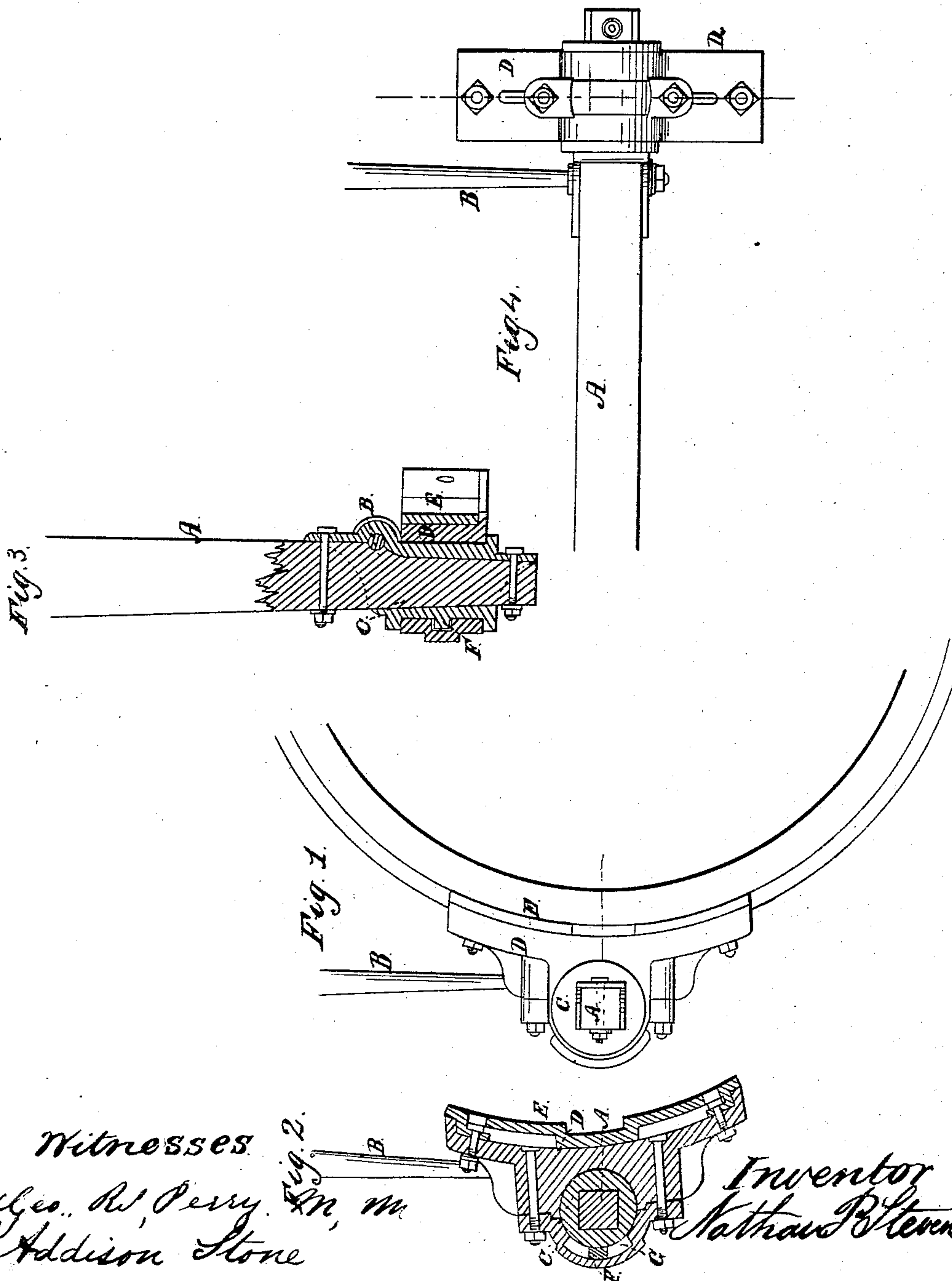


N. P. Stevens.

Brake Shoes.

