

(No Model.)

J. BEVENS.
DRAFT EQUALIZER.

No. 403,635.

Patented May 21, 1889.

Fig: 1.

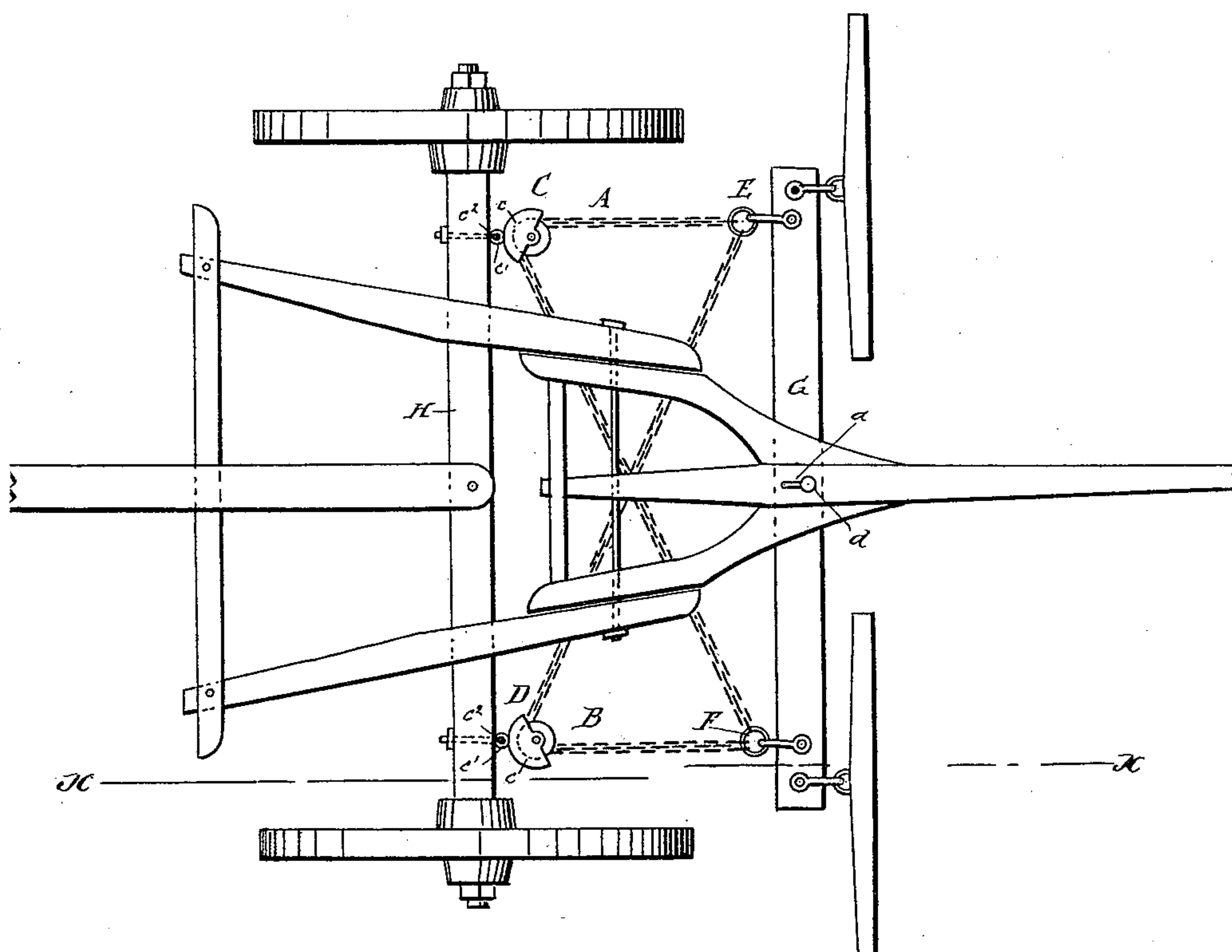
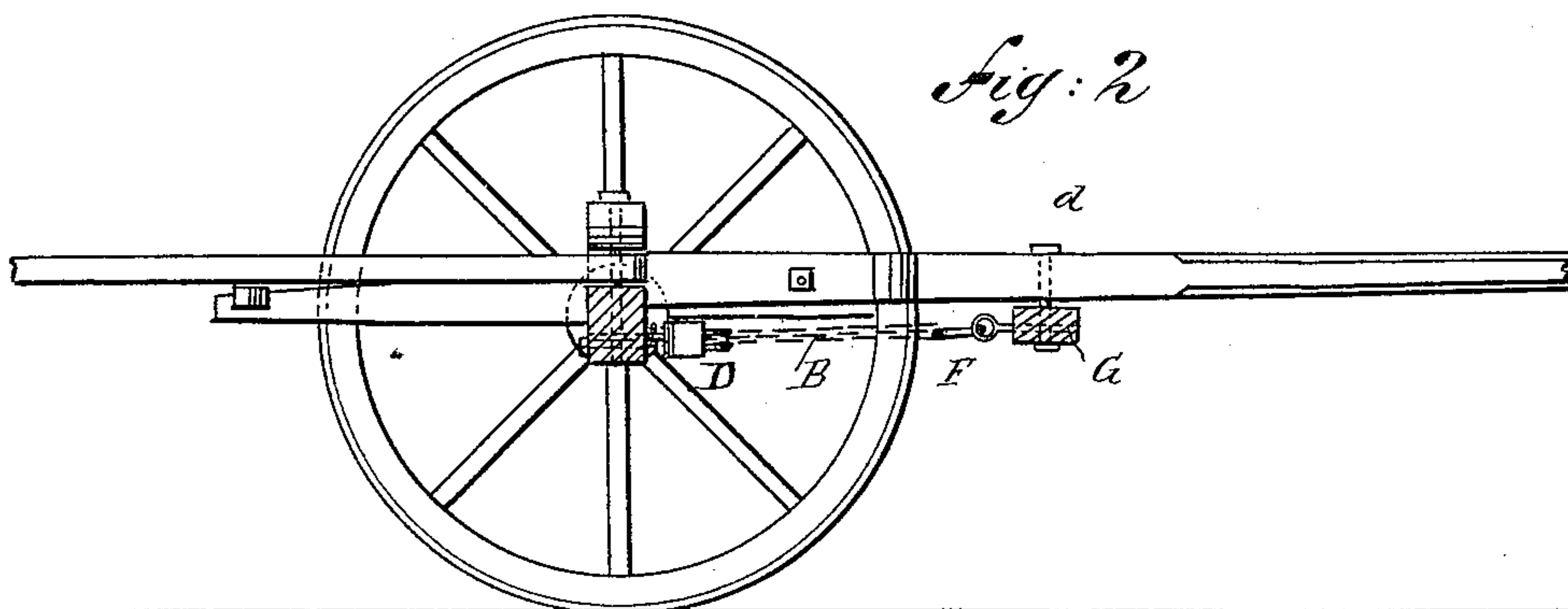


