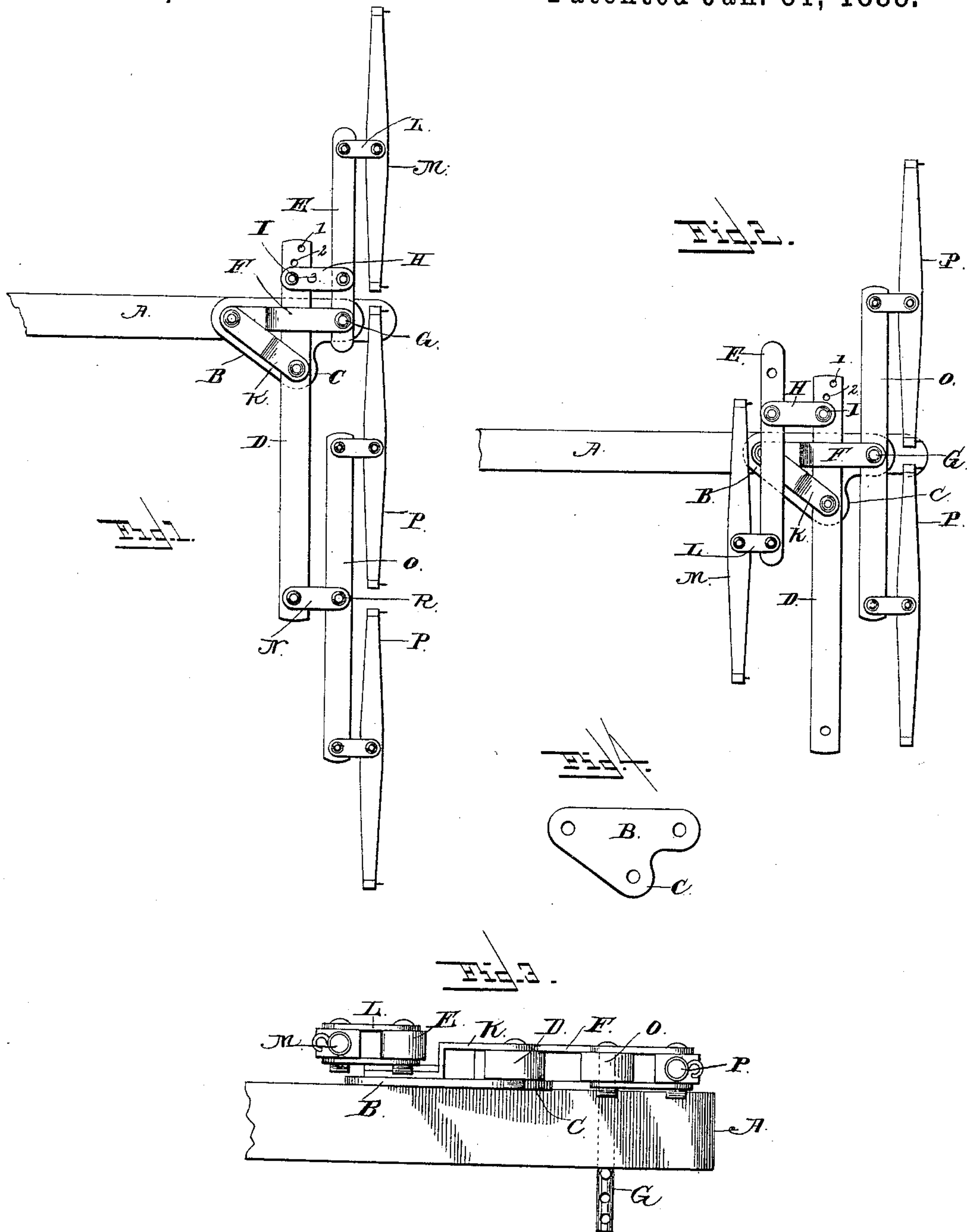


(No Model.)

W. H. FRITTS.
DRAFT EQUALIZER.

No. 377,024.

Patented Jan. 31, 1888.



Witnesses

M. E. Fowler
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UNITED STATES PATENT OFFICE.

WILLIAM HENRY FRITTS, OF PLANO, ILLINOIS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 377,024, dated January 31, 1888.

Application filed March 3, 1887. Serial No. 229,602. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY FRITTS, a citizen of the United States, residing at Plano, in the county of Kendall and State of Illinois, have invented a new and useful Improvement in Draft-Equalizers, of which the following is a specification.

My invention relates to an improvement in draft-equalizers for harvesters; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

The object of my invention is to provide a three-horse equalizer which is adapted to be converted into a two-horse equalizer at pleasure in order to permit the team attached to the harvester to be driven through a narrow gateway and over narrow roads and bridges.

In the drawings, Figure 1 is a top plan view of my improved equalizer when adapted for the attachment of three horses. Fig. 2 is a top plan view of the same when adapted for the attachment of two horses. Fig. 3 is a side elevation of the same. Fig. 4 is a detail view.

A represents the draft pole or tongue, and B represents a plate which is bolted on the upper side thereof, and is provided with an arm, C, that projects beyond one side of the tongue.

