A. HERRING.
Railroad-Track.

No. 206,876. Patented Aug. 13, 1878.

Fig 1.

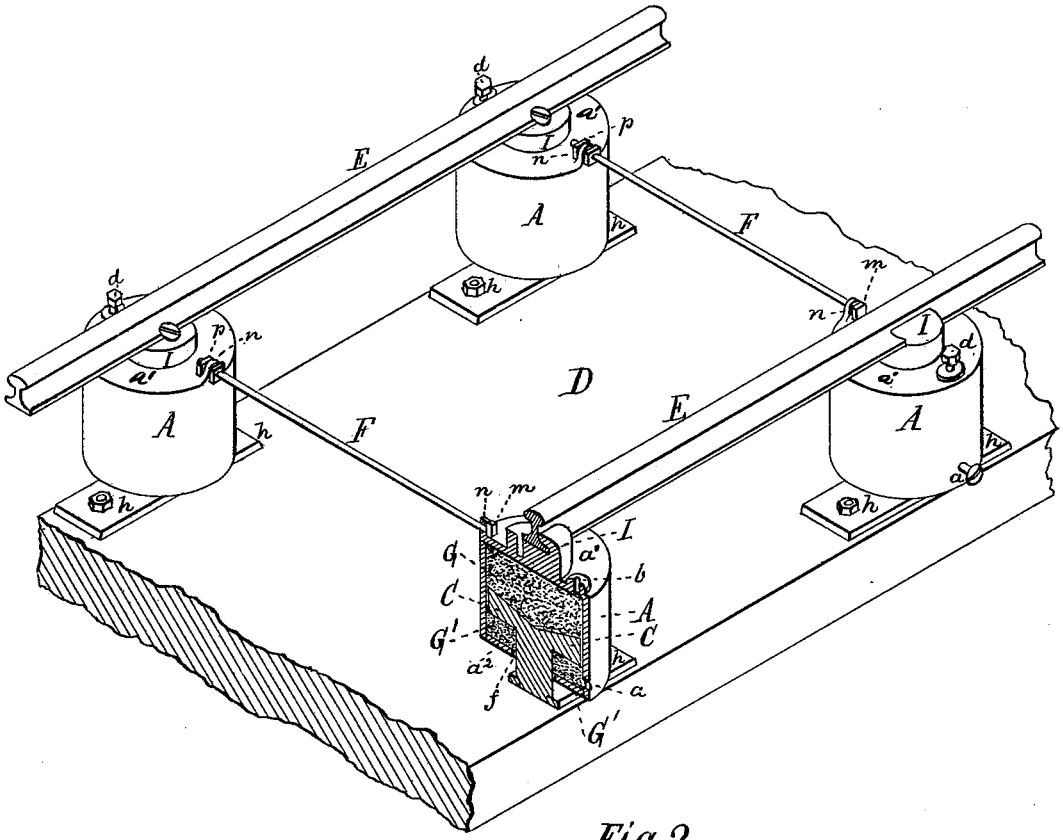
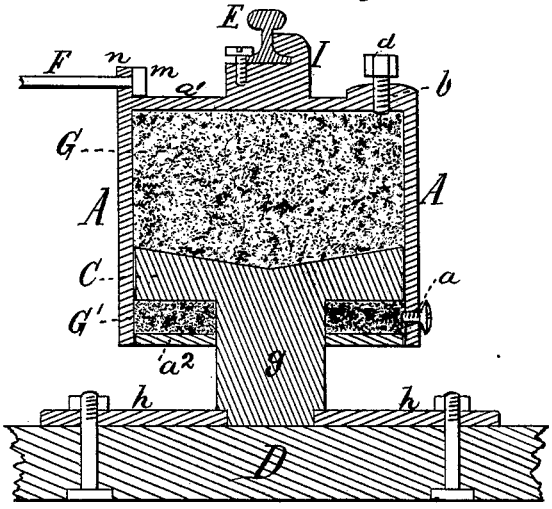


Fig 2.



Witnesses:

J. S. Theodor Laug.
L. A. Widdeburn.

Inventor:

Anaxamander Herring
by Masm Fenwick & Laurence

UNITED STATES PATENT OFFICE.

ANAXAMANDER HERRING, OF COHOES, NEW YORK.

IMPROVEMENT IN RAILROAD-TRACKS.

Specification forming part of Letters Patent No. **206,876**, dated August 13, 1878; application filed July 13, 1878.

