

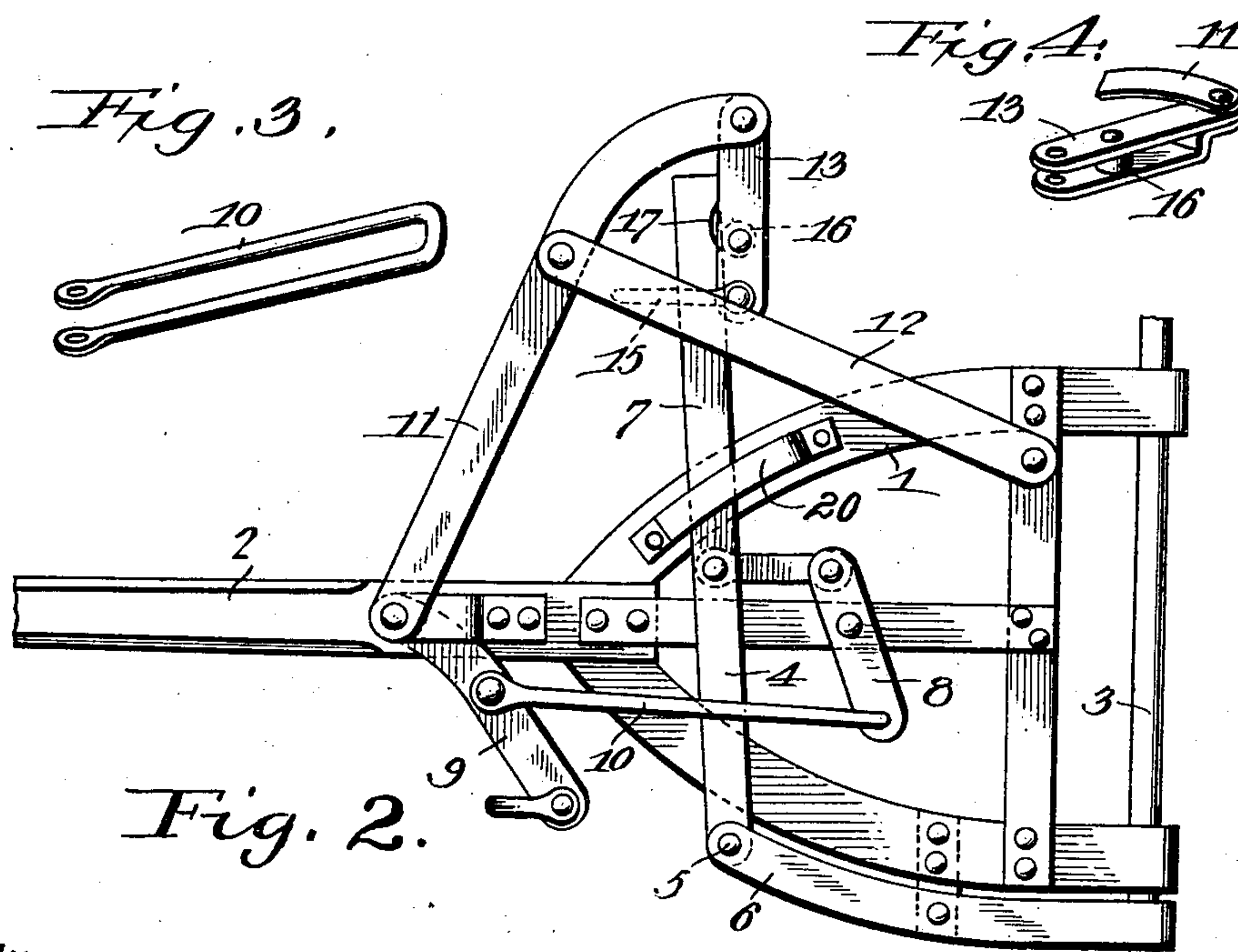
