(No Model.)

H. OAKES.

REACH COUPLING FOR VEHICLES.

No. 356,049. Patented Jan. 11, 1887.

Fig. 1.

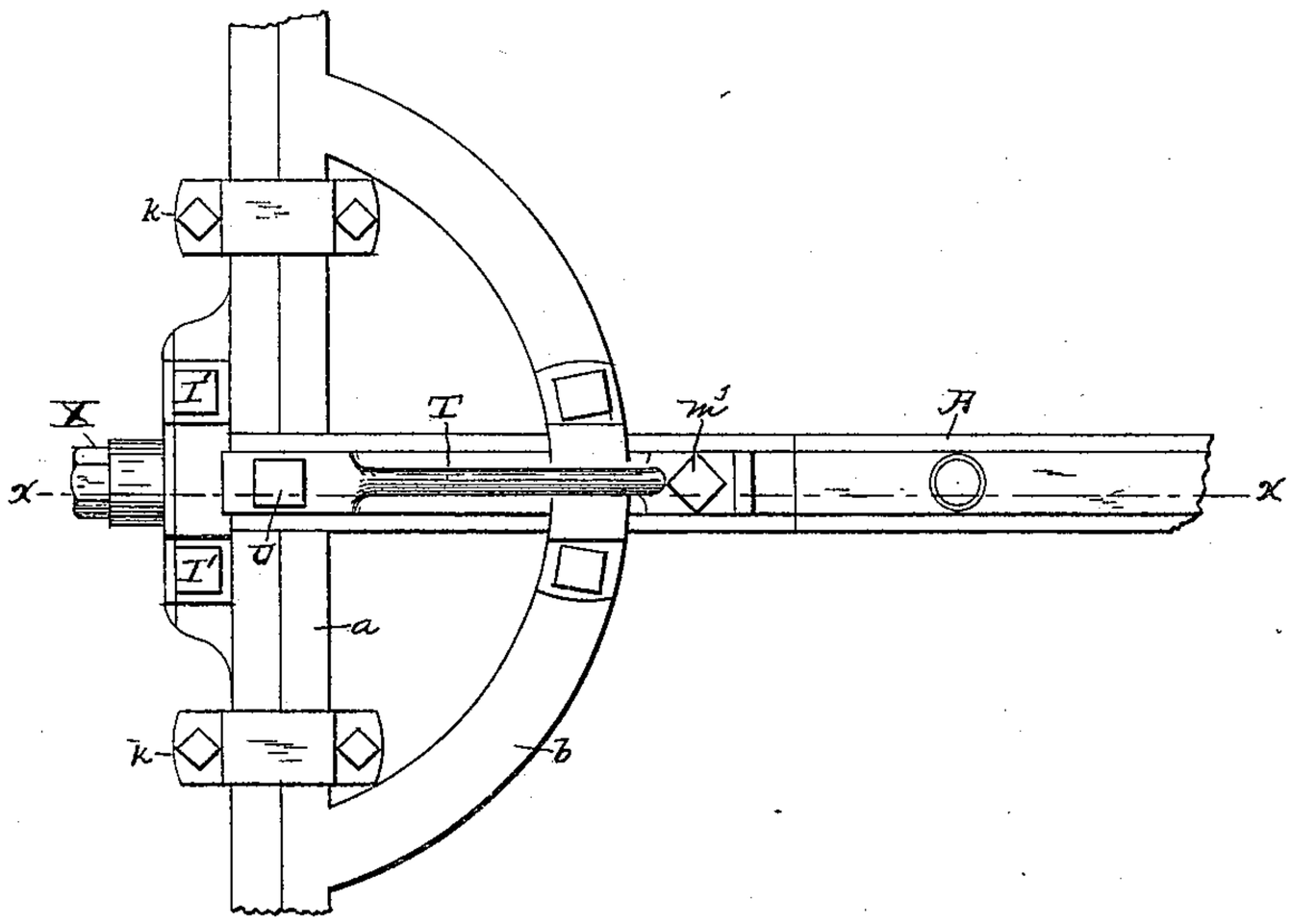


Fig. 2.

