

No. 670,256.

Patented Mar. 19, 1901.

W. THORNBURGH.

SPRING PROTECTING DEVICE FOR RAILWAY CAR COUPLINGS.

(Application filed Apr. 30, 1900.)

(No Model.)

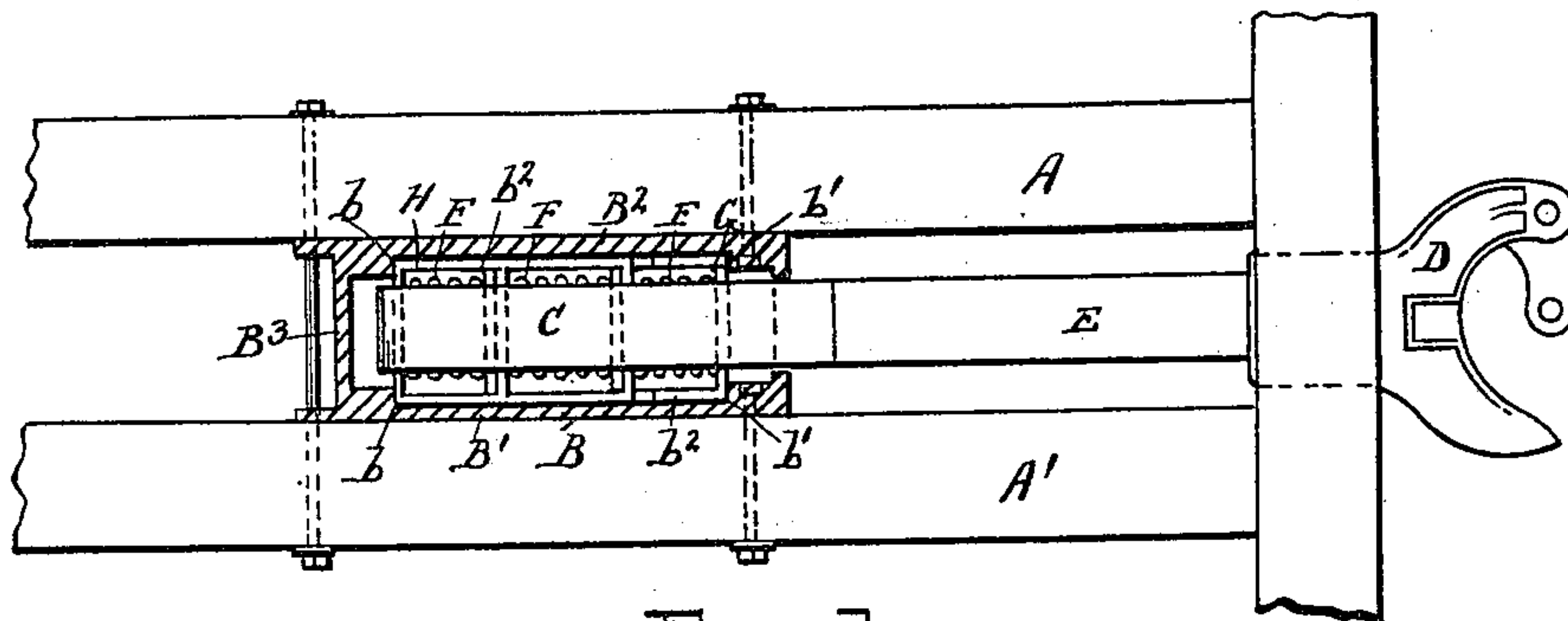


Fig. 1.