D represents a transverse lever, which is pivoted at a distance of one-third of its length to the projecting ear or arm C of the plate B.

E represents a short lever, which is pivoted at its inner end to the plate B, in front of the lever D, and the outer end of the said lever E projects from the same side of the tongue with the short end of the lever B. A strap, F, has its rear end bolted to the rear side of the plate B, and the said strap extends forward, passes over the short end of the lever D, and bears upon the inner end of the lever E, and is attached to the pivotal bolt G, which pivots the latter to the base-plate and to the tongue. The lower end of this bolt projects below the lower side of the tongue and is provided with a vertical series of transverse openings adapted to receive linchpins to prevent the bolt from becoming accidentally disengaged from the tongue.

H represents a link, which is pivotally connected to the lever E at a slight distance from the pivotal bolt G. The rear end of the said

link is adapted to be connected to the short end of the lever B by means of a bolt, I, which engages either of a series of three openings, 1, 2, and 3, which are made in the short end of the lever D, and are arranged in a curved line drawn from the center of the bolt which pivots the front end of the link H to the lever E.

K represents a strap, which has its rear end bolted on the rear end of the strap F, and the said strap K extends diagonally outward and forward from the strap F, and has its outer end bearing on the upper side of the lever D, and pivoted thereto by the same bolt which serves as the fulcrum for the said lever.

To the free end of the short lever E is pivoted a link, L, which serves for the attachment of a singletree, M, and to the free end of the long lever D is pivoted a link, N, which serves for the attachment of a whiffletree, O, the ends of which are provided with the usual singletrees, P. The whiffletree O is connected to the front end of the link N by means of a pivotal bolt, R, which passes through the front end of the link and through the central opening in the whiffletree. When thus arranged, the device is adapted for the attachment of three horses, as shown in Fig. 1. The horse which is attached to the singletree M is ranged on one side of the tongue, and the horses which are attached to the singletrees P are on the opposite side of the tongue.

By reference to Fig. 1 it will be seen that all three of the singletrees are ranged in the same line. The openings 1, 2, and 3, which are made in the short end of the long lever, serve to shift the strain, so that it may be caused to bear unequally on the horses on opposite sides of the tongue, when necessary to do so, in the event of one of the horses being weaker than the others. When the bolt I connects the rear end of the link H with the central opening, 2, the load is applied equally to the three horses. When the said bolt connects the said link to either of the openings 1 or 3, the load is unequally distributed among the three horses, as will be readily understood.

Many gateways, roads, and bridges are not sufficiently wide to permit the passage of three horses abreast, and in order to enable the team attached to the harvester to be driven through such narrow places it is necessary to detach one of the horses. To accomplish this expe-

ditionally, the pivotal bolt G is removed to permit the short lever E to be swung rearward parallel with the long lever, and thereby carry the singletree M with it, and the bolt G is then
 5 dropped in the opening in the said short lever to prevent it from becoming lost. The bolt R is then disengaged from the whiffletree O and the link N, and the whiffletree is placed between the strap F and the tongue, with its central opening ranging with the openings made
 10 in the said strap and tongue, and the bolt R is reinserted in the whiffletree and enters the said openings in the strap and tongue, thereby pivoting the center of the whiffletree to the tongue, as shown in Fig. 2. This causes the horses attached to the singletrees P to range on opposite
 15 sides of the tongue, as shown in Fig. 2, thus entirely dispensing with the horse formerly attached to the whiffletree, and thereby narrowing the width of the team and enabling the machine to be driven through narrow places.

It will be noted, by reference to Fig. 2, that the long arm of the lever G does not project beyond the outer end of the contiguous singletree P, and that none of the parts are detached
 25 when the draft-equalizer is in this position, and consequently no part of the apparatus is likely to become lost or forgotten.

Having thus described my invention, I
 30 claim—

1. In a draft-equalizer, the combination of the tongue, the long lever D, pivoted at a suitable distance from one end and provided with the series of openings 1, 2, and 3 at its shorter
 35 end, the short lever E, pivoted to the tongue and projecting beyond the same side thereof

with the shorter end of the lever D, the link H, pivoted to the short lever E, near the inner end thereof, and the bolt I, to connect the rear end of the said link to either of the series of
 40 openings in the short arm of the lever D, the said openings being arranged in a curved line drawn from the center of the bolt that connects link H to short lever E, for the purpose set forth, substantially as described.

2. In a draft-equalizer, the combination of the tongue, the forward-extending strap F thereon, the long lever D, pivoted to the tongue at a suitable distance from one end and having the link N pivoted to its outer end, the
 50 short lever E, the link H, connecting the same, near its inner end, to the short arm of the lever D, whereby the said lever E may be swung in rear of the lever D, for the purpose set forth, the singletree M, attached to the outer end of
 55 the lever E, the removable bolt G, to extend through aligned openings in the strap F, lever E, and tongue, to pivot the inner end of the said lever to the tongue in advance of the lever D, the whiffletree O, and the removable bolt R, to
 60 attach the same either to the link N at the long end of the lever D or to the tongue, all combined and arranged to operate substantially in the manner and for the purpose described.

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

WILLIAM HENRY FRITTS.

Witnesses:

D. R. POMERY,
 M. S. WING.