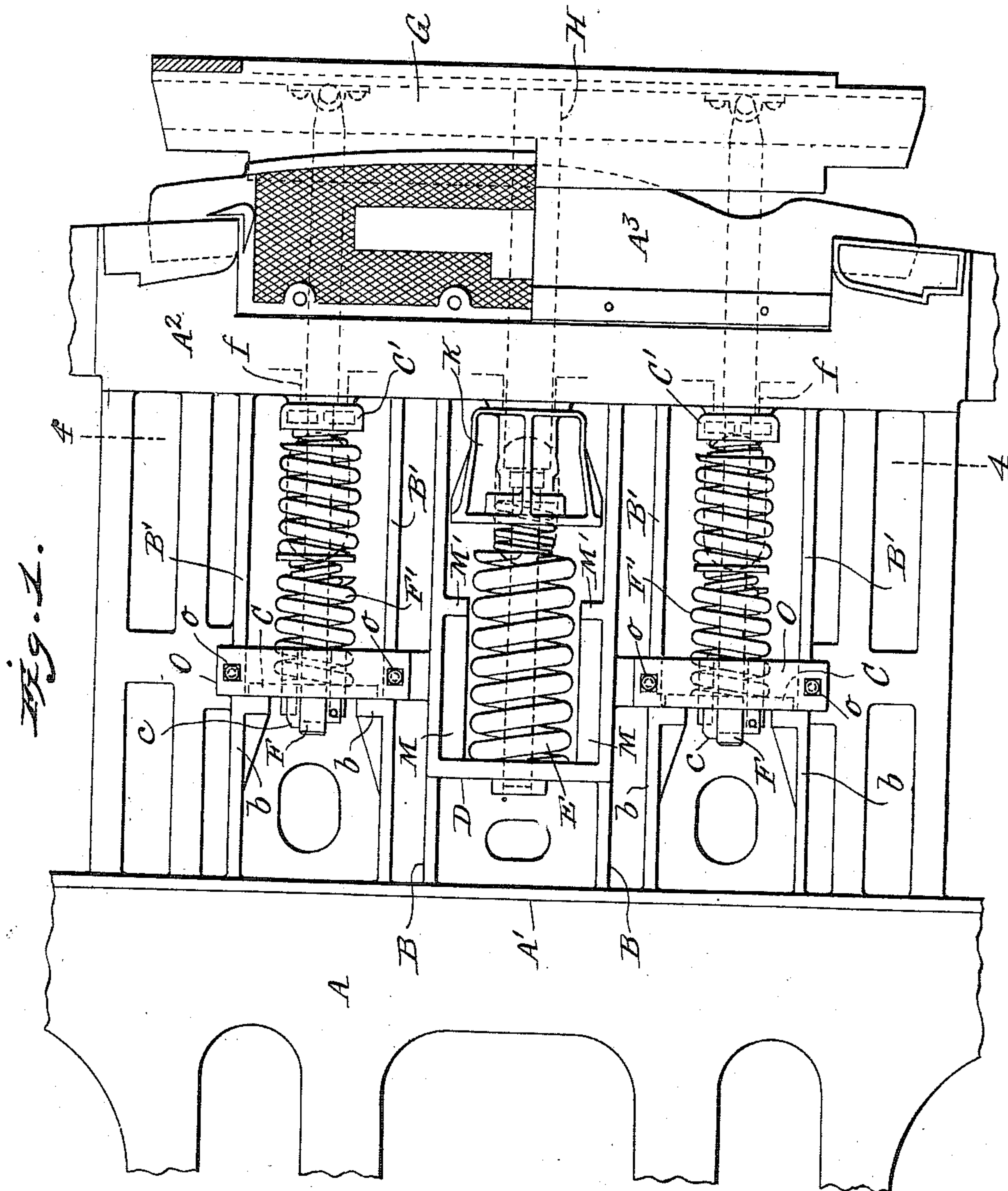


R. D. GALLAGHER, JR.  
 BUFFING MECHANISM FOR PASSENGER CARS.  
 APPLICATION FILED MAR. 16, 1911.

994,740.

Patented June 13, 1911.

