(No Model.)

I. J. STONER.

DRAFT EQUALIZER.

No. 429,222. Patented June 3, 1890.

Fig. 1.

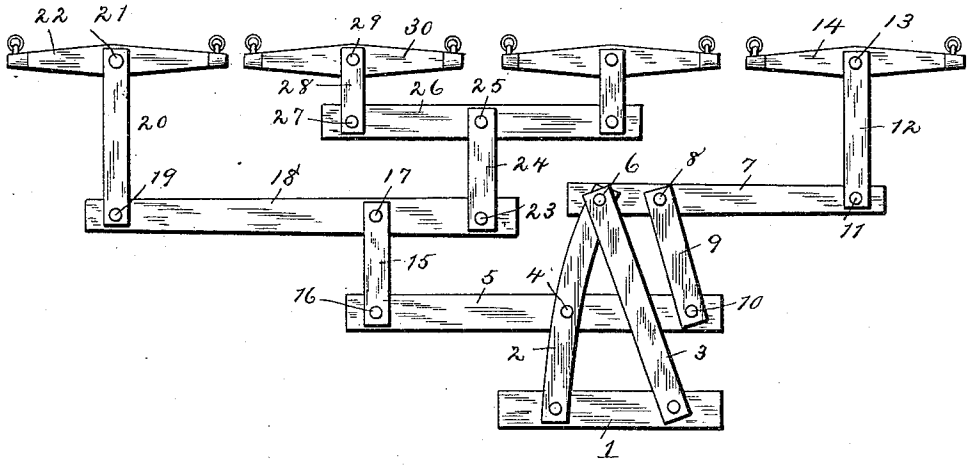
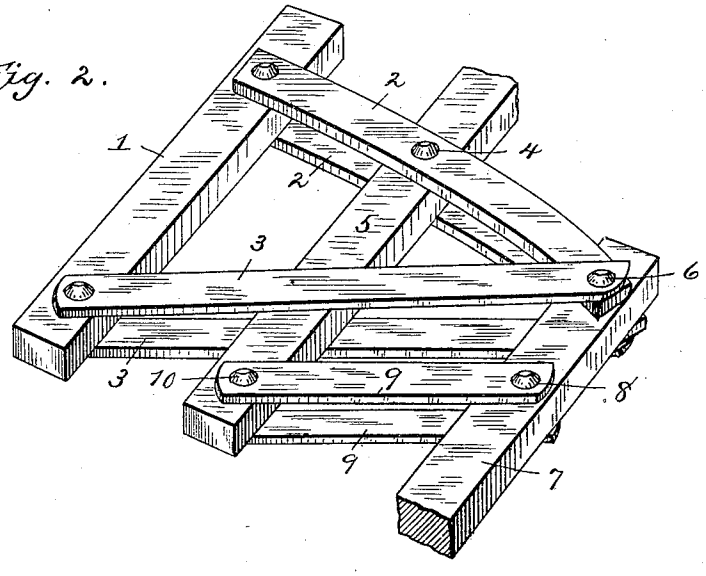


Fig. 2.



Witnesses:

Harry L. Amer.

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By his Attorneys,

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UNITED STATES PATENT OFFICE.

IRWIN J. STONER, OF WAUPONSEE, ILLINOIS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 429,222, dated June 3, 1890.

Application filed February 24, 1890. Serial No. 341,533. (No model.)

To all whom it may concern:

Be it known that I, IRWIN J. STONER, a citizen of the United States, residing at Wauponsee, in the county of Grundy and State of Illinois, have invented a new and useful Draft-Equalizer, of which the following is a specification.

This invention has relation to four-horse equalizers for plows or other heavy farm-machines, and among the objects in view are to exactly equalize the strain upon the four horses.

With this main object in view the invention consists in a series of compound levers and single and double trees, all arranged as hereinafter described, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of an equalizer constructed in accordance with my invention. Fig. 2 is a detail in perspective of the doubletree, its adjacent levers, and their connections.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 represents the rear draft-bar, and from the same there project forwardly opposite pairs of draft-straps 2 and 3, the rear ends of which are securely bolted to the upper and lower surfaces of the bar, said straps converging toward their front ends, as shown. The straps 2 are curved, and are pivoted, as at 4, slightly to one side of the center of the main doubletree 5, and to the straps said doubletree is pivoted, as at 4. The opposite companion straps 3 are straight and slightly diagonally disposed, and are pivoted, as at 6, to the front end of the curved straps 2, said pivot also passing through the inner end of the lever 7, which at one side of the pivot 6 is connected pivotally, as at 8, to a pair of short straps 9, the rear ends of which are pivoted, as at 10, to the extreme right end of the main doubletree 5. The outer end of the lever 7 has pivoted thereto, as at 11, a pair of straps 12, which at their outer ends are pivoted, as at 13, to a singletree 14.

At the left of the main doubletree 5 there are connected a pair of straps 15, the rear ends of which are pivoted, as at 16, to said doubletree, and the forward ends of which are pivoted, as at 17, near the inner end or to the right of the center of the lever 18. The outer end of the lever 18 has pivoted, as at 19, a pair of straps 20, which at their forward ends are pivoted, as at 21, to a singletree 22. The extreme right of the lever 18 has pivoted thereto, as at 23, a pair of straps 24, which at their forward ends are pivoted, as at 25, to a secondary doubletree 26. To the opposite ends of the secondary doubletree 26 are pivoted, as at 27, opposite straps 28, the forward ends of which are pivoted, as at 29, to singletrees 30, so that the secondary doubletree carries two singletrees, as will be understood.

By the above construction it will be apparent that I have provided a draft-equalizer to be employed with four horses, and that by the peculiar manner of arranging the levers and double and single trees, together with their connections, the draft will be equally applied to each of the animals.

Having thus described my invention, what I claim is—

1. In a draft-equalizer, the combination of the following elements: the rear bar 1, the opposite straps 2 and 3, connected at their rear ends to said bar, the main doubletree 5, pivoted, as at 4, to the inner one of the converging straps, the lever 7, connected by the straps 9 to the outer right-hand end of the main doubletree, said lever also being pivoted to the ends of the straps 2 and 3 at the inner end of said lever, and the singletree 14, pivoted at the extreme right of the lever 7, the lever 18, connected by the straps 15 to the left of the main doubletree and by the straps 20 to the singletree 22 at the extreme left of said lever and provided at its right end with the straps 24, the secondary doubletree 26, connected by the straps 24 to the inner end of the lever 18, and the opposite singletrees 30 and their connecting-straps 28, the rear ends of which are pivoted to the opposite ends of the secondary doubletree, substantially as specified.

2. In a draft-equalizer, the combination of the following elements: the rear bar 1, the opposite converging straps 2 and 3, the former being curved and the latter diagonally disposed with relation to the line of draft and pivoted to the ends of the former and the two connected at their rear ends to said bar, the

main doubletree 5, pivoted, as at 4, to the inner one of the converging straps and free to pass the opposite straps, the lever 7, connected by the straps 9 to the outer right-hand end of the main doubletree, said lever also being pivoted to the converged ends of the straps 2 and 3 at the inner end of said lever, the lever 18, connected by the straps 15 to the left of the main doubletree, and the singletree and doubletrees connected to the levers 7 and 18, as set forth.

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

IRWIN J. STONER.

Witnesses:

THOMAS WALSH,

A. A. HANSON.