(No Model.)

2 Sheets—Sheet 1.

T. THOMPSON.

DRAFT EQUALIZER.

No. 448,095. Patented Mar. 10, 1891.

Fig. 1.

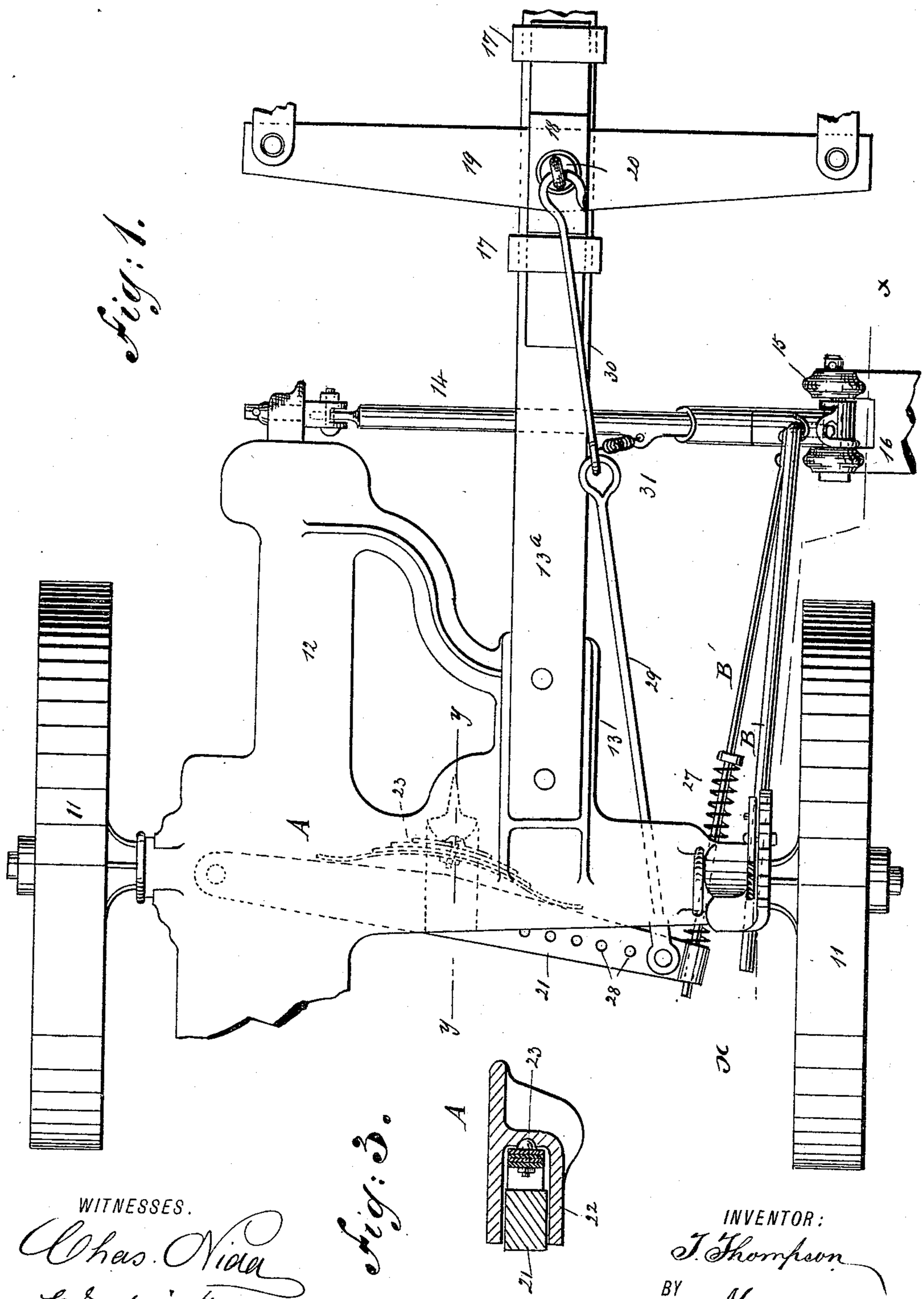


Fig. 3.

WITNESSES.

Chas. Nida

C. Sedgwick

INVENTOR:

T. Thompson

BY Munn & Co.

ATTORNEYS

(No Model.)

