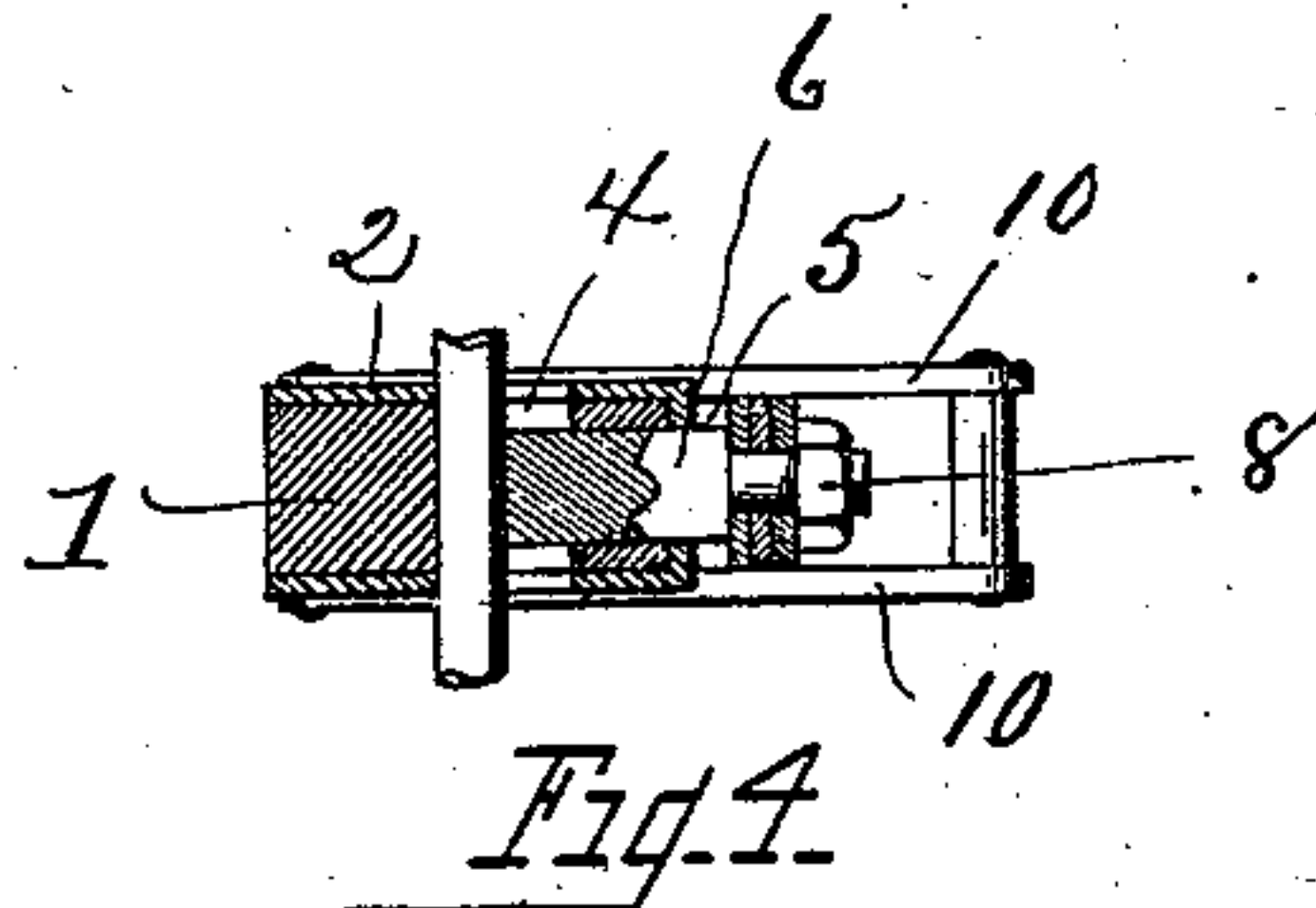
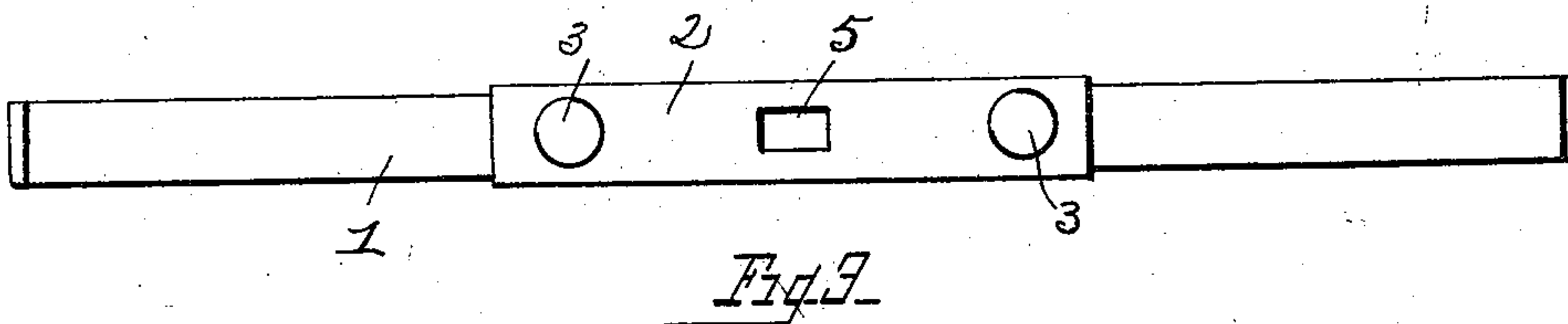
