(No Model.)

J. PUTMAN.

DRAFT EQUALIZER.

No. 380,635. Patented Apr. 3, 1888.

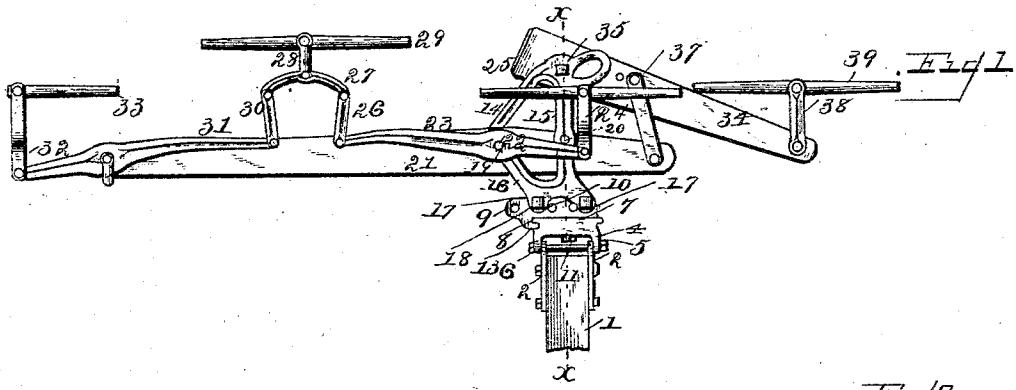


Fig 1

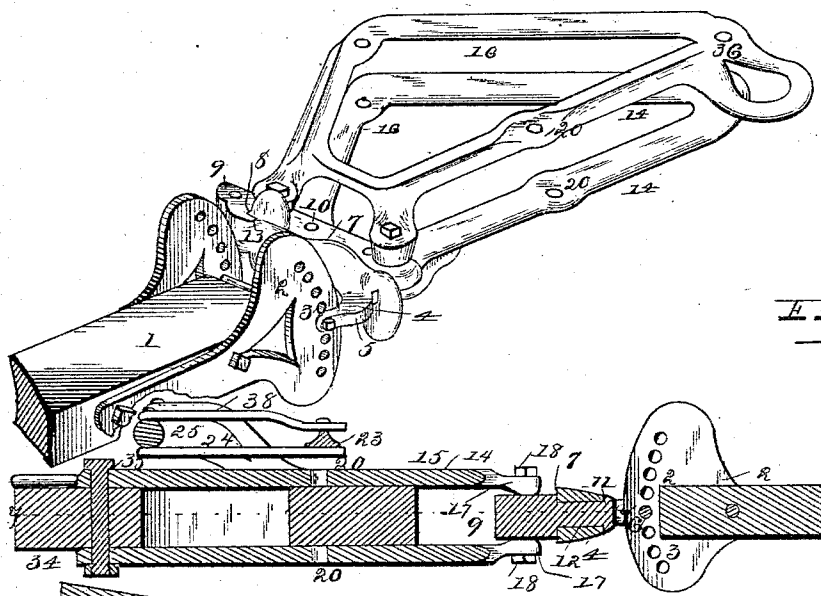


Fig 2.

Fig 3

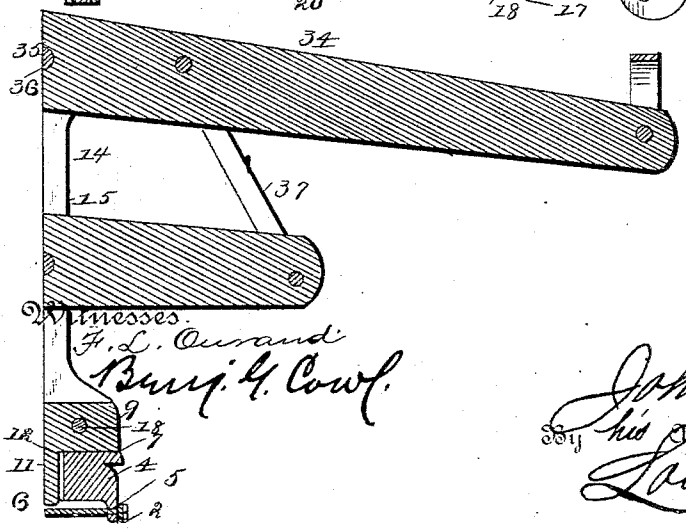


Fig 4.

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. 380,635, dated April 3, 1888.

Application filed July 9, 1887. Serial No. 243,872. (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 Draft-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 plan view of my improved draft-equalizer. Fig. 2 is a perspective view of the end of the plow-beam and of the clevis, swivel, and frame for attaching the levers. Fig. 3 is a vertical sectional view on line *x x*, Fig. 1; and Fig. 4 is a horizontal sectional view on line *y y*, Fig. 3.

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

My invention has relation to draft-equalizers for four horses; and it consists in the improved construction and combination of parts of such an equalizer, as hereinafter more fully described and claimed.

In the accompanying drawings, the numeral 1 indicates the end of the plow-beam, to the sides of which are secured the clevis-plates 2, having the segmental series of perforations 3 in their outer ends.

