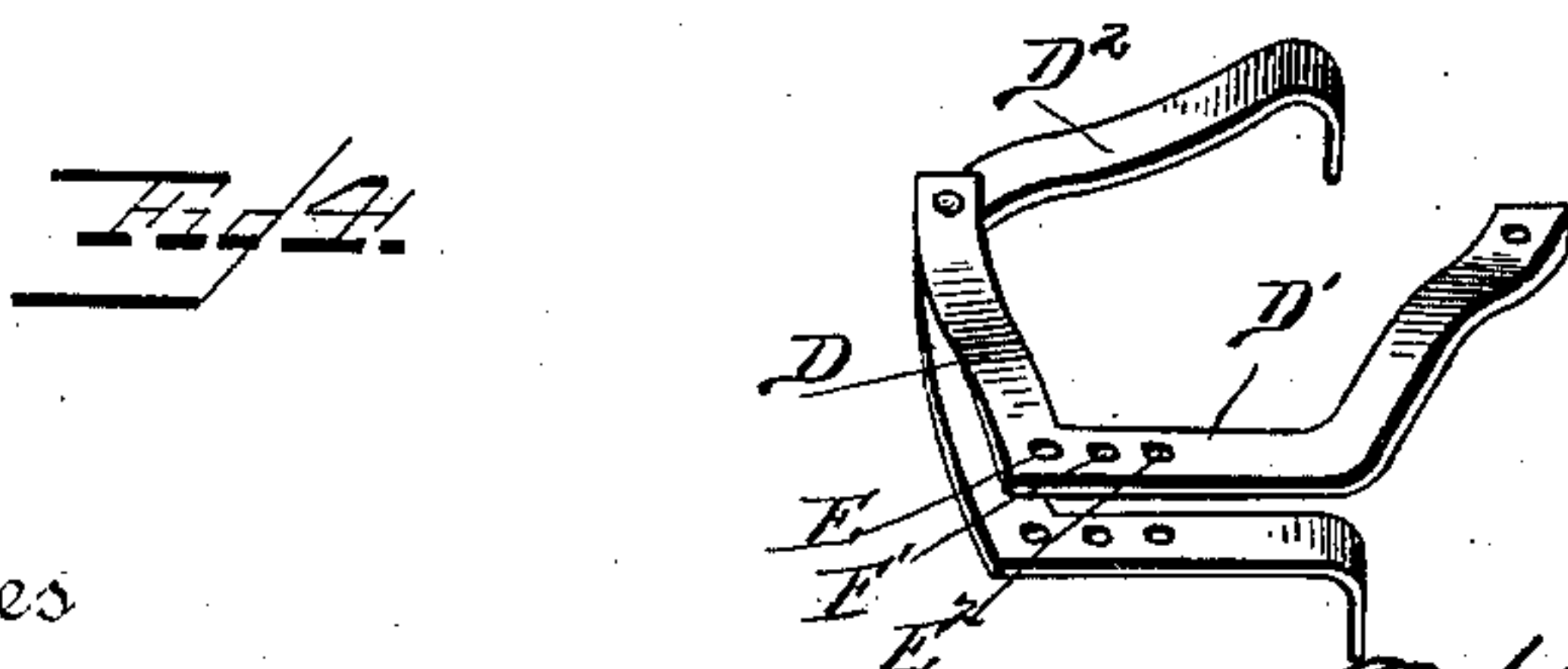