3 SHEETS-SHEET 1.



Witnesses  
 Thomas Durant  
 Robert P. Brown,

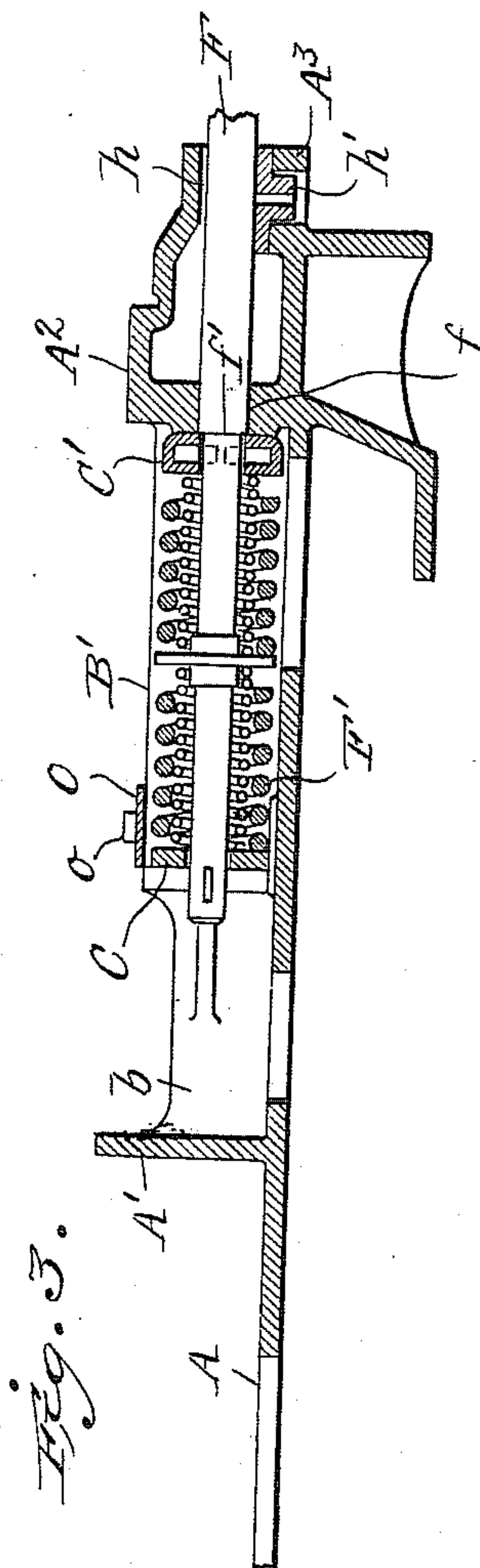
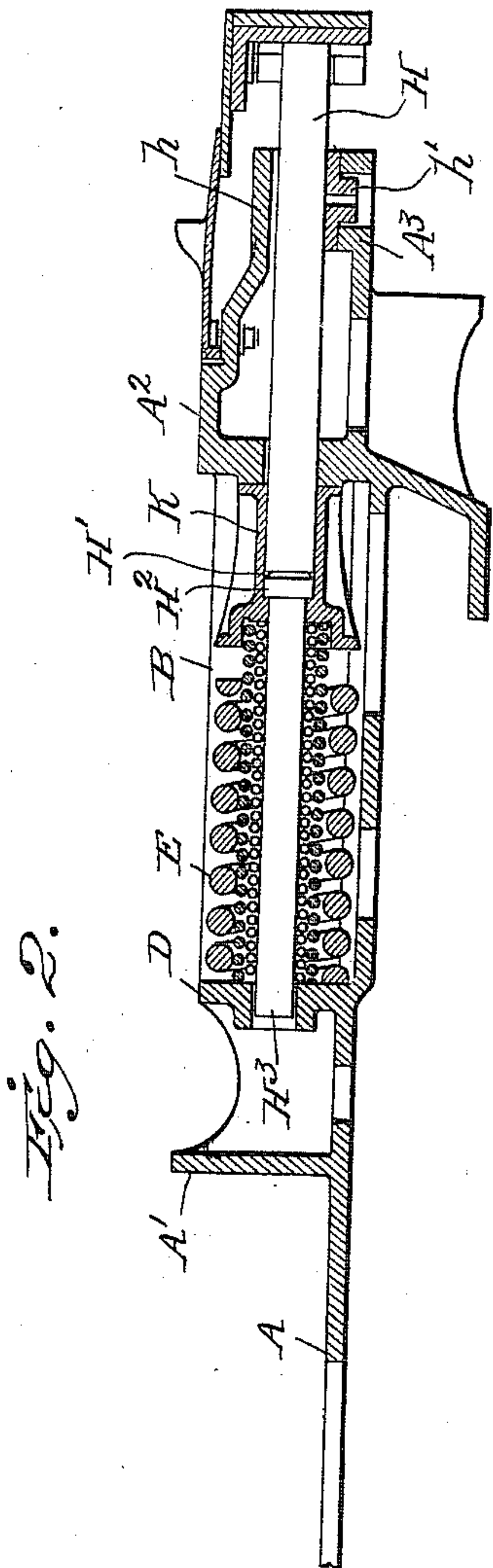
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3 SHEETS—SHEET 2.



