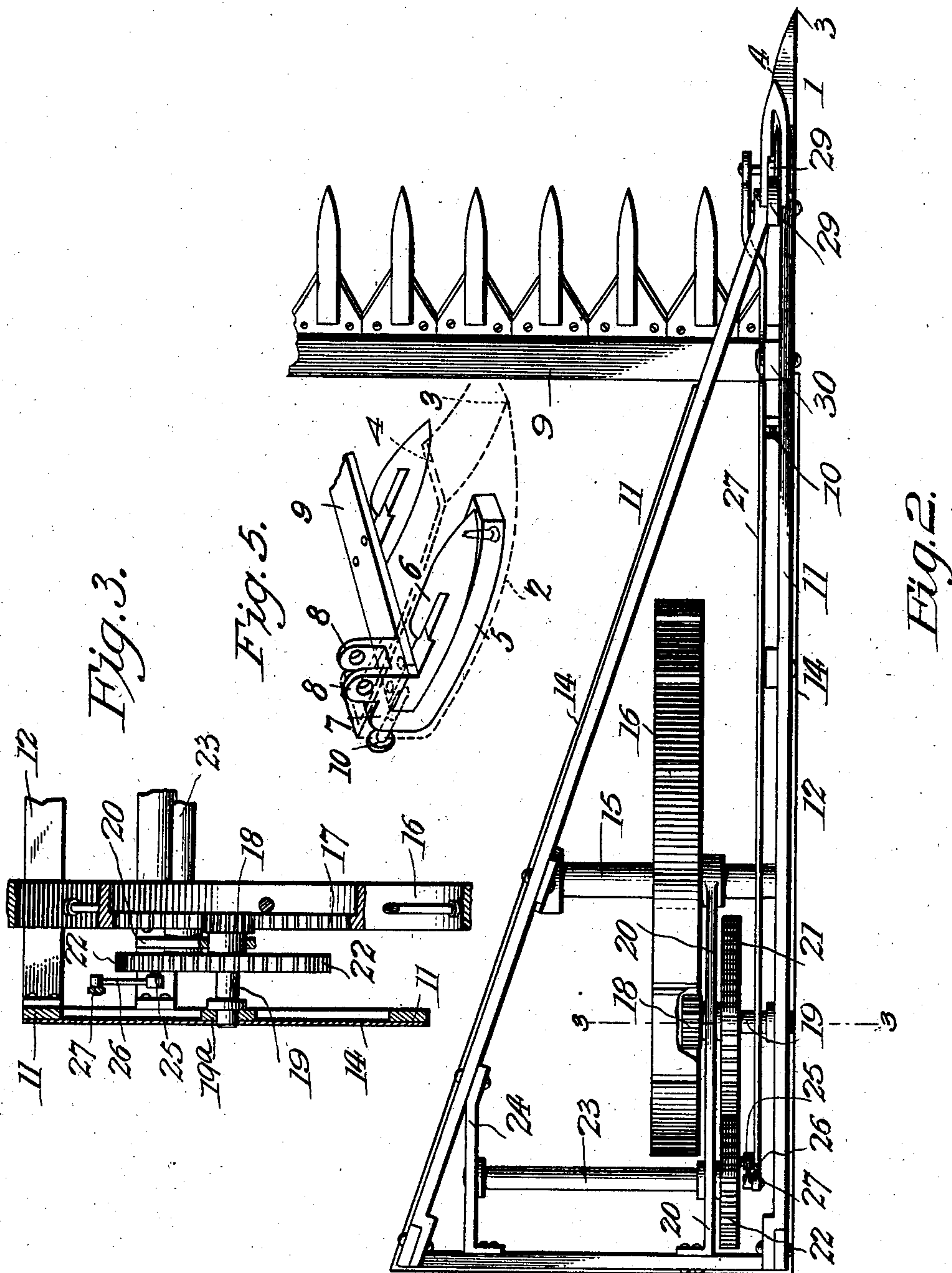
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UNITED STATES PATENT OFFICE.

JACOB MUSSELL, OF HOMEDALE, IDAHO.

SWATH-CUTTING ATTACHMENT FOR MOWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 763,068, dated June 21, 1904.

Application filed July 30, 1903. Serial No. 167,618. (No model.)

To all whom it may concern:

Be it known that I, JACOB MUSSELL, a citizen of the United States, residing at Homedale, in the county of Owyhee and State of Idaho, have invented a new and useful Swath-Cutting Attachment for Mowing-Machines, of which the following is a specification.

This invention relates to swath-cutting attachments for mowing-machines; and it may be described as an improvement upon the device for which Letters Patent of the United States No. 625,981 were granted to myself on the 30th day of May, 1899.

My invention comprises a vertically-disposed cutting apparatus adapted to cooperate with the ordinary horizontal cutting mechanism to cut and separate the swath from the standing crop, so as to clear the track for the next round of the machine. By my present invention I aim to dispose the said vertical cutting apparatus in alinement with the extreme outer end of the horizontal cutter-bar, to contrive an improved frame whereby the progress of the machine shall not be impeded, and to produce a device which shall possess superior advantages in point of simplicity, durability, ease and certainty of operation, and general efficiency.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional elevation of my improved swath-cutting attachment for mowing-machines, the near side wall and a portion of the far wall having been removed. Fig. 2 is a top plan view of the same. Fig. 3 is a transverse sectional view taken on the line 3-3 in Fig. 2. Fig. 4 is a perspective detail view of the improved shoe which forms a part of my invention. Fig. 5 is a perspective detail view showing the outer end of a finger-bar to which my improved shoe and its related parts have been attached, said shoe being shown in dotted lines.

