(No Model.)

N. W. PARKER & F. WILCOX.

SHAFTS FOR ROAD CARTS.

No. 413,304. Patented Oct. 22, 1889.

Fig. 1

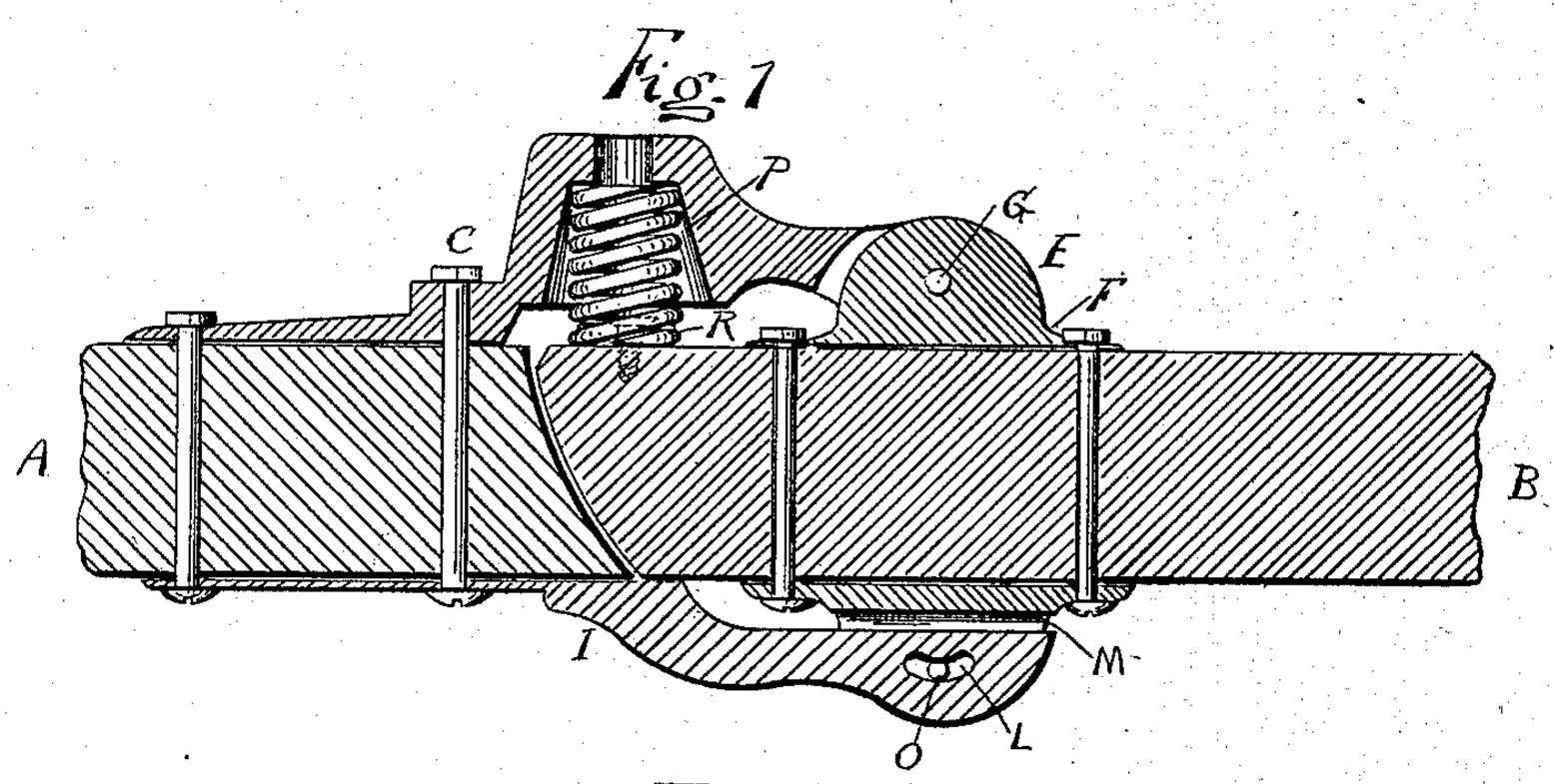


Fig. 2

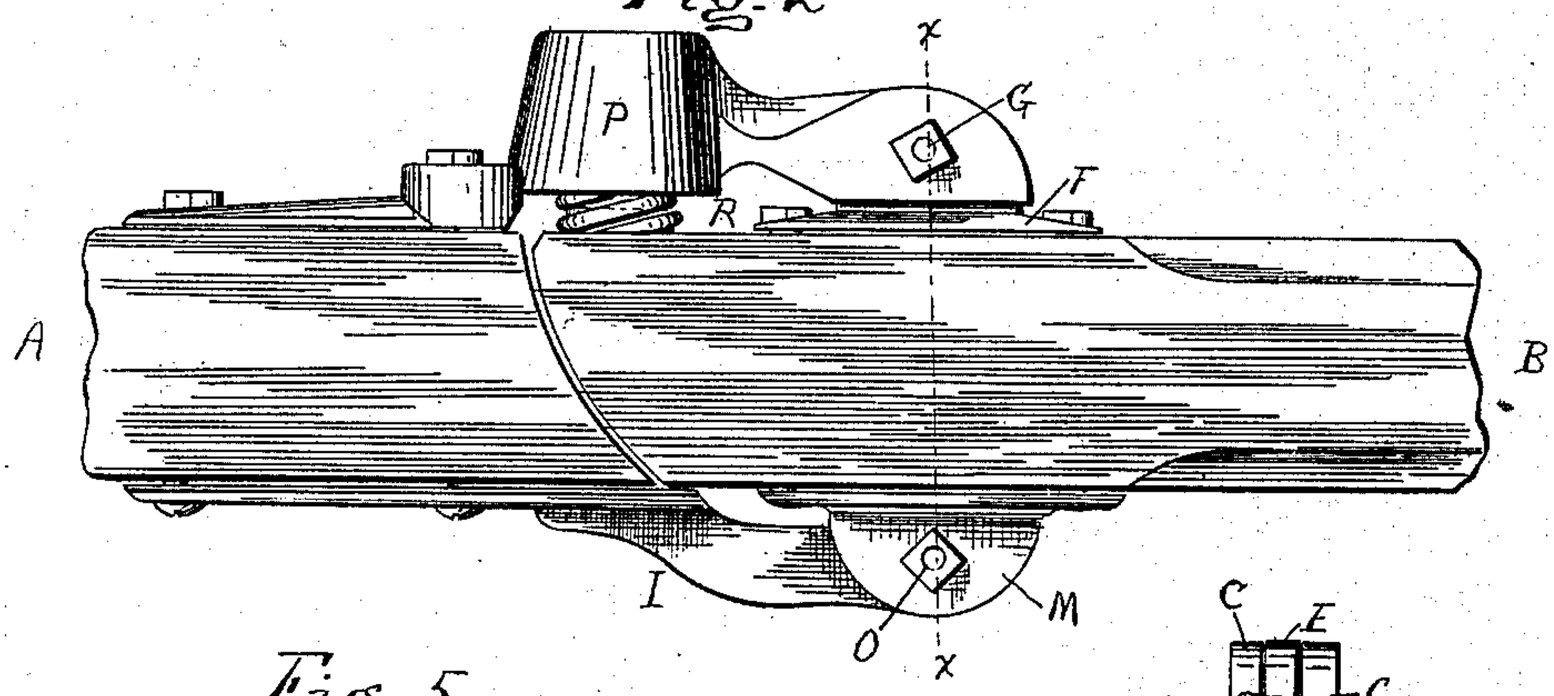


Fig. 5.

