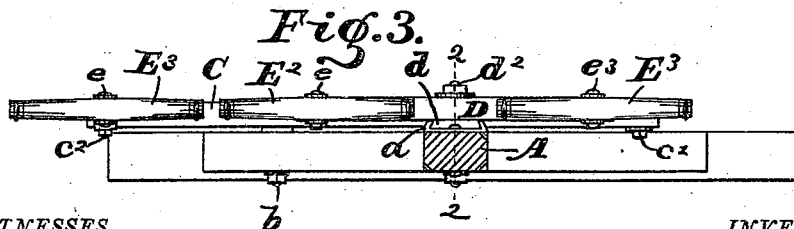
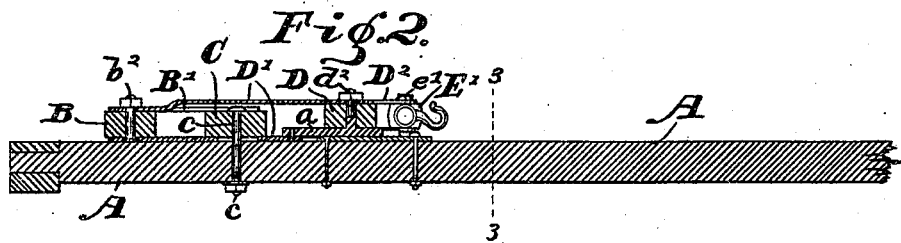
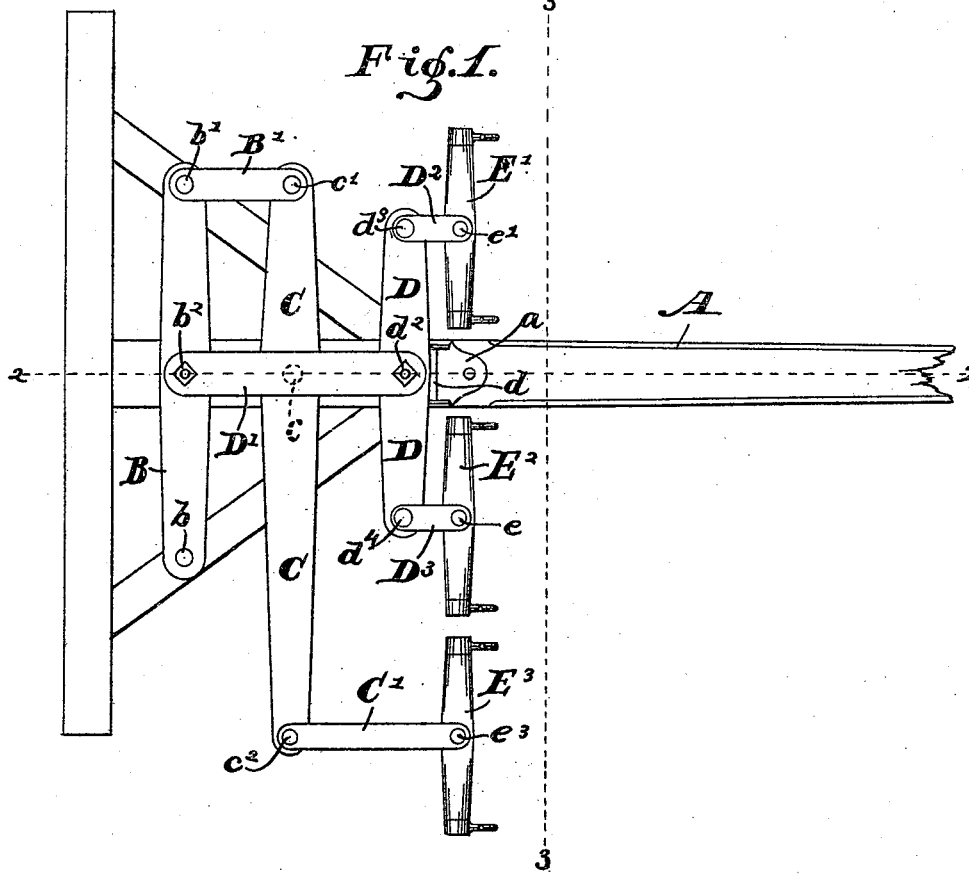


J. E. MUSTARD.

DRAFT EQUALIZER.

No. 345,252.

Patented July 6, 1886.



WITNESSES.

