

No. 736,738.

PATENTED AUG. 18, 1903.

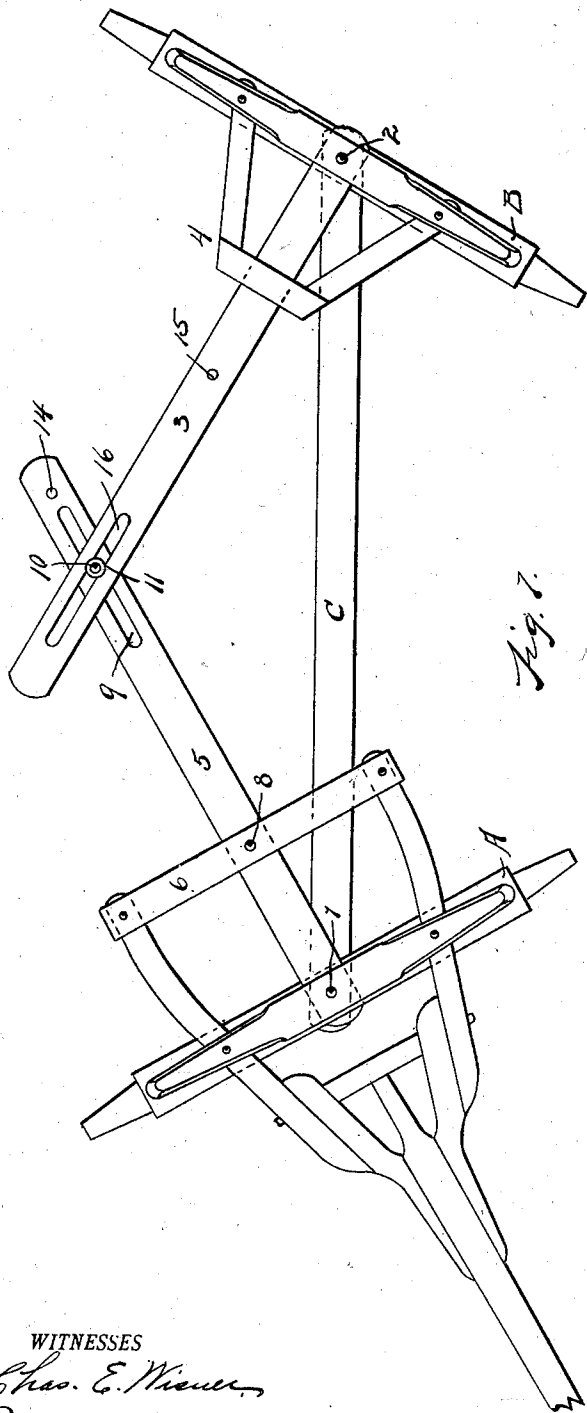
F. C. KERBY.

INTERCHANGEABLE REACH AND SHORT TURNING GEAR.

APPLICATION FILED NOV. 3, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES

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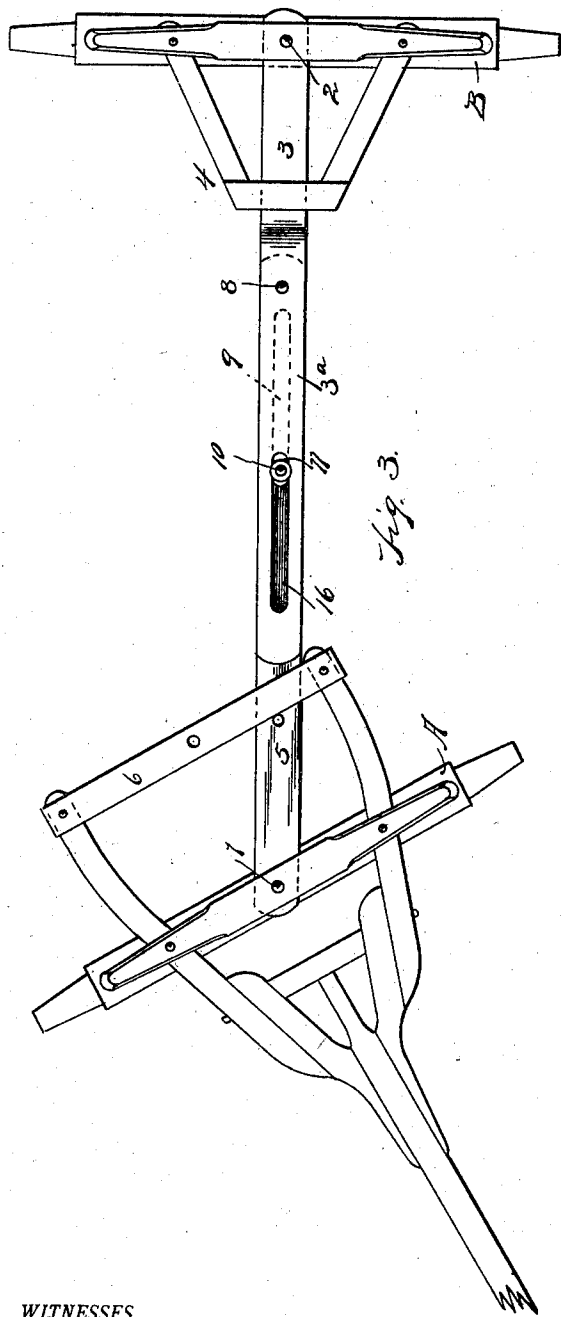


Fig. 3.