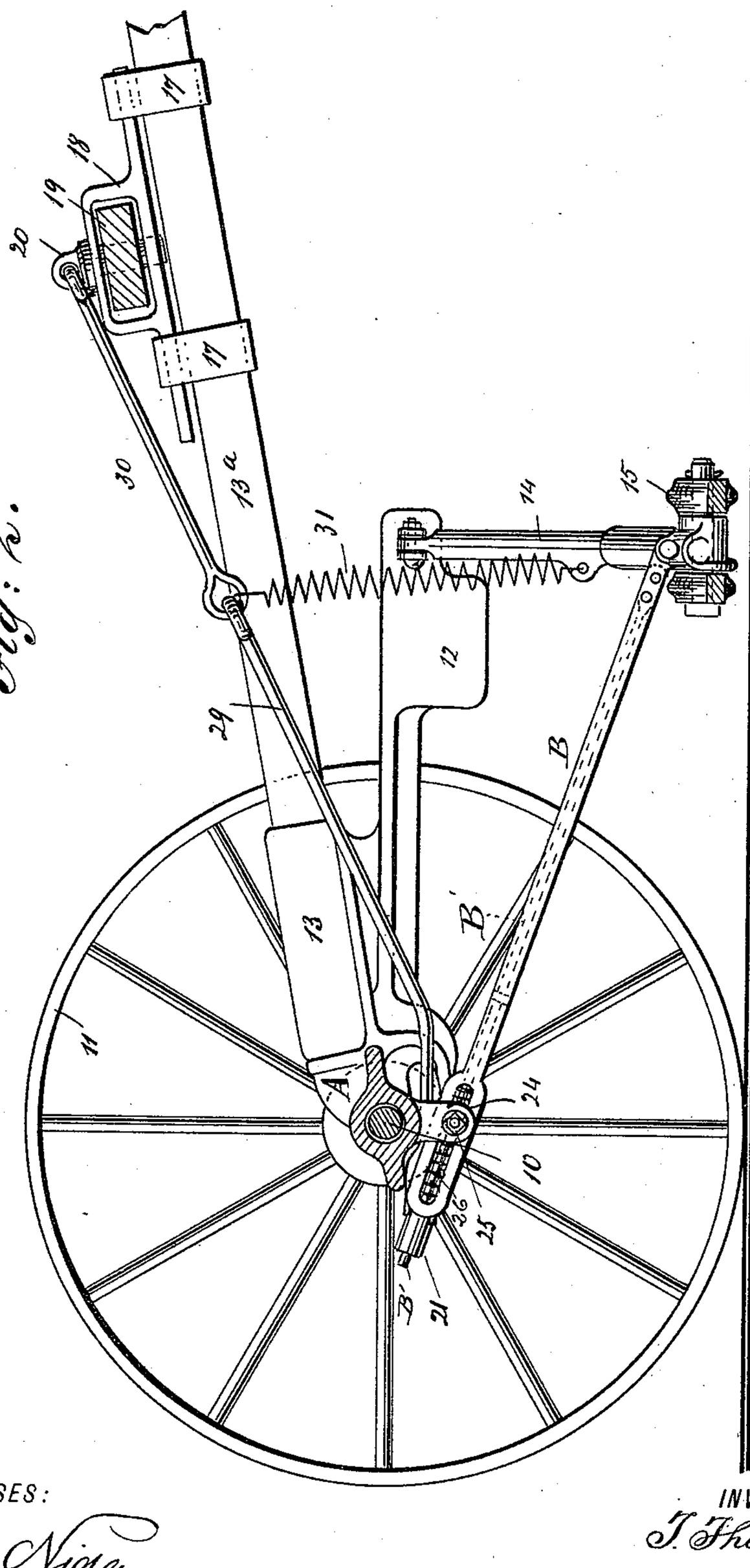
2 Sheets—Sheet 2.

T. THOMPSON.

DRAFT EQUALIZER.

No. 448,095. Patented Mar. 10, 1891.

Fig. 2.



WITNESSES:

Chas. Nichols.

C. Sedgwick

INVENTOR:

T. Thompson

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

THOMAS THOMPSON, OF TOWNSEND, MONTANA, ASSIGNOR TO HIMSELF AND WILLIAM S. THOMPSON, OF SAME PLACE.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 448,095, dated March 10, 1891.

Application filed October 25, 1890. Serial No. 369,325. (No model.)

To all whom it may concern:

Be it known that I, THOMAS THOMPSON, of Townsend, in the county of Meagher and State of Montana, have invented a new and useful Improvement in Draft-Equalizers, of which the following is a full, clear, and exact description.

My invention relates to an improved draft-equalizer especially adapted for use in connection with mowing and similar machines, and has for its object to render the work of drawing the machine comparatively easy for the team, and to so construct the device that as the machine is moved forward the draft-bar, through the medium of the team, will exert sufficient forward pressure directly upon the rear edge of the finger-bar to overcome any tendency toward a side movement upon the part of the latter, thereby holding the finger-bar always at a right angle to the tongue and the tongue straight with the team.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a portion of a mowing-machine, illustrating the application of the device. Fig. 2 is a section taken on line $x\,x$ of Fig. 1, and Fig. 3 is a section on the line $y\,y$ of Fig. 1.

The frame A of the machine is illustrated as constructed tubular at its rear end to receive an axle 10, which axle is held to revolve freely in the frame, and is provided at each end with a supporting-wheel 11, one or both of which wheels may be adapted to communicate motion to the driving mechanism of the sickle-bars in any well-known manner.

The frame is provided with two forward extensions 12 and 13. The extension 13 is given an upward inclination, as best illustrated in Fig. 2, and constitutes a socket for the reception of the rear end of the tongue 13^a of the implement. The extension 12 is more or less horizontal, and to one side thereof the upper end of a bar 14 is pivoted, which bar extends downward and is secured to a shoe or knuckle 15 of the finger-bar 16, the said knuckle virtually constituting a portion of the said finger-bar.