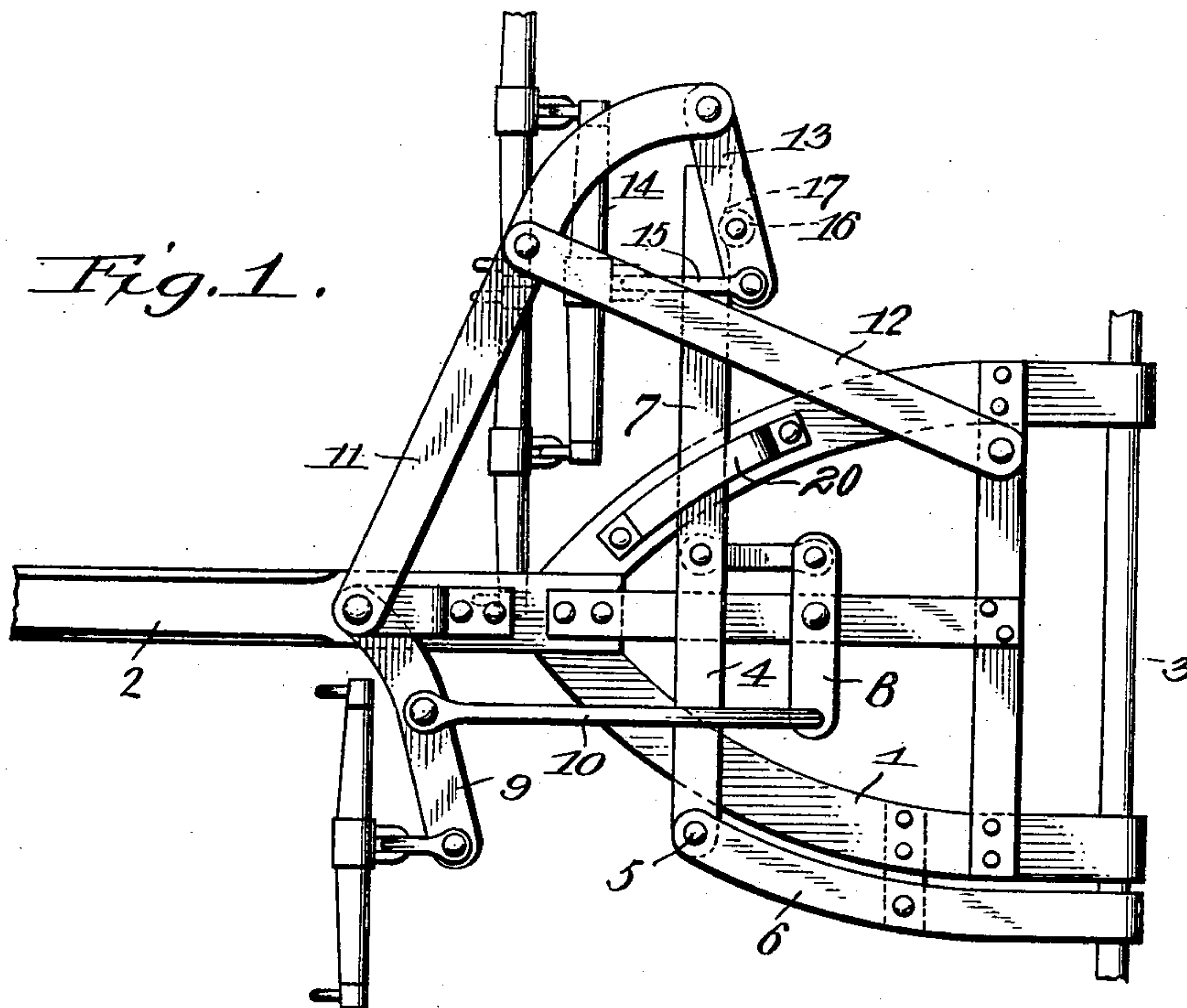
No. 742,741.

