

No. 673,879.

Patented May 14, 1901.

W. E. LAWHORN.

DOUBLETREE.

(Application filed Mar. 29, 1901.)

(No Model.)

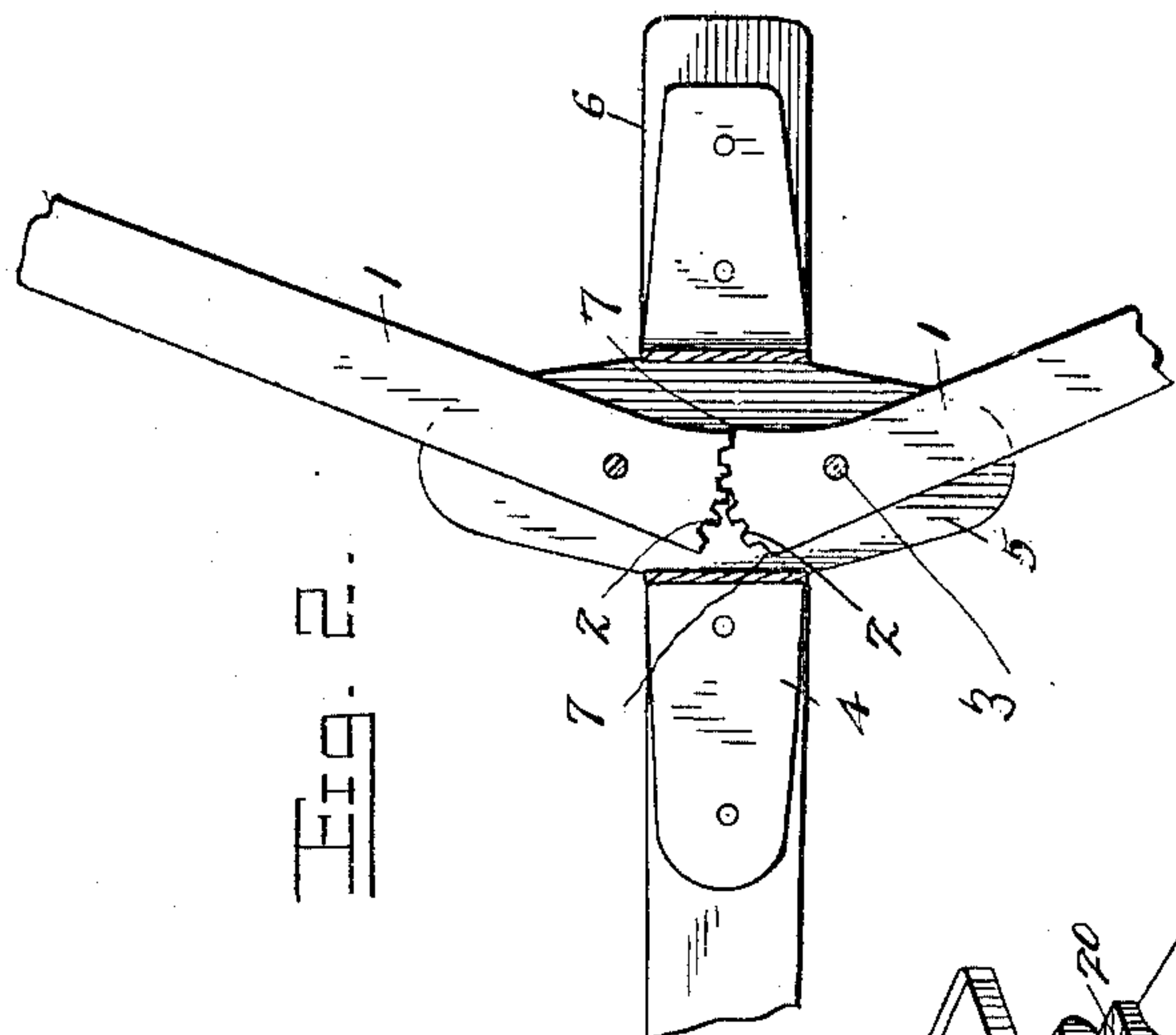


Fig. 2.

