

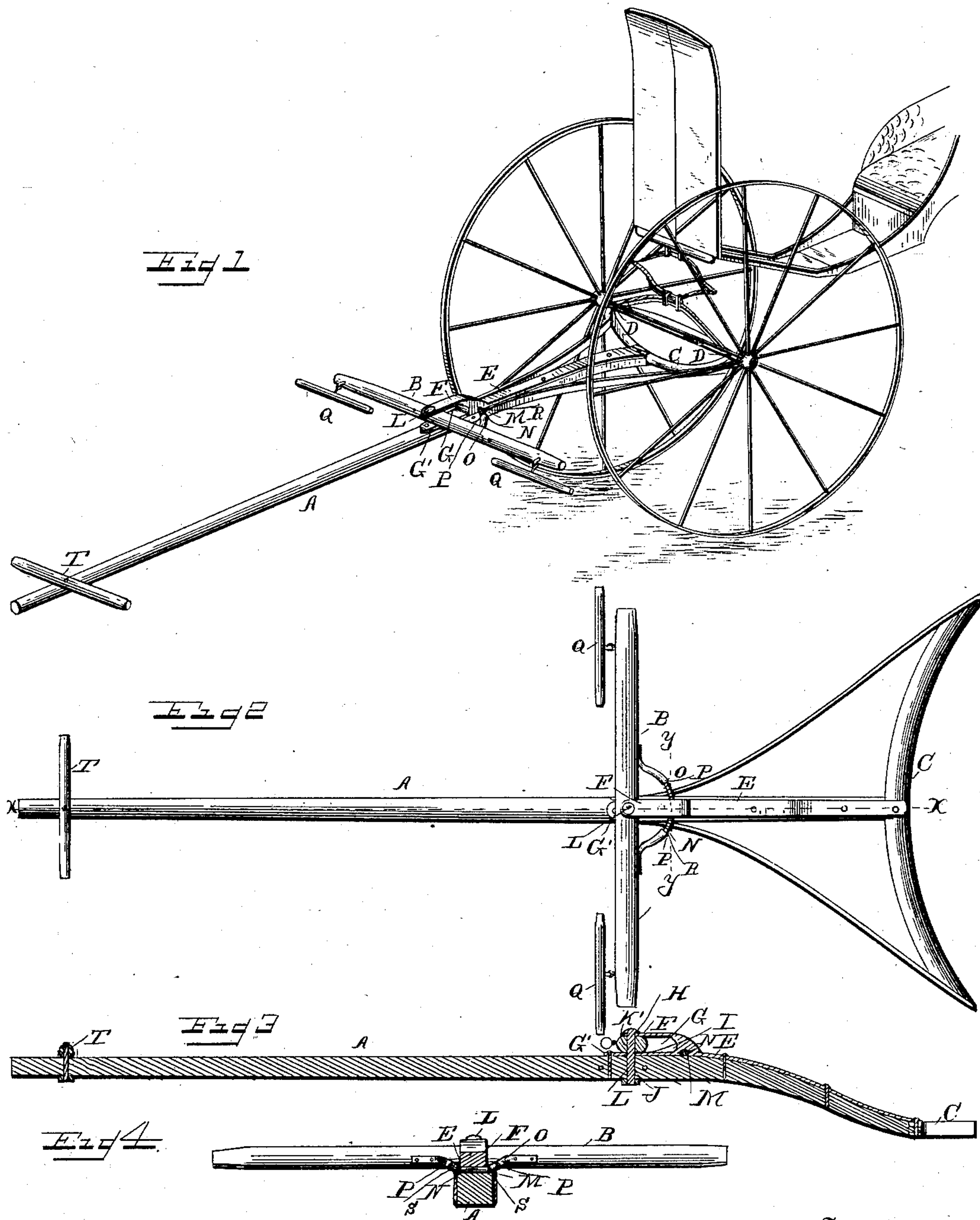
(No Model.)

J. R. FREELAND.

DOUBLETREE.

No. 374,468.

Patented Dec. 6, 1887.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES R. FREELAND, OF WELLSVILLE, NEW YORK, ASSIGNOR OF ONE-HALF
TO EDWIN COLTON BRADLEY, OF SAME PLACE.

DOUBLETREE.

SPECIFICATION forming part of Letters Patent No. 374,468, dated December 6, 1887.

Application filed June 25, 1887. Serial No. 242,465. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. FREELAND, of Wellsville, in the county of Allegany and State of New York, have invented certain
5 new and useful Improvements in Regulating Devices for Doubletrees; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable
10 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 view, showing my regulating device for doubletrees applied in
15 operative position to the doubletree on the tongue of a phaeton. Fig. 2 is a top plan view of the doubletree and tongue provided with my improvement. Fig. 3 is a vertical sectional view taken on line *x x* of Fig. 2, and
20 Fig. 4 is a vertical transverse sectional view taken on line *y y* of Fig. 2.

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

My invention consists in a new and improved regulating device for doubletrees,
25 which is adapted to be applied to all light and heavy carriages, wagons, mowing-machines, reapers, and all vehicles, agricultural implements, and machines using poles and double-
30 trees; and my invention will be hereinafter fully described and claimed.

Referring to the several parts by letter, A indicates a tongue, and B the doubletree thereof, to which my invention is shown as applied, this tongue being shown in Fig. 1 attached at its rear end by the tongue-hound
35 C, having the end thill-irons, D D, to the front axle of a two-spring phaeton. Upon the rear part of the tongue is bolted or otherwise rigidly secured the bearing-plate E,
40 which is formed at its forward end with the head F, which has the long horizontal recess G formed in it, extending from its front end, the lower lip, G', thus formed, being bolted
45 to the upper side of the tongue, while the upper lip is free. The upper and lower lips are formed with the registering apertures H I at their forward ends, which register with each other and also with the vertical apertures J
50 in the tongue, through which the king-bolt passes.

