

(No Model.)

T. PATES.
DRAFT EQUALIZER.

No. 298,773.

Patented May 20, 1884.

Fig. 1.

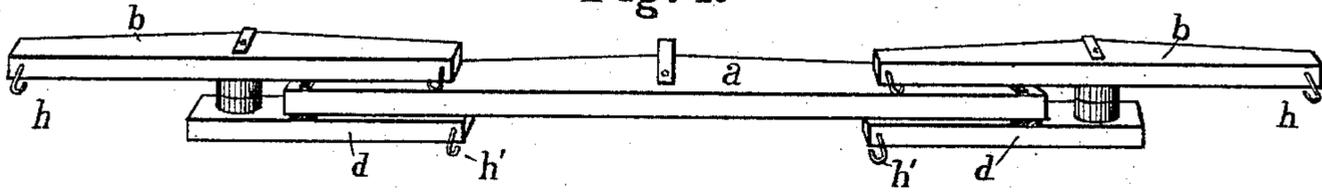


Fig. 2.

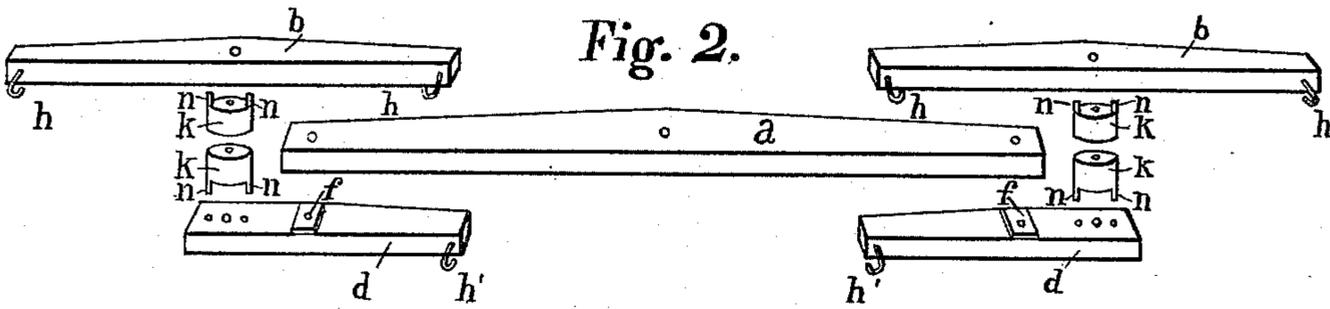


Fig. 3.

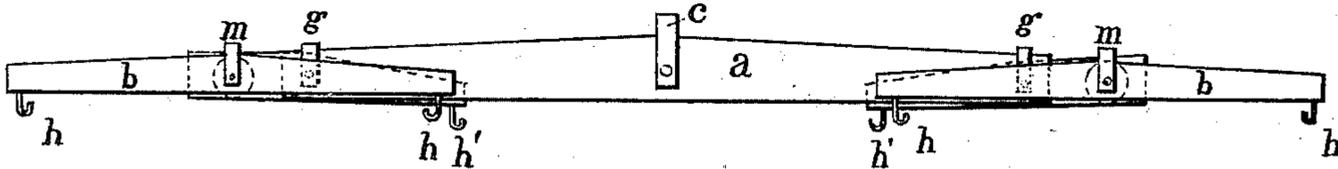


Fig. 4.

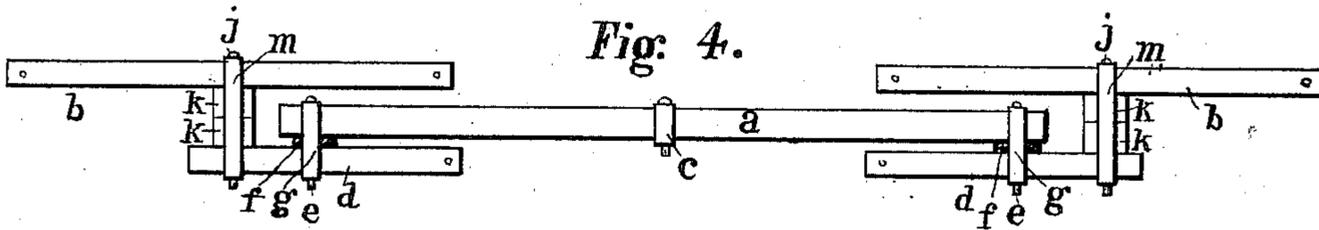
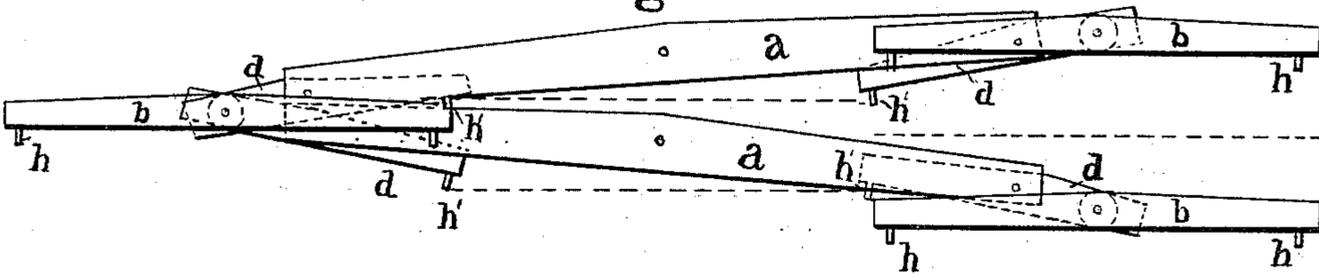


Fig. 5.