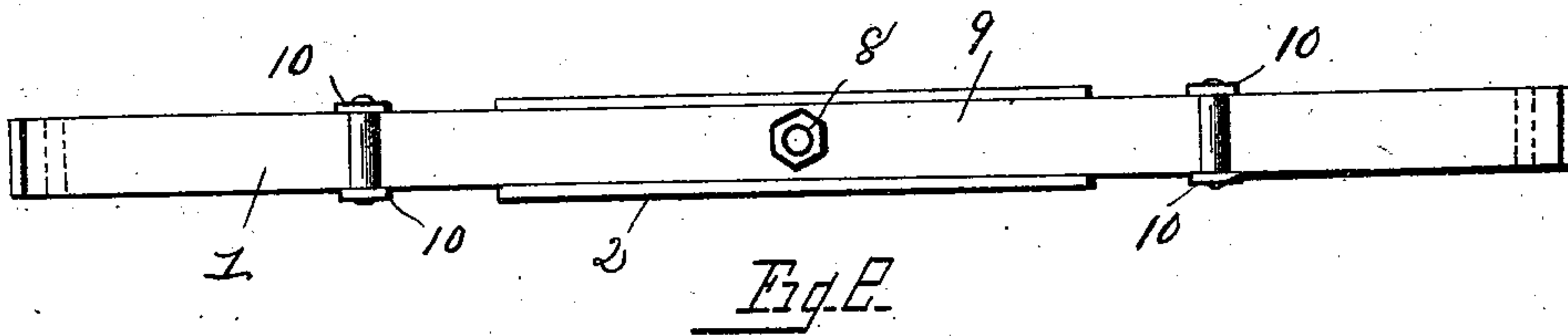
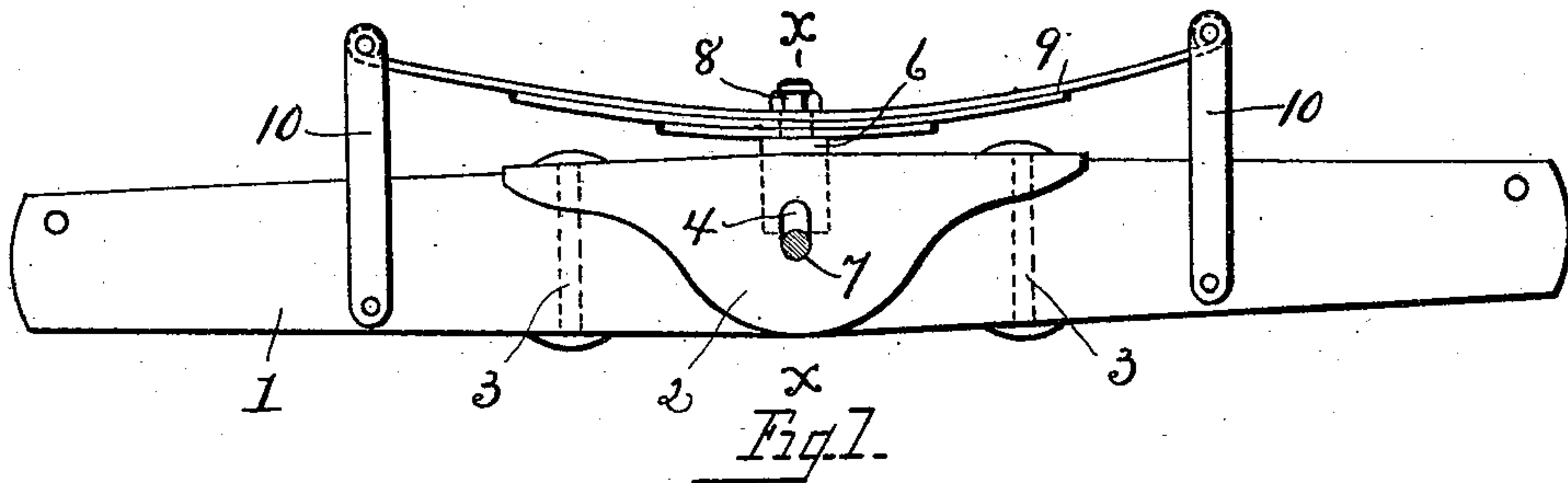


