

(No Model.)

J. PUTMAN.
DRAFT EQUALIZER.

No. 310,850.

Patented Jan. 13, 1885.

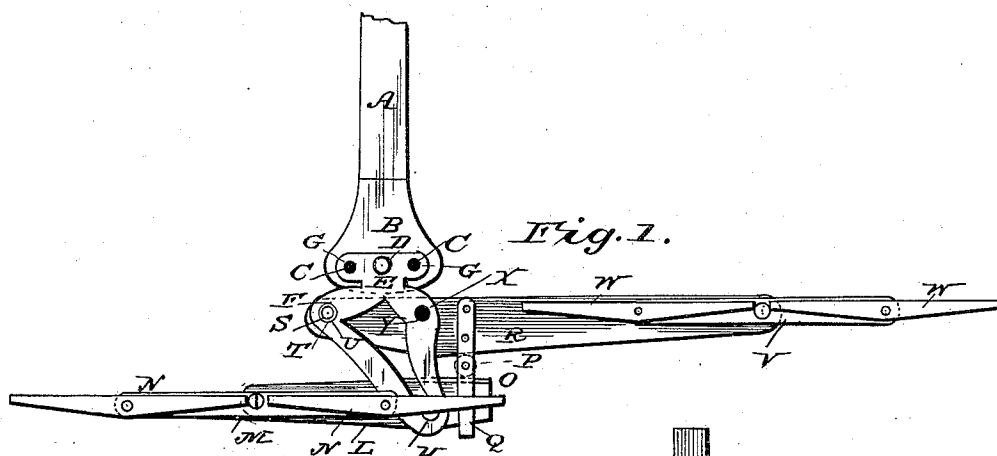


Fig. 2.

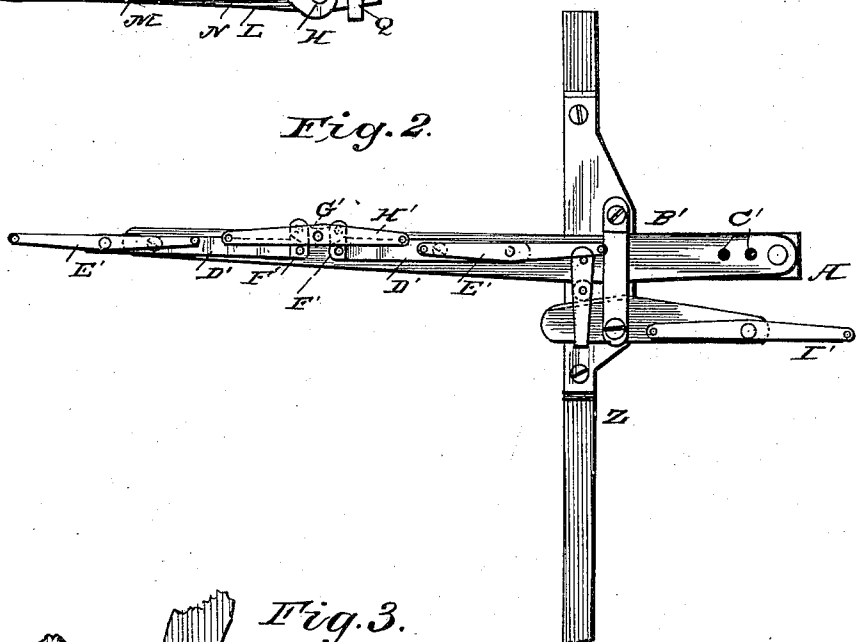


Fig. 3.

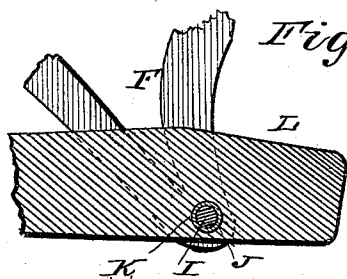
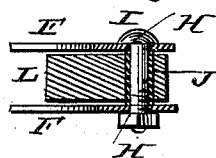


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN PUTMAN, OF BEARDSTOWN, ILLINOIS, ASSIGNOR TO MARTHA A. PUTMAN, OF SAME PLACE.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 310,850, dated January 13, 1885.

