

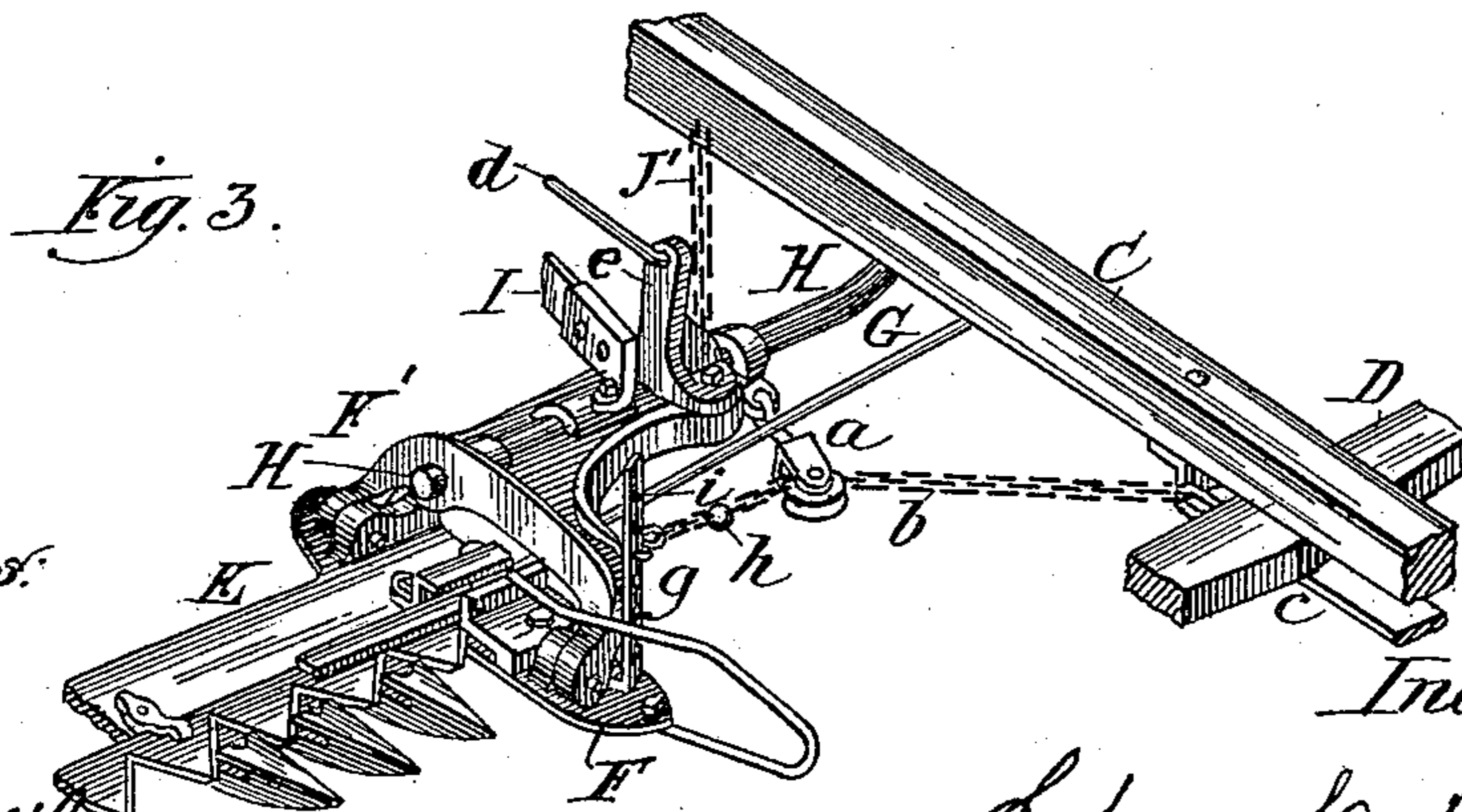
