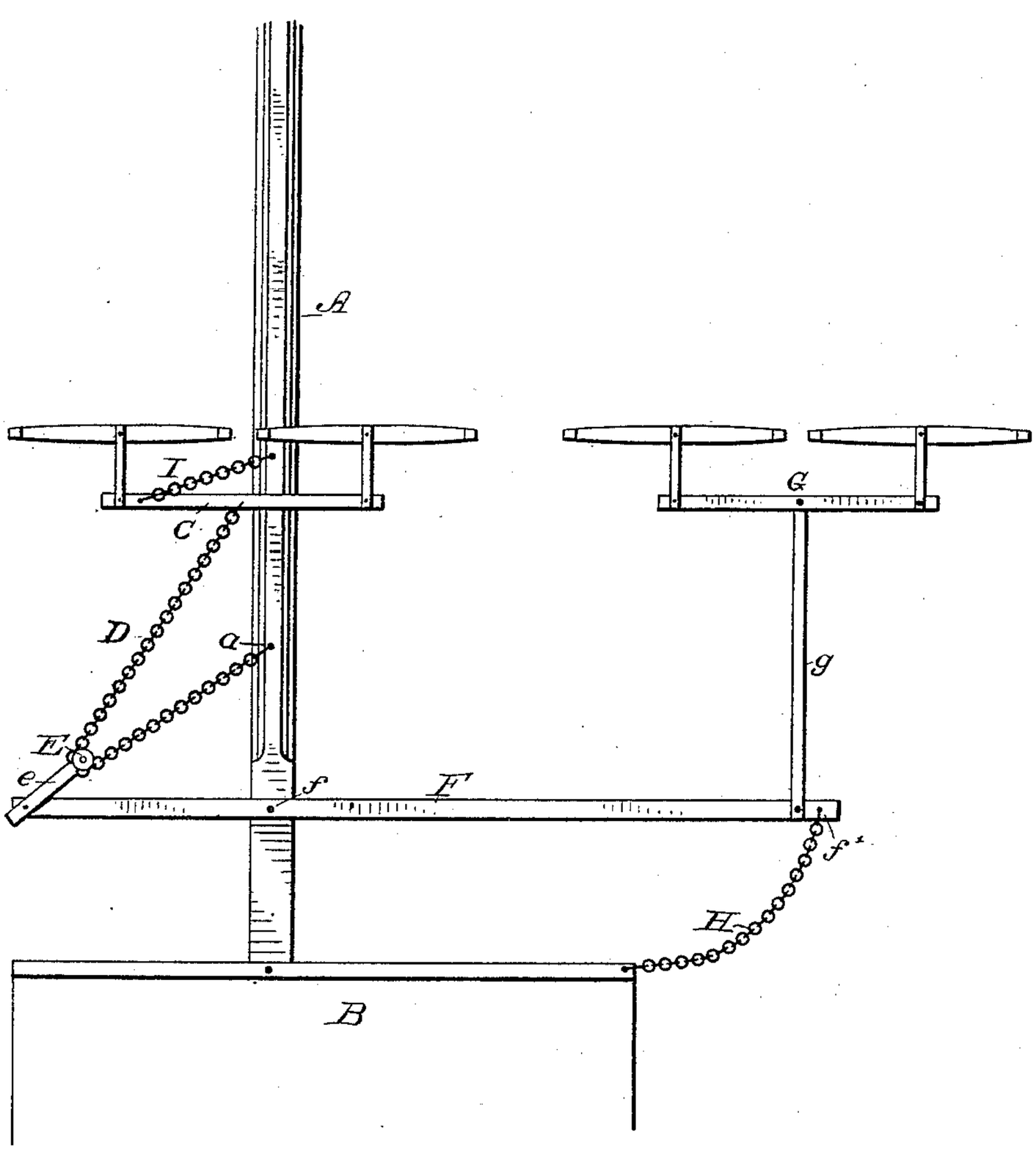
(No Model.)

L. T. NICHOLS.

DRAFT EQUALIZER.

No. 339,007. Patented Mar. 30, 1886.



Witnesses

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L. T. NICHOLS, OF CLAREMONT, MINNESOTA.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 339,007, dated March 30, 1886.

Application filed January 30, 1886. Serial No. 190,369. (No model.)

