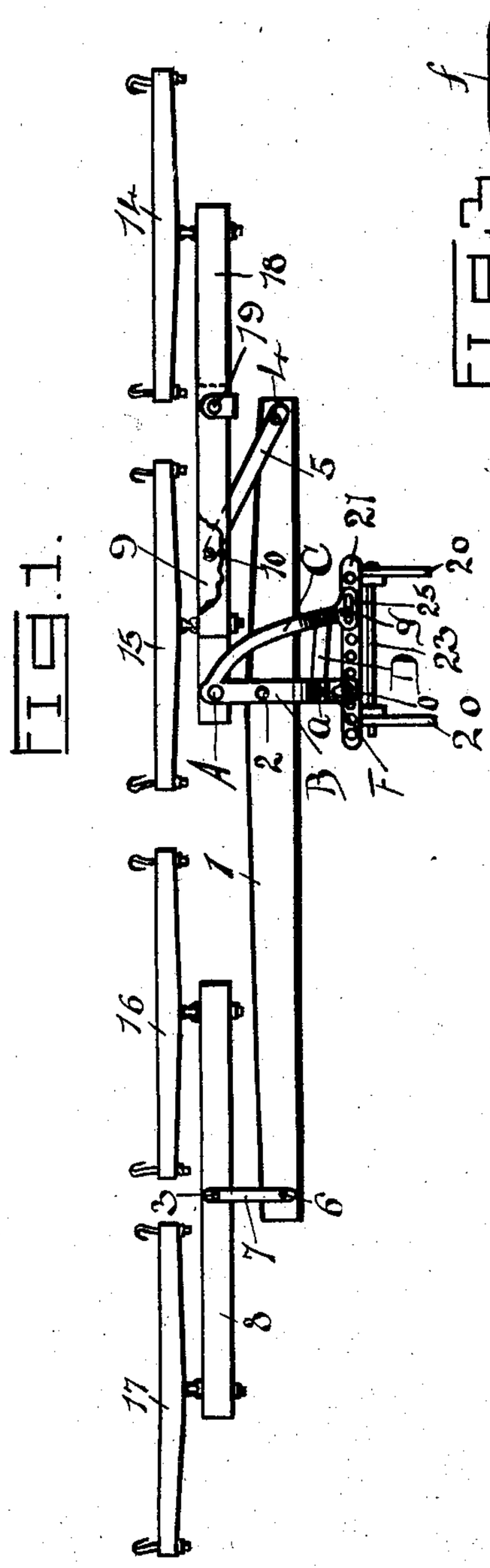
No. 733,832. PATENTED JULY 14, 1903.

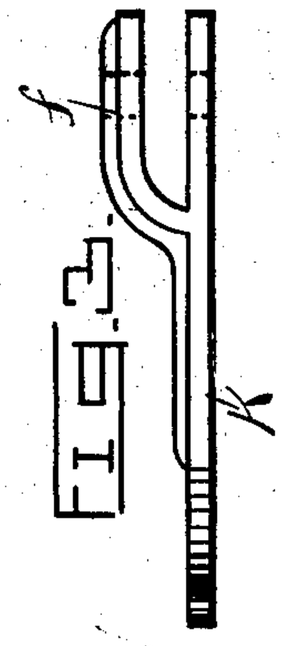
J. W. GAMBLE.

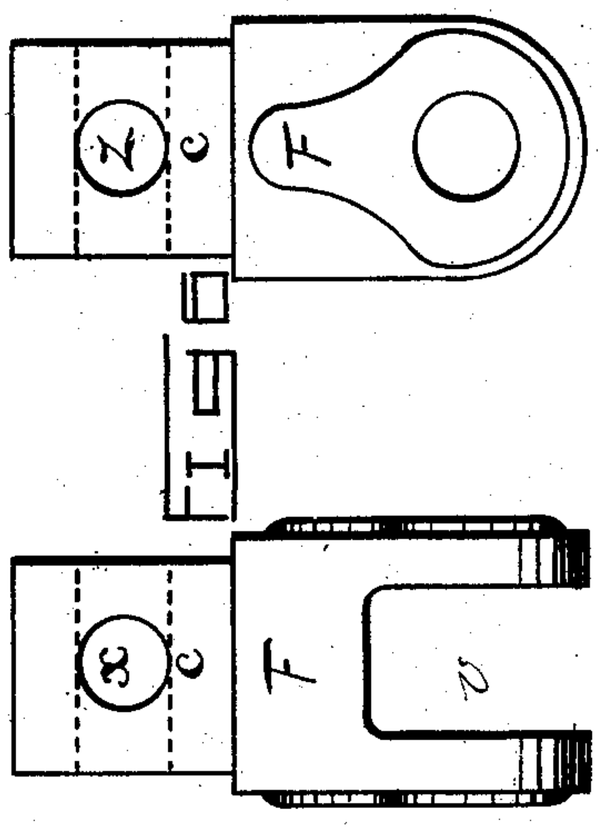
FOUR-HORSE EQUALIZER.