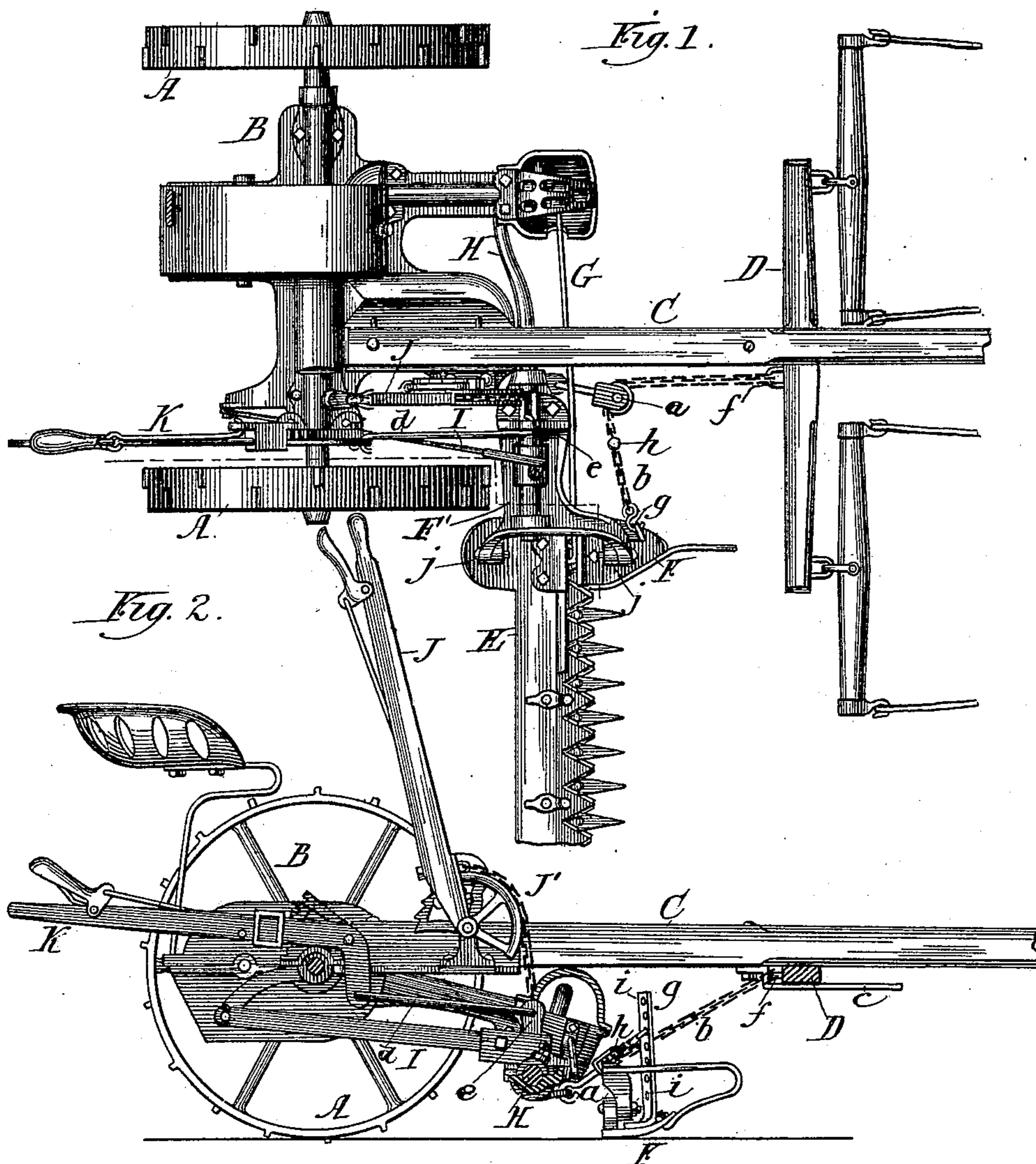
(No Model.)

