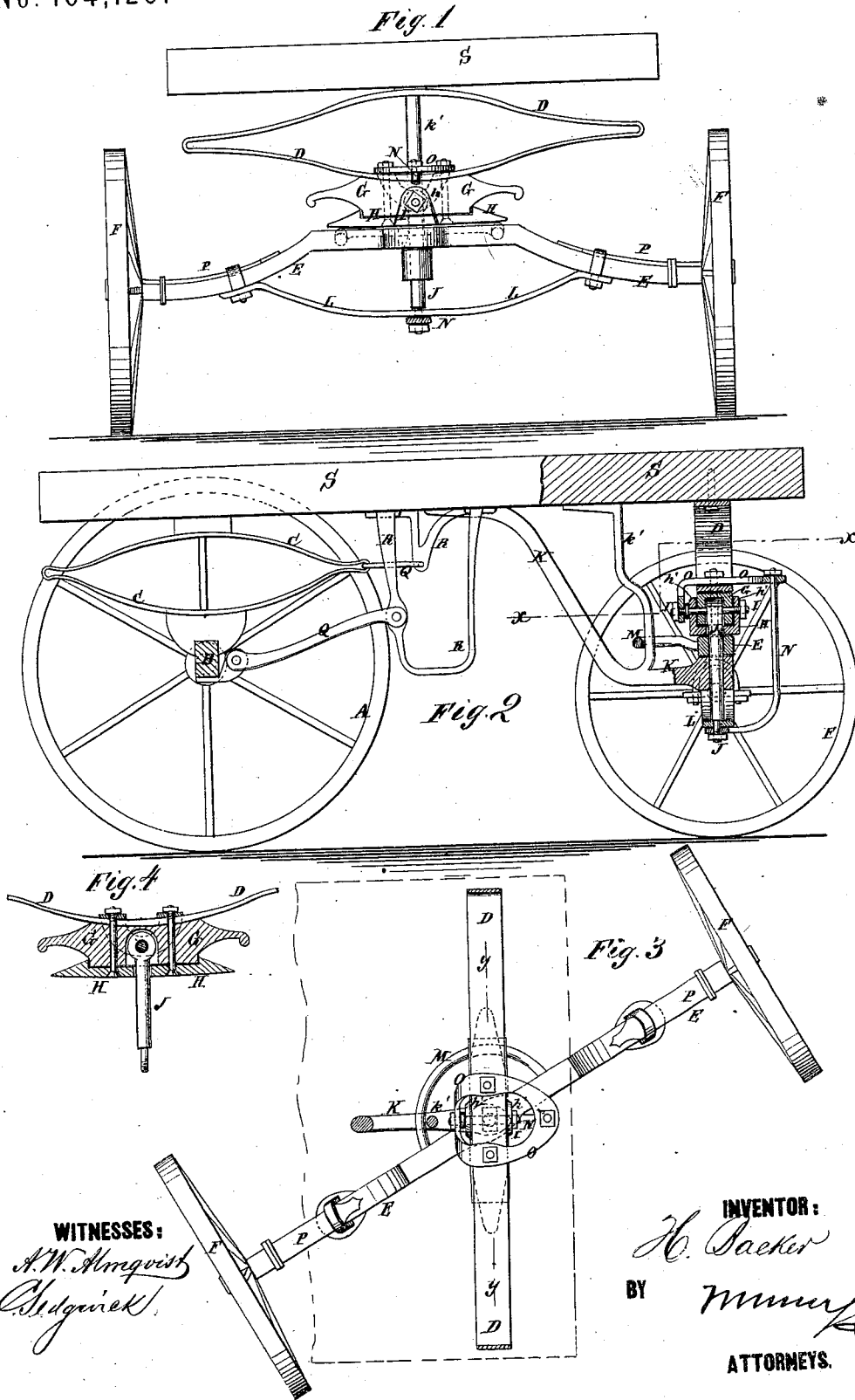


H. BACKER.  
Running Gear.

No. 164,129.

