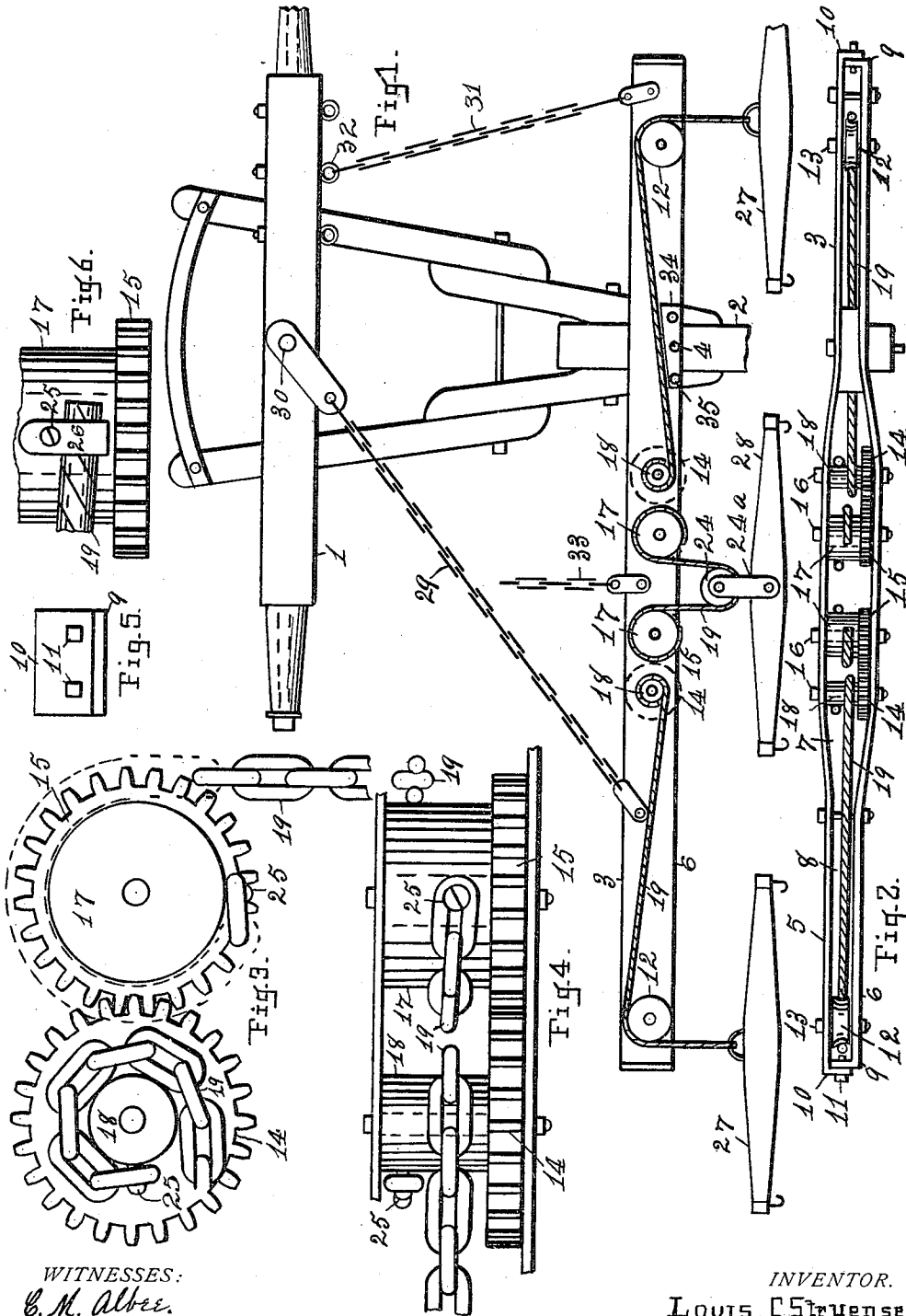


L. C. STRUENSEE.  
EVENER.

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WITNESSES:  
E. M. Albee.  
K. A. Pickert

INVENTOR.  
LOUIS C. STRUENSEE.  
BY  
E. M. Albee,  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

LOUIS C. STRUENSEE, OF OSHKOSH, WISCONSIN.

EVENER.

1,064,561.

Specification of Letters Patent.

Patented June 10, 1913.

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*To all whom it may concern:*

Be it known that I, LOUIS C. STRUENSEE, a citizen of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented a new and useful Improvement in Eveners, of which the following is a specification.

My invention relates to the construction of the evener bar, and to the mechanism of the evener, the evener bar being formed of two strips of band metal belted together, and the mechanism consisting of gear wheels, pulleys and flexible members, as will be hereafter explained, and the object of the invention is, to produce an evener bar of sufficient strength for answering the demands upon it, of band metal, with as little weight as possible, and to provide one that can be made by an ordinary mechanic in the farming sections where suitable wood for an evener is not always to be obtained easily, and to provide it with mechanism for equalizing the draft of all the animals, so that the draft of all of the animals bear their proper share, the invention being shown in the accompanying drawing, in which,—

Figure 1 is a plan of the evener with the upper one of the two pieces of which it is composed, removed, the evener being applied to a tongue of an axle to be drawn, and showing the position of its gearing and the manner in which the several draft animals are attached. Fig. 2 is a front elevation of the evener bar complete. Fig. 3 is a plan of one of two pairs of gear wheels in mesh, and pulleys integral with the wheels, each pulley having a chain wound around it, the chain on the larger pulley showing one link only at its point of connection with the pulley, the remainder of the distance around being indicated in dotted lines for not obscuring the gear teeth. Fig. 4 is a side elevation of Fig. 3, between the top and bottom band metal strips. Fig. 5 is an end view of the evener bar, and showing the bolts by which it is bolted together. Fig. 6 is a side elevation of part of one of the pulleys above its gear wheel, with a clamping member for securing a rope thereto, should a rope be used. Figs. 3, 4, 5 and 6, are upon a larger scale than 1 and 2. Similar numerals indicate like parts in all views.