PATENTED OCT. 27, 1903.

M. F. RICHARDSON.
DRAFT EQUALIZER.

APPLICATION FILED AUG. 18, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

MILLARD F. RICHARDSON, OF HOLTON, KANSAS, ASSIGNOR OF ONE-HALF
TO LOREN M. ELLIOTT, OF HOLTON, KANSAS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 742,741, dated October 27, 1903.

Application filed August 18, 1903. Serial No. 169,919. (No model.)

To all whom it may concern:

Be it known that I, MILLARD F. RICHARDSON, a citizen of the United States, residing at Holton, in the county of Jackson and State of Kansas, have invented a new and useful Draft-Equalizer, of which the following is a specification.

This invention relates to draft-equalizers; and one of the primary objects thereof is to provide an efficient means for equalizing the pull on different sides of the draft-pole, so as to compensate for the difference in the horse-power.

Another object of the invention is to provide means for efficiently assembling the parts, and, further, to provide a device of the class described which will be cheap, durable, and which will readily perform the service for which it was intended.

Other objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims, it being understood that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

In the drawings, Figure 1 is a top plan view of the equalizer, showing one position of the parts. Fig. 2 is a similar view showing a slightly-modified position. Fig. 3 is a detail perspective view of one of the links, and Fig. 4 is a detail perspective view of one of the levers.

The reference-numeral 1 designates the front hounds, carrying the tongues 2 and supported by the axle 3, all of common construction.

The draft-equalizer is supported by the parts just described, and it is illustrated as having a long lever 4 transversely disposed with relation to the pole and terminally pivoted, as at 5, to an arm 6, rigid on the axle 3. This lever we term the "primary equalizing-lever," mainly on one side of the pole, the length of the longest arm 7 being governed by the ratio of the horse-power on the respective sides of the pole. A lever 8 of the first order is fulcrumed in rear of the primary

lever, and one end of said lever 8 is connected to the long arm of the lever 4, the other end of the lever 8 being connected to swingle-tree-supporting lever 9 by a link 10, illustrated as being in the form of a loop and straddling the lever 4. 9 is a lever of the second order and is fulcrumed to the tongue, from which leads a brace 11, supported from the hounds by a brace 12. This brace 11 constitutes a bracket terminally supporting an independently-pivoted lever 13, which terminally supports a doubletree 14 by a connection 15. This lever 13 carries a roller 16, adapted to contact with and roll upon the edge of the lever 4 when resistance is offered to one draft device by the other. When the pull is properly proportioned, the roller will drop into the seat or notch 17, provided in the lever 4; but when an unequal pull is offered on either side of the pole 2 the roller will be unseated. As before stated, the proportion of the relative ends of the lever 4 on either side of the pole will be calculated accordingly as the previously-designed oppositely-located horse-powers are to be employed.

It will be observed that the primary lever 4 is unsupported with respect to the pole, being fulcrumed at a point distant from the pole, so that considerable leverage will be had at the terminal of the longer or free arm thereof. It will also be observed that the limit of movement is governed by the guide-loop 20, carried by the hounds. This loop may or may not be employed, as desired, although I prefer to apply it as shown.

I claim—

1. The combination with a draft-pole, of a primary equalizing-lever mainly on one side of the pole and fulcrumed at a point distant from the pole, a lever of the first order connected to the primary equalizing-lever, a swingle-tree-support connected to the lever of the first order, and a whiffletree-supporting lever, independently mounted and removably engaging the primary equalizing-lever.
2. The combination with a draft-pole, of a long equalizing-lever transversely disposed with relation to the pole, and independently pivoted at a point distant from said pole, a draft device, connected to the lever to exer-

cise a pull in one direction, and means for resisting the pull on the lever, comprising a lever removably engaging said equalizing-lever, and draft means connected to the lever.

5 3. In a draft-equalizer, the combination of a plurality of levers, and a cooperating draft device, one of said levers having a notch, and an independently-mounted lever, for supporting a draft device and removably engaging the notch.

10 4. In a draft-equalizer, the combination of a plurality of levers, one of which is provided with a notch, and an independently-mounted lever, removably engaging the notch.

15 5. In a draft-equalizer, the combination with a vehicle-pole, of a lever extending across the pole and terminally fulcrumed independently thereof, a second lever, having one end intermediately connected to the first lever, a lever pivoted to the pole, and connected to
20 the remaining end of the second lever, and

an opposing lever oppositely engaging the first-named lever.

6. In a draft-equalizer, a system of connected levers one of which is terminally supported and provided with a free end, and an opposing lever independently mounted and removably engaging the terminally-pivoted lever.

7. The combination with a draft-pole, of a series of connected levers, a draft device connected to one of the levers in the series, and an independently-mounted lever, independently movable to resist the entire set of levers in the series.

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

MILLARD F. RICHARDSON.

Witnesses:

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