Patented June 8, 1875.



WITNESSES:  
*A. W. Amqvist*  
*A. Sjogren*

INVENTOR:  
*H. Backer*  
BY *Wm. M. ...*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

HENRY BACKER, OF UNION HILL, NEW JERSEY.

## IMPROVEMENT IN RUNNING-GEARS.

Specification forming part of Letters Patent No. **164,129**, dated June 8, 1875; application filed March 13, 1875.

*To all whom it may concern:*

Be it known that I, HENRY BACKER, of Union Hill, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Wagon-Gearing, of which the following is a specification:

Figure 1 is a front view of a wagon-gearing, to which my improvement has been applied, the front brace being broken away. Fig. 2 is a side view of the same, partly in section, to show the construction. Fig. 3 is a horizontal section of the same taken through the line *x x*, Fig. 2, the fore wheels being shown as cramped. Fig. 4 is a detail section of the same taken through the line *y y*, Fig. 3.

Similar letters of reference indicate corresponding parts.

The invention will first be fully described, and then pointed out in the claims.

A represents the rear wheels; B, the rear axle; C, the rear springs, which may be arranged longitudinally or transversely with the axle, as may be desired. D are the forward springs; E, the forward axle, and F the forward wheels. The forward springs D are bolted to the head-blocks G H, the upper part G of which is made of wood, and its lower part H of iron. The upper side of the iron part H is made with a shoulder near each end, against which rest shoulders formed upon the lower parts of the ends of the wooden part G. Upon the front and rear edges of the upper side of the iron part H are formed lips *h'*, which overlap the front and rear sides of the wooden part G, and which have holes formed through them to receive the bolt I, which passes through them, through the wooden part G, and through a hole in the flattened upper end or head of the king-bolt J, which is inserted in a recess in the wooden part G of the head-block. The king-bolt J passes through the iron part H of the head-block, through the forward axle E, through the forward end of the brace K, and through the center of the strengthening-bar L, and has a nut screwed upon its lower end. The forward axle E is made with a bend in its end parts, to bring its middle part to the proper height to receive the head-block G H. The middle or arched part of the axle E is strengthened by the bar L, which spans the bends or arch of the axle E, and the ends of which are secured to the said axle by clips or other substantial fastenings. The brace-bar K is

curved or inclined upward, and its rear end is securely bolted to the frame of the wagon-body S. The space between the middle part of the axle E and the strengthening-bar L should be equal, or nearly equal, to the play of the springs D, so that the forward end of the brace K may move down upon the king-bolt J, as the springs D are compressed. The brace K is made with a branch arm, *k'*, which projects upward at the rear of the axle E, is bent to the rearward, and is bolted at its upper end to the frame of the wagon-body. The branch arm *k'* passes through a loop or staple, M, the ends of which are attached to the axle E. The branch arm *k'* and loop M prevent the forward axle from rocking and twisting, and prevent the said forward axle from separating from the rest of the gearing should the king-bolt break. N is a stay-rod or brace, the lower end of which is placed upon the lower end of the king-bolt J, below the strengthening-bar L. The stay-rod N projects forward, and is bent upward, and its upper end is secured to the forwardly-projecting part of the loop O, which is placed upon the lower part of the forward spring D, and is secured by the bolts that secure said spring to the head-block G H. The rear part of the loop O is bent downward, and is secured by the bolt I.

By this construction, the connection between the head-block G H and the forward axle E will be made firm and secure without the use of a fifth-wheel. The end parts of the axle E, between the ends of the strengthening-bar L and the axle-arms, are strengthened by bars P, placed upon them, and secured by clips or other suitable fastenings.

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

1. The combination of the strengthening-bar L, with the bent axle E, and the king-bolt J, substantially as and for the purpose set forth.

2. The combination of the arm *k'* and the loop or staple M, with the brace K, the axle E and the bolt J, substantially as and for the purpose set forth.

HENRY BACKER.

Witnesses:

CHARLES WITTREICH,  
A. RIEMENSCHNEIDER.