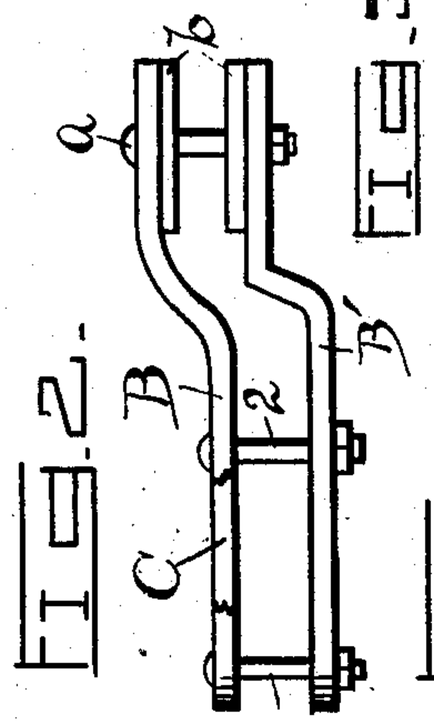
APPLICATION FILED DEC. 22, 1902.

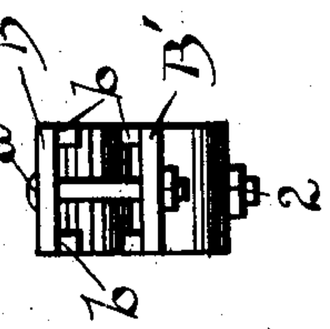
NO MODEL.











WITNESSES:
W. E. Windsor.
N. Oberman.

INVENTOR
Joseph W. Gamble
By Geo. W. Sues.
Attorney

No. 733,832. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

JOSEPH W. GAMBLE, OF OMAHA, NEBRASKA.

FOUR-HORSE EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 733,832, dated July 14, 1903.

Application filed December 22, 1902. Serial No. 136,182. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. GAMBLE, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain useful Improvements in Four-Horse Equalizers; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to new and useful improvements in four-horse equalizers.

The aim of my invention is to provide a four-horse equalizer simple of construction, readily operated, and so constructed that the same may be secured to plows to equally distribute the draft.

It should be understood that this present invention is an improvement over and above what is shown and described in my Patent No. 561,076, issued to me May 26, 1896.

In the accompanying drawings I have shown in Figure 1 a top view with portions removed of a four-horse equalizer embodying my invention. Fig. 2 shows an enlarged detached side view of the double tongue as used in my equalizer. Fig. 3 shows a side view of the auxiliary tongue as used when the double tongue and auxiliary tongue are cast separate. Fig. 4 shows an end view of the double tongue, while Figs. 5 and 6 show, respectively, a side and top view of the reversible fork as used in my invention.

My four-horse evener is so constructed that the "side draft," so called, is overcome. In using my four-horse equalizer one horse walks in the furrow and three upon the landside, so that all the horses travel upon solid ground.

In Fig. 1 I have shown the forward broken ends of the plow-beams 20, to which is pivotally secured an ordinary clevis 21, supported by the pin 23, as illustrated in the drawings. Extending from this clevis 21 is a reversible fork F, which is bifurcated, as shown at *v* in Fig. 5, so that the fork will stride the clevis 21. Extending through this reversible fork and the clevis is a pin *o*. Secured to this reversible fork F by means of a suitable bolt *a* is a double tongue B, (shown in detail in Fig. 2,) the members B B forming this double tongue being provided in front with the ribs *b*, between which is held the square stem *c* of the reversible tongue, as disclosed. The upper member B of this double tongue is provided with a lateral extension C, cast integral therewith and ending in a perforated ear 25, through which passes the bolt *g*, as shown in Fig. 1, to secure the upper double-tongue member C to the clevis 21. Near the forward end the upper double-tongue member B is provided with a bolt A, which bolt supports the land end of the draw-bar 9, as shown in Fig. 1. Approximately intermediate of its ends these double-tongue members B B′ are perforated to accommodate the bolt 2, which pivotally supports the long bar 1, as disclosed.

