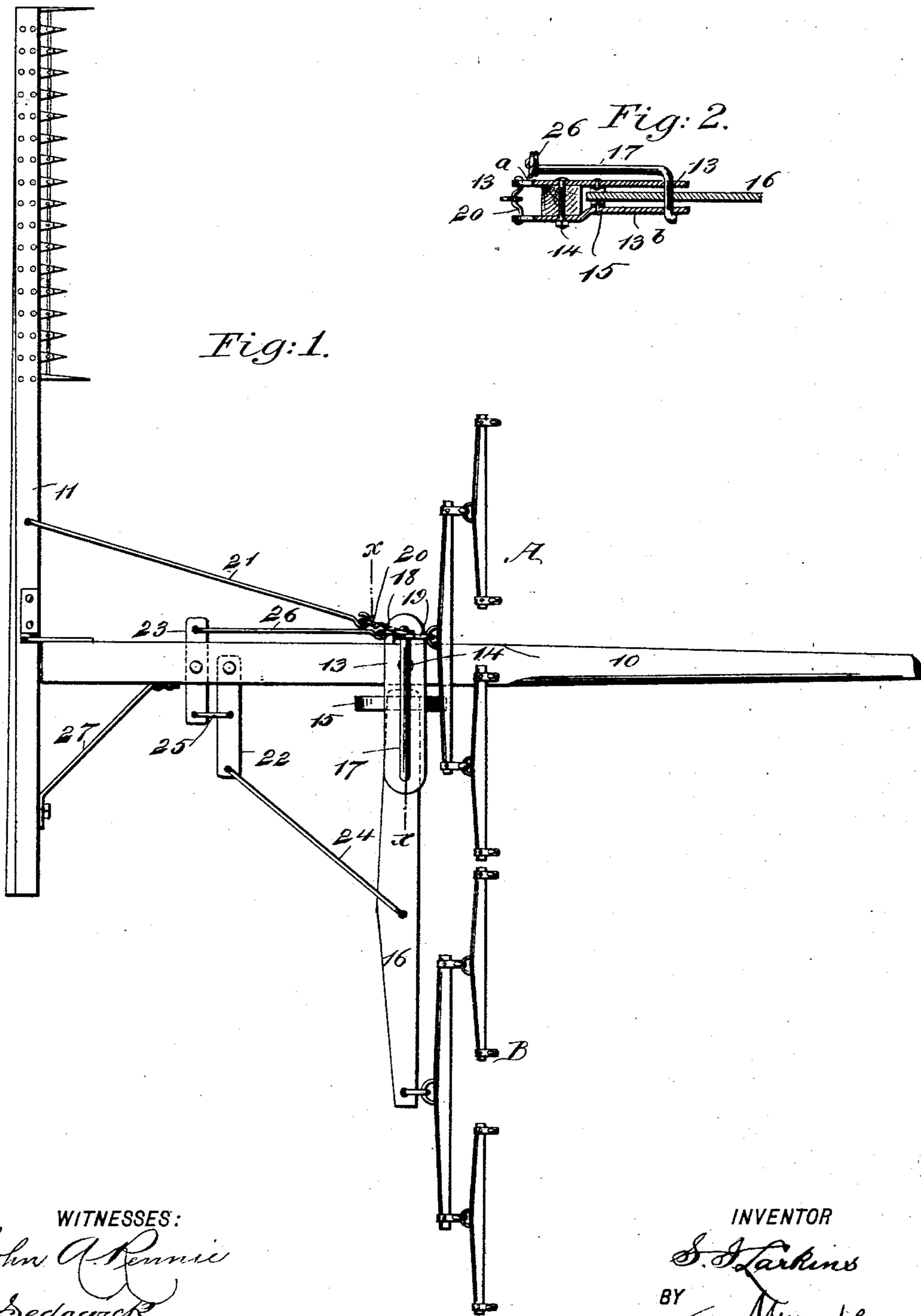


(No Model.)

**S. I. LARKINS.**  
**DRAFT EQUALIZER.**

No. 520,322.

Patented May 22, 1894.



**WITNESSES:**

John A. Rennie  
C. Sedgwick

***INVENTOR***

S. J. Perkins  
BY Munn & Co  
ATTORNEYS.

THE NATIONAL LITHOGRAPHING COMPANY,  
WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

SAMUEL I. LARKINS, OF MURRAY, IOWA.

## DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 520,322, dated May 22, 1894.

Application filed February 28, 1894. Serial No. 501,830. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL I. LARKINS, of Murray, in the county of Clarke and State of Iowa, have invented a new and Improved  
5 Draft-Equalizer, of which the following is a full, clear, and exact description.

My invention relates to an improvement in draft equalizers, and it has for its object to improve upon the construction of the equal-  
10 izer for which Letters Patent were granted to me on January 2, 1894, No. 512,039; and the object of the invention is to simplify the construction shown in the aforesaid patent and render the equalization of the draft of the  
15 cutter bar of a reaper or mower, or whatever load is to be drawn, more positive or decided.

