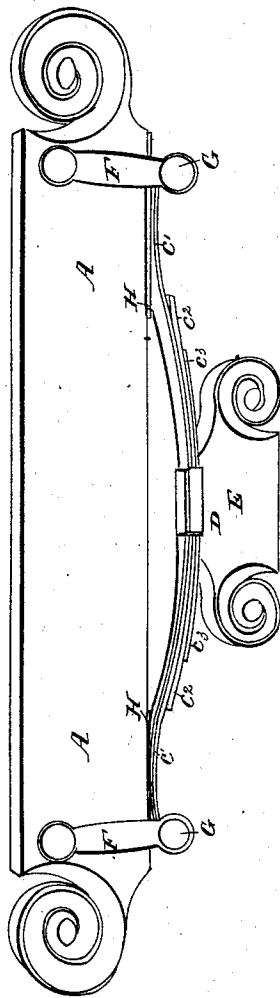


F. M. RAY.

Carriage-Spring.

No. 1,000.

Patented Nov. 3, 1888



UNITED STATES PATENT OFFICE.

F. M. RAY, OF CATSKILL, NEW YORK.

SPRING FOR RAILROAD-CARS.

Specification forming part of Letters Patent No. 1,000, dated November 3, 1838; Reissued September 25, 1840, No. 25.

To all whom it may concern:

Be it known that I, FOWLER M. RAY, of Catskill, in the county of Greene and State of New York, have invented a new and useful Improvement in Springs for Railroad-Cars and other Carriages, and that the following is a full and exact description thereof.

Referring to the draft accompanying this specification:—A, is a part or section of the side-rail or frame of a railroad car.

C¹ is one leaf of the spring passing at its ends around bolts, or secured by other means at G, over and upon which leaf (C¹) may be placed one or more leaves, for the purpose of strengthening the spring as may be required.

C² and C³ are two leaves of the spring touching at, and secured to C¹ and to the leaves above by a band D, at the center, and intended to support the upper leaves under increased weight, by coming in contact, gradually from the center, as the pressure increases.

D, is a band confining all the leaves of the spring at the center, through which a bolt passes, and is fastened, into the block E.

E, is a block of wood of such shape and size, as may be required either for convenience in fitting to the car or axle-box, or for the necessary support of the springs.

F, are shackles, swinging upon bolts (K,) advancing to, or receding from the center

as the pressure upon the car diminishes or increases, the inventor claiming the right of securing the spring at the point (G,) by a bolt and shackle, or by sliding bolt or otherwise.

G, are the bolts passing through the shackles, around which the spring or leaf (C¹) passes and is secured.

H, are plates of iron or steel fastened to the underside of the rail of the car, upon which the upper leaves of the spring slide or wear.

The number, as well as the length and size of the plates may be increased or diminished as may be required and the spring may be applied to other carriages.

What I, the undersigned, claim the right of invention to, and desire to secure by Letters Patent, is—

The constructing of the springs for railroad cars, or other carriages in such a manner, as that the shorter leaves shall not be in contact with those above them, excepting when the pressure of the load shall cause them so to do, the same being constructed and operating substantially as herein set forth.

FOWLER M. RAY.

Attest:

JAS. D. PINCKNEY,
M. WATSON.