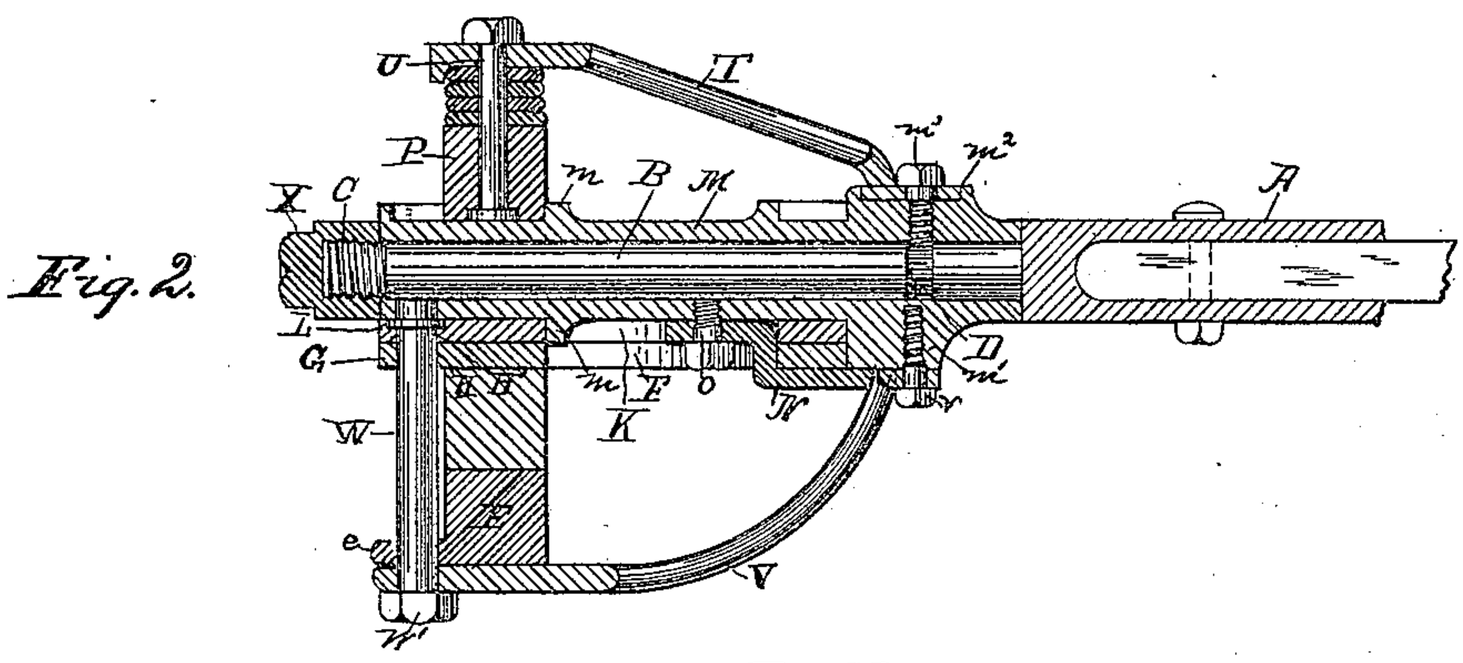
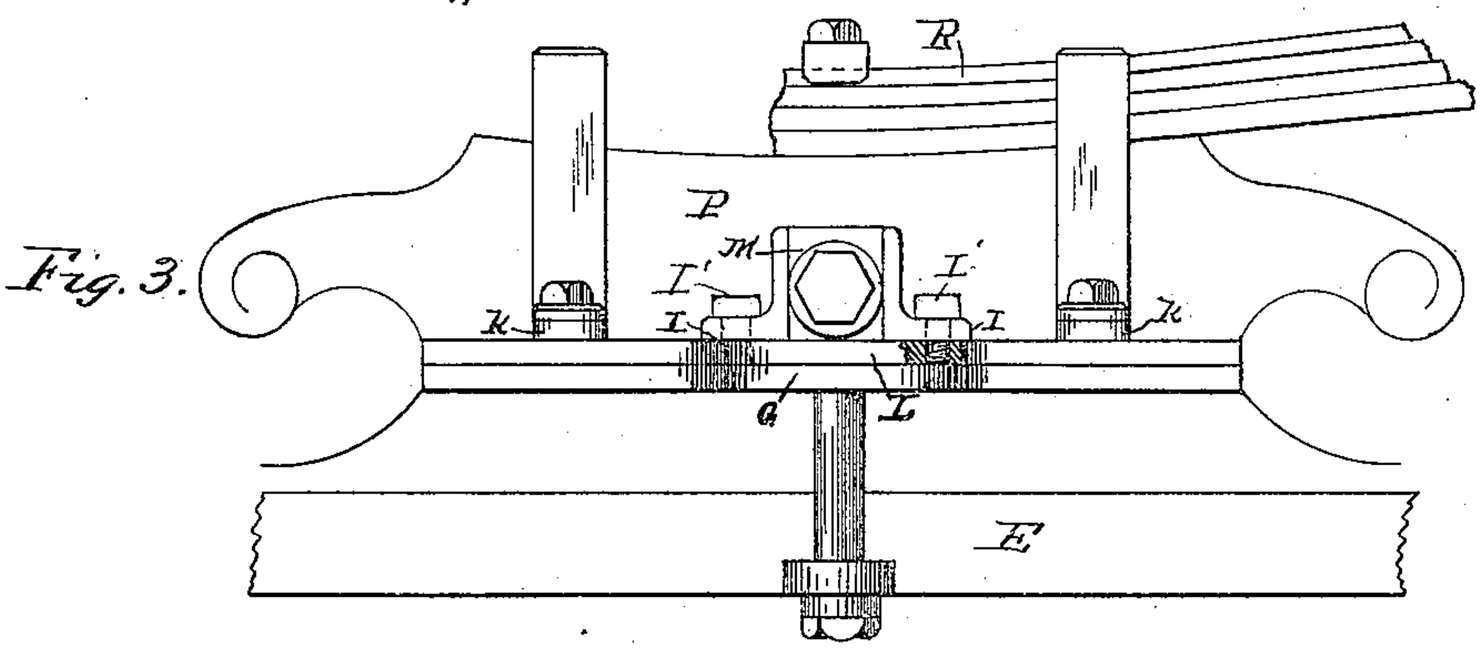