Fig: 2



WITNESSES:

Chas. Nida
C. Bedgwick

INVENTOR.

J. Bevens
BY *Munn & Co*

ATTORNEYS,

UNITED STATES PATENT OFFICE.

JOHN BEVENS, OF MARINE MILLS, MINNESOTA.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 403,635, dated May 21, 1889.

Application filed February 26, 1889. Serial No. 301,190. (No model.)

To all whom it may concern:

Be it known that I, JOHN BEVENS, of Marine Mills, in the county of Washington and State of Minnesota, have invented a new and
5 Improved Draft-Equalizer, of which the following is a full, clear, and exact description.

My invention consists of a draft-equalizer applied to the doubletree and front axle or other front part of a wagon, sleigh, sled,
10 mower, reaper, and other vehicle or machine, in such a manner that the draft of both horses is transmitted to either side of the vehicle or machine which meets an obstruction, and which equalizes the draft when one horse
15 is in advance of the other and prevents almost altogether the lurch or side swing of the tongue or pole of the vehicle or machine and obviates side-draft.

Reference is to be had to the accompanying
20 drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view showing my invention applied to a wagon, and Fig. 2 is a
25 sectional elevation taken on the line $x x$ of Fig. 1.

My new equalizer as a whole comprises the two crossed chains, cords, or ropes A B, the two pulleys C D, attached to the vehicle, and
30 clevis and ring or other connections, E F, for attaching the ends of the chains to the doubletree. The chain A passes from the connection E around pulley C, and thence to the connection F, while the chain B passes
35 from the connection F around pulley D, thence to the connection E. The chains are thus crossed in the center and take the whole draft or strain of the load, and each acts upon both ends of the doubletree, so that should
40 one horse be faster than the other the chains render through the pulleys and equalize the draft, and should one wheel or side of the vehicle meet with an obstacle or sink into sand or mud the resistance tightens the chain on
45 that side and slackens it on the other, which transfers the draft of both horses directly to the obstructed side. In this manner the chains have universal action and the power of both horses is transferred to where there

is the most resistance, which enables them to
50 handle the load with greater ease than with common whiffletrees or the equalizers in common use; and this arrangement also completely prevents the tongue from swinging
55 sidewise and striking the horses, as the draft is entirely on the chains and not on the tongue. The doubletree is slotted at a , so that the draft will not come on the bolt d , and the doubletree is by preference placed beneath
60 the tongue to relieve the team somewhat of the weight of the tongue.

The pulleys C D are each made of iron or steel castings, and provided with a suitable
hood or guide, c , to keep the chain in place, and each pulley-frame is made with an eye, 65
 c' , to attach to a hook, c^2 , on the axle H or other front part of the vehicle or machine. The hooks and eyes are made of sufficient
70 strength to stand the draft of the team, and they enable the whiffletrees to be readily attached to and detached from the vehicle or machine.

When the equalizer is applied to reapers or mowers, they must be provided with a suitable
75 cross-bar, to which the pulleys may be attached, and when properly attached the equalizer completely overcomes all side-draft, and when used on a sleigh or on sleds the pulleys are attached to the center bar or to the nose
80 of the runners.

This equalizer works equally well with one horse, and when so used the chains are attached to the ends of the singletree; or the traces may be hooked directly into the chains and the pulleys attached to the vehicle, as
85 shown and described.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the axle or other
90 part of the vehicle provided with pulleys located in line with the draft, or thereabout, of the whiffletree provided with rings or staples near its ends, and chains passing from each end of the whiffletree to and around
95 the opposite pulley, thence to the adjacent end of the whiffletree, substantially as described.

2. The whiffletree A, provided near its ends with the rings E F, and the axle-tree provided with the pulleys C D, in combination with the two chains A B, the former attached
5 at one end to the ring E, passed through pulley C, thence to the ring F, to which it is attached, the chain B, attached at one end to the ring F, passed around the pulley D, thence to ring E, to which it is attached, substantially as described.

JOHN BEVENS.

Witnesses:

CHAS. STRAND,
JOHN H. SAWYER.