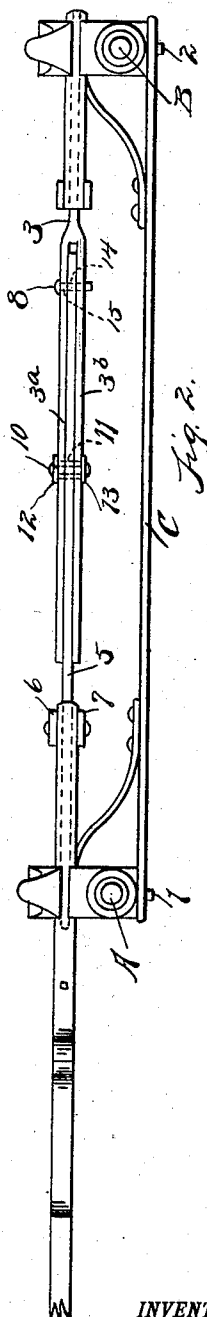


Fig. 2.

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UNITED STATES PATENT OFFICE.

FREDERICK C. KERBY, OF DETROIT, MICHIGAN.

INTERCHANGEABLE REACH AND SHORT-TURNING GEAR.

SPECIFICATION forming part of Letters Patent No. 736,738, dated August 18, 1903.

Application filed November 3, 1902. Serial No. 129,976. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK C. KERBY, a subject of the King of Great Britain, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Interchangeable Reaches and Short-Turning Gears for Wagons; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to an interchangeable reach and short-turning gear for wagons, and has for its object an improved means for connecting the front and rear axles of a wagon by means of which the connection may be used interchangeably as an ordinary reach or as a short-turning gear.

In the drawings, Figure 1 is a plan view showing the invention. Fig. 2 is a side elevation. Fig. 3 shows the two reaches brought to the position of an ordinary gear of a wagon.

A indicates the front axle, and B the rear axle. A reach C is pivotally held by king-bolts 1 and 2 to both axles. In addition to this reach C, which determines the spread of the axles and which is used for draft purposes, there is rigidly secured to the rear axle a tongue 3, extending forward from the fixed hounds 4, and there is pivotally secured to the front axle a tongue 5, extending rearwardly from the front axle A, pivotally secured to the front axle by the king-bolt 1 and engaging between the cross-bars 6 and 7, that join the rear ends of the front hounds. The tongue 5 is provided with a bolt-hole through which a bolt 8 engages and secures the tongue 5 rigidly with respect to the front hounds. One of the tongues 3 or 5 is forked, as shown in the drawings. The rear tongue 3 is forked, and the end of the tongue 5 engages between the branches 3^a and 3^b of the fork. Both forks 3^a and 3^b of the tongue 3 are provided with slots extending longitudinally of the axis of the tongue 3, and the tongue 5 is provided with a slot, and the slots 16 through the forks of the tongue 3, and 9 through the tongue 5, register, and the tongues are held together by a bolt 10, which passes through a friction-roller 11, nearly filling, but slightly less in diameter than, the cross-distance between the sides of the slot. The roller is held

from escaping by washers 12 and 13. The tongue 5 is provided near its end with a bolt-hole 14, and the tongue 3 is provided with a bolt-hole 15, properly spaced to register with bolt-hole 14 when the two parts of the pivoted reach are brought to a position parallel with the integral reach C.

When it is desired to use the device as a short-turning gear, it is assembled as shown in Fig. 1, in which case the hind wheels are guided to track in the curve traversed by the front wheel.

When it is desired to use the invention for an ordinary reach, the pin 8 is removed and the parts of the pivoted reach and the integral reach are brought to a parallel position and the pin is dropped through the holes 14 and 15. This couples the pivoted reach and makes it a substantially unpivoted or integral reach, and its operation is similar to that of the ordinary reach, which remains at all times parallel with the integral reach C.

What I claim is—

1. In an interchangeable ordinary reach and short-turning gear, the combination of the rear cross-bar of the front hounds slotted the whole of their length, provided with a removable pin 8, in combination with overlapping tongues 3 and 5, one of said overlapping tongues being forked, and both being slotted, a roller 10 engaging through the slots of both said tongues, and the reach C arranged as described and for the purposes specified.

2. The rear cross-bar of the front hounds slotted throughout its length provided with a removable pin 8, in combination with the pivoted reach composed of overlapping tongues 3 and 5, both of said tongues being slotted and one of said tongues being forked to receive the overlapping part of the other tongue, the roller 10 passing through the slotted fork and through the slot of the tongue 5, and arranged to form an adjustable frictionless connection, and the reach C pivotally secured to both axles, the tongues 3 and 5 being provided with bolt-holes 14 and 15, whereby the reach may be changed from a short-turning gear to an ordinary reach, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

FREDERICK C. KERBY.

Witnesses:

FRANCES CLOUGH,
NETTIE V. BELLES.