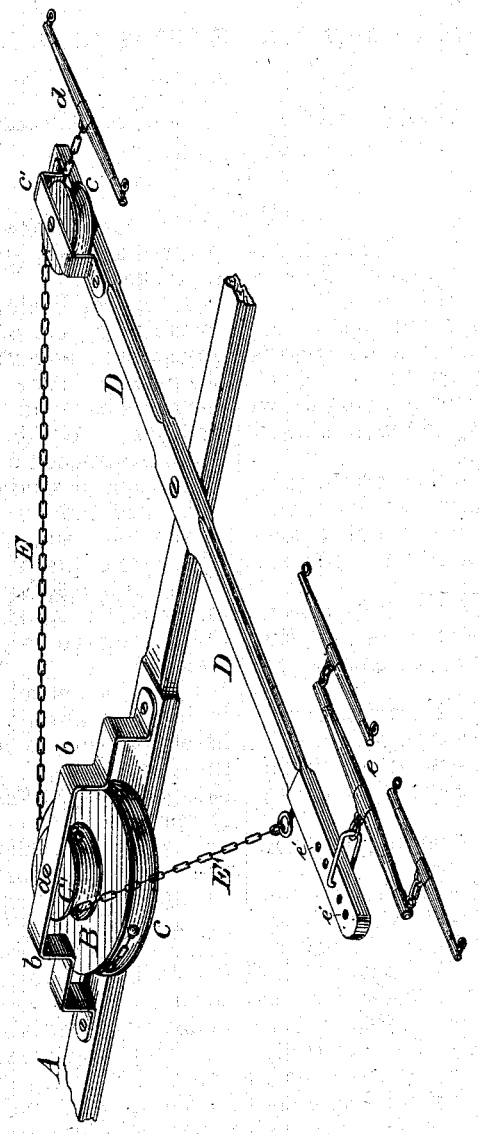
G. W. HARRINGTON.

DRAFT-EQUALIZER.

No. 186,558. Patented Jan. 23, 1877.



Attest:

Inventor:

George W. Harrington

by Geo. W. Dyer & Co.

Attys.

UNITED STATES PATENT OFFICE.

GEORGE W. HARRINGTON, OF PLAIN VIEW, MINNESOTA.

IMPROVEMENT IN DRAFT-EQUALIZERS.

Specification forming part of Letters Patent No. **186,558**, dated January 23, 1877; application filed July 28, 1876.

To all whom it may concern:

Be it known that I, GEORGE W. HARRINGTON, of Plain View, in the county of Wabash and State of Minnesota, have invented a new and useful Improvement in Draft-Equalizers; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is a draft-equalizer for three horses, which can be readily attached to a wagon-pole or the beam of a plow, and will be cheap in construction and efficient in operation.

My invention therein consists in the peculiar construction and arrangement of the principal operative parts, as fully hereinafter explained.

To enable others skilled in the art to manufacture my device, I now describe the same in connection with the drawings, in which the figure represents a perspective view of my equalizer.

Like letters denote corresponding parts in each figure.

A represents the pole of a wagon or other vehicle or machine, or the beam of a plow. A double pulley, B, is pivoted upon the pole or beam by a pin or bolt, *a*. A bracket, *b*, incloses this pulley, and receives one end of the pin or bolt. The double pulley consists of two grooved wheels or pulleys, C C′, preferably cast in one piece, but, when made of wood, secured rigidly together in any suitable manner. The wheel or pulley C is of larger diameter than the pulley C′—the exact dimensions being easily determined—and is mounted below the said pulley C′. D is the cross-bar, pivoted to the pole or beam, and projecting farther on one side than on the other to give room for two horses on that side, and, in connection with the double pulley, to equalize the draft. On the shorter end of the cross-bar is pivoted a small friction-pulley, *c*, mounted in a bracket, *c′*.

A rope or chain, E, is secured at one end to the periphery of the grooved pulley C at any suitable point, and, passing partly around the same, extends through the shorter end of the cross-bar, and bears against the friction-pulley *c*. To the outer end of the rope or chain is attached a single whiffletree, *d*. Another rope or chain, E′, is secured to the periphery of the small grooved pulley C′, and to the long end of the cross-bar. A double whiffletree, *e*, is attached to the long end of the cross-bar, a series of holes, *e′*, being made in the said cross-bar, for the purpose of giving the advantage to either the single or double team.

The principal advantages of my device lie in its adaptability for use on a plow, which heretofore has not been accomplished in any three-horse equalizer as a center draft, in the cheapness of construction, and the efficiency of operation.

Having thus fully described my invention, and explained some of its advantages, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a three-horse equalizer, the combination of the double grooved pulley B, cross-bar D, and the ropes or chains E E′, substantially as described and shown.

2. In a three-horse equalizer, the combination of the double grooved pulley B, cross-bar D, the ropes or chains E E′, and the friction-pulley *c*, constructed and arranged substantially as described and shown.

This specification signed and witnessed this 14th day of July, 1876.

GEORGE W. HARRINGTON.

Witnesses:

H. P. WILLSON,

A. Y. FELTON.