A casting, 4, is pivoted by two rearwardly-extending perforated ears, 5, upon a bolt, 6, passing through the said ears and through two registering perforations in the clevis-plates, and the forward portion of the casting is formed with a flat vertical bearing-face, 7, having flat ears 8 projecting to the sides in a vertical plane.

A transverse bar, 9, has a series of perforations, 10, and a rearwardly-projecting nutted bolt, 11, which passes through a perforation, 12, in the casting in the center of the flat face of the same, the nut bearing against the rear side of the casting and the bolt forming a swivel-pin, upon which the bar may rock against the face of the casting. The rear side of the bar is provided with an inwardly-pointing lip, 13, which may engage one of the flat ears of the casting, having the ear rocking or sliding within it. Two frames, 14, are formed with each a straight side piece, 15, and with a V-shaped side piece, 16, and are formed at the rear end where the said side pieces unite with each two perforated and registering ears, 17, having their perforations registering with the perforations in the bar, nutted bolts 18, passing through the perforated ears and through the perforations in the bar, securing the frames one below the other in horizontal planes.

The V-shaped sides of the frames have perforations 19 at their apices, and the middles of the straight sides are formed with perforations 20 in a transverse line with the perforations in the V-shaped sides, and a long lever, 21, is fulcrumed near its inner end upon a bolt, 22, passing through the perforations in the V-shaped sides and through the lever. A lever, 23, is pivoted upon the bolt above the upper frame and at a point one-third of its length, the lever having a short arm and a long arm twice the length of the short arm, and a clevis or stirrup, 24, is pivoted to the short arm of the lever and has a singletree, 25, pivoted in it.

The end of the long arm of the lever has a link, 26, pivoted to it, and the forward end of this link is pivoted to the end of an arched bar, 27, to the middle of which a clevis or stirrup, 28, is pivoted, having a singletree, 29, while a link, 30, is pivoted to the other end of the arched bar, and is pivoted with its rear end to the end of the long arm of a lever, 31, fulcrumed at the outer end of the long main lever, and having the same shape as the other smaller lever, and having a clevis or stirrup, 32, pivoted to the end of its shorter arm, a singletree, 33, being pivoted in the said clevis or stirrup. A lever or arm, 34, is fulcrumed at its inner end upon a bolt, 35, passing through perforations 36 in the forward ends of the frames, and straps 37 are pivoted to the said lever or arm 34 near the fulcrum and to the inner end of the main lever, while a clevis or stirrup, 38, is pivoted to the outer end of this arm or lever and has a singletree, 39, pivoted in it. It will now be seen that draft-animals may be hitched to the singletrees pivoted to the short arms of the smaller levers, and

these animals will pull against the draft-animal hitched to the singletree pivoted to the united ends of the long arms of the said levers, the said three animals equalizing each other, and these three animals will pull together upon the longer arm of the main lever and upon the frames and be equalized by the animal pulling upon the outer end of the shorter lever.

The swivel-joint between the perforated bar and the inner casting will admit of a rocking motion of the equalizer, and will also admit of the long main lever being thrown over to the opposite side, the animal walking in the furrow being hitched to the shorter lever, so that it is desirable to throw the other singletrees to either side, according as the plow is a right or a left hand plow, and the lip upon the perforated bar will engage one flat ear of the casting, preventing a lateral breaking strain upon the swivel-bolt.

The joint formed between the perforated ears of the casting and the bolt in the clevis-plates will admit of an up-and-down motion for the equalizer.

When it is desired only to use three horses, the fulcrum-bolt for the long lever is changed to the perforations in the straight sides of the frames and a doubletree is secured to the long arm of the said lever instead of the smaller levers upon the same.

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

1. In a draft-equalizer, the combination of two clevis-plates secured to the sides of the end of a plow-beam, a casting having two perforated rearwardly-projecting ears pivoted upon a bolt passing through the perforations of the clevis-plates and having a flat forward face provided with laterally-projecting flat vertical ears, and a bar having a rearwardly-extending swivel-bolt pivoted in the casting and an inwardly-pointing lip upon its rear side engaging one of the flat ears and having the equalizer attached to it, as and for the purpose shown and set forth.

2. In a draft-equalizer, the combination of a perforated transverse bar swiveled to a casting secured to the clevis, two frames having each a V-shaped and a straight side piece, and having ears at their rear ends secured by bolts to the perforated bar, and having perforations at the apices of the V-shaped sides and at the middles of the straight sides, a long main lever pivoted near one end upon a bolt passing through the apices of the sides of the frames, two levers pivoted at a point one-third of their length, respectively, upon the fulcrum-bolt for the main lever and at the end of the long arm of the same, and having singletrees at the ends of their short arms, an arched bar having a singletree at its middle and having its ends connected by links to the ends of the long arms of the levers, and a shorter lever fulcrumed upon a bolt passing through the forward ends of the frames and having a singletree at its outer end, and straps pivoted to it near the fulcrum and to the end of the short arm of the main lever, 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,
JOHN HUSTED.