(No Model.) 2 Sheets—Sheet 1.

A. T. MASTEN.

FOUR HORSE EVENER.

No. 346,932. Patented Aug. 10, 1886.

Fig. 1.

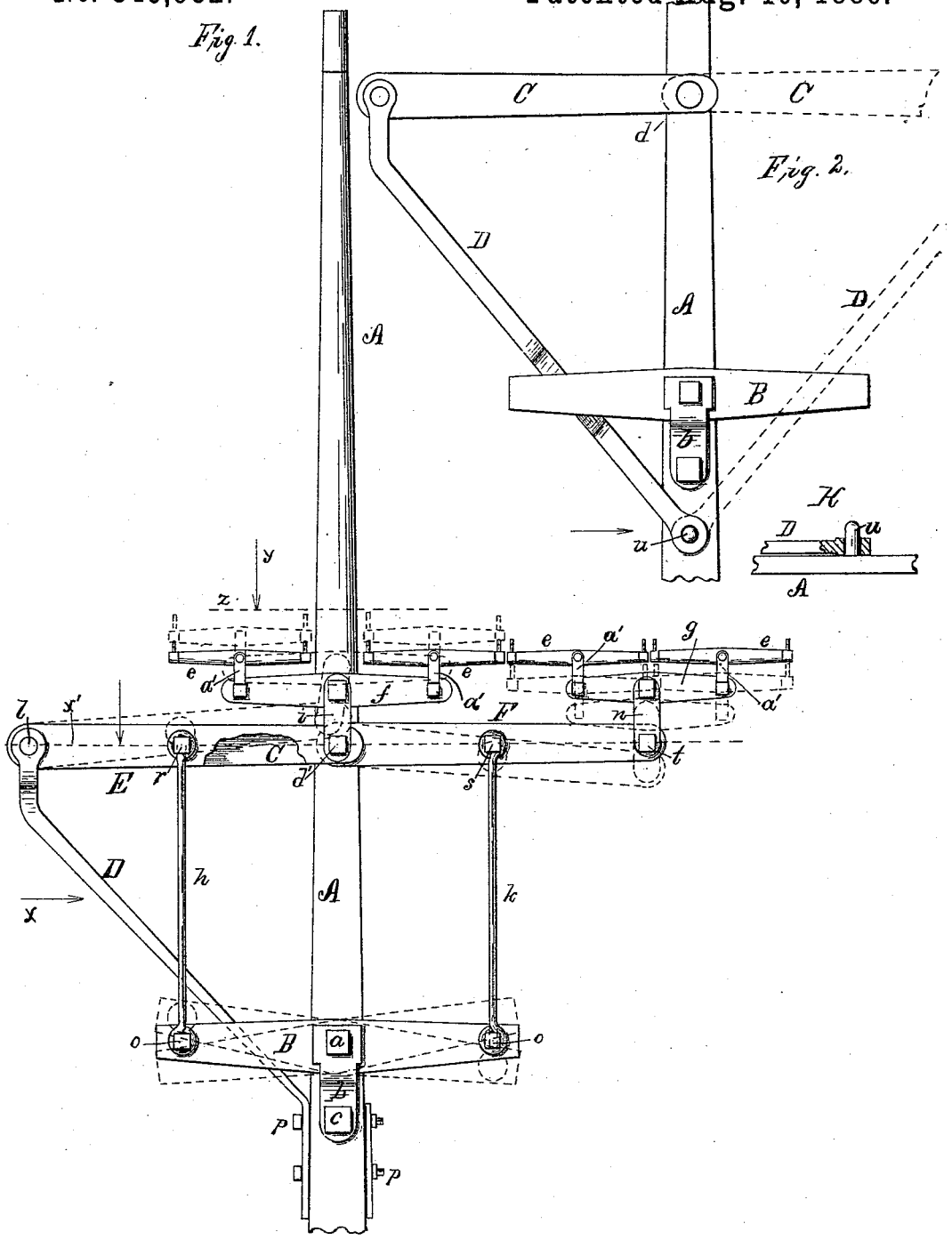

Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

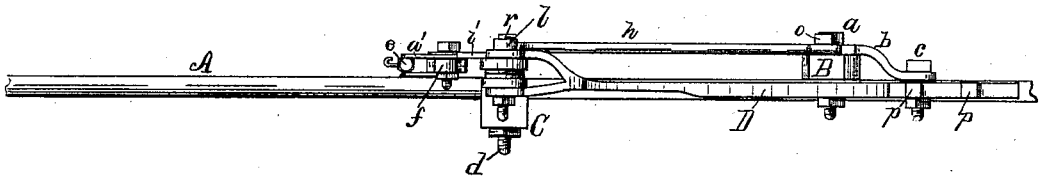


Fig. 4.

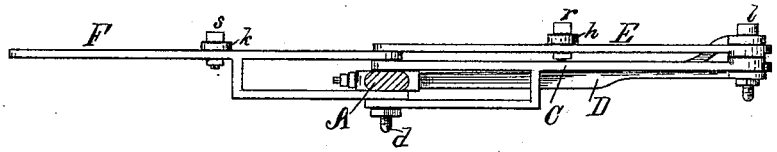
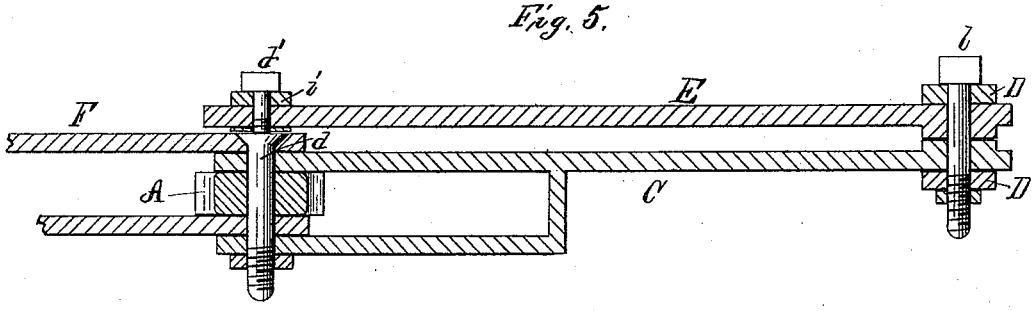


Fig. 5.



Attest:
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Inventor:
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UNITED STATES PATENT OFFICE.

ALANSON TRACY MASTEN, OF SHILOH, GRUNDY COUNTY, IOWA.

FOUR-HORSE EVENER.

SPECIFICATION forming part of Letters Patent No. 346,932, dated August 10, 1886.

Application filed April 19, 1886. Serial No. 199,382. (No model.)

To all whom it may concern:

Be it known that I, ALANSON TRACY MASTEN, of Shiloh, in the county of Grundy and State of Iowa, have invented a new and useful Improvement in Four-Horse Eveners, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

In heavy draft work, when four horses are required to be hitched together, it is sometimes convenient and necessary, when the horses work abreast, to have one horse on one side of the tongue or pole and three horses on the other side. Particularly is this convenient in using such farm implements as reapers and sulky-plows. To produce a device by means of which this may be accomplished without resulting in side draft, or throwing more work upon one horse than another, is the object of my invention, the invention being hereinafter fully described, and more particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a plan of my improved eveners for four horses, parts being shown in two positions by full and dotted lines, a part of the left-hand draft-lever being broken away to show the lever-bar beneath; Fig. 2, a similar view of some of the same parts drawn to show another and better method of attaching the side brace to the tongue; Fig. 3, a side elevation of the parts shown in Fig. 1, viewed as indicated by arrow *x* in said latter figure; Fig. 4, a view of the same, seen as indicated by arrow *y* in Fig. 1, drawn to more fully show the form of the draft-levers and lever-bar, the tongue being sectioned as upon the dotted line *z*; and Fig. 5, an enlarged view of the rigid lever-bar and combined lever with contiguous parts, the main parts being vertically sectioned as upon the dotted line *x'* in Fig. 1, and viewed as indicated by the arrow pointed thereon.

Referring to the parts, A is the tongue or pole attached to the vehicle or machine, it being substantially of common form.