Application filed July 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN PUTMAN, a citizen of the United States, and a resident of Beardstown, in the county of Cass and State of Illinois, have invented certain new and useful Improvements in Horse-Equalizers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a top view of my improved draft-equalizer, showing it applied to a plow or cultivator beam. Fig. 2 is a similar view of a slight modification of the same, showing it applied to a vehicle having a tongue; and Figs. 3 and 4 are respectively a horizontal and a vertical sectional detail view of one of the pivotal points of the levers.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to draft-equalizers; and it consists in the improved construction and combination of parts of an equalizer adapted to be changed for the attachment of three or four draft-animals, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the plow-beam, which is provided with a horizontal clevis-plate, B, having a number of perforations, C, for the reception of one or more bolts, D, which serve to secure the inner cross-heads, E, of two forwardly-projecting frames, F, passing through perforations G in the said cross-heads, one bolt being employed when it is desired to allow the frames lateral play, while two or more bolts are employed when it is desired to have the frames rigidly attached to the clevis-plate, the perforations in the cross-heads and in the clevis-plate registering. The outer ends of the frames have perforations H, through which passes a bolt, I, around which a sleeve, J, fits and turns, which again fits in a perforation, K, near the inner end of a lever, L, upon the outer end of which a double-tree, M, is pivoted, to the ends of which double-tree two single-trees, N, are pivoted. The rear edge of the

inner end of this lever is provided with a protecting-plate, O, which bears against an anti-friction roller, P, journaled between the inner or rear ends of a stirrup, Q, which projects forward from a lever, R, pivoted at its inner end upon a bolt, S, having a sleeve, T, and passing through perforations U in the forwardly-projecting frames F, the said perforations being to one side of the line of draft. The outer end of this latter lever, which is longer than the lever pivoted in the forward ends of the frames, and which I therefore will call the longer lever, to distinguish it from the other lever, which I will call the shorter lever, has a double-tree, V, pivoted upon it, and two single-trees, W, are pivoted to the ends of this double-tree. The frames have other perforations, X, to the side of the line of draft opposite to the perforations at which the inner end of the longer lever is pivoted, and the longer lever has a perforation, Y, registering with the said perforations, and when three animals are used the bolt and sleeve upon which the inner end of the longer lever is pivoted are transferred to these perforations, and a single-tree substituted for the double-tree upon the longer lever, the leverage of which is increased by moving the fulcrum (the bolt and sleeve) closer to the burden, (the stirrup and anti-friction roller.)

In Fig. 2 is shown a modification of the equalizer, showing it applied to a vehicle having a tongue, Z, which tongue has a laterally-projecting arm, A', to the outer end of which the inner end of the longer lever is pivoted. The shorter lever is pivoted upon the tongue, being secured by a strap, B', secured to the tongue and passing over the inner portion of the longer lever, and having the pivotal bolt for the shorter lever passing through its end. The inner end of the longer lever and the end of the arm projecting from the tongue are provided with registering perforations C', into either of which the pivotal bolt for that lever may be inserted, the leverage of the long lever being increased by moving the fulcrum inward, and two levers having short outer arms and longer inner arms (shown at D') are pivoted upon the longer lever, and have single-trees E' E' pivoted upon their outer ends and

connecting-arms F' pivoted at their inner arms, which connecting-arms are pivoted to the ends of a small yoke, G', upon the middle of which a single-tree, H', is pivoted, three animals thus pulling upon one side of the tongue, while the fourth animal is attached to a single-tree, I', upon the outer end of the shorter lever, being thus upon the other side of the tongue.

If desired, a double-tree may be pivoted upon the longer lever for the attachment of two horses, and the fulcrum of the said lever be moved farther in toward the tongue, when the equalizer may be used for three animals.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of a frame projecting forwardly from the object to be drawn, and having perforations to one side of the line of draft and one perforation in the line of draft and forward of the lateral perforations, a longer lever pivoted with its inner end having a series of perforations upon a bolt passing through one of the lateral perforations of the frame, a stirrup projecting forward from near the inner end of the longer lever, and having an anti-friction roller journaled between its inner ends, a shorter lever pivoted with a perforation near its inner end upon a bolt passing through the forward perforation of the frame and having the rear edge of its inner end bearing against the roller in the stirrup upon the longer lever, and single and double trees pivoted upon the levers, as and for the purpose shown and set forth.

2. The combination of the clevis-plate having a number of perforations, the forwardly-projecting frames having cross-heads at their inner ends provided with perforations registering with the perforations in the clevis-plate, and having perforations in their forward ends and perforations lateral to the line of draft, bolt or bolts passing through the perforations in the cross-heads of the frames and in the clevis-plates, bolts passing through the forward perforations of the frames and through one set of perforations to the side of the line of draft, sleeves fitting upon the said bolts, a long lever having perforations at and near its inner end and fitting with the said perforations upon the sleeve upon the bolt in one of the lateral perforations, a stirrup projecting from near the inner end of the lever and having a roller journaled between the inner ends, a shorter lever pivoted near its inner end upon the sleeve fitting upon the bolt at the forward ends of the frames and bearing against the roller with the rear edge of its inner end, double-trees pivoted upon the ends of the levers, and single-trees pivoted upon the ends of the double-trees, as and for the purpose shown and set forth.

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

JOHN PUTMAN.

Witnesses:

CHAS. M. SPRING,
ROBT. A. BROWN.