

J. B. & S. WILSON.

Axle.

No. 7,948.

Patented Feb 25, 1851.

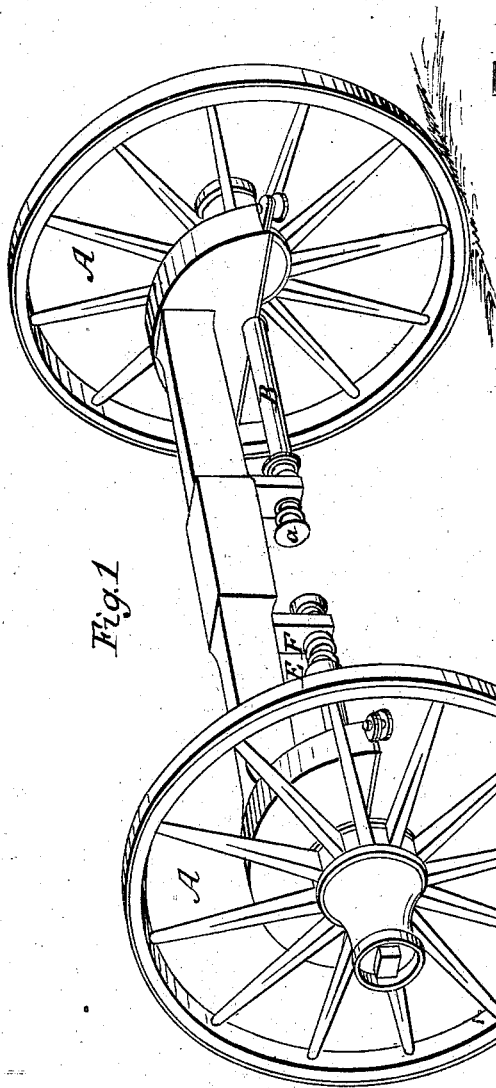


Fig. 1

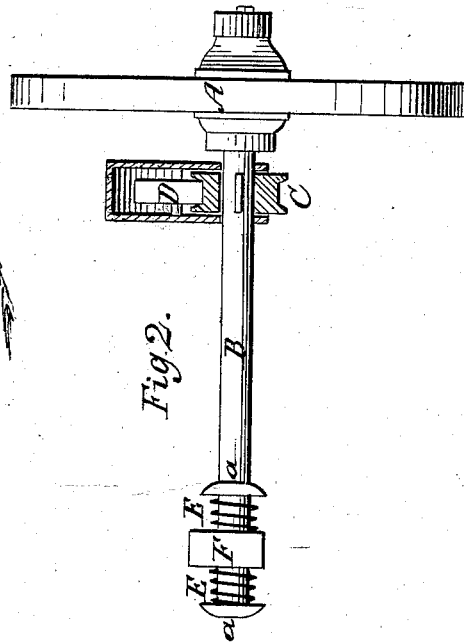


Fig. 2.

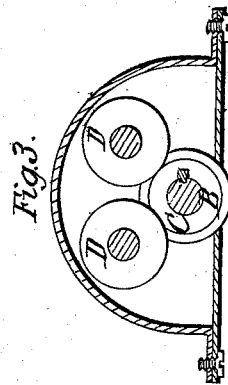


Fig. 3.

UNITED STATES PATENT OFFICE.

J. B. WILSON, OF TOWNSENDS INLET, NEW JERSEY, AND STACY WILSON, OF KENSINGTON, PENNSYLVANIA.

APPLYING FRICTION-ROLLERS TO HUBS AND AXLES.

Specification of Letters Patent No. 7,948, dated February 25, 1851.

To all whom it may concern:

Be it known that we, Jos. B. WILSON, of Townsends Inlet, in the county of Cape May and State of New Jersey, and Stacy Wilson, of Kensington, in the county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in the Running-Gear of Wheel-Carriages, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which forms part of this specification, and in which—

Figure 1 is a view in perspective of one of our anti-friction axle trees. Fig. 2 is an elevation of one of the wheels with its shaft, the friction box being in section, and Fig. 3 is a side view of one of the boxes with one side removed.

Our invention consists in furnishing each wheel with a separate axle or shaft which is arranged to play outward from or inward toward the central line of the carriage while the weight is supported on friction wheels.

In the drawing A A are the wheels, each being secured to a separate shaft, B, of about half the usual length. Each of these shafts is supported in two places, the one near the wheel and the other near the extremity furthest from the wheel. At the point of support nearest the wheel the shaft passes through a sleeve, C, which is carried round with the shaft by a feather projecting from the latter. The sleeve rests against two friction wheels, D, D, which thus support the weight of the load. The sleeve has a flange surrounding each of its extremities, the space between the two being adapted to the thickness of the antifriction wheels, which thus prevent the sleeve from moving across their faces along with the axle and obviate the difficulties arising from unequal wear. Springs, E, E, are applied to the inner extremity of the shaft on each side of the inner bearing, F, which may also be furnished with friction wheels. These springs act against collars, a, a, se-

cured to the shaft and tend to keep it always in the same position; but the shaft is otherwise free to slide inward or outward in the sleeve, C, and bearing, F. The several bearings or boxes are secured to a false axle on which the carriage body is mounted in the usual manner.

It will be perceived that if the wheel strike any obstacle, a stone for example, the larger part of which is on its outer side, it will glance inward without moving the rest of the carriage, and without requiring an effort in the team to raise the weight over the obstacle, and as soon as the obstacle is passed the wheel is returned to its position by the tensive force of the springs acting upon its shaft. If the larger portion of the stone be between the wheels the wheel striking it will glance outward and be returned to its proper position by the springs as in the former instance.

We do not wish to confine ourselves to the use of spiral springs to the exclusion of springs of other forms; nor to two springs as one can be made to produce the same result.

What we claim as our improvement and desire to secure by Letters Patent in the herein described method of applying friction rollers to the axles of wheel carriages, is—

The interposition between the bearing of the axle and the faces of the friction rollers of a loose sleeve through which the axle is free to slide endwise while it at the same time carries the sleeve round with it in its rotation, the sleeve having a groove in its outer periphery to receive the friction rollers and prevent them from moving endwise on the collar.

In testimony whereof we have hereunto subscribed our names.

JOSEPH B. WILSON.
STACY WILSON.

Witnesses:

JOHN CLOUDS,
LUKE V. SUTPHIN.