Near the frame A straps 17 are secured to the tongue 13^a, and between the upper faces of said straps and the upper face of the tongue a yoke 18 is held to slide, the ends of which yoke are sufficiently long to extend through the straps, as best illustrated in Fig. 2. In the body of the yoke a double-tree 19 is pivoted by means of a suitable pin 20, as is shown in both Figs. 1 and 2.

Beneath the frame, preferably at the rear of the axle, a draft-bar 21 is transversely located. The end of the draft-bar farthest from the side of the machine carrying the finger-bar is pivotally attached to the bottom of the frame, preferably just beneath the axle, as shown in dotted lines, Fig. 1. The draft-bar is of sufficient length to extend to the opposite end of the machine. The draft-bar at its center passes through a strap or yoke 22, secured to the bottom of the frame A, as is best shown in Fig. 3 and in dotted lines in Fig. 1, and to the forward wall of said strap or yoke a spring 23 is centrally secured, which spring is ordinarily of a semi-elliptical-leaf pattern, and the extremities of the spring have a bearing upon the forward edge of the draft-bar at each side of its center.

Upon the end of the frame, beneath the axle and near the free end of the draft-bar, a lug 24 is formed, which extends downward, and the said lug is provided with a pin 25, which pin passes through a longitudinal slot 26, formed in the upper end of a connecting-rod B, which connecting-rod at its lower end is pivotally connected with the knuckle 15 of the finger-bar, as illustrated in Fig. 2.

A second rod B′ is secured at its lower end to the inner face of the connecting-rod B near the pivotal point of the latter, and the upper end of the rod B′ is passed through an eye formed in the free end of the draft-bar. The upper end of the rod B′ is encircled by a spring 27, which spring has a bearing against the forward edge of the eye in the draft-bar and against a collar formed upon the rod, as shown in Fig. 1.

At the free end of the draft-bar a series of

longitudinally-arranged apertures 28 is produced, and the rear end of a link 29 is connected with the draft-bar, preferably by means of a pin or bolt passed through one of the apertures 28. The link 29 is curved upward and forward, and its upper end is pivotally attached, preferably, to a second link 30, the forward end of which second link is connected with the upper end of the pin 20, pivoting the doubletree. The links 29 and 30 at their connection are united with the bar 14, connecting the finger-bar with the frame by a spring 31.

It will be observed that as the horses draw the implement forward through the medium of the links 29 and 30 tension is exerted upon the free end of the draft-bar, and said bar is drawn inward against the tension of its spring 23, and as the draft-bar is moved forward pressure is exerted upon the rod B′ against its spring-cushion, and thence through the medium of the connecting-bar B directly to the finger-bar at the rear side thereof. A number of holes 28 are provided in order that the device may be regulated for use with a long or with a short finger-bar.

It will be readily understood that as power is applied forwardly in the direction of one side immediately at the back of the finger-bar at its inner end the said bar will be held always at a right angle to the tongue when the latter is in its normal position, and that the tongue, by reason of the support of the finger-bar formed by the device, will not have the tendency so common in all mowing-machines to move in the direction of the finger-bar.

By reason of the peculiar construction of the device it is exceedingly durable and the finger-bar cannot be injured thereby, as the movement of one is adapted to the movement of the other.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a mowing or similar machine, the combination, with the tongue and finger-bar, of a doubletree capable of sliding upon the tongue, a draft-bar pivoted at one end to the rear of the machine, the opposite end of the bar being free to move laterally, and connections, substantially as shown and described, between the free end of the draft-bar and both the doubletree and finger-bar, as and for the purpose specified.

2. In a mowing or similar machine, the combination, with the frame, the tongue, and the finger-bar, of a draft-bar pivoted at one end beneath the frame, a spring-cushion bearing against the forward side of the draft-bar, a doubletree capable of sliding upon the tongue, an adjustable link connection between the free end of the draft-bar and the doubletree, and a cushioned connection between the free end of the draft-bar and the finger-bar, substantially as shown and described.

3. In a mowing or similar machine, the combination, with the tongue, a doubletree held to slide upon the tongue, and the finger-bar, of a spring-pressed draft-bar pivoted at one end to the frame of the machine, links connected with the doubletree and adjustably attached to the free end of the draft-bar, a rod attached to one end of the finger-bar and having a sliding connection with the free end of the draft-bar, and a cushion carried by the connecting-bar and having a bearing against the draft-bar, substantially as shown and described.

4. In a mowing or similar machine, the combination, with the frame, the tongue connected with the frame, and the finger-bar, of a spring-pressed draft-bar pivoted at one end beneath the axle of the frame, a connecting-bar having a sliding connection with the frame and a pivot connection with the finger-bar, a doubletree capable of a sliding movement upon the tongue, a link connection between the free end of the draft-bar and the doubletree at or near its center, and a rod provided with a spring cushion held to slide at one end in the free extremity of the draft-bar and having its opposite end attached to the connecting-bar near its pivotal attachment to the finger-bar, substantially as and for the purpose specified.

THOMAS THOMPSON.

Witnesses:
H. S. HYATT,
ALEC. C. CARSON.