1, indicates an axle and 2, a tongue connected thereto upon which tongue the evener

bar 3 is pivoted at 4. The evener bar is formed of two nearly similar strips of band metal, 5 and 6, both of which are straight near their ends with their central portion curved outward in two places for providing a wider space 7, between them than the space 8, toward the ends. Both strips have their ends bent at a right angle inward, the angular bent ends 9, of one fitting with- in the angular bent ends 10, of the other, and one or more bolts 11, are inserted through both for holding them firmly together. Near each end of the evener bar, a sheave pulley 12, is mounted for revolution upon a pivot bolt 13, and a short distance from the center of the length of the bar at each side of said center, two gear wheels 14 and 15, are mounted for revolution upon bolts 16. These gear wheels are of like diameter and are in mesh with each other, and each is provided with a pulley integral with it, the ones nearest the center of the length of the bar being provided with a pulley 17, which in the illustration herein is twice the diameter of the pulley 18, upon the outer gear wheels, but this proportion may be varied according to the strength of the draft animals attached to the evener, whenever required.

For connecting the several pulleys with the draft animals, a flexible member is required, a rope being shown in Figs. 1 and 2 on account of the small scale upon which said figures are drawn, and a chain is shown in Figs. 3 and 4. Either may be used and the numeral 19, will be used for indicating both, a chain and rope, and they will be termed a "flexible member." Where a chain is shown it is secured to the pulley to which it is connected with a tap bolt 25, and where a rope is used, if no means of securing it is shown, it is to be considered as being secured with a clamp 26, in connection with the bolt 25.

Secured to each of the smaller pulleys are flexible members 19, which are normally wound around each pulley nearly its entire circumference, thence carried to and passed around a sheave pulley 12, near the end of the bar and connected with a whiffletree 27.

Secured to each of the larger pulleys are the ends of a flexible member 19, its slack normally wound around nearly the circumference of each pulley, thence run around a pulley 24 in the sheave block 24<sup>a</sup> and said sheave block connected to a whiffletree 28.

By this arrangement of pulleys, gears and flexible members, the draft of each animal can be equalized. When the article to be drawn is provided with a tongue, it may be connected to it with the pin 4, with tie chain 29, extending from a point upon the longer end of the bar to the bolster pin 30, and tie chain 31, running from its shorter end to one of the eye bolts 32, but if said article has no tongue, and is of the nature of a walking plow, it may be connected with it by means of the chain 33, or other suitable connecting means, from the center of the length of the bar. The bar may be strengthened at the point of its connection with the tongue by inserting a block of suitable material 34, and securing it between the upper and lower band metal strips with bolts 35.

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

1. An evener for three draft animals, adapted to be attached to an object to be drawn, consisting of a bar of a suitable length, two pairs of gear wheels spaced apart, those of each pair being of a like diameter and in mesh, a pulley integral with each gear wheel, those of the inner gear wheels of each pair being approximately double the diameter of that of the outer pulleys of each pair and each of the gear wheels and pulleys being suitably mounted for revolution upon the bar, a grooved face pulley mounted for revolution near each end of the bar, a flexible member secured, one end to each one of said larger pulleys and normally nearly encircling each pulley, a sheave block, a pulley therein, around which the slack of said flexible member is passed, means for attaching a draft animal to said sheave block, a flexible member secured at one end to each of said smaller pulleys and normally nearly

encircling the same, thence running to and around one of the aforesaid grooved face pulleys, and means for attaching a draft animal to the free ends of each of said last two named flexible members.

2. An evener for three draft animals, adapted to be attached to an object to be drawn, consisting of a bar formed of two nearly similar strips of band metal of a suitable length, a right angled bend near the ends of each strip, the angular bent ends of one strip fitting within the angular bent ends of the other strip, one or more bolts through the angular bent ends of each strip and the two strips spaced apart a suitable distance, a grooved face pulley mounted for revolution near each end of said space, two pairs of gear wheels spaced apart, those of each pair being of a like diameter and in mesh, a pulley integral with each gear wheel, those of each inner gear wheels being approximately, double the diameter of those of the outer gear wheels, and each of the gear wheels and pulleys being mounted for revolution between said strips within a suitable space, a flexible member secured at each end to one of said larger pulleys and normally, nearly encircling each pulley, a sheave block, a pulley therein around which the slack of said flexible member is passed, means for attaching a draft animal to said sheave block, a flexible member secured at one end to each of said smaller pulleys and normally nearly encircling each pulley, thence running to and around one of the aforesaid grooved face pulleys, and means for attaching a draft animal to the free ends of each of said last two named flexible members.

L. C. STRUENSEE.

Witnesses:

HARRY LOUIS HALVERSON,  
C. M. ALBEE.