Witnesses

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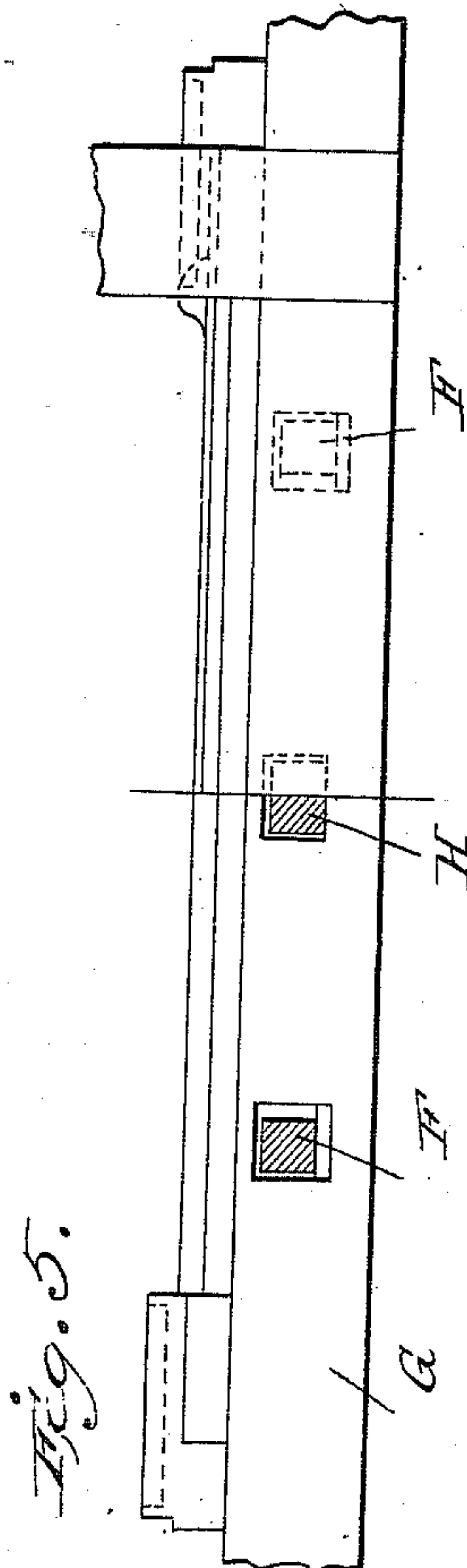
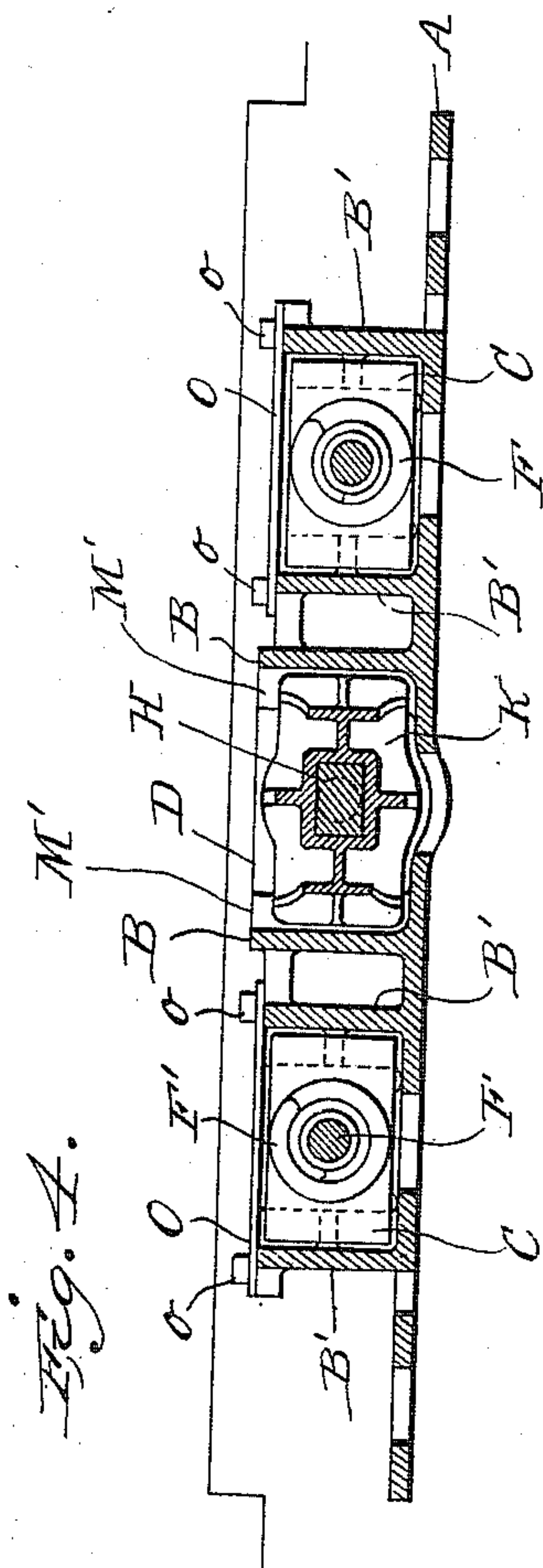
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3 SHEETS—SHEET 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## BUFFING MECHANISM FOR PASSENGER-CARS.

