

F. W. SUTTON.
DRAFT EQUALIZER.
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994,618.

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Fig. 1.

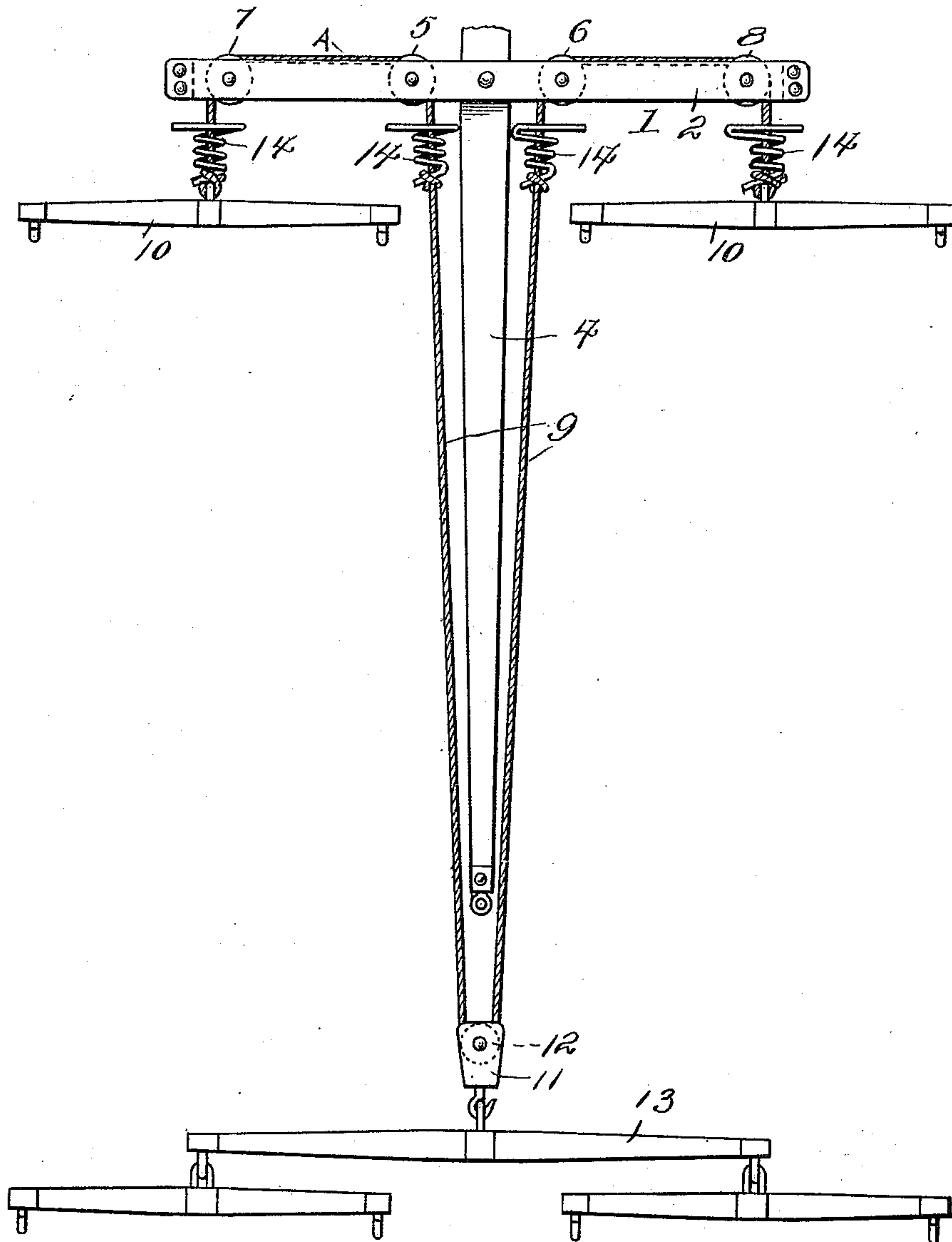


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK W. SUTTON, OF NORTH ENGLISH, IOWA.

DRAFT-EQUALIZER.

994,618.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK W. SUTTON, a citizen of the United States, residing at North English, in the county of Iowa and State of Iowa, have invented new and useful Improvements in Draft-Equalizers, of which the following is a specification.

The invention relates to a draft equalizer designed primarily for use with two teams connected in tandem, and is directed particularly to an equalizer in which the pull of the forward team will be equalized with the pull of the tongue team, and the pull of the horses constituting the latter team will also be equalized.

The main object of the present invention is the provision of a draft equalizer in which the respective horses of the tongue team are connected to the respective ends of a movable flexible connection, while the team of lead horses are also connected to said flexible element by a member through which the element is movable.

A further object of the present invention is to provide a flexible connection adjacent the draft bar with stops or buffer elements which tend to limit the movement of said flexible element beyond predetermined points in either direction.

The invention in its preferred details of construction will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a plan of the improved draft equalizer. Fig. 2 is a side elevation of the draft bar.

Referring particularly to the accompanying drawings, the improved evener includes a draft bar 1 including spaced upper and lower sections 2 and 3, connected together by any suitable interposed supporting elements or blocks, as 4. The bar is centrally and pivotally connected to the tongue in place of the usual doubletree, and adjacent the tongue connection on the respective sides of the tongue and between the sections 2 and 3 are mounted pulleys 5 and 6. At the respective ends of the draft bar between the sections are mounted additional pulleys 7 and 8. An endless member, as a wire rope or the like A, is passed in rear of the pulleys 5 and 7 then forwardly to provide a projecting loop 9, and rearwardly and

around the pulleys 6 and 8, the respective terminals of the element projecting in advance of the pulleys 7 and 8. To the respective terminals are connected in any usual or preferred manner swingletrees 10 to which the horses of the pull team are connected. Slidably mounted on the loop portion 9 of the flexible element is a connector 11 of any usual or preferred type including a pulley 12 over which the element passes. The lead team is attached to the element 11 by the usual doubletree 13. Stops 14 are preferably arranged on the element A to limit its movement in either direction. These stops, which are preferably in the form of spring elements, are particularly important as they tend to effectively prevent either team gaining such control as will practically preclude the balancing of the other team, it being obvious that by the disposition of the stops the pull of either team beyond a predetermined point will be prevented by said stops or in other words said stops will, when in engagement with the draft bar, form in effect the connection between the particular team then exerting an excessive pull and said draft bar, relieving the other team to a material extent of the draft of the first team.

In operation it will be obvious that unequal pull of either of the horses of the team will be equalized through the movement of the element A, while unequal pull of either team with respect to another will be similarly equalized.

The device may be readily applied to any usual tongue construction in a simple and expeditious manner and when in place will insure equalization of the four horse team connected in tandem pairs.

Having thus described the invention, what I claim as new, is:—

A draft equalizer including a draft bar pivotally connected at its longitudinal center with the tongue of the vehicle, a flexible element having its respective terminals arranged in advance of the respective ends of the draft bar and its central portion projected in loop form in advance of the central portion of the draft bar, said element intermediate the loop portion and each terminal being movably guided at spaced points and in rear of the draft bar, draft members connected to the terminals of the

element in advance of the draft bar, a draft
element connector slidably mounted on the
loop portion of the element, and means se-
cured upon the element adjacent the ter-
5 minals and on the loop portion to limit the
movement of such parts toward the draft
bar.

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

FRANK W. SUTTON.

Witnesses:

LEE SUTTON,
ARTHUR W. SUTTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