WITNESSES:

Carl Heibeler.
M. Bertram

INVENTOR

Thomas Pates.

BY

John Lane.

ATTORNEY

UNITED STATES PATENT OFFICE.

THOMAS PATES, OF ALTON, ILLINOIS, ASSIGNOR TO THE HAPGOOD PLOW COMPANY, OF SAME PLACE.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 298,773, dated May 20, 1884.

Application filed February 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS PATES, a citizen of the United States, residing at Alton, in the county of Madison and State of Illinois, have invented a new and useful Improvement in Three-Horse Draft-Equalizers, of which the following is a specification.

My invention relates to a three-horse draft-equalizer for use on plows and other machines in which it is desirable that the hitch shall be short, with the horses close back to the plow.

My invention will first be described in the specification with reference to the drawings, and afterward pointed out in the claims.

Referring to the drawings, like letters refer to like parts in all the figures, in which Figure 1 is a perspective view showing the front side and top of a set of three-horse draft-equalizers. Fig. 2 is a perspective view, the same as Fig. 1, with the several parts disconnected and apart, showing the construction of the said parts. Fig. 3 is a plan or top view showing how the hitch is made short, in that the trace-hooks *h'* and *h* are all but a short distance in advance of the clevis *c*, which connects the plow. Fig. 4 is a rear view showing how the single-trees *b* are over the double-tree *a*, and the triple-tree *d* under the said double-tree. Fig. 5 is a plan or top view showing the movement of the parts, and how, when one single-tree falls behind the other, the trace-hooks *h* on the triple-trees keep parallel to each other.

All the figures represent and show my improvement in a set of three-horse draft-equalizer, in which *a* represents a central double-tree or evener, on both ends of which is connected a triple-tree, *d*, which has its long arm extending inwardly and provided with a trace-hook, *h'*, and its short arm extending outward, to which is connected a single-tree, *b*, and it will be observed that both ends of the said set are alike in construction, both ends of the said double-tree carrying a triple-tree, and both triple-trees carrying a single-tree. The said double-tree may be of ordinary construction, as shown, made somewhat longer than the ordinary two-horse evener. The said single-trees may be of ordinary construction, with

trace-hooks *h*, as shown, and the said triple-trees may be the ordinary triple-tree, in which one arm is double the length of the other arm, as shown, in which I provide the said long arm with a trace-hook, *h'*, as shown. In my improvements the said triple-trees are placed under the double-tree, *a*, and the said single-trees are placed over the triple-trees above them sufficient to clear the double-tree. Two block-washers, *k k*, are placed between the said single-tree and triple-tree, and a plate or washer, *f*, may be interposed between the said double-tree and triple-tree to clear them from chafing, as shown. The said block-washers *k* may preferably be provided with the pins *n n*, which enter holes in the woods, thereby keeping the said washers from turning on the woods, that the turning shall be on the meeting faces of the said washers, as will be understood by inspecting the drawings. The bolt *j* is placed vertically through the single-tree *b*, the two block-washers *k k*, and the short arm of the triple-tree *d*, as shown, and the well-known hasp *m* may be used with the said bolt, as desired. The said bolt permits the single-tree to swivel or turn thereon over the triple-tree, as will be understood by the drawings. The bolt *e* is placed vertically through the double-tree *a* and the triple-tree *d*, as shown, and the washer *f* may be interposed between the said triple-tree and double-tree, as shown, and also the hasp *g* may be used with the said bolt, as shown. The said bolt *e* permits the said triple-tree to swivel or turn thereon, as will be understood by the drawings.

It will be observed that the distance between the two trace-hooks *h' h'* on the triple-trees is about equal to the length of a single-tree, and that only two single-trees are used in my improved set of three-horse draft-equalizers, it being intended and provided that the traces of the center horse of the three shall be hitched direct to the hooks *h'* on the triple-trees, obviating the use of a single-tree for the center horse, as will be understood by the drawings.

It will be observed that by reason of the triple-tree being under the double-tree and the single-tree over the triple-tree, the trace-

hooks *h* and *h'* are all about on a line a short distance forward of the clevis *c*, to which clevis a plow may be connected, whereby the horses may all be hitched close back to the plow, as desired.

5 It is obvious that my improved set of three-horse draft-equalizers may be used either side up—that is, they may be inverted and the top side turned down.

10 I am aware that it is common to connect a triple-tree to both ends of a double-tree, both said triple-trees carrying a single-tree. Therefore I do not broadly claim such; but I am not aware that anyone has heretofore constructed a three-horse draft-equalizer in the peculiar manner herein shown and claimed.

15 Having thus set forth my invention, what I

claim, and desire to secure by Letters Patent, is—

The combination of the central double-tree, 20 two triple-trees, bolt *e*, and hasp *g*, one of the said triple-trees pivoted to each end of the said double-tree by means of the said bolt and hasp, as shown, the two single-trees, block-washers *k*, provided with pins *n*, bolts *j*, and 25 hasp *m*, one of the said single-trees pivoted to the short arm of each triple-tree by means of the said bolt *j*, hasp *m*, and two of said block-washers, as shown, and for the purpose specified.

THOMAS PATES.

Witnesses:

CHAS. S. PHILIPS,

WM. R. PINCKARD.