

UNITED STATES PATENT OFFICE.

GEORGE W. RAYMOND, OF SENECA, ILLINOIS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 552,484, dated December 31, 1895.

Application filed October 14, 1895. Serial No. 565,636. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. RAYMOND, a citizen of the United States, residing at Seneca, in the county of La Salle and State of Illinois, have invented a new and useful Draft-Equalizer, of which the following is a specification.

My invention relates to an improved draft-equalizer for use on plows, cultivators, and the like, and it has for its object the production of a draft-equalizer in which the construction is very simple and the equalization readily and easily effected.

The invention will first be described in connection with the accompanying drawings, and then pointed out in the claims.

Figure 1 of the drawings is a plan view of my improved draft-equalizer attached to a plow-beam, only so much of the latter as is necessary to show the connection being shown. Fig. 2 is a plan view of the equalizer detached, the equalizer-strap being shown attached thereto.

Referring to the drawings, A represents a draft-plate of usual construction adapted to be attached to the beam B of a plow in any well-known manner. To one end of the draft-plate is attached, by means of the usual clevis, a draft-chain C, the other end of which is attached to one end of an evener D, and to the other end of the draft-plate is attached a short chain *a*, for a purpose hereinafter described.

E is an equalizer, of substantially Z shape, made of a single length of material bent at the angles, as shown. The equalizer has a strengthening-bar 1 and two arms of different lengths, the longer arm *e* being free and having at its outer end a series of holes 2, for a purpose hereinafter stated, and the shorter arm *e'* being secured to the end of the evener D by bolts 3. The outer end of chain *a* is connected to the body portion of the equalizer forward of the arm *e*, thus connecting the equalizer and draft-plate.

Doubletrees F and F' are connected to the respective ends of the evener D by short straps *f* and *f'*, these doubletrees being of ordinary construction and operation.

G represents an equalizer-strap, it being provided at either end with a series of holes 4. This strap is connected to the strap *f* at the

junction of the latter with doubletree F, and at the other end with arm *e* of equalizer E, these connections by means of holes 2 and 4 being adjustable, for a purpose hereinafter stated.

The operation of my improved draft-equalizer is as follows: If the excess of draft is found to be in favor of the left-hand team, by simply adjusting the connection of equalizer-strap G, through holes 2 and 4, with the arm *e* of the equalizer and with the strap *f*, and thereby shortening the distance between the free arm of the equalizer and the doubletree F, the equalizer will exert a forward push on the right-hand end of the evener and a forward pull on the right-hand end of the draft-plate, and thus cause the plow to be again drawn true by the pull on the draft-plate. It is evident that by simply reversing the operation the excess of draft, when in favor of the right-hand team, can be as easily compensated for, and also as the connections of the equalizer-strap with the free arm of the equalizer and with the doubletree-strap *f* are adjustable, and also that the free end of arm *e* of the equalizer is provided with a series of adjusting-holes, the compensation for any amount of excess can be readily and easily effected.

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

1. In a draft-equalizer, the combination, with a plow-beam, of a draft-plate pivotally connected thereto, a draft-chain connected to one end of the draft-plate, a Z-shaped equalizer connected to the other end of the draft-plate, an evener, one end of which is connected to the end of the draft-chain, its other end having secured thereto one arm of the equalizer, doubletrees connected to the ends of the evener by straps, and an equalizer-strap connected at one end to one arm of the equalizer and at the other end to the doubletree strap at its junction with the doubletree, substantially as described.

2. In a draft-equalizer, the combination, with a plow-beam, of a draft-plate pivotally connected thereto, a draft-chain secured at one end to one end of the draft-plate, a Z-shaped equalizer connected by a short chain to the other end of the draft-plate, said equal-

izer having a short arm and a long arm, an
evener, one end of which is connected to the
other end of the draft-chain, its other end hav-
ing secured thereto the short arm of the equal-
5 izer, doubletrees connected to the ends of the
evener by doubletree-straps, and an equalizer-
strap adjustably connected at one end to the
long arm of the equalizer and at the other end
to the doubletree-strap at the junction of the

latter with the doubletree, substantially as 10
described and for the purposes stated.

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

GEORGE W. RAYMOND.

Witnesses:

CHARLES DONELSON, Jr.,
IRVING E. SMITH.