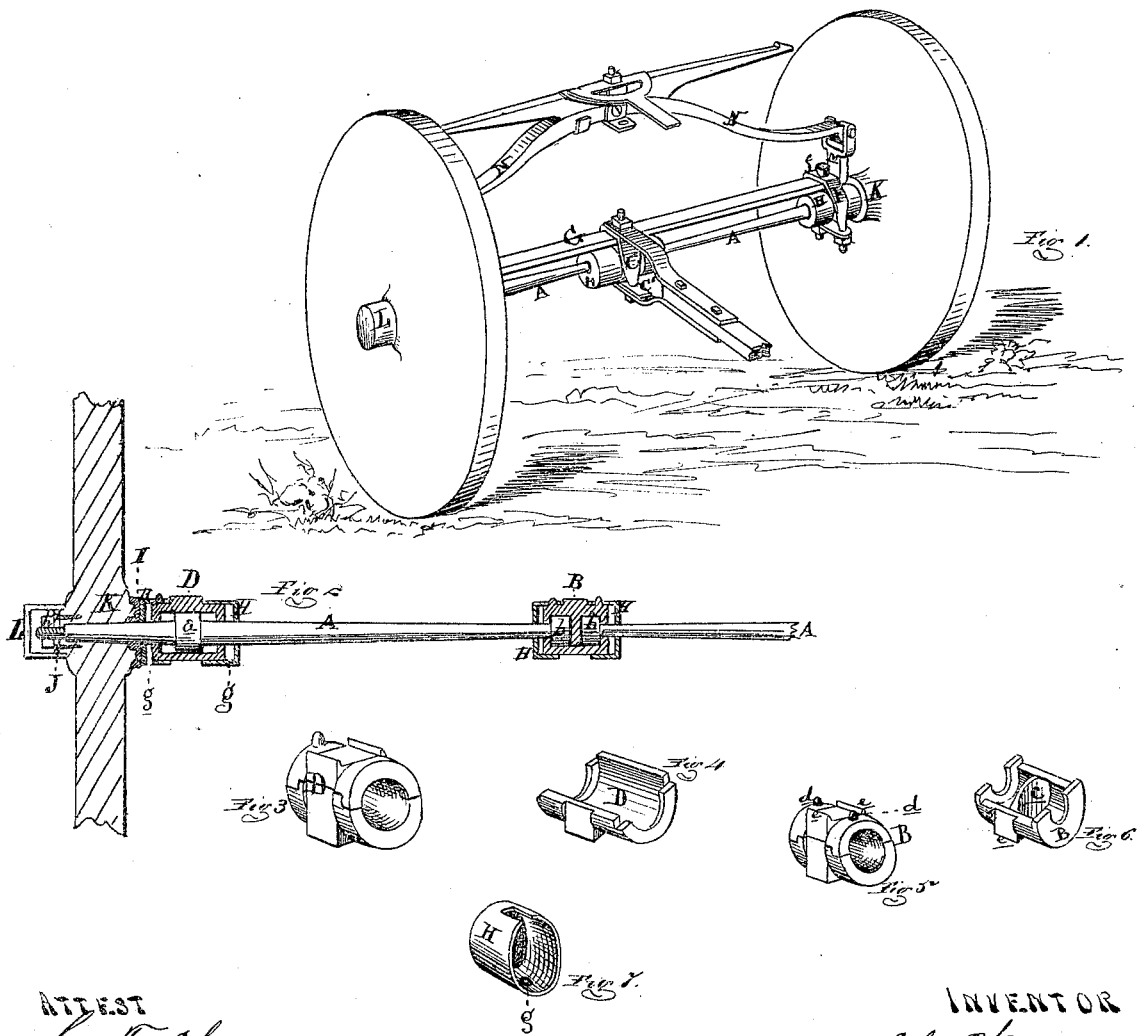


ELI WIGLE.

Improvement in Running-Gear for Carriages:

No. 114,072.

Patented April 25, 1871.



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ELI WIGLE, OF BAY CITY, MICHIGAN.

Letters Patent No. 114,072, dated April 25, 1871.