(No Model.)

E. L. LIDKE.
SPRING DOUBLETREE.

No. 557,332.

Patented Mar. 31, 1896.



WITNESSES

Carroll J. Webster
Sam H. Keller.

INVENTOR

Edward L. Lidke
By William Neblett
Atty

UNITED STATES PATENT OFFICE.

EDWARD L. LIDKE, OF TOLEDO, OHIO, ASSIGNOR TO F. M. RAKESTRAW, OF
SAME PLACE.

SPRING-DOUBLETREE.

SPECIFICATION forming part of Letters Patent No. 557,332, dated March 31, 1896.

Application filed April 10, 1895. Serial No. 545,174. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. LIDKE, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Spring-Doubletrees; 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, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to a spring-doubletree, and has for its object to provide a doubletree in which the initial strain to start the load shall be gradual upon the horses and shall not be directly between the doubletree and the load until a maximum strain is exerted, whereby seesawing of the horses due to the dread of a sudden pull to start a heavy load is avoided.

Another object is to distribute the strain upon the doubletree at a point near each end in starting, the strain upon the central portion of the doubletree due to its contact with the doubletree-bolt thus being avoided until a maximum strain is exerted by the horses, thus lessening the liability of the doubletree to break due to a sudden jerk on the ends, as would be the case were the strain directly on the doubletree-bolt.

The invention consists in a doubletree having a slot therein through which the doubletree-bolt passes, there being a spring having a central bearing against the bolt, the ends being connected to the doubletree, the spring having a tendency to hold the doubletree back. By this means a forward pull of the doubletree will be against the spring until the doubletree moves a distance corresponding to the length of the slot, when the pin will be engaged by the doubletree and the strain be directly upon the same.

My invention further consists in the parts and combination of parts as shown in the drawings, described in the specification, and pointed out in the claim.

In the drawings, Figure 1 is an elevation of a spring-doubletree constructed in accordance with my invention. Fig. 2 is a rear view of the same. Fig. 3 is a rear view of

the doubletree, the spring and connections being omitted. Fig. 4 is a sectional view on lines *x x*, Fig. 1.

1 designates a doubletree having a casting 2 secured thereon by means of bolts or rivets 3, the doubletree and casting having a slot 4 therein, through which passes the doubletree-bolt. Upon the rear of the doubletree, and extending through the casting, is a recess 5, in which passes a bumper or draw-bar 6, the bumper or draw-bar normally resting against the doubletree-bolt 7. Secured upon the rear of the bumper or draw-bar, by means of a nut 8, is a spring 9, each end of the spring being preferably secured to the doubletree by means of straps or hangers 10.

From the foregoing the operation will be readily apparent. A forward pull upon the doubletree will cause the ends of the spring to bend forward due to a pull given by the straps 10, it being understood that the bumper or draw-bar abuts against the doubletree-bolt. Therefore the doubletree is free to move a distance corresponding to the length of slot 4, at which time a maximum strain is exerted upon the doubletree, and the pull will then be directly from the doubletree upon the doubletree-bolt. By this means the initial strain is gradual upon the horses and is not a positive pull until the maximum strain is exerted.

What I claim is—

A doubletree having a chamber in its rear portion and a slot extending transversely of the doubletree and communicating with the chamber, a plate or casting secured to the doubletree and having slots registering with the slot of the doubletree, a bumper arranged within the chamber, a doubletree-bolt extending through the slots of the respective parts and normally in engagement with the bumper, a spring secured at its center portion to the bumper, and straps pivotally connected with the doubletree and with the ends of the spring.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

EDWARD L. LIDKE.

Witnesses:

CARROLL J. WEBSTER,
WILLIAM WEBSTER.