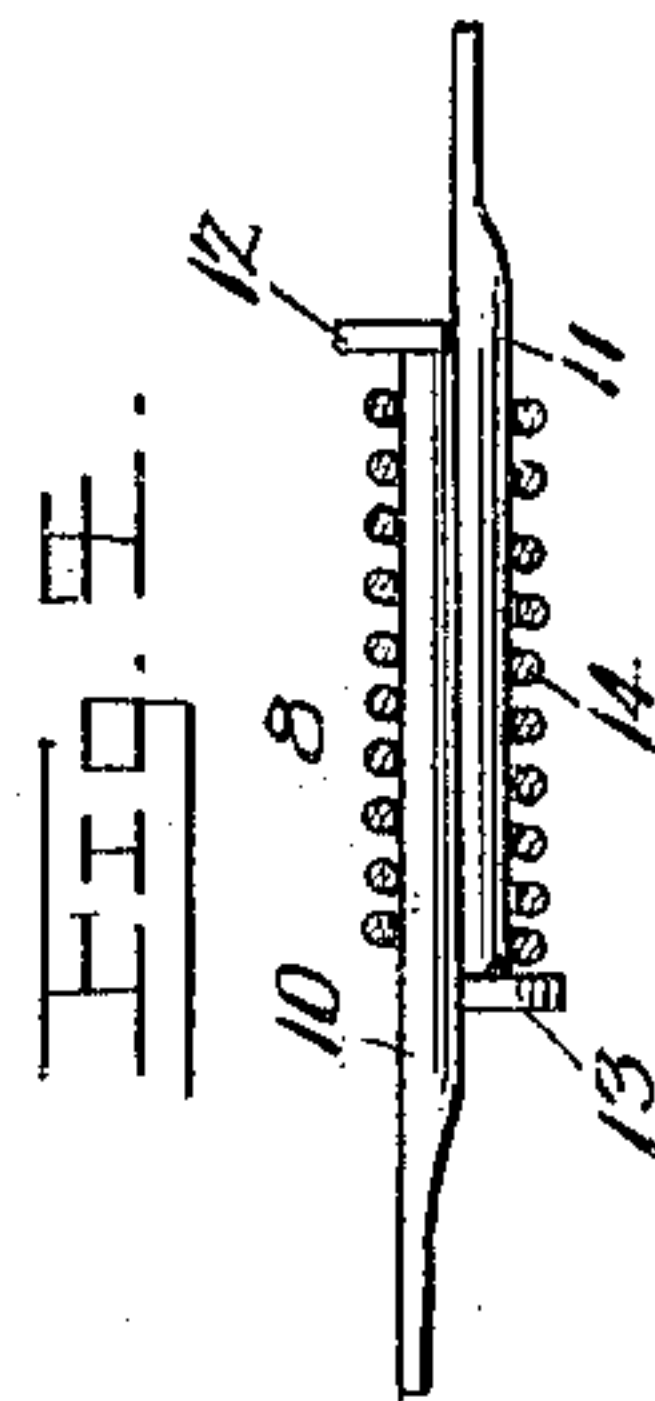


Fig. 5.

Fig. 1.