Corresponding parts in the several figures are indicated by similar numerals of reference.

In carrying out my invention I provide a

shoe of the peculiar construction clearly illustrated in Fig. 4 of the drawings, by reference to which it will be seen that said shoe, which is generally designated 1, comprises a base or runner frame 2, having a point 3 curved in an upward and forward direction and a guard 4 extending rearwardly and upwardly from said point. Said base contains a frame 5, connected therewith by means of bolts or rivets, said frame being provided at its rear edge with an overhanging flange 7, having upturned lugs 8, said flange serving for the attachment of the finger-bar 9 of an ordinary cutting apparatus, while the upturned lugs 8, which are transversely perforated, serve for connection with the frame of my improved apparatus, as will be hereinafter described. The frame 5 within the shoe supports the outermost finger 6 of the cutting apparatus, which is secured at its front end by means of a screw and at its rear end by means of a set-screw 10, extending through the rear wall of the shoe 1, frame 5, and into the heel of the finger 6. Other suitable means may be employed within the scope of my invention for effecting the necessary connection.

The frame of my improved attachment is composed of suitable frame-bars 11, which converge forwardly, so as to form a frame or casing, the ground plan of which forms a right-angled triangle, the hypotenuse of which faces inwardly toward the machine to which my improved apparatus is attached, while the outer rear sides of said frame are disposed at right angles to each other. Said frame, which as a whole is designated 12, is provided with side plates or walls 14, serving to shield and guard the operating mechanism which is contained within said frame or casing. The walls 14, which extend over the sides and the rear end of the casing 12, are provided with bearings for a shaft 15, carrying a traction-wheel 16, which travels upon the ground and which is provided with an internal gear 17, meshing with a pinion 18, mounted upon a short shaft 19, journaled in a diagonal brace member 19^a, forming a part of the frame of the casing, and in a brace 20. The diagonal brace member 19^a also serves as one of the supports for the shaft 15. The shaft 19 also carries a gear-

wheel 21, meshing with a pinion 22 upon a transverse shaft 23, having its bearings in the brace 20 and in an additional brace 24 near the rear end of the casing. The pinion 22 is
 5 provided with a wrist-pin 25, connected by a link 26 with the rear end of a lever 27, the front end of which is suitably connected with and serves to operate the vertically-movable cutter-bar 28 of the vertically-disposed cut-
 10 ting apparatus, which in addition to said cutter-bar comprises a finger-bar 29, which is suitably mounted at the front end of the frame or casing. The latter is provided with a vertical brace-bar 30, the lower end of which is
 15 fitted between the ears or lugs 8 of the shoe 1, with which it is connected by means of a transverse pin 31.

It will be observed from the foregoing description that the vertical cutting apparatus
 20 of my invention is disposed at the extreme outer end of and slightly in advance of the horizontal cutting apparatus of the mowing-machine to which it is attached. The consequence is that the swath will be cut in ad-
 25 vance of the mowing-machine and being thus divided from the standing crop will be more efficiently and easily operated upon by the horizontal cutting apparatus. The weight of the frame 12 added to that of the gearing
 30 contained within said frame is sufficient to cause the traction-wheel 16 to hug the ground with sufficient tenacity to operate the vertical cutting apparatus, while the latter is so dis-
 35 posed as to render entanglement with the crop practically impossible. The guard 4 of the shoe serves to elevate the material that is to be operated upon to the lower teeth of the vertical cutting apparatus, and the latter is
 40 thus enabled to operate without retarding the progress of or imposing any severe additional draft upon the machine.

The peculiar construction of the frame of my improved cutting apparatus is such that
 45 its outer side is straight in the direct line of draft, and consequently does not by engaging the standing crop check the progress of the machine. At the same time the inner side or hypotenuse of the triangular frame will divide the swath from the crop by forcing it
 50 in an inward direction, so that no obstacle will exist to the progress of the machine on its subsequent round.

I have in the foregoing described a simple and preferred form of my invention; but I desire it to be understood that I do not limit
 55 myself with regard to the structural details of the same, but reserve the right to any changes, alterations, and modifications which may be resorted to within the scope of my invention and without departing from the spirit or sac-
 60 rificing the utility of the same.

Having thus described my invention, I claim—

1. In a swath-cutting attachment for mow-
 ing-machines, the combination with the sickle-
 65 bar, of a shoe detachably connected therewith, a right-angled, triangular casing connected with said shoe, vertically-disposed cutting apparatus supported by said casing, a shoe in
 70 advance of the horizontal cutting apparatus of the mower, and means within said casing for transmitting motion to said vertical cutting apparatus.

2. In a swath-cutting attachment for mow-
 ing-machines, the combination with the sickle-
 75 bar, of a shoe connected detachably with the outer end of the same and provided with upwardly-extending lugs, a right-angled, triangular casing having a frame-bar extending
 80 between and connected with said lugs, a vertically-disposed cutting apparatus supported by said shoe and casing, a traction-wheel within the latter engaging the ground, and means for transmitting motion from said trac-
 85 tion-wheel to the vertically-disposed cutting apparatus.

3. In a swath-cutting attachment for mow-
 ing-machines, the combination with the sickle-
 bar, of a shoe detachably connected with the
 90 outer end of the same, a right-angled, triangular casing having pivotal connection with said shoe, a vertically-disposed cutting apparatus disposed at the front end of said casing and supported by the latter and by the shoe,
 95 and a guard extending upwardly and rearwardly from the point of the shoe.

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

JACOB MUSSELL.

Witnesses:

WALTER GRIFFITHS,
 R. B. MURRAY.