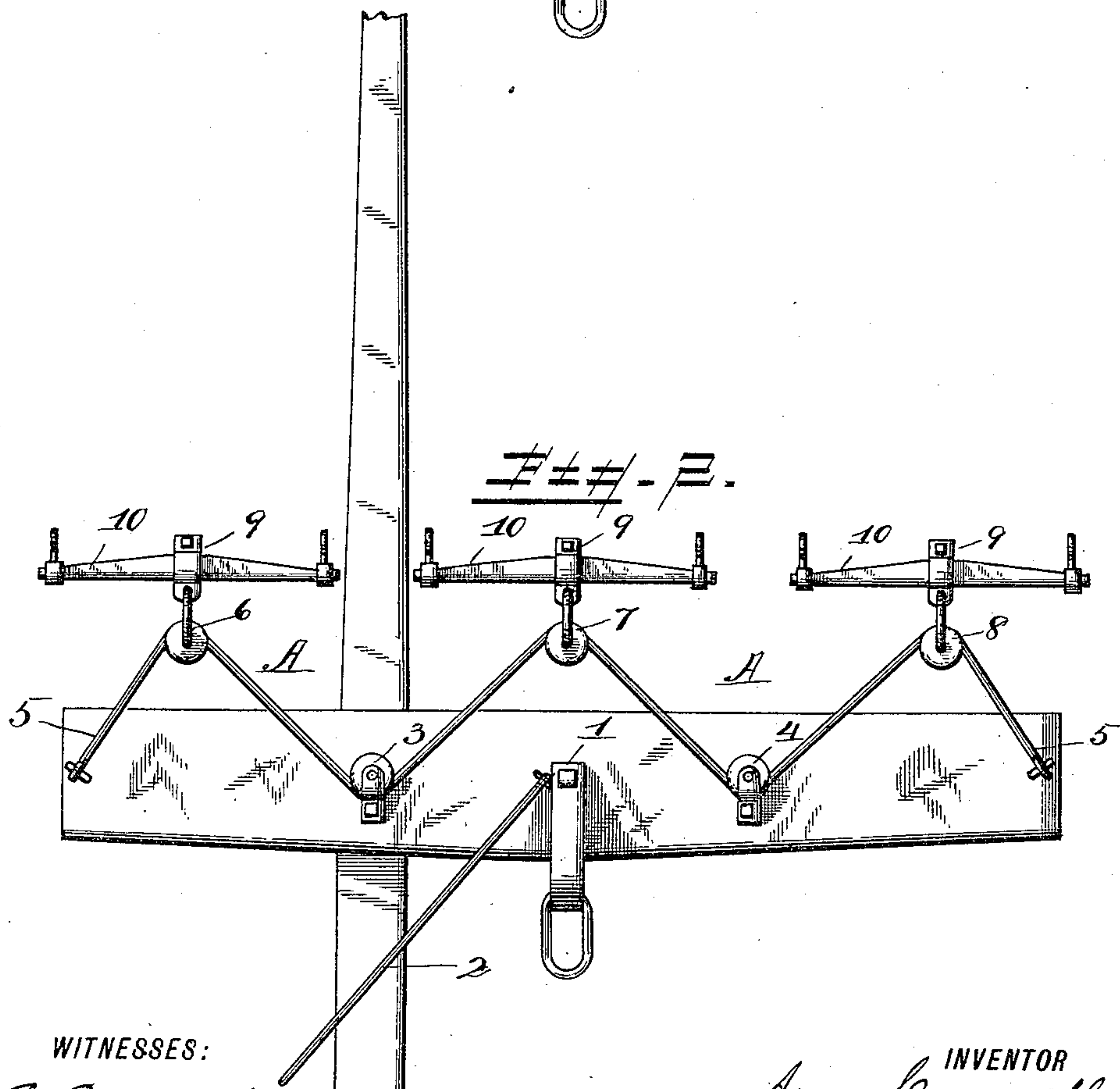
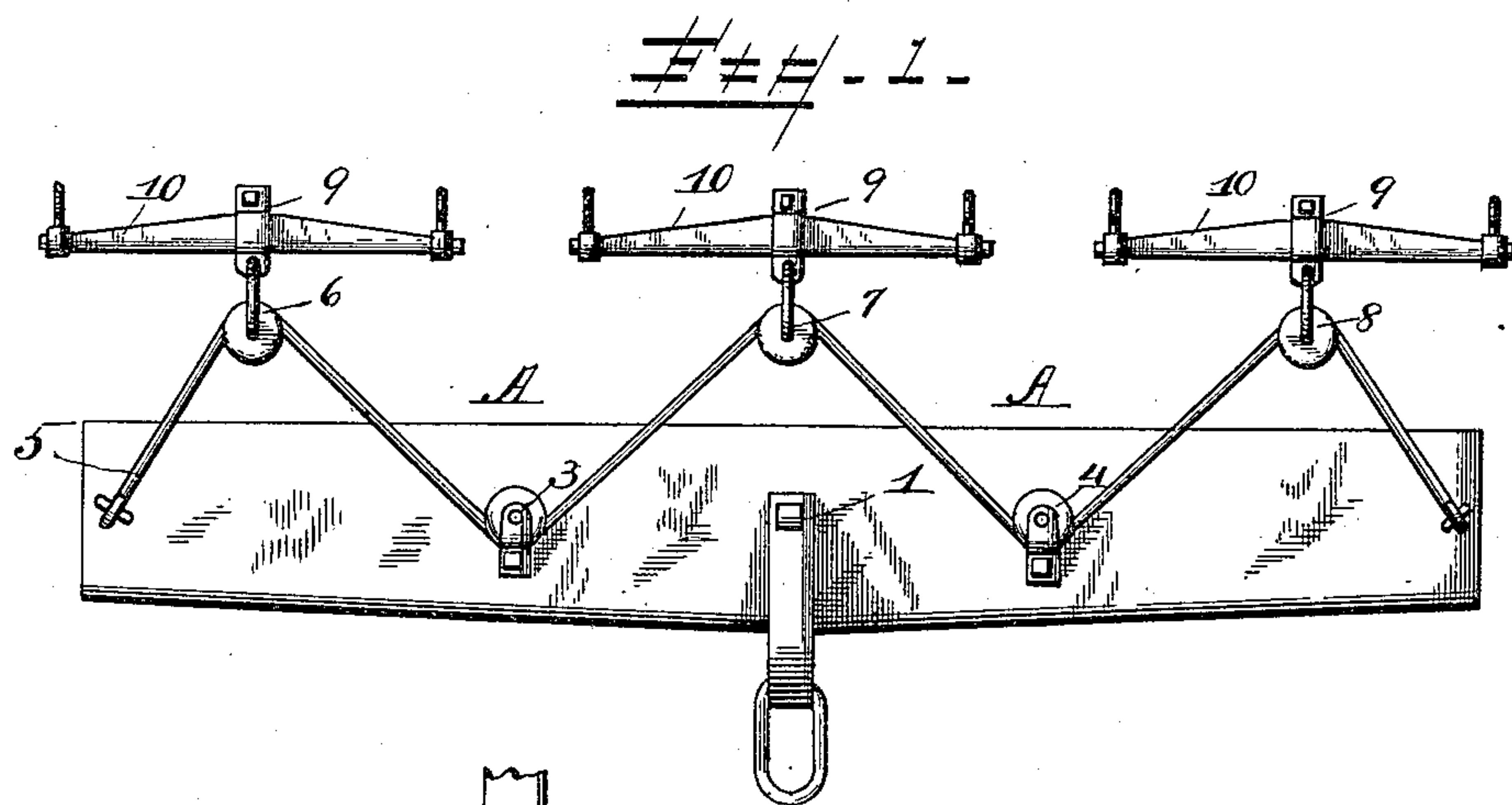