To all whom it may concern:

Be it known that I, ANAXAMANDER HERRING, of Cohoes, in the county of Albany and State of New York, have invented a new and useful Mode of Securing an Elastic Railroad Track or Bearing, and destroying the effect of the percussive force of railroad-cars upon the railroad-rails and supports thereof, and upon the 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, forming part of this specification, in which—

Figure 1 is a perspective view of a portion of a railroad-track laid down in accordance with my improved mode, and showing one of the pillow-blocks or supports in vertical section. Fig. 2 is a vertical section of one of the pillow-blocks or supporting-cushions on a larger scale.

The nature of my invention consists in the employment of sand between the parts of compound and chambered pillow-blocks or equivalent device, which is adapted for supporting railroad-rails on iron bridges, elevated railways, and for cross-ties, railroad-beds, and cushions for car-bodies, in lieu of wood, metal, and rubber supports, which are yielding.

By my invention an elastic track on iron bridges can be secured without the aid of metal and rubber springs or combustible materials, such as wood, and at the same time the effect of the percussive action of cars upon the metal railroad-bridge heretofore experienced is destroyed, and the shaking and loosening of the parts of the bridge structure, as well as the jarring of the rail-cars, avoided, this result being due to the fact that the sand serves to absorb the blows due to the weight and motion of the cars as they roll over the track, while it serves to effectually deaden the sound experienced in elevated railways.

In the accompanying drawings, A represents a metal chamber or drum having a sand-supply hole, *a*, in its side, and provided with two heads, a^1 a^2, one or both of which may be constructed so as to be bolted firmly to the body portion in any well-known manner. The head a^1 is closed solid, except at *b*, where a sand-supply hole is provided, and plugged by a screw-plug, *d*, while the head a^2 is also closed solid, except at its center, where a passage, *f*, for a piston-rod, *g*, of a piston, C, to pass through, is provided. The piston C serves as a guide as well as a piston. The piston C is fitted within the drum or chamber A by removing one of said heads and again replacing it. The diameter of the piston C is about equal to that of the inner diameter of the drum; and the stem or rod *g* of the piston is of a diameter just equal to the passage *f*, through which it is extended, and it is firmly fastened to a metal plate, *h*, by which the pillow-block or support is bolted to a bridge or other structure, D, as shown in the drawings.

On top of each pillow-block or support A, and centrally over the piston, a notched chair or shoe, I, for a rail, E, is provided, the rails of a railroad-track fitting in these notched shoes and being confined in place by spikes or otherwise, in any known and appropriate manner.

Where two or more pillow-blocks are used side by side, as shown in the drawings, thrust-tie-rods F may be placed between them, the head *m* on one end of the rods bearing against perforated lugs *n* of one set of blocks, and a nut or nuts, *p*, on the other end of the rods bearing against lugs *n* of another set of blocks.

With an apparatus such as herein described, or any equivalent thereof, I employ sand, as at G G′, for forming a cushion, one portion of the sand, G, being introduced into the chamber or drum A through the top opening, *b*, above the piston, and another portion, G′, through the side opening, *a*, below the piston, as shown in the drawings.

In case the rails should not be level, sand is removed from the lower part of the chamber or drum below the piston, and an additional quantity placed in the upper part of the chamber or drum above the piston.

In laying down or adjusting the track for use the pillow-blocks are adjusted and the track leveled by removing the screw-plug from the holes *b* of the upper heads of the drums A and raising the drums until the track is level, and then introducing sand through said openings *b* until the space between the piston and said head of the drum is filled, and

finally filling the lower part of the drum through the opening *a* and replacing the screw-plugs in the openings *a b*.

Having described my invention, I claim—

1. Sand as a cushion for railroad-rails, car-bodies, and other analogous uses, applied between the upper head of a drum or chamber, A, and a piston, substantially as and for the purpose described.

2. Sand as a cushion for rails and other objects, applied between the heads of a drum or chamber, A, and the upper and lower ends of a piston, substantially as and for the purpose described.

3. The drum or chamber A, packed with sand and provided with a piston, the stem or rod of which is fastened to a foundation, and having a railroad-rail shoe or chair formed on its upper head, substantially as and for the purpose described.

4. The drum or chamber A, packed with sand and provided with a piston, and having the sand-supply holes *a b*, substantially as and for the purpose described.

Witness my hand in the matter of my application for a patent on a sand cushion or support for railroad-rails and other purposes.

ANAXAMANDER HERRING.

Witnesses:

S. W. GROESBECK,

JOHN ENOCH.