Chas. Leonard,
C. W. Bradford

INVENTOR.

James E. Mustard,
PER
C. Bradford,
ATTORNEY.

(No Model.)

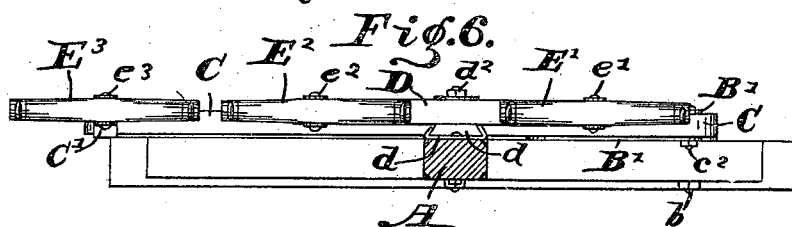
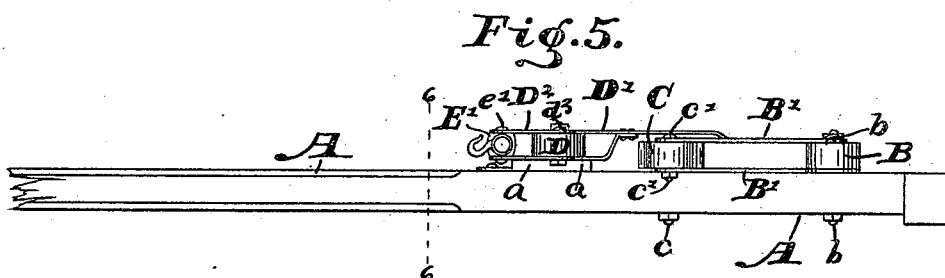
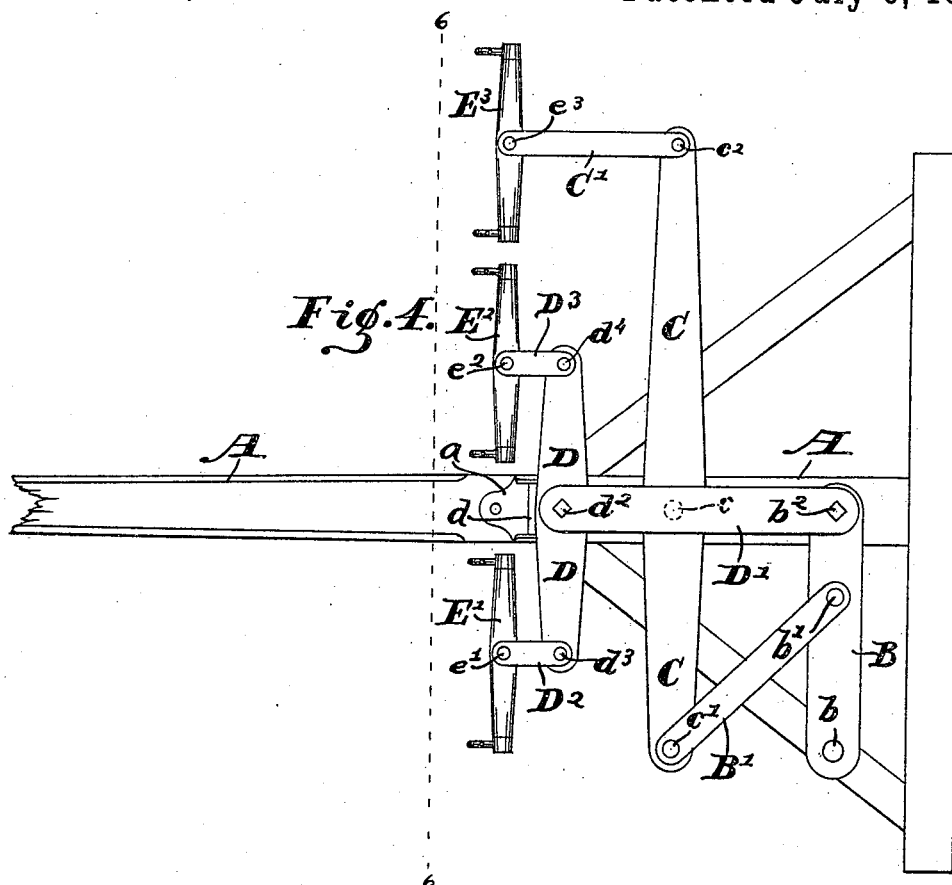
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JAMES E. MUSTARD, OF GLEN HALL, INDIANA.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 345,252, dated July 6, 1886.