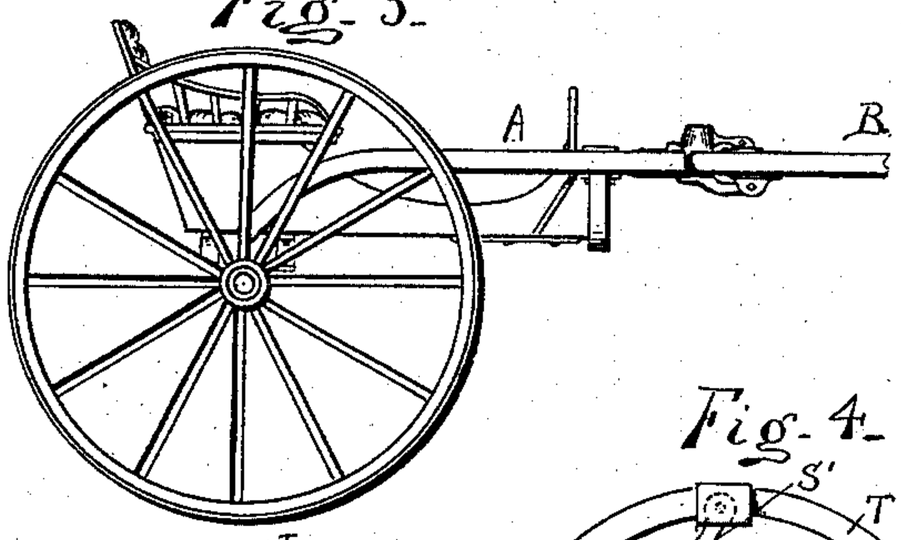


Fig. 3.

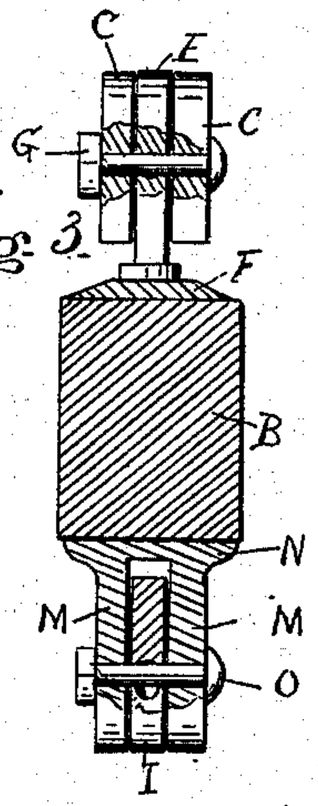
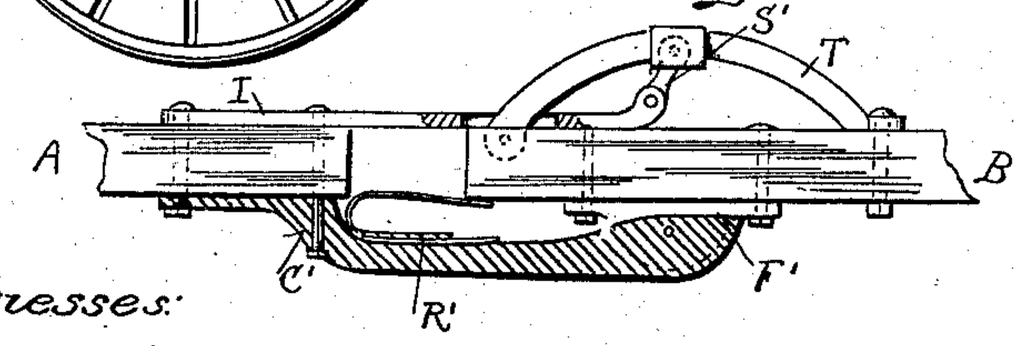


Fig. 4.



Witnesses:
L. M. Bartlett
M. P. McKee.

Inventors:
N. W. Parker
F. Wilcox
By W. A. Bartlett
Atty.

UNITED STATES PATENT OFFICE.