Secured to the upper double-tongue member B and the auxiliary tongue member C and cast integral therewith is a transverse bar D, so that I provide, in effect, a connection in the form of a right-angle triangle, the hypotenuse being represented by the auxiliary tongue B and having three terminal perforations adapted to receive the bolts A, *o*, and *g*, as disclosed.

Extending from the furrow end of the long bar 1 are two draw-straps 5, secured above and below, which are pivotally secured to the long bar 1 by means of the bolt 4, and extending at an angle toward the land end of the draw-bar 9, and being secured between the ends of said draw-bar 9 by means of the bolt 10, as shown.

Pivotally secured to the furrow end of the draw-bar 9 is a bolt 19, supporting the doubletree 18, which doubletree is connected nearer the furrow end, from which doubletree 18 extend the swingletrees 14 and 15, as shown.

Projecting from the main bar 1 and extending from the bolt 6 are the draw-straps 7, which by means of a bolt 3 are secured to the doubletree 8, secured approximately centrally of its ends and from which doubletree extend the swingletrees 16 and 17, as shown.

Should the draft-animals secured to the swingletrees 16 and 17 upon the land side draw to tilt the main bar 1 slightly forward at the land end, the plow, were it not provided with the auxiliary tongue, would be tilted to take too much land, and so cause the inner team to receive more than their

share of the load. The auxiliary tongue, however, prevents the pressure of the outside or land team coming upon the inner or furrow team, and so equalizes the loads. Then were it not for the auxiliary tongue connected to the main tongue and extending backward and connected to the plow-clevis there would be no vibration between the long bar and the short bar.

In connection with my Patent No. 561,076, granted to me May 26, 1896, there was disclosed an evener mounted on said main tongue and draw-rods connecting said evener to said evener-bar instead of draw-rods and evener, as in that patent. This invention does not employ the draw-rod or evener, only the tongue and auxiliary tongue.

The present invention employs two bars, one long and one short, both being mounted, the double tongues being connected together by means of short draw-straps near one end of the long bar and near the center of the short bar.

In Patent No. 561,076 I show and use a short hinge plate or bar, while in this invention I do not use the short hinge-plate. It will also be noticed in Patent No. 561,076 that the forward end of the auxiliary tongue is provided with a slotted end, so the plow may be turned square, while in this invention I do not use the slot, as the horses can be brought around and the plow turned sq uare by the hinging of the long and short bar. In the patent I describe that the auxiliary tongue and main tongue may, if desired, be cast together. In this present invention I desire to claim both tongues cast together, with this distinction: In the patent I had a sliding connection between the main tongue and the auxiliary tongue and in the present I have none.

In Fig. 3 I have shown a modification in which an auxiliary tongue K, provided with the upward extension *f*, between which the plow-clevis 21 is to be held. In using my modification the auxiliary tongue K is pivotally secured to the main tongue member B and forms a distinct portion thereof. When used on an up-and-down clevis, I prefer employing this auxiliary tongue.

It will be noticed that the fork F is reversible, having the openings *x* and *z* extending at right angles, this also for the purpose of securing the same plows and having an up-and-down clevis.

Now, having thus described my said invention, what I claim as new, and desire to secure by United States Letters Patent, is—

1. In a four-horse equalizer, the combination of the following instrumentalities to wit: a long bar, a draw-strap pivotally secured to said long bar and inclining toward the land side, a draw-bar, said draw-strap being pivotally secured to said draw-bar between its ends, a double tongue secured to said long bar intermediate of its ends, said draw-bar being secured to the forward end of said double tongue, an auxiliary tongue extending from the forward end of said double tongue and curving rearward toward the furrow side, said double tongue and auxiliary tongue being adapted to be secured to a suitable clevis, a doubletree secured to one end of said long bar, and a doubletree secured to the furrow end of said draw-bar.

2. The combination with a tongue, a fork adjustably secured to the rear end of said tongue, said fork being adapted to be secured to a clevis, an auxiliary tongue curving from the forward end of said first-mentioned tongue rearward and forming an integral part thereof, the rear end of said auxiliary tongue being slotted to receive a suitable bolt, a bolt passing through said first-mentioned tongue approximately centrally between its ends, a long bar pivoted to said bolt, said bolt being secured near the furrow end of a long bar, a draw-strap pivotally secured to draw-bar and angling forward toward the land side, a draw-bar pivotally secured near one end of said main tongue, said draw-strap being secured at its forward end approximately centrally to said draw-bar, a doubletree secured to said draw-bar, and a doubletree secured near the land end of said long bar.

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

JOSEPH W. GAMBLE.

Witnesses:

WILLIAM EDGAR WINDSOR,

GEORGE W. SUES.