994,740.

Specification of Letters Patent. Patented June 13, 1911.

Application filed March 16, 1911. Serial No. 614,931.

*To all whom it may concern:*

Be it known that I, RICHARD D. GALLAGHER, Jr., of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Buffing Mechanism for Passenger-Cars; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of the specification, and to the figures and letters of reference marked thereon.

This invention relates to that type of buffing mechanism particularly adapted for passenger cars, the objects of the invention being to provide a mechanism which may be utilized in combination or connection with so-called cast steel platforms, provision being made whereby the springs and minor parts of the operating mechanism may be removed from the car without detaching the vestibule or buffer from the stems on which it is mounted.

In the accompanying drawings—Figure 1 is a top plan view of a portion of a cast steel platform frame, showing the buffer mechanism of the present invention in place therein. Fig. 2 is a central longitudinal section through the same. Fig. 3 is a similar section on a plane coincident with one of the side stems, but omitting the buffer itself. Fig. 4 is a transverse section in a plane indicated by the lines 4—4, Fig. 1. Fig. 5 is a front elevation with one half of the buffer broken away to show one of the side stems and part of the center stem in section.

Like letters of reference in the several figures indicate the same parts.

The platform frame indicated generally by the reference letter A, is an integral steel casting having at an intermediate point in its length a vertical web A' adapted to rest squarely against the end sill of the car and at its outer edge it has formed integrally therewith the buffer beam A<sup>2</sup> and buffer beam extension A<sup>3</sup>. Between the buffer beam A<sup>2</sup> and web A' there are arranged a plurality of vertical longitudinally extending webs B, B', and the operating or moving parts of the buffing mechanism within the platform frame lie between the said webs B, B'. The side webs B' have on their proximate faces brackets b forming the stops for the rear followers C of the side

stem springs and the central webs B are connected by a bridge or web D lying parallel with the web A' as shown in Figs. 1 and 2, and forming the support for the inner ends of the center stem springs E. Both the side and center stem springs are of usual construction, that is to say, there is a relatively light inner spring or plurality of inner springs surrounded by larger and heavier springs of somewhat less length than the inner springs. The inner springs are adapted to hold the buffer extended or projected to its limit when parallel with the end of the car and the heavier springs come into action after the buffer has been pushed in to a point where the coupling of the cars is effected.

The side stems F are pivotally connected at their outer ends with the buffer G and passing through bearings f in the buffer beam extension and buffer beam extend back through followers C. They have the usual keys c passed through their inner ends. The side stem springs F' are confined between the rear followers C and front followers C' which normally rest against the inner face of the buffer beam but are adapted to be picked up and moved rearwardly by shoulders f' on the side stems when said stems are moved inwardly. By this construction the side stems will compress the springs F' when moved either inwardly or outwardly, thus in turning a curve the buffer may pivot on the end of the center stem H, one end of the buffer being moved inwardly while the other end moves outwardly and under certain circumstances to be presently explained, the whole buffer may be drawn out beyond normal position even without withdrawing the keys c from the rear ends of the side stems.