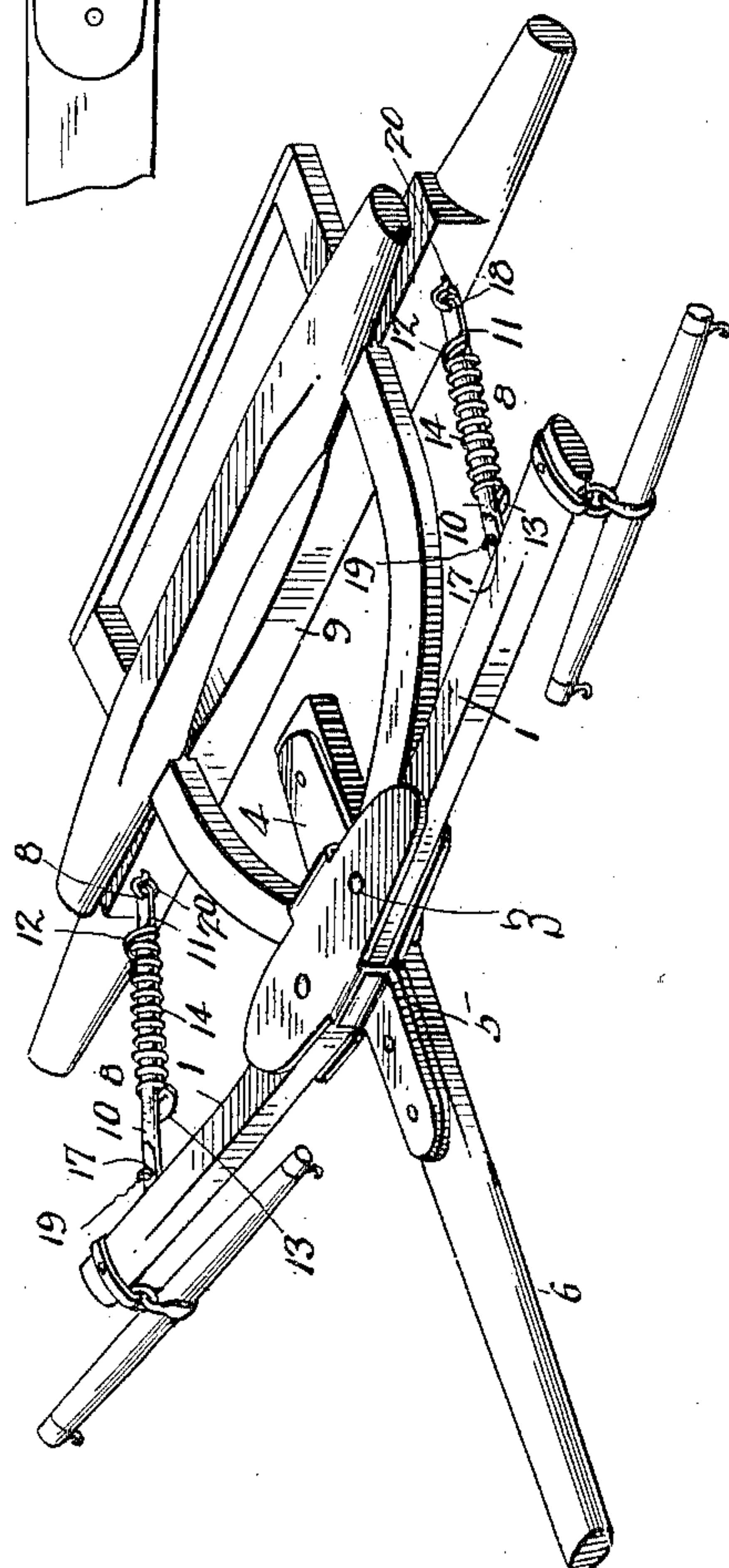
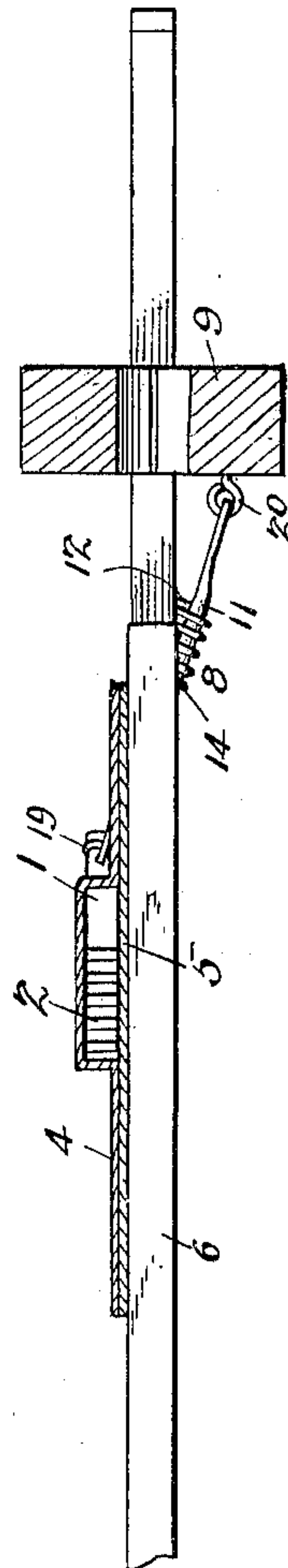


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM E. LAWHORN, OF CARUTHERSVILLE, MISSOURI.

## DOUBLETREE.

SPECIFICATION forming part of Letters Patent No. 673,879, dated May 14, 1901.

Application filed March 29, 1901. Serial No. 53,464 (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. LAWHORN, a citizen of the United States, residing at Caruthersville, in the county of Pemiscot and State of Missouri, have invented a new and useful Doubletree, of which the following is a specification.

The invention relates to improvements in doubletrees.

The object of the present invention is to improve the construction of doubletrees and to provide a simple, inexpensive, and efficient one adapted for use on all kinds of vehicles and implements and capable of equalizing the draft and of enabling both draft-animals of a team in event of an emergency to be hitched to the same side of the implement or vehicle to permit both of them to have a firm foothold and to obviate the necessity of having one of the horses pull on soft ground.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a portion of a running-gear provided with a doubletree constructed in accordance with this invention. Fig. 2 is a plan view of a portion of the same, the upper section or plate of the casing being removed to show the inner ends of the sections of the doubletree. Fig. 3 is a central longitudinal sectional view. Fig. 4 is a longitudinal sectional view illustrating the construction of the tension or cushioning devices.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 1 designate sections of a doubletree provided at their inner adjacent ends with teeth 2 and fulcrumed between their ends on vertical pivots 3, which pass through upper and lower sections or plates 4 and 5 of a casing. The casing which receives the inner portions of the sections of the doubletree is mounted on the tongue or pole 6, and the sections 4 and 5 are provided with central laterally-extending portions and are spaced apart thereat to receive the doubletree. The upper plate or section is angularly bent in advance and in rear of its central portion to upwardly off-

set the latter from the central portion of the lower plate or section, and the front and rear portions of the plates or sections 4 and 5 are secured together and to the tongue or pole 6.

