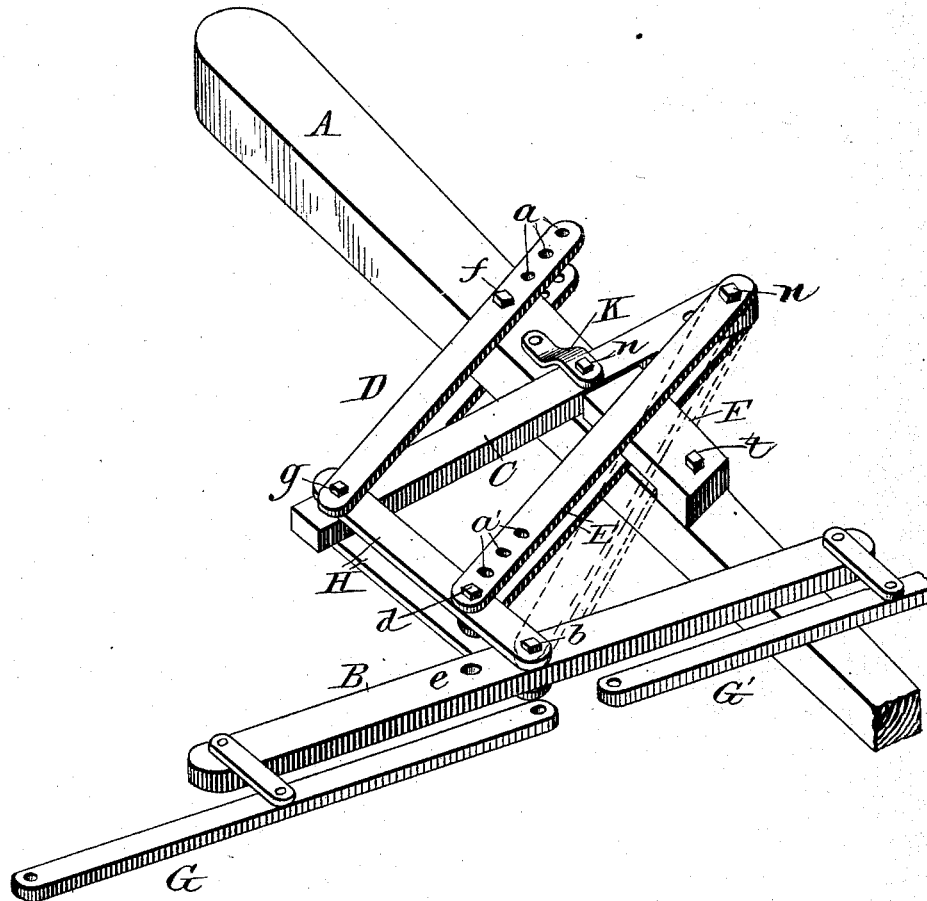


(No Model.)

J. JONES.  
DRAFT EQUALIZER.

No. 489,009.

Patented Jan. 3, 1893.



Witnesses:  
John F. Conway  
W. Mansford Mitter

Inventor.  
James Jones  
By Thomas B. Swan  
His Attorney.

# UNITED STATES PATENT OFFICE.

JAMES JONES, OF SHARON, IOWA.

## DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 489,009, dated January 3, 1893.

Application filed March 31, 1892. Serial No. 427,305. (No model.)

### *To all whom it may concern:*

Be it known that I, JAMES JONES, a citizen of the United States, residing at Sharon township, in the county of Audubon and State of Iowa, have invented certain new and useful Improvements in Draft-Equalizers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in draft-equalizers and it consists in the peculiar construction and combination of the parts that will be more fully set forth hereinafter, and particularly pointed out in the claim.

My invention is particularly adapted to be used on harvesting machines and other agricultural machines in which there is a heavy side draft, and the object of my invention is to provide a draft-equalizer which will overcome the side draft of self binding harvesting machines, and which can be readily converted from a four-horse to a three-horse equalizer when desired. I attain these objects by the device illustrated in the accompanying drawing in which the figure is a perspective view of the draft-equalizer.

A, represents a pole or tongue of a self binding harvesting machine of ordinary construction.

The bar C, is secured to the tongue by means of the bolt *n*, and extends diagonally across the tongue, and projects farther therefrom at the off side than at the opposite side.

The two parallel iron straps D, are each secured to the tongue by the bolt *f*, at their inner ends, and at their outer ends to the outer end of the bar C, by the bolt *g*, they are provided with several apertures *a*, so that they can be adjusted at different positions on the tongue, one of said straps rests on the top of the tongue and the other under the tongue.

The two parallel draw bars H, are pivoted at their rear ends, by the bolt *g*, to the outer end of the bar C, and at their forward ends to the bar B, by the bolt *b*. The two parallel draw bars E, are pivoted at their rear ends,

by the bolt *m*, to the bar C, and at their forward ends, by the bolt *d*, to the draw bars H, or if desired they can be moved to the position as shown by broken lines, and their forward ends pivoted to the bar B, by the bolt *b*. The bar B, is pivoted to the forward ends of the draw bars H, by the bolt *b*, and has secured at its ends the double-trees G, and G'. The double-trees G, and G', each have single-trees attached to their ends in the usual manner. F, is a stop secured to the tongue by the bolt *t*, it passes between the bars E, and its rear end rests against the bar C, and when the machine is being turned it prevents the end of the bar B, to which the double-tree G', is attached from moving too far backward, so that the horses attached to the double-tree G, can turn the machine. The draw bars E, are provided with several apertures *a'*, adapted to receive the bolt *d*, or bolt *b*, by means of which the bars H, can be held at different angles, and the draft on the bars E, increased or diminished. The drawing shows an equalizer adapted for four horses, but by moving the bar B, and inserting the bolt *b*, through the aperture *e*, of the bar B, and by substituting a single-tree in place of the double-tree G', a three-horse draft-equalizer is provided.

The operation of my invention will be very readily understood from the foregoing description and the accompanying drawing.

Having described my invention what I claim as new and desire to secure by Letters Patent is—

The combination of the pole A, the bar C, which crosses the pole and is rigidly secured thereto by means of the bolt *n*, and parallel straps D, the parallel bars H, pivotally connected at their rear ends to the outer ends of the bar C, and at their forward ends to the bar B, the parallel bars E, pivotally connected at their rear ends to the inner end of the bar C, and at their forward ends to the bars H, the bar B, carrying the double-trees, and the stop F, secured to the tongue, all substantially as described.

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

JAMES JONES.

Witnesses:

J. S. GOSS,

T. R. WALLACE.