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

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

25 Figure 1 is a plan view of the equalizer connected with the sickle bar of a reaper or mower; and Fig. 2 is a transverse section on the line *x—x* in Fig. 1.

Although I have illustrated the equalizer as  
30 applied to a reaper or mower, it will be understood that it is equally applicable to any form of vehicle or machine where an equalizer for a four-horse team and in which the team must be equally divided, is required.

35 In carrying out the invention the tongue 10 is represented as connected with the sickle bar 11 of the reaper or mower, the connection being effected in any suitable or approved manner. At the point upon the tongue where  
40 the equalizer would usually be applied a stirrup 13, is pivotally located, which stirrup as shown in Fig. 2, comprises two plates 13<sup>a</sup> and 13<sup>b</sup>, which are connected with the tongue by a  
45 bolt 14, passed through the latter and through the plates. The plates of the stirrup extend much farther beyond the right-hand side of the tongue than beyond the left-hand side thereof, and at the right-hand side of the tongue, at one side of the stirrup, a loop  
50 15, is formed, adapted to limit the movement of the inner end of the drawbar 16, which drawbar is pivotally connected with the stir-

rup near its right-hand end through the medium of a swing bar 17, which is passed downward loosely through the plates of the  
55 stirrup and through the drawbar, as is likewise shown in Fig. 2, the said swing bar being made to extend longitudinally over the top of the stirrup and about even with the left-hand side of the tongue. The left-hand end or free  
60 end of the swing bar is provided with two oppositely disposed hooks 18 and 19, and the forwardly-extending hook 19, is connected with the left-hand double-tree A, while the right-hand double-tree B is connected with the right-  
65 hand end of the draw bar 16. A clevis 20, is pivoted in the left-hand end of the stirrup, and one end of the side draft rod 21 is pivotally connected with said clevis and with the sickle bar, being attached to the latter a pre-  
70 determined distance from the left-hand side of the tongue 10. Between the sickle bar and the stirrup two equalizing bars 22 and 23, are pivotally connected preferably with the under side of the tongue. The equalizing bar  
75 22 is the forward one, and extends only beyond the right-hand side of the tongue, being connected at its outer end with the draw bar through the medium of a link 24. The inner  
80 equalizing bar 23, extends mainly beyond the left-hand side of the tongue, but likewise a predetermined distance beyond the right-hand side thereof, and the forward or right-hand equalizing bar 22 is connected by a link  
85 25 with the right-hand end of what may be called the left-hand or inner equalizing bar 23, the left-hand end of this latter equalizing bar being connected with the rearwardly-extending hook 18 of the swing bar by a connecting rod 26. A brace 27, is usually em-  
90 ployed to connect the rear end of the tongue at its right-hand side with that portion of the sickle bar extending beyond the right-hand portion of the tongue.

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

1. In a draft equalizer, the combination, with a tongue adapted to be attached to the vehicle or machine to be drawn, a stirrup lo-  
100 cated upon the tongue and extending mainly beyond one side and slightly beyond the other, a draw bar located at the right-hand side of the stirrup and extending within the same at

the said side, and a swing bar pivotally connecting the draft bar with the stirrup, extending over the latter in direction of its left-hand end, a double-tree connected with the  
5 free end of the swing bar, and a second double-tree connected with the free end of the draw-bar, of equalizing bars pivoted upon the tongue and extending beyond opposite sides, the two bars being in link connection, a connecting rod uniting the right-hand equalizing  
10 bar with the draw bar, and a similar rod uniting the left-hand equalizing bar with the free end of the swing bar, and a side draft bar connected with the left-hand end of the  
15 stirrup and likewise connected with the machine to be drawn, at the left-hand side of the tongue, as and for the purpose set forth.

2. In a draft equalizer, the combination, with a tongue adapted to be attached to a  
20 sickle bar, vehicle, or a machine to be drawn, a stirrup pivoted upon the tongue and extending beyond opposite sides thereof, guide loops located at opposite sides of the right-hand portion of the stirrup, a draw bar extending into  
25 the right-hand end of the stirrup, the inner end of the drawbar being located between the said loops, a swing bar pivoting the draw bar in

the stirrup at the right-hand end of the latter and extending over the stirrup in direction of its left-hand end, a double-tree connected with the free end of the swing bar, and  
30 a second double-tree connected with the free end of the draw bar, of a forward equalizing bar pivoted to the tongue and extending beyond the right-hand side thereof, a second  
35 rear equalizing bar pivoted to the tongue and extending beyond both sides thereof, mainly beyond its left-hand side, the right-hand end of the inner or second equalizing bar being in link connection with the forward  
40 equalizing bar, connecting rods uniting the right-hand end of the right-hand equalizing bar with the draw bar, and the left-hand end of the left-hand equalizing bar with the free  
45 end of the swing bar, and a side draft rod connected with the machine to be drawn, at the left-hand side of the tongue, said draft rod being in clevis connection with the left-hand end of the stirrup, as and for the purpose set forth.

SAMUEL I. LARKINS.

Witnesses:

T. W. HUGHEN,  
F. H. BISHOP.