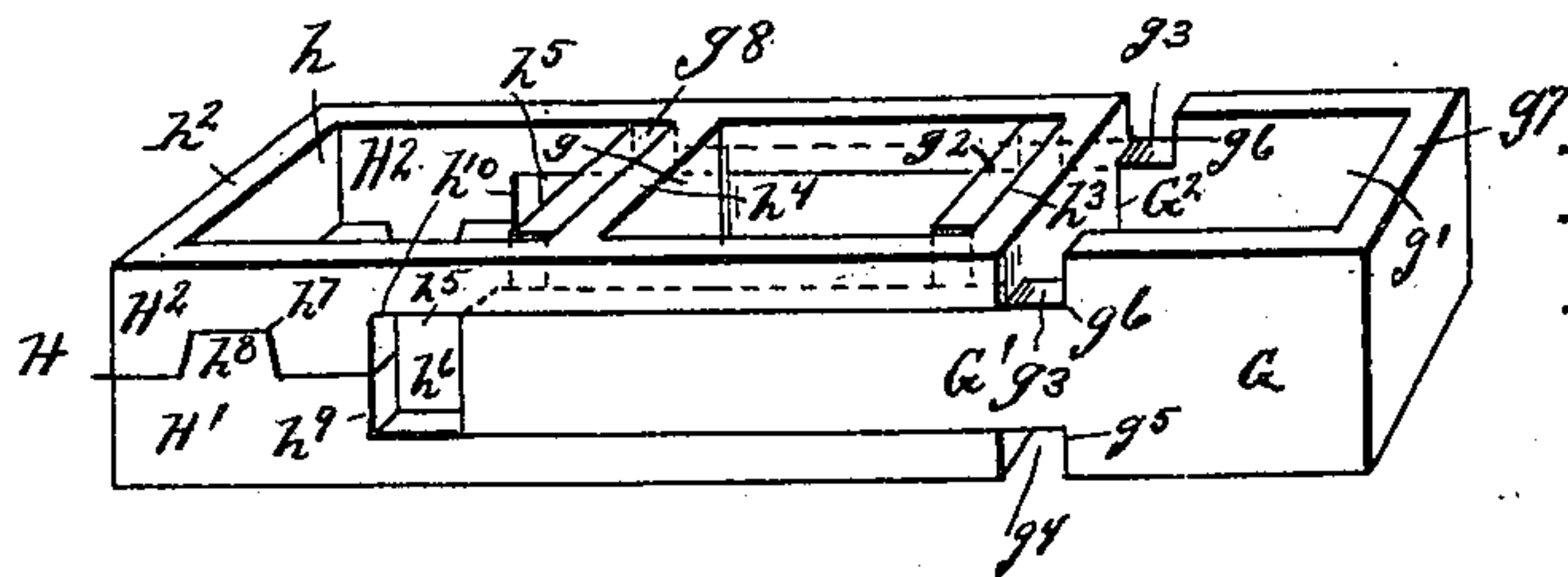


Fig. 2.

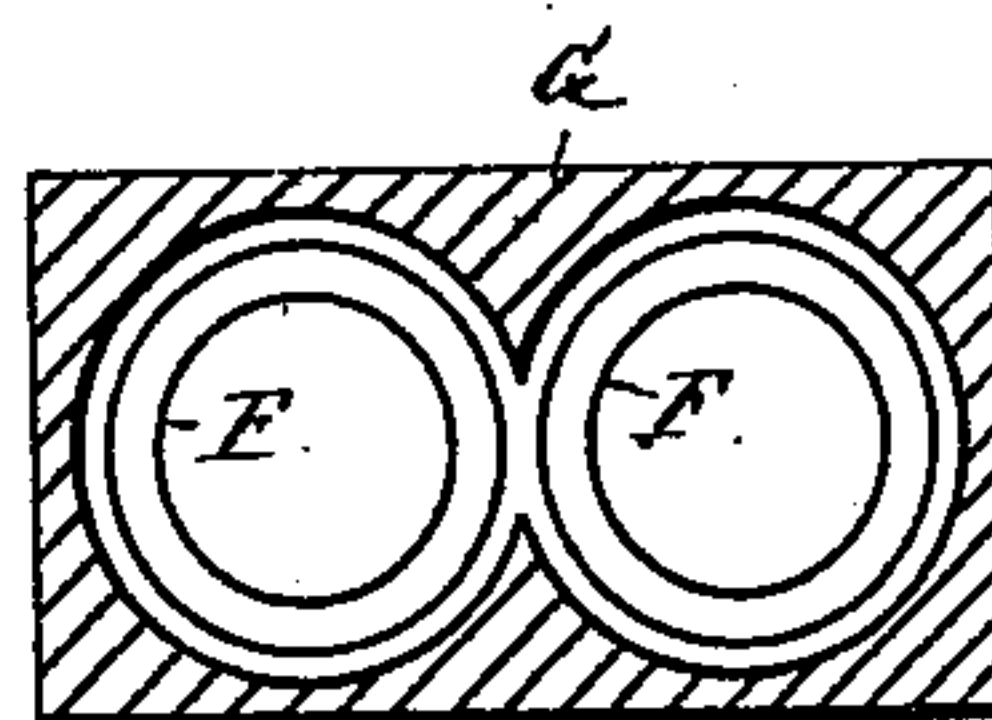


Fig. 3.