To all whom it may concern:

Be it known that I, L. T. NICHOLS, a citizen of the United States, residing at Claremont, in the county of Dodge and State of Minnesota, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a specification, reference being had therein to the accompanying drawing.

The drawing shows this device in a top plan view.

This invention belongs to that class of devices known as "draft-equalizers," and more especially that species in said class called "four-horse eveners."

The novelty consists in the construction and combination of the several parts, all as will now be more fully set forth and explained.

In the drawing, A denotes the tongue or pole, and B the harvester or other device to which it is attached. The two-horse double-tree C is not pivoted to the tongue, but plays free. To this double-tree at the center is attached one end of the chain D. This chain D passes back around the pulley E, which plays between the double strap *e*, which double strap is pivoted to the short end of the long lever F, and thence said chain D is brought back to a point, *a*, on the tongue A, where its end is securely fastened. The long lever F is pivoted at *f* to the tongue, so that just one-third of its length is inside—that is, to the left of the tongue or pole—as shown in the drawing, and two-thirds outside—that is, to the right of the pole or tongue—as in drawing. At or near the long end of this lever F, in any of the holes *f'* is pivoted one end of the forwardly-projecting double draw-straps *g*, between the other ends of which is pivoted the double-tree G. This construction and combination forms a very perfect four-horse equalizer. The team that pulls across the tongue by being attached to double-tree C, which is attached to the chain D, which passes around the pulley and is fastened to the tongue, has a double power upon the short end of lever F; hence the short end of this lever F only has to be one-half of the length of the long end to equal the draft-power of the other team, which is attached to the long end of lever F, which is just twice the length of the short end, and thus it not only allows both teams the same draft-power, but also the same distance to play—that is, if one team pulls ahead six inches it will cause the other team to pass back the same distance, and vice versa. By using a pulley which doubles the draft-power upon the short end of the lever F, it is the same in effect as though one team was on the inside of the tongue and one team on the outside of the tongue, hitched one on one end of lever F and the other on the other end equal distances from where it is pivoted to the tongue.

At any convenient point on the long end of the lever F is attached one end of the chain H, the other end of said chain being attached to the outside of the harvester or other device to which the evener is connected. This chain has proper slack, so that when it is necessary to turn the teams around the inside team can be held back and the outside team made to pull the harvester or other device around. Thus the inside team has only to keep their place and there will be no strain on them from the neck-yoke, which in eveners of other construction causes serious harm to the necks of animals.

In order to prevent the inside double-tree from swinging in toward the grain, a small chain, I, is attached near the end of double-tree C, and the other end of said chain is attached to the tongue a little forward of where double-tree C plays over the tongue when both teams are pulling even.

By using a false tongue this evener can be readily attached to a walking-plow, and thus in breaking up new ground one horse will walk in the furrow and the other three will walk out upon the smooth unbroken land, and by having a false piece of a tongue to reach from the clevis of the plow beyond the point on the tongue where the chain D is fastened, this evener can be used on a sulky-plow with the same results. Thus this equalizer can be readily adapted to either a harvester, a walking-plow, or a sulky-plow.

Having now described my invention, what I consider new, and desire to secure by Letters Patent, is—

1. In combination with a four-horse evener consisting of the double-tree C, the chain D, running round a pulley on the inner and short

end of the lever F, the lever F, straps *g* on its long end, the double-tree G, and the chain H, all as and for the purpose set forth.

2. In an equalizer substantially as set forth, the combination, with the pole or tongue A and the double-tree C, of the chain I, attached near the inside of the double-tree C and to the pole, all substantially as described.

3. In a four-horse evener, the combination of the tongue A, the harvester B, the double-tree C, the chain I, connecting the double-tree C to the pole, the chain D, connecting with the double-tree C and the tongue, the pulley E, bar F, pivoted to the tongue, as described, the double-tree G, connected with the end of the longer arm of F, and the chain H, all as and for the purposes set forth.

4. In a draft-equalizer, a double-tree connected to the tongue by means of a chain extending nearly to its inside end and allowing the horses to be attached one on each side of the pole and centered on a chain attachment extending to a lever near the inner end of the pole, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

L. T. NICHOLS.

Witnesses:

G. E. WESTINGHOUSE,

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