G. F. GODLEY.
Car-Spring.

No. 208,904. Patented Oct. 15, 1878.

Fig 1

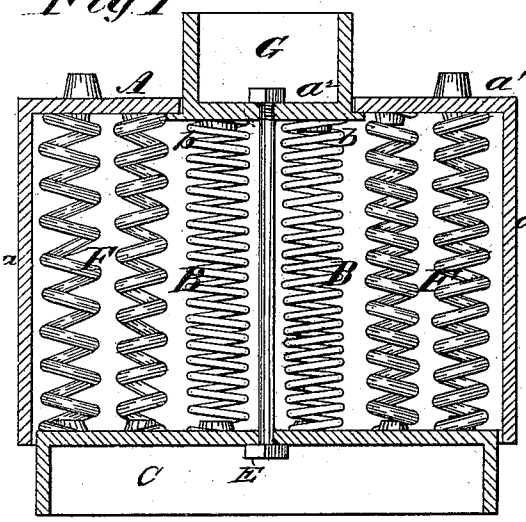


Fig 2

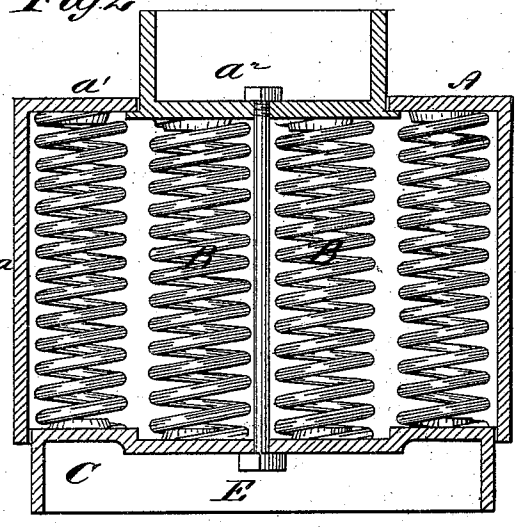
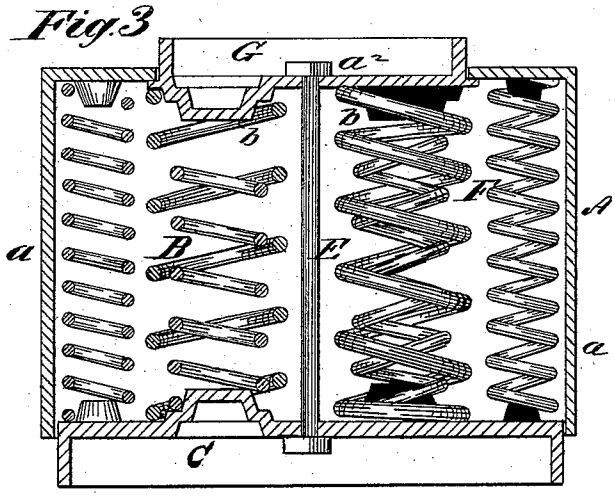


Fig 3



Witnesses
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By

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UNITED STATES PATENT OFFICE.

GEORGE F. GODLEY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CAR-SPRINGS.

Specification forming part of Letters Patent No. **208,904**, dated October 15, 1878; application filed June 25, 1877.

To all whom it may concern:

Be it known that I, GEORGE F. GODLEY, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Car Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figures 1 and 2 are vertical longitudinal sections of my invention. Fig. 3 is a vertical longitudinal section of a modification.

My invention consists of a car-spring box or case provided with two or more nests of springs of different bearing capacities, and having followers located respectively above and below said springs, whereby the latter, according to their bearing capacities, will be caused to yield successively under increasing weight, as hereinafter described and claimed.

Referring to the accompanying drawings, A represents a case of any suitable form in cross-section, having sides *a a* and head a^1.

B B F F are spiral springs located in said box, and C G are followers located respectively above and below said springs, the follower G resting upon the springs B B, which are the weaker set, and the case A resting upon the springs F F, which are the stronger. All the springs are supported upon the follower C, which is capable of sliding or moving into the case A.

The followers C and G are connected by a bolt, E, having a nut, a^2, screwed onto one end. This bolt prevents the followers from separating too far, but does not limit their approach toward each other, the follower C allowing the bolt to play through it freely.

b b are studs projecting from the followers and case, and embraced by the ends of the springs. In operation, the springs B B, through the medium of the follower G, yield first. Under an increase of weight, however, beyond the effective bearing capacities of these springs, the follower G is pressed down to a level with the top of the case A, whereupon the springs F are brought into action through the medium of the follower C and case A, and so caused to assist the springs B B.

I have referred to the springs B B as being the weaker. They may, however, be made the stronger without departing from the spirit of my invention. A modification of my invention is shown in Fig. 3, wherein, while separate followers and springs of different grades or bearing capacities are employed, the central springs compose a nest formed of two or more spirals, one fitting within the other, coiled in reverse directions, or otherwise, the inner spring being shorter and stiffer than the outer, and only coming into action after the latter has been partially compressed.

I claim—

1. A car-spring case provided with two or more followers for springs of different bearing capacities, said followers being arranged on opposite sides or ends of the case, and adapted to come into action successively, so as to bring the different series of springs into use, according to the character of the load, substantially as described.

2. A case or box of springs of different bearing capacities, in combination with followers arranged respectively at opposite ends of the case and adapted to operate on the springs according to the increase of the weight of the load, the central springs being formed in nests, one within the other, (and the two coiled in opposite directions,) as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of June, 1877.

GEORGE F. GODLEY.

Witnesses:

SAML. J. VAN STAVOREN,

CHAS. F. VAN HORN.