B is a strong equalizing-bar of common form, held to the tongue by a bent strap, *b*, and bolts *a* and *c*, in the usual manner.

C is a rigid lever-bar, secured at one end to the tongue by a bolt, *d*, passing through both, said bar occupying a position at right angles to the tongue, and held at the other end by a rigid side brace, D, reaching back and joined to the tongue at a point preferably in rear of the equalizer.

E is the left draft-lever, pivoted to and normally lying directly over the lever-bar C.

F is the right draft-lever, pivoted to the tongue by the bolt *d'*, which passes through said lever and tongue, as shown, and through the lever-bar C also. *f* and *g* are eveners of common kind, provided with ordinary whiffletrees, *e*, said eveners being respectively attached to the free ends of the draft-levers E and F by ordinary connecting-straps, *i* and *n*, secured by bolts *d'* and *t*, respectively.

The draft-levers E and F are alike as to length and leverage, and are connected with the respective ends of the equalizer by draft-rods *h* and *k*, said rods being held to the levers by bolts *r* and *s*, respectively. The lever E is pivoted to the lever-bar C at its outer end by means of a bolt, *l*, which also passes through the end of the side brace, D, the latter being divided at its end to receive between its branches said lever-bar and lever. The draft-rods *h* and *k* are preferably joined to the draft-levers at points midway between their fulcrums and the points at which the eveners are attached thereto, and the equalizer is made of such length that said draft-rods attached thereto shall be parallel with the axis of the tongue and equidistant on either side thereof.

The arrangement of the parts is purposely such that the free end of the draft-lever E is over the tongue, and the bolt *d'*, at which the evener *f* is connected with said lever, is over the axis of the tongue, which brings the whiffletrees *e e* of said evener equally on either side of said tongue. This allows two horses to travel with the tongue or pole between them, while the other two horses work at their right, as shown by the position of the whiffletrees. As will be seen, the draft-levers E and F and the equalizer B vibrate upon their respective bearings as the draft of the horses varies.

In use upon heavy reapers, where four horses are employed to work abreast, it is very desirable to divide the horses by the tongue or pole, so that but one horse shall be upon the side of the tongue next the standing grain.

As seen in Figs. 4 and 5, the lever-bar C and draft-lever F are bifurcated at their ends next the tongue, each holding a branch of the other and the tongue between their respective branches. This construction is preferable, though not necessary.

This device is designed to be made reversible, so that the single horse may be placed on either side of the tongue, as convenience or necessity requires. To do this the lever-bar and brace are detached from the tongue and turned to the other side, as indicated in dotted lines in Fig. 2, the lever F, with its evener and whiffletrees, being put to proper place on the other side of the tongue. This reversing of the parts requires but a few minutes of time, as each part fits properly to its place.

As shown in Fig. 1, the brace is held to the tongue by means of bolts *p*, which pass through the latter, being provided with screw-nuts at their outer ends. In reversing the parts these bolts are removed; but, as above stated, the manner of attaching the brace to the tongue as shown in Fig. 2 is more convenient and preferable. In this construction, *u* is a rigid stud reaching upward from the surface of the tongue, and the brace is formed with an eye, which is simply slipped over the stud, as shown, in either position of adjustment. The stud *u* is better shown at K. It may be straight or bent at the top, as desired.

The free end of the lever E is intended to swing freely backward and forward over the lever F and bolt *d* as the horses move along and the relative draft upon the levers varies.

What I claim as my invention is—

The fixed lever-bar C, the pole to which said bar is attached at one end, and the side brace, D, which is attached to the outer end of said lever-bar and also to said tongue, in combination with the lever E, pivoted to the outer end of said lever-bar and extending over the latter throughout its entire length, the lever F, pivoted to the tongue at the inner end of said lever-bar, the equalizer B, the rods *h k*, connecting its ends to said levers E F, the equalizers *f g*, attached to the free ends of said levers, and the whiffletrees *e*, attached to the ends of the two latter equalizers, substantially as and for the purpose set forth.

ALANSON TRACY MASTEN.

Witnesses:
A. MACAULAY,
ROBERT MARTIN.