IMPROVEMENT IN RUNNING-GEARS FOR CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, ELI WIGLE, of Bay City, in the county of Bay and State of Michigan, have invented a new and useful Improvement in Running-Gear for Wagons; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a perspective view of my invention.

Figure 2 is a partial longitudinal section.

Figure 3 is a perspective of the outer boxes.

Figure 4 is a perspective of one-half of the same.

Figure 5 is a perspective of the center box.

Figure 6 is a similar view of the top half of the same in an inverted position.

Figure 7 is a perspective of the sand-guards.

Like letters refer to like parts in each figure.

The nature of this invention refers to a new construction of axles for wheeled vehicles, so that they will run easier, run more true for a greater length of time, and last longer than those of ordinary construction, and so arranged that any one part which may wear out may be easily replaced with but little trouble or expense.

The invention consists in the novel and peculiar construction of the sectional axles and the boxes in which they are journaled, and in the attachment thereof to a transverse bar, the ends of which are turned up to form the spring jacks, the whole arranged and operating as more fully hereinafter set forth.

In the drawing—

A represents iron or steel axle-arms, each having shrunk on it near the hub a collar, *a*, of steel, from which it tapers each way.

At the inner end is shrunk on a collar or ferrule, *b*, which, with the other, constitutes the journals of the arm.

B is the center box, the upper half of which is provided with a transverse diaphragm, *c*, against which the inner ends of the axles abut.

The ends of these brasses are also capped to embrace the axle next the collar, in order to retain the oil and exclude dust from the bearings.

The top of the upper half is flattened to bear close up to the under side of the transverse bar G, being provided with flanges *e* at the side to embrace the edges of the bar, and two studs, *d*, near the ends, which enter recesses in the under side of said bar.

The sides and bottom of the middle part of the box are flat and rectangular, and are secured to the bar G by a stirrup, C, embracing both, with its threaded ends projecting through a plate, C', under the box, secured there by nuts on the stirrup, whereby the box is firmly secured in place.

D are the end boxes, which are similar in construction to the center one, without the diaphragm, and

are in like manner secured to the transverse bar G by stirrups F, as shown.

A close oil-cup, *f*, should be inserted in an opening tapped through the stirrups, bar G, and the top brass of each box, for oiling the bearings whenever required.

On the front sides of the stirrups draft-clips should be forged when applied to the front axles.

H are sand-guards, which are sheet-metal cylinders, provided with an opening in their caps just large enough to admit the axle, with their flanges slipped over the cylindrical ends of the boxes to keep out the dust.

Each should be provided with an opening, *g*, in the lower part, through which any overflow of oil may pass out.

The bearings in the end boxes are made longer than the journal, so that there may be no friction on the sides of the collar, and to contain an ample supply of oil, in which the journal runs.

I is the plate on the inner end of the hub K, and is so formed as to flange over the band while its central part projects into and is boxed in the hub-opening.

J is the outer plate on the other end of the hub, to which it is attached by screws, as shown.

Through this plate the threaded end of the axle projects and receives a nut, *k*, which is screwed home against the plate, securing the wheel to the arm.

Over the outer band of the hub is secured a cap, L. The extremities of the bar G are turned up and forked to form the spring jacks M.

In each fork is a transverse pin carrying a friction-roller, on which rests the hooked end of the spring N, which is loosely held by clipping over it the extremities of the fork, saving the cost of a hanger at each jack.

Among the advantages of this construction of the running gear are: that it will run truer than any other with less draft; when any part is worn out it can readily be replaced at a small cost; the hole in the hub being very small, the wheel will last longer, as the spokes may be driven in the full length of their tenons; dust and grit cannot reach the journals; and the whole costs less to build than any other.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the separate axle-arms A provided with collars *a* and *b*, the boxes B and C, and the hub K provided with sand-guards H, all constructed and arranged substantially as and for the purpose specified.

2. The combination of the separate axle-arms A, the boxes B and C, and the transverse bar G, all constructed and arranged substantially as described and shown, for the purpose set forth.

Witnesses:

H. T. EVANS,
JOHN MCNENAM.

ELI WIGLE.