N^o 23,722. Patented Apr. 19, 1859.



Witnesses
Geo. W. Perry
Addison Stone

Inventor
Nathan P. Stevens

UNITED STATES PATENT OFFICE.

NATHAN P. STEVENS, OF KEENE, NEW HAMPSHIRE.

IMPROVEMENT IN BRAKE-HEADS FOR RAILROAD-CARS.

Specification forming part of Letters Patent No. 23,722, dated April 19, 1859.

To all whom it may concern:

Be it known that I, NATHAN P. STEVENS, of Keene, in the county of Cheshire and State of New Hampshire, have invented a new and useful Improvement in Brake-Heads for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is an elevation of the improved brake-head. Fig. 2 is a vertical section through the same. Fig. 3 is a horizontal section of the same. Fig. 4 is a transverse elevation of the same.

Similar letters in the figures refer to corresponding parts.

This invention consists in connecting the brake-heads to the horizontal brake-beam by journals and boxes, so as to enable them to have an oscillating movement to adapt their detachable shoes to the periphery of the wheels of the car, and in attaching to the said journals and boxes certain caps and springs for giving any desired inclination to the brake-heads in relation to the peripheries of the wheels, so as to enable a greater pressure to be exerted by the lower portions of the shoes than by their opposite parts, and to prevent the heads from oscillating on their journals beyond a certain distance.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The horizontal beam A is suspended by the usual upright hanging rods B transversely in front of or behind the wheels of the car, and the ends of this beam have tenons formed on them, which fit in corresponding openings in the center of metal sleeves C, which are slipped and secured on said tenoned ends so as to form journals. These journals pass through corresponding boxes formed in the brake-heads D, midway between their upper and lower ends, which brake-heads have depressions or sockets formed in their segment-of-a-circle-formed surfaces next the car-wheels, in which are secured by screws segmental shoes E, of metal, wood, or other suit-

able material, corresponding on their outer surface with the peripheries of the car-wheel. On the peripheries of the journal-sleeves C are formed cogs or protuberances F, which enter segmental grooves formed around the inner peripheries of the caps of the brake-head boxes, in the lower end of each of which is inserted a strip of vulcanized india-rubber G, exactly filling it flush with the journals, which bears against it, so as to enable the india-rubber to yield to the pressure of the cog or protuberance F when the brake-head shoe E is pressed upon the wheel. This cog or protuberance F, moreover, serves to retain the brake-head D in a certain position in relation to the wheel when withdrawn therefrom. The india-rubber strip G may be increased or diminished in length to enable the brake-head shoe E to be brought in contact with the wheel at any inclination or slant in relation to the same that may be desired.

The operation of these improved brake-heads D is simple and effective. When the shoes E on their segmental surfaces are pressed against the wheels, their corresponding circling surfaces at once adapt themselves to their peripheries through the journals C at the ends of the transverse brake-beam A, and no matter how unevenly they may have been worn there cannot be any torsion or strain on the transverse beam, as is the case when the brake-heads are fixed permanently to the ends of the same.

In the event of one portion of either of the shoes E wearing out before the other they may be detached from the brake-head D and again attached with their ends reversed.

The slightly-increased pressure exerted by the lower portions of the shoes E over the upper portions, through the instrumentality of the cogs or protuberances F and india-rubber strips G, prevents the said upper portions from being crowded unequally upon the wheels by the increased friction created at these parts.

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

1. Suspending the brake-heads D to the

ends of the transverse brake-bar A by the journals and boxes, substantially in the manner and for the purpose set forth.

2. Forming cogs or protuberances on the peripheries of the journal-sleeves C and interposing strips of rubber G between them and the ends of the grooves in the journal-box cap in which the said cogs or protuber-

ances move, for causing a greater pressure to be extended on the lower than on the upper portions of the shoes E, as described.

NATHAN P. STEVENS.

Witnesses:

GEO. W. PERRY,
ADDISON STONE.