K indicates a doubletree, which is formed with the central vertical aperture, K', through which the king-bolt passes, the doubletree being pivotally secured in the head F of the
55 bearing-plate E by the king-bolt L, of ordinary construction. Through the rear part of the head F of the bearing-plate E is formed a transverse aperture, M, to the rear of the recess G, in which the doubletree is pivotally
60 secured. Through this transverse aperture M extends and works the middle portion, N, of a U-shaped bearing-piece or yoke, O, the ends of which are bent out at right angles and are bolted to the rear side of the doubletree on
65 each side of the king-bolt, and on each side of the middle portion, N, of the yoke are formed the shoulders P P, as shown. On each end of the doubletree are pivotally secured the singletrees Q Q, of ordinary construction. 70

In operation, when the tongue and doubletree of a carriage or agricultural machine is provided with my improvement, it will be seen that when the team turns the carriage or machine, as soon as the doubletree has turned
75 on the king-bolt for a comparatively short distance the stop or shoulder P on that side of the regulator-yoke will come in contact with that side of the head F, a small spiral spring, R, or rubber cushion, S, being arranged
80 on the middle part of the yoke on each side between the shoulders and the outer sides of the head F, as shown, these rubber cushions or spiral springs serving to render the regulator noiseless when in use, the spring or rubber
85 cushion being tightly compressed as the tongue swings around, so as to become practically solid; and when the shoulder thus comes in contact with the side of the head F, when the tongue has swung around for a short distance, it will prevent the tongue from moving
90 around farther as the carriage or machine turns, and thus prevent the singletrees at the ends of the doubletree from touching (coming into contact with) the wheels of the wagon, carriage, or other vehicle to which my invention
95 is applied, while, when it is applied to any of the various kinds of agricultural implements or machines, the danger to which horses are frequently subjected by coming into contact
100 with the machinery of the implement is entirely obviated, the shoulders on the yoke

making it impossible for the doubletree to turn far enough around on the king-bolt for the horses to touch any part of the machinery when turning the machine around, as will be readily understood.

The construction of the regulator is such that when my invention is applied to carriages, wagons, or agricultural implements or machines, if the king-bolt, which secures the doubletree in the head F should at any time break, the doubletree will still be held firmly in position by the yoke, which is firmly and securely bolted at its long ends to the doubletree, and thus any accident which might occur by the neck-yoke T being drawn off of the front end of the tongue and the tongue falling to the ground is prevented or avoided; also, as the team is held firmly in to the tongue by the yoke, even after the king-bolt breaks, they can be controlled, and a serious runaway is thus often prevented.

Accidents frequently occur when driving a span of horses, by the traces of one horse becoming unhooked, or by the stay-straps on one side breaking, thereby permitting the team to pull the neck-yoke off beyond the end of the pole or tongue. My invention entirely overcomes this difficulty and prevents the possibility of any accident of this kind occurring, as should the traces of one horse become unhooked or the stay-straps break on one side of the tongue the shoulder of the yoke on that side will immediately be brought into contact with that side of the head F as the other horse draws forward, and it will thus be impossible for either of the horses to pull the neck-yoke off of the end of the pole or tongue.

The manner in which my improved regulator is attached brings the strain upon three points of the doubletree, rendering it much less liable to breakage in case of a sudden strain upon it. The strain falling at the point where the king-bolt passes through the doubletree and on the two points where the long ends of the yoke are firmly bolted to the rear side of the doubletree, as when the yoke turns slightly to either side, so that one of the stops or shoulders of the yoke bears against that side of the head F of the bearing block or plate E, and the yoke is thus held against further movement, it will be seen that on the side on which the said shoulder is in contact with the head F the forward end of the yoke will be pressed forward against the rear side of the doubletree, the pressure will be against the rear side of

the doubletree at that point, while the doubletree on the other side of the king-bolt will draw forward on that end of the yoke, as will be readily understood, so that the strain will fall on and be divided between three points of the doubletree.

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 it is simple and strong in construction and exceedingly effective in its operation. Its use prevents the ends of the single-trees from coming into contact with the wheels of the vehicle, and, when used on agricultural implements or machines, prevents the horses from coming into contact with any part of the machinery. The horses are held and the neck-yoke is prevented from being drawn off of the end of the pole or tongue in case of the king-bolt breaking or the traces of one horse becoming unhooked or the stay-straps of one horse breaking. The strain is brought and divided between three points, so that the doubletree is much less liable to break under a sudden strain. The doubletree is held firmly in position upon the pole or tongue and prevented from rocking or side motion. The coiled springs or rubber or other elastic cushions cause the device to work noiselessly.

My invention may be applied to all light and heavy wagons, carriages, mowing-machines, reapers, and all vehicles, agricultural implements, and machines using poles or tongues and doubletrees.

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

The combination of a bearing-head adapted to be secured upon the tongue and formed with the transverse aperture, and the lips having the vertical apertures adapted to receive a king-bolt, the regulator-yoke having the shoulders on each side of its central portion and having its outwardly-bent ends adapted to be secured to the doubletree, and the springs or cushions arranged as described, substantially as and for the purpose set forth.

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

JAMES R. FREELAND.

Witnesses:

WILLIAM BRUCE,
N. L. WILLIAMS.