Fig. 3.



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HENRY OAKES, OF SILVER CITY, TERRITORY OF NEW MEXICO.

REACH-COUPLING FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 356,049, dated January 11, 1887.

Application filed September 16, 1886. Serial No. 213,681. (No model.)

To all whom it may concern:

Be it known that I, HENRY OAKES, a citizen of the United States, residing at Silver City, in the county of Grant and Territory of New Mexico, have invented a new and useful Improvement in Reach Attachments, of which the following is a specification.

My invention relates to an improvement in vehicle-reaches; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a top plan view of a portion of a reach, the front axle, and the fifth-wheel, of a vehicle embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same, taken on the line *x x* of Fig. 1. Fig. 3 is a front elevation of the same.

A represents the reach, which extends forwardly from the rear axle and is provided at its front end with a metallic spindle, B, which is threaded at its front extremity, as at C, and near the rear end of the same is an annular groove, D.

E represents the front axle, on which is placed a semicircular section, F, of a fifth-wheel, the said section F having on its front side, at its center, a forwardly-projecting lug, G, in the center of which is made an opening, H. K represents a similar semicircular section, which is placed on the upper side of the section F, and is also provided on its front side, at its center, with a projecting lug, L, having an opening, H′, which registers with the opening H, and threaded openings I are made on opposite sides of the opening H′. Each semicircular section of the fifth-wheel comprises a straight arm, *a*, above the axle, and a curved arm, *b*, which projects rearwardly from the axle.

M represents a box or sleeve, which is provided with a longitudinal bore that is adapted to receive the spindle B of the reach. The front end of the said box or sleeve is squared and rests upon the upper section of the fifth-wheel, and is provided with a shoulder, *m*, that bears against the said fifth-wheel so as to seat the front end of the box or sleeve firmly thereon. The rear end of the said box or sleeve is provided on its under side with a shoulder, *m′*, which bears against the rear sides of the curved arms of the sections of the fifth-wheel, and corresponds in depth to the thickness of the said fifth-wheel. The lower side of the said shoulder is flush with the lower side of the fifth-wheel. The front end of the box or sleeve has laterally-extending wings, which bear upon the upper section of the fifth-wheel, and through the said wings extend vertical bolts I′, the shanks of which are screwed into the openings I, and thus secure the front end of the box or sleeve to the upper section of the fifth-wheel.