Application filed October 3, 1885. Serial No. 178,874. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. MUSTARD, of the town of Glen Hall, county of Tippecanoe, and State of Indiana, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a specification.

My said invention relates to that class of devices known as "draft-equalizers," whereby an additional horse can be added to the usual team of two horses, so that the three shall be alongside each other, and all pull from a common point of draft, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a top or plan view of a tongue or pole to a vehicle or machine, provided with a draft-equalizer embodying my said invention; Fig. 2, a longitudinal sectional view thereof on the dotted line 2 2; Fig. 3, a front elevation of the same, as seen from the dotted line 3 3; Fig. 4, a top or plan view of an alternate arrangement; Fig. 5, a side elevation of the same, and Fig. 6 a view thereof similar to Fig. 3.

In said drawings the portions marked A represent the tongue or pole to which the equalizer is applied; B, a lever pivoted to a stationary point on one side of said pole; C, a lever pivoted directly to said pole; D, the double-tree, and E' E" E³ the single-trees.

The pole A is or may be any ordinary pole or tongue of a wagon or other vehicle, or mowing or reaping or other like machine. It should have (in order that my invention may be used to the best advantage) a slide, *a*, upon its top, in which a sliding block, *d*, attached to the under side of the double-tree, may be secured and move.

The lever B is secured by a pivot, *b*, to some stationary part, such as the brace or cross-bar of the tongue, at one end, and at its other or free end, (or a point between said pivoted end and said free end,) is connected to the short end of the lever C, by straps, links, or other similar connections, B', said straps or links being shown as secured to said levers by pivots *b'* *c'*.

The lever C is secured to the tongue A at a point between the lever B and the double-tree D by a pivot *c*. Its short end is connected to

the lever B, as just described, and to its long end is connected the single-tree E³, either by straps or links C' and pivots *c'* *e'*, as shown, or in any other desired manner.

The double-tree D is connected to the lever B by straps or links D' and pivots *d'* *b'*, and preferably has the slide-block *d* secured to its under side, which rests and moves in the slide *a*, as previously described. This slide-block, however, and said slide *a* may be dispensed with without departing from my invention, although its use is advantageous in holding the double-tree to the desired position. To the ends of said double-tree are secured the single-trees E' E" by the straps or links D² D³ and pivots *e'* *d'* and *e'* *d'*, or otherwise, as may be desired.

The operation is as follows: The three animals being secured to the single-trees, the one secured to the single-tree E³ is enabled, by means of the leverage obtained through the arrangement described, to hold an equal position with the two secured to the double-tree through the other single-trees. My particular arrangement also obviates the side draft, which has in many forms of equalizers been a serious disadvantage. It is simple and inexpensive in construction, and can be readily applied wherever needed.

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

1. The combination, with the tongue or pole of a vehicle or machine, of a draft-equalizer consisting of two levers, one pivoted to a stationary point on one side of said pole, the other pivoted directly to said pole and connected to the first, the double-tree located above or below the pole and connected to said first lever, and a single-tree connected to the long end of the second lever, substantially as set forth.

2. The combination, with the tongue or pole of a vehicle or machine, of a draft-equalizer consisting of a lever pivoted to a stationary point on one side of said pole, a second lever pivoted directly to said pole and connected to the first, a single-tree connected to the free end of said second lever, and a double-tree mounted in a slide on said tongue or pole and secured by a connection running past said second lever to said first lever, substantially as set forth.

3. The combination, with the tongue or pole

of a vehicle, of a draft-equalizer consisting of
a lever pivoted to a stationary point on one
side of said pole, a second lever pivoted di-
rectly to said pole and double-tree, two single-
5 trees connected to said double-tree, and a sin-
gle-tree connected to said second lever, said
second lever and said double-tree being both
connected to said first lever at suitable dis-
tances from its pivot, substantially as and for
10 the purposes set forth.

4. The combination, with the tongue or

pole A, of the lever B, pivot *b*, link B', lever
C, pivot *c*, double-tree D, link D', and single-
trees E' E² E³, as set forth.

In witness whereof I have hereunto set my 15
hand and seal, at Indianapolis, Indiana, this
29th day of September, A. D. 1885.

JAMES E. MUSTARD. [L. s.]

In presence of—

E. W. BRADFORD,
CHARLES L. THURBER.