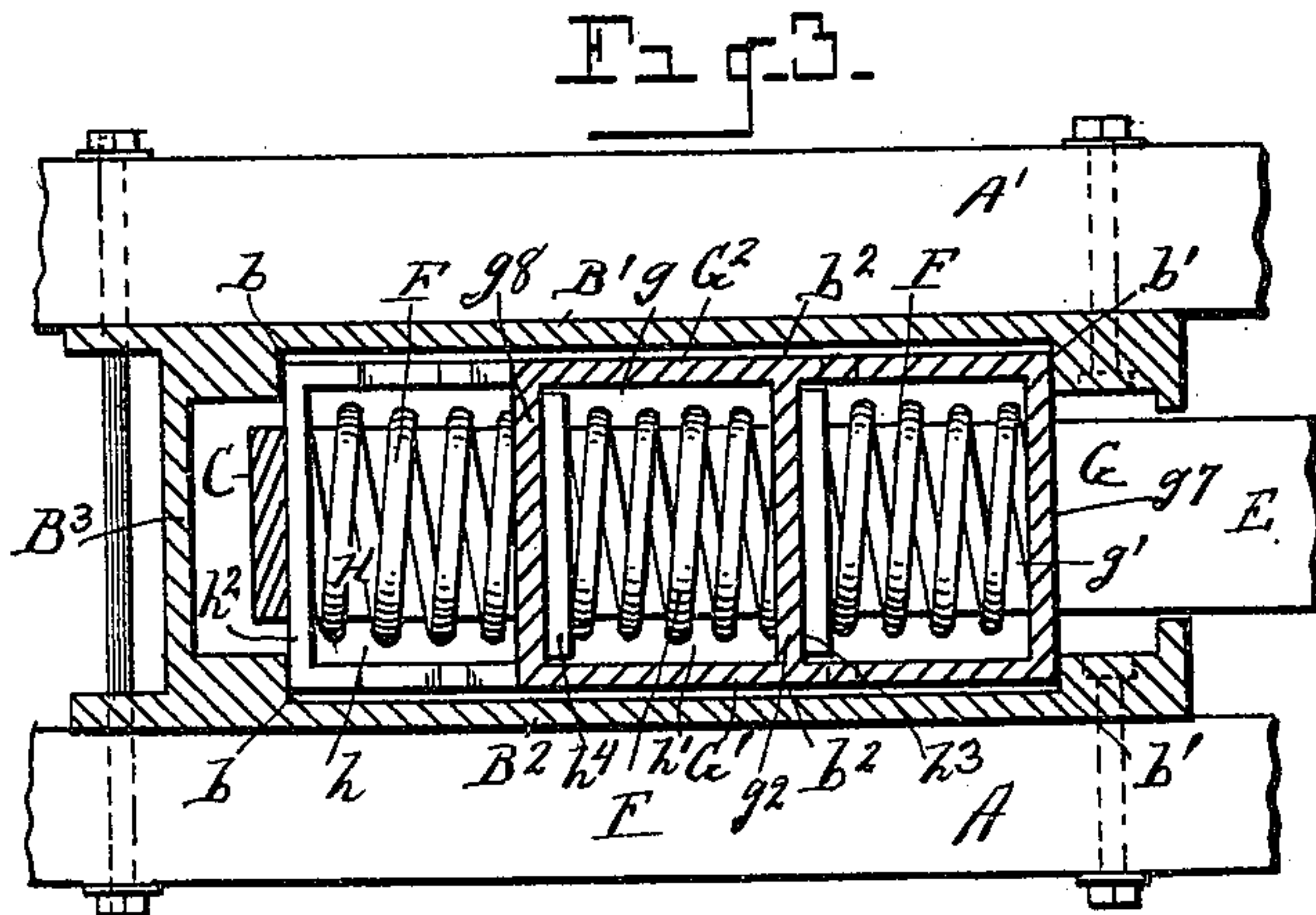


Fig. 4.

WITNESSES.

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WILLIAM THORNBURGH, OF DETROIT, MICHIGAN.

SPRING-PROTECTING DEVICE FOR RAILWAY-CAR COUPLINGS.