J. C. BLOOM.

MOWER.

No. 396,023.

Patented Jan. 8, 1889.



Witnesses:

Charles H. Booth

Charles G. Buffin

Inventor:

John C. Bloom

UNITED STATES PATENT OFFICE.

JOHN C. BLOOM, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO EMERSON,
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MOWER.

SPECIFICATION forming part of Letters Patent No. 396,023, dated January 8, 1889.

Application filed January 27, 1887. Serial No. 225,661. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BLOOM, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, and a citizen of the United States, have invented a new and useful Improvement in Mowers, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view; Fig. 2, a side elevation with one wheel removed and the shoe partly cut and broken away; Fig. 3, a detail of the inner shoe and its connections.

The object of this invention is to provide means for utilizing the power or draft of the team in partly balancing or floating the finger-bar of a mower while being drawn forward, so as to diminish its friction on the ground at one or both ends, and also to utilize the same power in assisting the operator using the hand-lever to raise the finger-bar from the ground, and its nature consists in the several parts and combinations of parts, hereinafter described and claimed as new.

In the drawings, A B represent the ordinary wheels, frame, and gearing of a mower; C, the tongue or draft-pole; D, the double-tree; E, the finger-bar; F, the inner shoe; F', a yoke; G, the pitman-rod; H, the coupling-arm; I, a thrust-bar; J J', the hand-lever, sector, and chain for elevating the shoe; K, the hand-lever for rocking or changing the pitch of the finger-bar and its guards; *a*, sheave or pulley attached to the inner end of the yoke; *b*, chain or rope; *c*, supporting-strap for the double-tree; *d*, connecting-rod.

e is an arm fixed to the inner end of the yoke F', whereby the finger-bar is rocked laterally; *f*, staple or hook for attaching the chain *b* to the double-tree; *g*, standard or post located at or near the inner front end of the inner shoe; *h*, limit-stop on chain *b*; *i*, adjusting-holes in post *g*.

The wheels A, frame B, with its included gearing, and tongue C are of the ordinary construction of front-cut mowers. The finger-bar E, with its sickles and guards, is also of the ordinary construction, but may be of greater length than that of the ordinary mower. The shoe F is also of the ordinary construction, except that at or near its inner front end the post

or standard *g* is applied, and at or near the inner end of the yoke F' the sheave or loop *a* is applied. The sheave or loop *a* may be applied to the coupling-arm H. The finger-bar is folded up lengthwise on the joint *j*, and rocks laterally upon the coupling-arm, upon which the shoe is sleeved. The hand-levers J K are also of the ordinary construction and operation.

The double-tree D is applied to the tongue at or about the ordinary place, and is supported below or above the tongues, as may be most convenient. To the clevis or staple *f* of the double-tree the chain or wire rope *b* is attached, which passes through the sheave *a*, and is attached to the post or standard *g* at one of the adjusting-holes *i*, higher or lower, according to the height or position desired for the outer end of the finger-bar. If the chain is attached to the upper hole, less power is required to raise the outer end of the finger-bar with a less movement, while if placed in a lower hole more power is required, while a greater elevation of the outer end is obtained. By the use of these holes the draft can be adjusted so as to float the finger-bar or relieve it from the greater part of its friction upon the ground, it being designed to nearly balance the outer end of the finger-bar, or the entire finger-bar, by the draft of the team.

As shown, the chain is provided with a limit-stop, *h*, which comes in contact with the sheave or loop *a* to prevent the further passage of the chain or rope, and when the limit-stop is in contact with the sheave the draft or power of the team is then applied to the sheave, which tends to elevate the shoe and the entire finger-bar, and by this arrangement the outer end is prevented from rising more than a very short distance, and then both ends will be elevated together. This arrangement, in addition to diminishing the weight of the finger-bar on the ground, assists the operator by lessening the weight on the lever J.

It will be understood that the chain or other flexible connection, *b*, may be directly applied to the inner end of the shoe and serve a useful purpose, while a gag-lever, gag-spring, or other device may be used for floating or bal-

ancing the outer end of the finger-bar, and
also that this device or arrangement of de-
vices may be used for floating the outer end
of the finger-bar by the direct application to
5 the post *g*, in which case the sheave, if one is
used, will be attached to the tongue or to some
immovable part of the machine, as shown in
an application filed by me November 15, 1886,
Serial No. 218,856. This arrangement is simple
10 in its construction and operation, and will be
found useful and a great relief to parties op-
erating mowers by relieving them of the great
manual labor required to operate the ma-
chine, and relieve the machine of a consider-
15 able side draft, making it run lighter in its
work, while the machine is in no wise retarded
in its adaptability or capacity to follow in-
equalities of the surface, and the inner end of
the finger-bar will not bear heavily on the
20 ground.

It will be understood that in machines
where only one horse is used the whiffletree
will take the place of the evener and will be
made movable, and that one end of the chain
b will be attached thereto.

What I claim as new, and desire to secure
by Letters Patent, is—

The hinged coupling-arm, the finger-bar *E*
and pivoted shoe *F*, post *g* on the shoe, and
sheave *a* on the coupling-bar, with the flexi- 30
ble connection *b*, having the limit-stop *h*
thereon, in combination with the movable
evener, substantially as specified.

JOHN C. BLOOM.

Witnesses:

LUCIUS C. WEST,
CHARLES H. BOOTH.