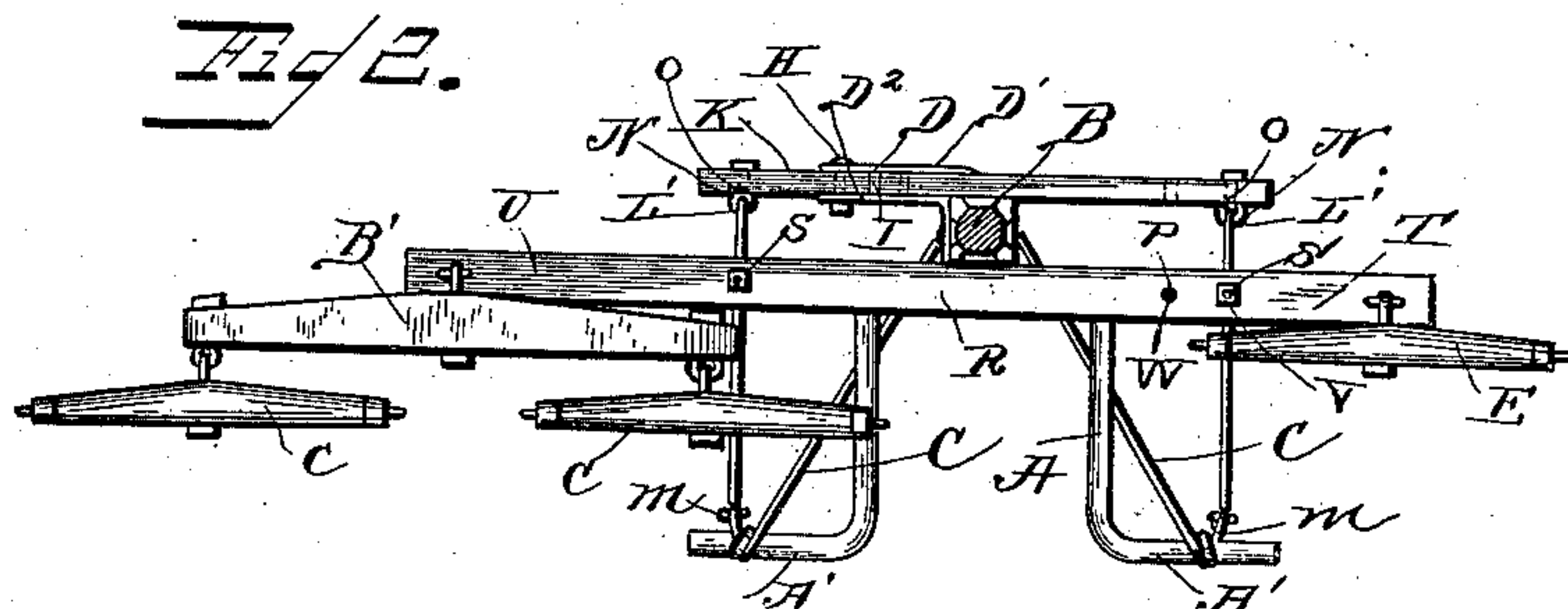
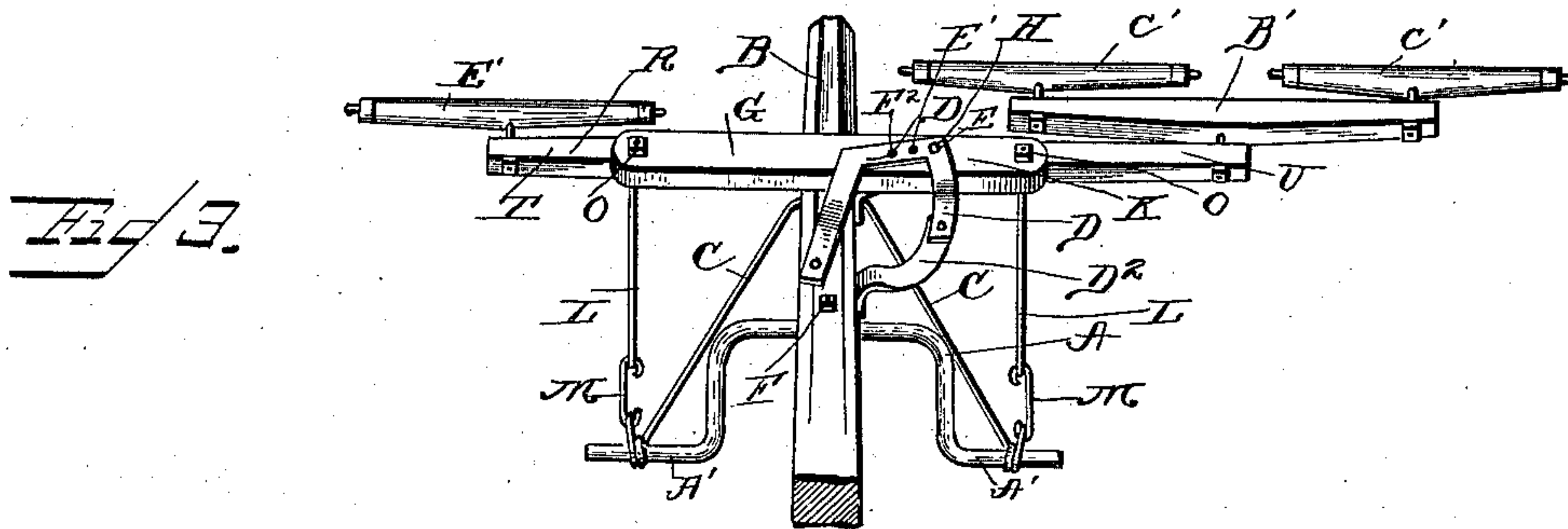
