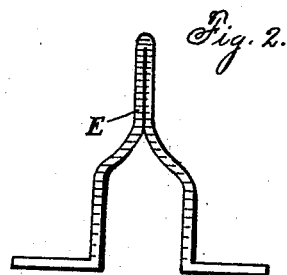
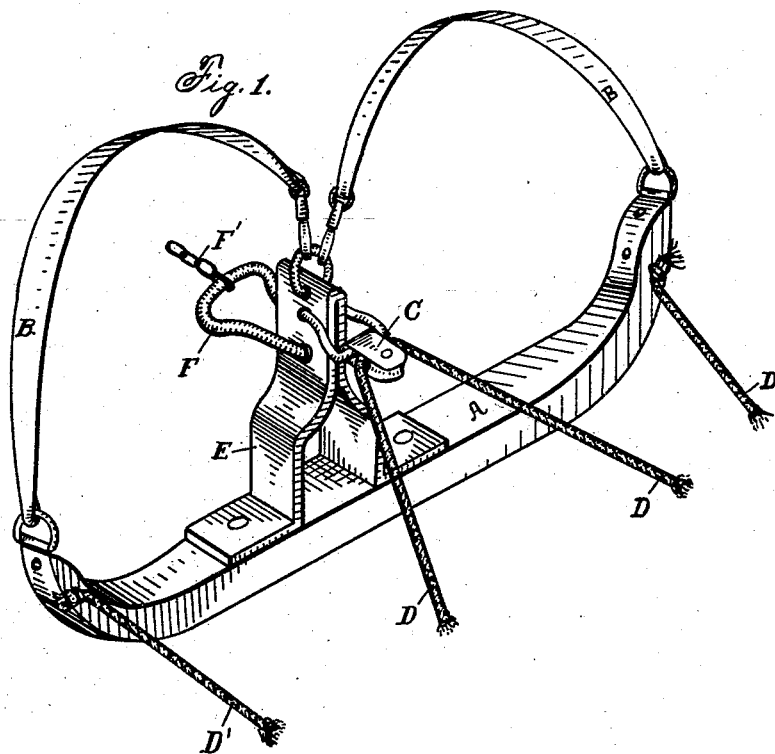


(No Model.)

M. W. TUCKER.  
DRAFT EQUALIZER.

No. 267,040.

Patented Nov. 7, 1882.



WITNESSES

Samuel C. Thomas.  
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# UNITED STATES PATENT OFFICE.

MORRIS W. TUCKER, OF SUMNER, MICHIGAN.

## DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 267,040, dated November 7, 1882.

Application filed June 27, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, MORRIS W. TUCKER, of Sumner, in the county of Gratiot, State of Michigan, have invented a new and useful Improvement in Draft-Equalizers; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to improvements in that class of draft-equalizers for which Letters Patent No. 236,196 were issued to me on the 4th day of January, 1881.

The object of my present invention is to provide means for tilting the arch and draft-bar forward when the team is pulling apart and rearward when the team crowds together, in order to produce a more equal distribution of the draft. This object I accomplish by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the draft-equalizing apparatus embodying my invention, and Fig. 2 a detached perspective view of the arch.

The letter A indicates the draft-bar; B, the straps for passing over the backs of the horses; C, the draft-block; D, the equalizing-chain; and D' the outer chains, which pass from the ends of the draft-bar to the hames of the adjacent horses. These parts are essentially the same as in my Letters Patent referred to. In the use of that device it has been found that if both horses crowd out or pull apart at the same time the outer chains, D', become slack, and the draft is thereby thrown on the inner chains and upon the inner shoulders of the horses; and if the horses crowd together the inner chain becomes slack, and the draft is thrown on the outer chains and upon the outer shoulders of the horses. This objection I overcome in the following manner:

It will be observed that instead of simply an arch supporting a draft-block at its crown, as in my former patent, the sides of the arch E are brought together at the top and extended upward to form an extension or arm, to the upper portion of which is secured a

clevis, F, or other device by which the rear draft-chain, F', is connected with the vehicle.

The draft-block C is secured to the upward extension or arm of the arch above the clevis F, to receive the equalizing-chain D, which passes around the draft-block, as represented.

In the operation of my present invention, if both horses crowd out at the same time, the upward extension or arm and arch E are tilted forward until the equalizing-chain D is permitted to pass forward sufficiently to take up the slack which would otherwise be caused in the outer chains, D', and thus the draft is equally distributed on both chains and upon the inner and outer shoulders of the horses. If, on the other hand, both horses crowd together or inward, the extension or arm or arch is tilted rearward until the equalizing-chains D are permitted to pass backward sufficiently to take up the slack, and thereby bring the draft equally on both chains and upon the inner and outer shoulders of the horses. The upward extension or arm of the arch also serves to shorten the crook which was formerly necessary at the ends of the draft-bar, for the reason that the location of the draft-block above the clevis causes the bar to drop a little below the line of draft, as indicated in my former patent.

Having fully described my invention, what I claim is—

1. In a draft-equalizer, the arch provided with the upward extension or arm for the attachment of the draft-block, substantially as described.

2. In a draft-equalizer, the combination, with a draft-bar, of an arch having an upward extension or arm, substantially as described.

3. In a draft-equalizer, the combination, with a draft-bar, of an arch having an upward extension or arm, a suitable draft-block secured to said extension or arm, and means for connecting the rear draft to the extension or arm, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

MORRIS W. TUCKER.

Witnesses:

J. EDW. WARREN,  
N. S. WRIGHT.