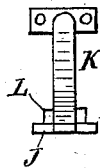
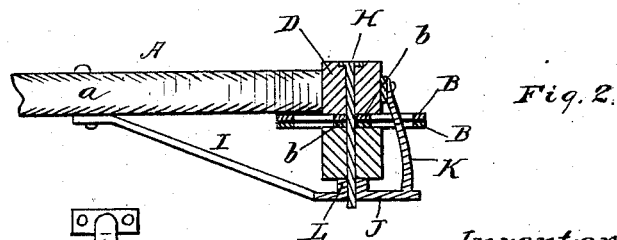
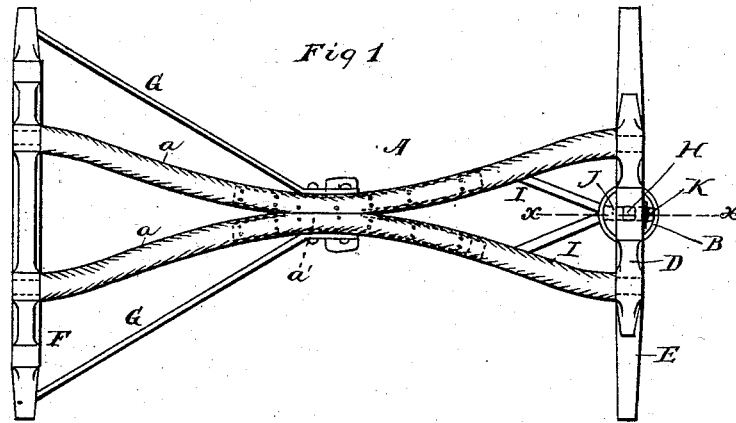


(No Model.)

C. F. BILHORN.
WAGON REACH.

No. 263,105.

Patented Aug. 22, 1882.



Witnesses

W. C. Corlies
Jno. C. MacGregor

Fig. 3

Inventor

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UNITED STATES PATENT OFFICE.

CHRISTIAN F. BILHORN, OF CHICAGO, ILLINOIS.

WAGON-REACH.

SPECIFICATION forming part of Letters Patent No. 263,105, dated August 22, 1882.

Application filed March 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN F. BILHORN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Running-Gears for Wagons, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a running-gear embodying my improvements; Fig. 2, a detail view in vertical longitudinal section and on an enlarged scale of the king-bolt and adjacent parts, and Fig. 3 a front elevation of the front upright rod shown in Fig. 2.

My invention relates to the bracing of the rub-iron and of the rear axle.

My invention consists, first, of a reach branching at both ends, combined with the rear axle and with rear axle-braces, which connect with the reach at the point where its branches connect with each other; second, of a reach braced laterally at the location of the rub-iron; and, finally, of details of construction hereinafter described, and definitely pointed out in the claims.

In the drawings, A represents a reach branching at each end, which has been reduced to the requisite shape from straight timbers cut with the grain by the usual means employed for steaming and bending wood. It is composed of two parts, *a a*, connected together, as shown, by an iron, *a'*, each side of which projects beyond the corresponding side of the reach to form a rub-iron.

B is a fifth-wheel, having a cross-piece, *b*, by which it is fastened to the front axle. A counterpart-wheel is secured to the head-block.

D is the head-block; E, the front axle; F, the rear axle; G G, rear axle-braces, which connect with the reach at the junction of the parts *a a*; H, the king-bolt; I I, braces extending from the king-bolt to the branches of the reach, and forming, with the plate J and rod K, the usual safety-lock for preventing

the withdrawal of the front axle from beneath the head-block in case of the accidental breaking of the king-bolt.

L is a collar, preferably made in one piece with the plate J, as are also the braces I I and rod K. The object of this collar is to make a broad bearing for the plate J on the king-bolt to keep the parts from wearing loose, and more especially to dispense with the curving of the braces I I downward, which is usually necessary in order to allow of the turning of the front axle.

The advantage of connecting the rear axle-braces at the junction of the branches of the reach is that the tendency of the former to deflect the reach laterally is met by the forward ends of the branches—their base—the head-block being supported against deflection by its connection with the wagon-body.

The advantage of bracing the rub-iron, as shown, from either the head-block or rear axle, or both, is too obvious to require elaboration. The forward branches of the reach not only act as braces, but are preferably themselves braced midway by the braces I I, which thus serve the double purpose of forming braces and a part of the safety-lock.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A reach having a rub-iron braced against lateral deflection, substantially as set forth.

2. The reach A, branching at its forward end, in combination with the braces I I, substantially as set forth.

3. A wagon-reach consisting in its forward part of arms diverging forwardly, in combination with a head-block having its rear surface in contact with the forward ends of the arms, substantially as and for the purposes described.

CHRISTIAN F. BILHORN.

Witnesses:

GEO. R. CUTLER,
W. C. CORLIES.