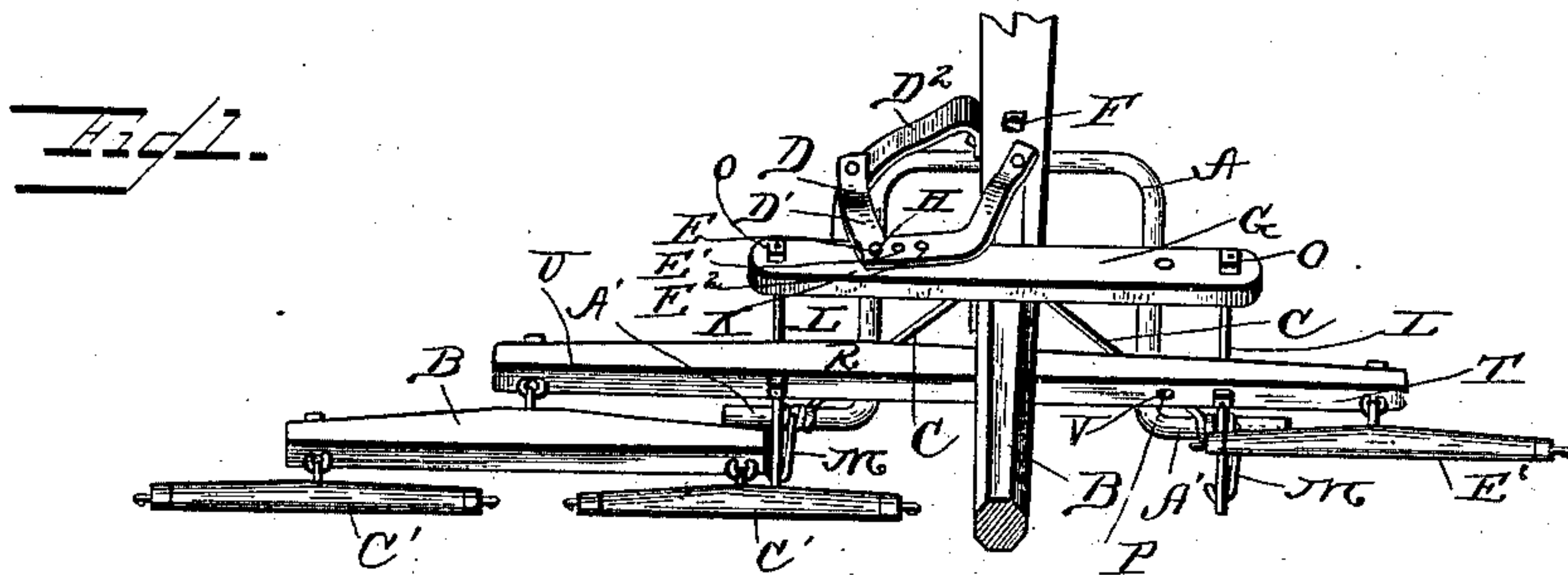