The outer ends of both the side and center stems are preferably square or rectangular as shown in Fig. 5 and all are supported in widely spaced bearings f and h in the buffer beam and buffer beam extension, wear blocks h' being provided if so desired in the bottom portions of the bearings in the buffer beam extensions. The widely spaced bearings keep the stems in proper alinement and permit of the use of a relatively short section at the outer end of the center stem. By reference to Fig. 2 it will be seen that the center stem is divided at H', the outer end or section H at this point



bearing upon the head  $H^2$  of a rear section  $H^3$  and the proximate ends of the two sections  $H$  and  $H^3$  being held in a sleeve-like front follower  $K$ , between which and the web  $D$  the center stem springs  $E$  are confined. The head  $H^2$  of the rear section  $H^3$  of the center stem confines the said rear section in the front follower  $K$  and the follower is preferably supported practically entirely upon the inner end of the outer section  $H$  of the stem. At its rear end the inner section  $H^3$  takes a bearing in the web  $D$ , thus supporting the rear end of the center stem and the springs surrounding the same. The arrangement is such that the two sections of the stem are maintained in proper alinement, but by drawing the buffer out a short distance, the outer section  $H$  of the center stem may be pushed forwardly out of the front follower  $K$  and the latter together with the springs and rear section  $H^3$  of the center stem may be readily removed.

To form additional guiding and supporting means particularly for preventing lateral movement of the center stem springs the inner faces of the central webs  $B$ , are preferably provided with longitudinally arranged projections  $M$ , the forward ends of which in connection with the vertical projections  $M'$  form stops for limiting the inward movement of the front follower  $K$ . This construction forms a very rigid structure, and at the same time one which does not interfere with the removal of the springs and followers and does not necessitate the removal of the buffer and vestibule connected therewith.

The rear followers for the side stem springs may be conveniently confined beneath cover plates  $O$  secured in place by bolts  $o$  which will permit of their ready removal should it be desired to remove the side stem springs or replace the same with new springs.

The whole bottom plate of the platform frame it will be understood is an integral casting and suitable apertures are formed in each of the pockets or chambers between the webs  $B$   $B'$ .

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. In a buffing mechanism for passenger cars, the combination with the cast steel platform frame having longitudinally arranged upwardly extending webs thereon, the buffer beam and buffer beam extension integral with said frame and supported by the ends of said webs, and the buffer, of center and side stems mounted to slide longitudinally in bearings in the buffer beam and buffer beam extension, center and side stem springs mounted on the inner ends of the stems, followers interposed between said

springs and the inner face of the buffer beam and stops for supporting the inner ends of the said springs, said stops being formed on the proximate faces of adjacent longitudinal webs, the arrangement being such that the springs and inner ends of the center and side stems lie between and below the top of said longitudinally arranged webs.

2. In a buffing mechanism for passenger cars, the combination with the platform frame, buffer beam, buffer and side stems supporting said buffer, of the center stem formed in sections one section of which is mounted in bearings in the buffer beam, a front follower mounted on the inner end of said section of the center stem and constitutes the support for the outer end of the inner section of said stem, a bearing for the inner end of said last mentioned center stem section, and a center stem spring mounted on the inner section of the stem and confined between said follower and bearing.

3. In a buffing mechanism for passenger cars, the combination with the platform frame having longitudinally arranged upwardly extending webs, a buffer beam constituting a portion of said frame supported by said webs, a buffer and side stems movably mounted in the beam and pivotally connected with said buffer, of a sectional center stem, bearings formed in the buffer beam for the outer section of said stem, a bearing for the inner end of the inner section of said stem carried by the platform frame, a follower in which the proximate ends of both said sections of the center stem are confined and whereby they are held in alinement and center stem springs confined between said follower and the bearing for the inner end of the center stem.

4. In a buffing mechanism for passenger cars, the combination with the cast steel platform frame embodying longitudinally arranged upwardly extending webs, a transversely arranged buffer beam at the outer end of said webs and a buffer beam extension, of a buffer, side stems supporting said buffer, a sectional center stem having its outer section rectangular in cross section and movably mounted in bearings in the buffer beam and buffer beam extension, a front follower in which the inner end of said outer section seats, said follower having a seat therein for the outer end of the inner section of the center stem, a bearing for the inner end of the inner section of the center stem, and springs confined between said bearing and follower, the arrangement being such that the outward movement of said follower is limited by the inner face of the buffer beam.

5. In a buffing mechanism for passenger cars, the combination with the cast steel platform frame embodying a buffer beam



and longitudinally arranged upwardly extending webs in rear of said beam, a transverse web extending between the central longitudinally extending webs and constituting a support for the center stem spring and inner end of the center stem and inwardly extending stop projections on the proximate faces of said intermediate webs forming stops for the forward follower of the center stem, of a buffer, a center stem mounted to move longitudinally in the buffer beam, said center stem being formed

in sections, a forward follower for said center stem adapted to rest against the inner face of the buffer beam and to be arrested in its rearward movement by the said stop projections, and center stem springs confined between said forward follower and bearing for the inner end of the center stem. 15

RICHARD D. GALLAGHER, JR.

Witnesses:

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E. K. WALKER.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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