SPECIFICATION forming part of Letters Patent No. 670,256, dated March 19, 1901.

Application filed April 30, 1900. Serial No. 14,802. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM THORNBURGH, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Spring-Protecting Devices for Railway-Car Couplers; and I 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 appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My present invention has for its object certain new and useful improvements in a spring-protecting device or housing for railway coupler attachments, and I carry out my invention as hereinafter described and claimed, and shown in the accompanying drawings, in which—

Figure 1 is an inverted plan view showing certain parts in horizontal section. Fig. 2 is a view in perspective of my improved box-followers. Fig. 3 is a horizontal section through the draft-spring housing and portions of the box-followers. Fig. 4 is a vertical section through the box-followers. Fig. 5 is a vertical cross-section through the box-followers, showing a modification.

This invention is designed as an improvement upon a device of this class for which Letters Patent of the United States No. 606,316 were granted to me June 28, 1898, and is a further embodiment of the general idea and purpose of the said patented invention. In the progress of car construction it is found desirable to still further increase the spring power or tension in railway coupler attachments, and my invention is designed to further secure these results. Said patent embraced two box-followers, each constructed with a single spring-chamber, in each of which chambers a spring or springs were located. My present invention aims more especially to provide box-followers with a greater number of spring-chambers, the number of said box-followers and chambers being capable of being increased indefinitely, so as to secure any amount of desired spring power or tension. At the same time my present invention aims to get an equal compression upon all the

springs and also an equal limitation of compression of all the springs to conform to the required guarantee, whatever it may be. As in said patent above referred to, this invention aims to do away with the ordinary form of followers in coupler attachments or draft apparatus and to substitute therefor the novel followers herewith shown and described. Furthermore, as in said patent above referred to, my present invention is designed for employment with the well-known Master Car-Builders' yoke, spring pocket or housing, and also to facilitate the removal of parts in case repairs may be required. Accordingly, A and A' represent timbers, and B represents a draft-spring housing engaged with said timbers. The draft-spring housing may be of any desired construction, in the instance shown said housing being provided with side walls B' B². The housing may be formed either as embodied in United States Patent granted to me August 24, 1897, No. 588,722, or as embodied in United States Patent granted to me June 21, 1898, No. 606,102, or said housing may be constructed in any other suitable manner, inasmuch as my present invention has no special reference to the style of draft-spring housing employed. In the housing herewith shown the side walls B' B² are connected by a rear wall B³, said side walls being engaged with the above-mentioned timbers in any suitable manner. Moreover, said side walls, as shown, are formed on their adjacent inner faces with shoulders or stops *b b* toward the rear thereof and with similar shoulders *b' b'* toward the front thereof, forming intermediate recesses *b² b²*, respectively.

D is the draw-head, and E its shank.

F represents draft-springs of any desired construction and arrangement.

C is a customary yoke.

G and H represent two chambered box-followers. As shown in the drawings, each box-follower is constructed with plural spring-receiving chambers, the box-follower G being provided with chambers *g g'* and the box-follower H with spring-receiving chambers *h* and *h'*, in each of which chambers is located one or more springs. These box-followers G and H are constructed and arranged so as to

limit each other's movement in a direction the one toward the other. One of the box-followers, as the follower H, is formed of separable sections to facilitate the engagement or disengagement of the parts. As shown, each of the box-followers is constructed with side and end walls and an intermediate partition. Thus the box-follower G is formed with side walls G^1 and G^2 , with end walls g^7 and g^8 , and with an intermediate wall g^2 . The two side walls for a portion of their length and adjacent to the end wall g^8 and the partition g^2 are shown recessed, as indicated at g^3 and g^4 , on their upper and lower edges. The box-follower H has each of its sections formed with side walls H^1 and H^2 , with end walls h^2 and h^3 , and with an intermediate partition h^4 . The side walls H^1 and H^2 are recessed along one end thereof and their adjacent edges, as indicated at h^5 and h^6 , to receive the adjacent cut-away or recessed portions of the sides G^1 G^2 of the corresponding box-follower. So, also, the adjacent edges of the side walls H^1 H^2 are held together from longitudinal displacement in any suitable manner—for example, one of said walls being recessed, as indicated at h^7 , and the other provided with a shoulder h^8 , fitted into said recess. It is obvious that the recessing of the side walls of the box-follower G forms shoulders g^5 and g^6 at the inner ends of said cut-away portions, while also the cut-away portions of the said walls H H^2 form shoulders h^9 and h^{10} at the inner ends of the recessed or cut-away portions. The box-followers G and H are interlocked the one with the other, the end walls h^3 of the box-follower H being located over or outside the partition g^2 of the box-follower G, the partition h^4 of the follower H having a similar engagement over the end wall g^8 of the follower G. In this manner the end wall g^8 of the follower G is adjacent to the intermediate partition of the follower H, while the partition of the follower G is adjacent to the end wall h^3 of the follower H. The cut-away portions of the followers G and H are of sufficient length to allow a desired longitudinal movement of the followers the one toward the other, the shoulders g^5 g^6 and h^9 h^{10} , together with the partitions and adjacent end walls of the followers, effectually limiting the movement of the followers in either direction, so as to equalize and limit the compression of all the springs, the adjacent portions of the two box-followers abutting when the portions are fully extended and when they are forced the one toward the other. This limitation and equalization of the compression of the springs will be effected as the followers travel in either direction.