(No Model.)

W. A. PERKINS.
DRAFT EQUALIZER.

No. 376,395.

Patented Jan. 10, 1888.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM A. PERKINS, OF CLIFTON, KANSAS.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 376,395, dated January 10, 1888.

Application filed October 11, 1887. Serial No 252,033. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. PERKINS, a citizen of the United States, and a resident of Clifton, in the county of Washington and State of Kansas, have invented certain new and useful Improvements in Draft-Equalizers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective top view of my new and improved draft-equalizer or horse-evenner. Fig. 2 is a front elevation. Fig. 3 is a perspective rear view; and Fig. 4 is a detail view of the casting which is secured to the tongue, and in which the upper doubletree is secured.

The same letters of reference indicate corresponding parts in all the figures.

My invention consists in a new and improved draft-equalizer or three-horse evenner which is especially adapted and designed to be used on a riding-cultivator to enable the farmer to employ three horses to draw a riding-cultivator, and my invention will be hereinafter fully described and claimed.

Referring to the several parts by letter, A indicates the arched axle of a riding-cultivator, on the ends of which the wheels are mounted, and B indicates the tongue of the cultivator, which is strengthened by the brace-rods C C. Upon the side of this tongue, in front of the arch A, is bolted the metal casting D, the upper and lower jaws, D' D², of the open forward part of which have the three registering apertures E, E', and E² formed in them, the aperture E being seven inches from the bolt F in the center of the tongue, while the aperture E' is eight inches from the said bolt, and the aperture E² is nine inches from the said bolt. In this casting is adjustably secured the upper doubletree, G, by means of the pivot-bolt H, passing through either of the registering apertures E, E', or E², and through the hole I, which passes vertically through the doubletree. This pivot-hole I is formed in the upper shorter doubletree twenty-six inches from its left-hand or longer end, J, and

thirteen inches, or one-third of its entire length, from its shorter end, K. The extremities of the ends of this doubletree are pivotally and movably connected by the standards L L and their bottom links, M M, with the straight end portions, A' A', of the arched frame A, as shown. These curved standards are formed, preferably, of flat bars, which are formed at their upper ends with apertures L', in which hook eyes N, which are formed on the lower ends of bolts O, the stems of which pass through end openings in the upper doubletree, and have nuts upon their upper threaded ends to secure them in position. The end of the shorter arm, K, of the upper doubletree has two of these openings P for the eyebolt, the outer hole being formed at the extremity or outer end of this arm thirteen inches from the pivot-hole I of the tree, while the other hole P is formed five inches in from this end hole, so the distance between it and the pivot-hole I is eight inches. The object of this arrangement will be hereinafter set forth.

R indicates the long equalizing bar or tree, which works below the tongue of the cultivator, this bar being connected to and supported by the standards L L, which are formed with the central apertures, L' L', with which engage eyebolts S S, which are secured in the bar R. The length of this equalizing bar or beam R is sixty-two inches, and it is hinged to the standard which depends from the end of the shorter arm of the doubletree G at a point seventeen inches from its right-hand end, T, and to the standard from the long arm or end of the doubletree at a point twelve inches from its left-hand end, U. Besides the hole V, which is formed through the beam R seventeen inches from its right-hand end, through which the eyebolt S at that end passes, a second hole, W, five inches nearer to the tongue, and therefore 22 inches from that end of the beam R, is formed through the beam, as shown, so that the bolt S can be removed from the outer hole, V, and inserted in the inner hole, W, where it is secured by screwing the nut upon its threaded end, for the purpose hereinafter specified.

To the right-hand or longer end of the equalizer-beam is centrally hinged a doubletree, B',

thirty-two inches in length, to the ends of which are hinged the two ordinary singletrees, C', while to the shorter or left-hand end of the equalizer-beam is hinged a singletree, E', of ordinary construction.

It will be seen that by constructing and arranging the several parts in the manner shown and described the draft will be thoroughly and perfectly equalized.

The device can be used either, as shown in the accompanying drawings, with the right-hand standard hinged to the extremity of the shorter end of the upper doubletree and to the beam R at a point seventeen inches from the right-hand or longer end of the same, or the eyebolts can be withdrawn and placed in the holes W and P, respectively, of the beam R and tree G five inches nearer to the tongue of the cultivator, making the draft precisely the same for each horse when the three horses are of equal strength. Again, the pivot-bolt F, which secures the upper doubletree in the casting D at the side of the tongue, can be withdrawn from the registering outer apertures, E² E², and placed in either the registering apertures E' or E. It will be seen that by these several adjustments the draft can be precisely and exactly regulated to suit the strength of the different horses employed.

The object of pivoting the upper doubletree in the casting S instead of upon the tongue is to bring the three horses each between two rows of corn.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my invention will be readily understood. It will be seen that my new and improved equalizer will enable the farmer to employ three horses to a riding-cultivator, thereby doing away with the hard work of walking, and also making it easier for the horses. With two horses it makes it too heavy if the farmer rides; but by attaching the equalizer and

hitching to it three horses the farmer can ride comfortably, and the work will still be easy for the horses. By arranging the parts as shown the horses will be thrown or will walk between the rows of corn, and the equalizer can be readily adjusted to make the work suit each horse, according to its condition and strength.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a three-horse equalizer, the combination of the perforated bracket or casting adapted to be secured to the side of the tongue, the upper doubletree having the aperture one-third of its length from its shorter end, the pivot-bolt, the hangers, the long equalizer-beam having the eyebolts arranged as described, and having the double and single trees secured to its ends, substantially as and for the purpose set forth.

2. In a three-horse equalizer, the combination of the perforated bracket or casting adapted to be secured to the side of the tongue, the upper doubletree having the aperture one-third of its length from its shorter end, and having the end aperture in its longer end and the two openings in its shorter end portion, the pivot-bolt and eyebolts, the hangers, the long equalizer-beam having the bolt-aperture toward its shorter end and the two bolt-apertures toward its longer end portion, the eyebolts, and the double and single trees secured to the ends of the equalizer-beam, all substantially as and for the purpose herein set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM A. PERKINS.

Witnesses:

GEO. C. MILLER,
M. CORTRIGHT.