

(No Model.)

A. W., E. & W. N. HATFIELD.
DRAFT EQUALIZER.

No. 454,734.

Patented June 23, 1891.

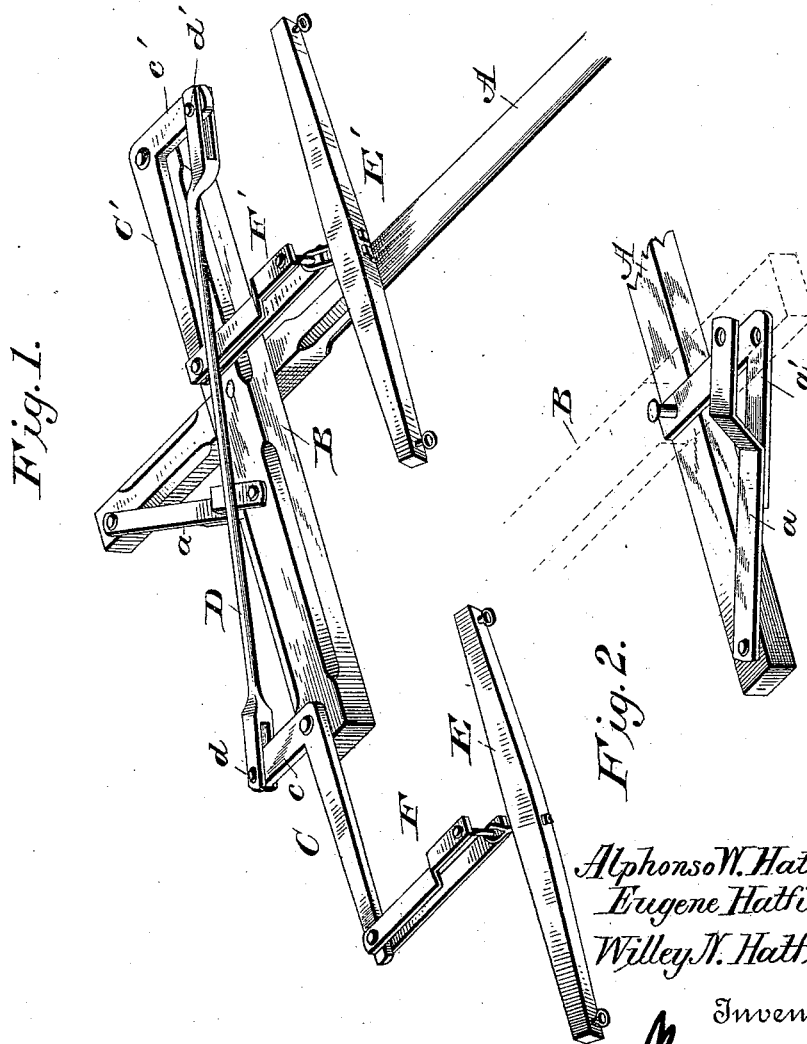


Fig. 1.

Fig. 2.

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Witnesses

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UNITED STATES PATENT OFFICE.

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DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 454,734, dated June 23, 1891.

Application filed March 5, 1891, Serial No. 333,813, (No model.)

To all whom it may concern:

Be it known that we, ALPHONSO W. HATFIELD, EUGENE HATFIELD, and WILLEY N. HATFIELD, citizens of the United States of America, residing at Correctionville, in the county of Woodbury and State of Iowa, have invented certain new and useful Improvements in Draft-Equalizers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in draft-equalizers.

The object of the invention is to provide a four-horse equalizer for harvesters in which three of the horses can be hitched to one side of the pole or tongue; and it consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a draft-equalizer constructed in accordance with our invention. Fig. 2 is a detail perspective view.

A refers to the tongue or pole, to which is rigidly secured a cross-piece B, said cross-piece being connected to the tongue by a brace *a*. To the ends of this cross-piece are pivotally secured bell-crank levers C and C', which are of substantially the same size and configuration, but reversed, so that the short end of the lever C' will project forwardly, while the short end of the opposite lever C projects rearwardly, these short ends *c* and *c'* being connected to each other by a rod D, the ends of which are bifurcated, as shown, and through said ends pass pivot-bolts *d* and *d'*. This connecting-rod bends a little upwardly near one end, so as to clear the connections for attaching the doubletree E' thereto.

To the long ends of the bell-crank levers are attached clevises F F', which are preferably made up of bars or strips of metal provided at their forward ends with vertical bolts, over which pass the eyebolts or links attached to the doubletrees E and E'. These double-

trees are of different length, and are provided at their ends with eyebolts for connecting the singletrees thereto.

The brace-rod *a*, which connects the tongue to the cross-piece B, has welded or otherwise secured to the under side thereof an angle-plate *a'*, one end of which is bent to lie over the tongue A, and at this point it is perforated for the reception of the bolt used for connecting the cross-piece to the tongue.

A draft-equalizer thus constructed can be cheaply manufactured, and it will be observed that the clevises F F' are mere duplications, and that the bell-crank levers C and C' are also duplicates, but are applied in a reverse position to the cross-piece B. This duplication of the parts considerably reduces the cost of manufacture.

If desirable, the short ends of the bell-crank levers may be connected to each other otherwise than by a rod having bifurcated ends.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a draft-equalizer, the combination of the tongue A, having a cross-piece B rigidly secured thereto, bell-crank levers C and C', pivoted to the cross-piece so that the short ends thereof will project front and rear, as shown, means for connecting the short ends of said levers to each other, and clevises connected to the long ends of the levers, substantially as set forth.

2. The combination, in a draft-equalizer, of a cross-piece having bell-crank levers secured thereto, the long members of said levers projecting in the same direction, while the short members project front and rear of the cross-piece, as shown, means for connecting the short ends of the levers to each other, and clevises attached to the long ends of the levers, together with doubletrees secured to said clevises, substantially as set forth.

3. In a draft-equalizer, the combination of a tongue or pole A, cross-piece B, rigidly secured to said pole to present a long and short end, a brace-rod *a*, extending from the rear end of the pole to the center of the cross-piece, bell-crank levers C and C', pivoted to the ends of the cross-piece, the long members

of said bell-crank levers extending in the same direction, while the short ends project in front and rear of the cross-piece, a rod D, having bifurcated ends, and means for connecting the same to the short ends of the levers, clevises connecting the long ends of the levers to doubletrees, one of the doubletrees being so located that its center will be over the pole, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

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WILLEY N. HATFIELD.

Witnesses:

CHARLIE GRANT,
ALBERT G. WOOD.