(No Model.)

A. CRANNELL.
DRAFT EQUALIZER.

No. 464,012.

Patented Dec. 1, 1891.



WITNESSES:

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UNITED STATES PATENT OFFICE.

AMER CRANNELL, OF MOUND CITY, MISSOURI, ASSIGNOR OF ONE-HALF TO
JAMES V. CRANNELL, OF SAME PLACE.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 464,012, dated December 1, 1891.

Application filed March 19, 1891. Serial No. 385,638. (No model.)

To all whom it may concern:

Be it known that I, AMER CRANNELL, of Mound City, in the county of Holt and State of Missouri, have invented a new and useful
5 Draft-Equalizer, of which the following is a specification.

My invention has relation to improvements in draft-equalizers; and the object is to provide a new and useful improvement or draft
10 attachment or device, whereby a force applied at different points in the device shall be compensated or equalized on the other points at which forces are applied.

I have clearly and fully illustrated my invention in the accompanying drawings, wherein—
15 in—

Figure 1 is a plan view of my invention applied to a doubletree. Fig. 2 is a plan view of my invention applied to a tongue of a vehicle or similar transporting device.
20 hicle or similar transporting device.

A designates a doubletree, which may be of any desired length and adapted to have connected thereto my improvements suitable for connecting three or more draft-animals
25 thereto. In the middle of the doubletree, in instances of an equally balanced or hung doubletree, is the usual fastening-bolt hole 1, to which a clevis (not shown) is attached to connect the doubletree to the load.

In Fig. 2 of the drawings is illustrated a doubletree rigidly fixed on a tongue, with a leverage of two to one, and braced by a rod 2, secured by any proper means to serve the purpose of insuring the rigidity of the
30 doubletree. On the doubletree are equidistantly mounted two sheaves 3 4, and at the ends of the doubletree are secured the ends of a cable or chain 5 with its intermediate portions arranged in the sheaves 3 and 4, substantially as shown, the cable or chain being
40 longer than the doubletree, so as to be slack and afford give-and-take distance to the ca-

ble when the respective drafts are applied. Between the sheaves on the doubletree and the sheaves on the respective end fastenings
45 of the cable are arranged pulleys or sheaves 6, 7, and 8, to which clevises 9 are hung, and to the clevises are connected singletrees 10, substantially as shown.

It will be readily perceived from the foregoing description and reference to the drawings that the draft being applied to the singletrees, the pull on the cable is compensated and equalized on the other parts, and whether
50 three or more powers be exerted on the cable at the respective points indicated the draft
55 will always be equalized.

It is apparent that by increasing the number of the sheaves on the doubletree and thus multiplying the points of attachment of the
60 other pulleys, the device may be made applicable to have additional animals employed.

Having thus described my invention, what I claim is—

The combination, with a doubletree, of 65 sheaves mounted thereon, a cable or chain longer than the doubletree secured at its ends to the ends of the doubletree and passing around the sheaves thereon, and sheaves, as 6, 7, and 8, arranged upon the cable, the sheave
70 6 being between one end of the cable and the sheave 3, the sheave 7 between the sheaves 3 and 4, and the sheave 8 between the sheave 5 and the other end of the cable, and singletrees secured to the sheaves 6, 7, and 8, substantially as set forth.
75

In witness whereof I have hereto set my hand in the presence of two attesting witnesses.

AMER CRANNELL.

Attest:

C. L. ANDERSON,
S. M. KYLE.