NATHANIEL WILSON PARKER AND FRANKLIN WILCOX, OF HAMILTON, NEW YORK.

SHAFTS FOR ROAD-CARTS.

SPECIFICATION forming part of Letters Patent No. 413,304, dated October 22, 1889.

Application filed August 3, 1889. Serial No. 319,636. (No model.)

To all whom it may concern:

Be it known that we, NATHANIEL WILSON PARKER and FRANKLIN WILCOX, residing at Hamilton, in the county of Madison and State of New York, have invented certain new and useful Improvements in Shafts for Road-Carts, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to shafts for road-carts, sulkies, or other similar vehicles.

The object of the invention is to produce a pole or thills for such carts in sections, jointed together with an elastic joint, so that the motion of the animal shall be felt but little by the occupants of the cart. Shafts have been heretofore made in sections for this purpose.

The invention is intended to give an improved device.

Figure 1 is a broken longitudinal section of a pole or shaft of a road-cart with our improved coupling attached. Fig. 2 is a side elevation of the same. Fig. 3 is a section on line *x x*. Fig. 4 is a side view of a modification. Fig. 5 is a side view of a cart, showing, generally, the location of the coupling.

A indicates the rear portion of a pole or shaft, which is attached to the cart in any known or suitable manner.

B is the front portion of the shaft, to which the horse is attached.

A bracket C is bolted or otherwise secured to the rear section A of the shaft, and extends across the break, rising a little above the face of the shaft. The front end of this bracket C, over the shaft-section B, is slotted to receive the tongue E of a leaf F, which is fastened to the front section of the shaft. A pin G passes through the bracket and tongue, forming a hinge, of which the pin G is the pintle.

A bracket I, attached to the lower rear section of the shaft, extends forward and has a curved slot L near its front end. The front end of tongue-bracket I rests between lugs M M of a leaf N, attached to the front shaft-section. The lugs M M are perforated, and a pin O passes through these lugs and the slot L of the front end of bracket I. The slot L is curved about the pin G as a center, so that pin O can play in said slot, and the shaft-section B, to which levers F and N are attached, can have a slight rocking movement about the pintle G, the limit of such movement being determined by slot L as well as by the distance of the brackets C and I from the faces of said shaft-section. The bracket C has a well P just over the end of section B, and this well receives a short stiff spring R, which spring bears on the bracket and on the shaft-section B. The depression of the front end of section B will compress this spring (see dotted lines, Fig. 1) without moving the rear section until the limit of compression of the spring has been reached.

Of course the position of the "knuckles" or tongues and lugs forming the hinge-joint may be reversed, and the position of the entire device on the shaft may be reversed without changing the principle of operation.

In the modification shown in Fig. 4 the bracket C′ is placed at the bottom of the thill-section, and is hinged to the leaf F′, forward of the joint. A link S′ is pivoted to the front end of bracket I′, and the upper end of this link is pivoted to the arch T′, which is fastened to the front section of the thill and springs over the link S′. The end of arch T′ nearest the joint passes through a hole in the top of bracket I′. A spring R′ is interposed between shaft B and bracket I′.

It will be seen that the outer section of the shaft lies between two brackets attached to the inner end, and is pivoted to one of said brackets and rocks against the other, the movement being retarded by an interposed spring, and that the movable shaft-section is connected by a movable coupling to the bracket opposite the one to which it is hinged.

What I claim is—

1. The combination, with two sections of a vehicle pole or shaft arranged end to end, of a bracket attached to one section extending past the proximate ends and hinged to the other section, and a spring bearing on one shaft-section and on the bracket, substantially as described.

2. The combination, with the divided section of a vehicle-shaft, of a pair of brackets secured to one section and extending across the break, a leaf on one shaft-section pivoted to one bracket, and a leaf on the other section loosely connected to its bracket, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

N. WILSON PARKER.
FRANKLIN WILCOX.

Witnesses:
C. M. WICKWIRE,
E. L. KINGSBURY.