The teeth 2 of the inner ends of the sections of the doubletree mesh with each other and cause the said sections to oscillate forwardly and rearwardly in unison, and they are adapted to enable the team to be hitched at one side of the tongue or pole to one of the sections of a doubletree should a vehicle or implement become mired. This construction will enable both horses to pull on firm solid ground without causing any side draft. The oscillation of the sections of the doubletree is limited by front and rear shoulders 7, which are adapted to abut against each other, as illustrated in Fig. 2 of the accompanying drawings.

The outer portions or arms of the sections of the doubletree are connected with tension or cushioning devices 8, which extend backward to the front axle 9, and each of these devices consists of a pair of longitudinal rods 10 and 11, provided at their inner ends with heads 12 and 13 and overlapped to receive a coiled spring 14, which is interposed between the said heads and which is compressed when the section of the doubletree is drawn forward by the draft-animals. The outer ends of the rods are provided with eyes 17 and 18, which are linked into hooks 19 and 20, mounted, respectively, on the doubletree and the front axle, as clearly illustrated in Fig. 1 of the drawings. These tension or cushioning devices obviate the necessity of employing stay-chains, and they also cushion the starting of a vehicle or implement and relieve both the occupants and the draft-animals of sudden jerks. The cushioning devices are also adapted to keep the traces tight and snug, and the springs are designed to be of a sufficient strength so that they will not be entirely compressed by the strain on a vehicle or implement, whereby they will always be active to cushion the strain. When both of the draft-animals of a team are connected with one of the sections of the doubletree for the purpose of dragging a vehicle out of the mire or for any other purpose, a straight forward pull will be exerted at the other side of the vehicle or implement by reason of the



gearing and the connection between the sections of the doubletree and the front axle.

It will be seen that the doubletree is exceedingly simple and inexpensive in construction, that it is light, strong, and durable, and that it may be advantageously applied to implements and all kinds of vehicles. It will also be apparent that the swing of the doubletree-sections is limited and that they are adapted to exert a straight forward pull uniformly at both sides of the tongue or pole and that they will equalize the draft at all times. Furthermore, it will be clear that it will enable both animals to be hitched at the same side of the pole or tongue should a vehicle become mired and when the draft-animals are so arranged that a straight forward pull is effected at each side of the tongue or pole. Furthermore, it will be clear that the device is capable of equalizing the draft between two horses should one horse be more powerful than the other and that should one horse be balky the other will exert a straight pull on the load without any lateral draft.

What I claim is—

1. In a device of the class described, the combination of a casing designed to be mounted on a tongue or pole and composed of upper and lower plates extending longitudinally of the said tongue or pole and having their central portions spaced apart and provided with lateral extensions projecting beyond the side edges of the tongue or pole, pivots mounted on the extensions of the plates, the doubletree-sections mounted on the said pivots and provided at their inner ends with meshing teeth and having stop-shoulders, and cushioning devices connected with the sections of the doubletree, substantially as described.

2. In a device of the class described, the combination of a casing designed to be mounted on a tongue or pole and composed of upper and lower plates provided at their centers with lateral extensions, the upper plate being angularly bent in advance and in rear of its central portion and having its end portions secured to the end portions of the lower plate, vertical pivots supported by the lateral extensions, the doubletree-sections mounted on the pivots and provided at their inner ends with teeth and meshing with each other, and cushioning devices connected with the doubletree-sections, substantially as described.

3. In a device of the class described, the combination of a casing designed to be mounted on a tongue or pole, doubletree-sections pivotally mounted in the casing and provided at their inner ends with teeth and meshing with each other, and the cushioning devices for connecting the doubletree-sections with the front axle, each cushioning device consisting of a pair of overlapped rods arranged to slide on each other and provided at their inner ends with heads, said rods being provided at their outer ends with means for connecting them to the doubletree-sections and the front axle, and springs disposed on the overlapped portions of the rods and interposed between the heads, substantially as described.

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

WILLIAM E. LAWHORN.

Witnesses:

J. A. PIERCE,

JOE CLAYBROOK.