I do not limit myself to any particular number of springs employed nor to any particular number of chambers in the followers which may be employed. I may use a cluster of springs in one or more of the chambers or double springs or a single spring in each chamber. The springs may be arranged tan-

dem, or twin springs may be employed, one lying alongside the other.

The yoke C is shown engaged with the draw-head shank and with the rear box-follower.

Where twin springs are employed, the box-followers may simply be made wider to accommodate said springs.

I do not limit myself to interlocking the two box-followers in the precise manner herewith shown and described, as a box-follower provided with plural chambers may be interlocked with another box-follower in any suitable manner within the scope of my invention, the two box-followers having a limited movement the one toward and from the other and whereby the one will provide a stop to the movement of the other in either or in both directions. The sides of the box-followers may be supported in the recesses of the draft-spring housing.

It will be observed that one of the chambers of one follower is coincident with a corresponding chamber of the other follower.

What I claim as my invention is—

1. In a spring-protecting device for railway coupler attachments, a chambered follower, a spring located in said follower, an additional follower provided with plural chambers, and plural springs arranged within the chambers of said additional follower.

2. In a spring-protecting device for railway-car coupler attachments, two followers each constructed with plural chambers, the plural chambers of each follower being arranged the one in advance of the other longitudinally of the car, and springs located in said chambers.

3. A spring-protecting device for railway-couplers consisting of box-followers, each provided with plural longitudinally-arranged chambers, a spring housed in each of said chambers and separated thereby the one from the other at their adjacent ends, said followers constructed to abut the one against the other to limit the compression of said springs.

4. A spring-protecting device for railway-couplers consisting of interlocked chambered box-followers, one of said followers constructed with plural chambers, springs located in the chambers of the followers, and one of said followers constructed of separable sections to engage the interlocking portion of the other follower.

5. A spring-protecting device for railway-couplers consisting of box-followers, and springs located in said followers, one of said followers constructed with end walls and an intermediate partition, and having recessed sides adjacent to one of said end walls and said partition, the other of said followers formed of separable sections, each section constructed with end walls and an intermediate partition, the sides of said sections at one end thereof constructed to fit upon the recessed sides of the first-mentioned follower and to contact at their opposite ends, the partition of each section and one of the end walls

thereof arranged to interlock over one of the end walls and the partition of the corresponding follower, said followers having a limited movement the one relative to the other to
5 limit the compression of said springs.

6. In a spring-protecting device for railway coupler attachments, interlocked chambered box-followers constructed to abut the one against the other to limit the compression of
10 the springs, one of said followers provided with plural chambers, and springs arranged within the chambers of said followers.

7. In a spring-protecting device for railway-car coupler attachments, two followers each
15 constructed with plural chambers, the chambers of each follower arranged the one in advance of the other longitudinally of the car,

and plural longitudinally-arranged springs located in said chambers.

8. In a spring-protecting device for railway- 20 car coupler attachments, two followers each constructed with plural chambers, the chambers of each follower arranged longitudinally of the car, and springs located in said chambers, one of the chambers of one of said fol- 25 lowers being coincident with one of the chambers of the other follower.

In testimony whereof I sign this specification in the presence of two witnesses.

WILLIAM THORNBURGH.

Witnesses:

N. S. WRIGHT,
M. HICKEY.