N represents a bent metallic strap, which has its front end bolted to the under side of the box or sleeve, as at O, and the rear arm of the said strap extends under the shoulder *m′* of the box or sleeve, and thereby the said strap embraces the curved arm of the sections of the fifth-wheel and secures the same firmly against the under side of the box or sleeve.

P represents the head-block of the vehicle, which bears upon the upper side of the fifth-wheel, directly over the axle, and is provided at its center, on its under side, with a recess adapted to receive the front end of the box or sleeve M. The usual front spring, R, is placed on the upper side of the head-block, and the said spring is clamped to the head-block, and the latter is clamped to the upper section of the fifth-wheel by means of straps, which are bent down over the spring and the head-block, and have their lower ends bolted to lugs *k*, which project from the front side of the upper section of the fifth-wheel.

T represents a brace-rod, which has its upper end flattened and placed on the lower side of the spring, at the center thereof, and a bolt, U, extends vertically through the center of the head-block, the spring, and the front end of the brace-rod, and secures the latter firmly to the spring and the head-block, as shown in Fig. 2. The rear end of the brace-rod T extends to the rear upper side of the box or sleeve and bears in a recess, m^2, which is made therein. A screw, m^3, passes vertically through the rear end of the brace-rod T and through the upper side of the box or sleeve M, and the lower end of the said screw enters the annular groove D, which is made in the spindle of the reach.

From the foregoing description it will be readily understood that the reach is made of two separable sections, which are swiveled together, and thus the front axle of the vehicle is free to move vertically at either end independently of the rear axle, and the reach is entirely relieved of torsional strain.

V represents a brace-rod, which bears at its front end on the under side of the front axle, and projects forwardly from the same for a slight distance, and rearwardly and upwardly to the shoulder m' of the box or sleeve M. A screw, v, passes vertically through the rear end of the brace-rod V, and also through the rear end of the strap N, and enters a threaded opening in the under side of the box or sleeve M, thus firmly securing the rear end of the rod V to the said box or sleeve, and clamping the rear end of the strap N also securely thereto.

From the center of the front axle, on its front side, projects a lug, e, having an opening which registers vertically with the openings H and H'. The king-bolt W passes down through the said openings H and H', and through the openings in the lug e and the front end of the brace-rod V, and on the lower end of the king-bolt is screwed a nut, W'. By means of this construction it will be readily seen that the king-bolt is located on the front side of the front axle, at the center thereof, and the axle is not weakened by providing it with a central opening for the king-bolt, as is the usual practice.

On the front threaded end of the spindle B of the reach is secured a nut, X, which forms a head for the spindle, and bears against the front end of the box or sleeve M, so as to prevent the spindle of the reach from being withdrawn from the box or sleeve accidentally. In the event that the said nut X should accidentally work loose and come off the threaded end of the spindle, the reach will be prevented from becoming detached from the box or sleeve by the screw m^3, which bears in the annular groove in the spindle of the reach.

Having thus described my invention, I claim—

1. The combination of the front axle, the fifth-wheel having the upper and lower sections, the box or sleeve M, secured rigidly to the upper sections, and the reach having the spindle swiveled in the box or sleeve, substantially as described.

2. The combination of the front axle having the lug e, the fifth-wheel, comprising the upper and lower sections, having the lugs L and G, the king-bolt passing through the said lugs and also through a lug, e', on one side of the axle, the box or sleeve M, secured to the upper section of the fifth-wheel, and the reach having the spindle swiveled in the box or sleeve, substantially as described.

3. The combination of the box or sleeve M, the reach having the spindle B at its front end entering the bore of the box or sleeve, and provided with the annular groove D, and the screw m^3 in the box or sleeve and entering the said annular groove, for the purpose set forth, substantially as described.

4. The combination of the fifth-wheel having the upper section provided with the lug L, the box or sleeve having the wings I, bolted to the said lug, and the reach having the spindle swiveled in the box or sleeve, substantially as described.

5. The combination of the fifth-wheel, the box or sleeve M, secured to the upper section thereof, and having the depending shoulders m' to bear against the rear sides of the curved arms of the fifth-wheel, and the reach having the spindle journaled in the box or sleeve, substantially as described.

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

HENRY OAKES.

Witnesses:
R. L. POWEL,
GEORGE R. BROWN.