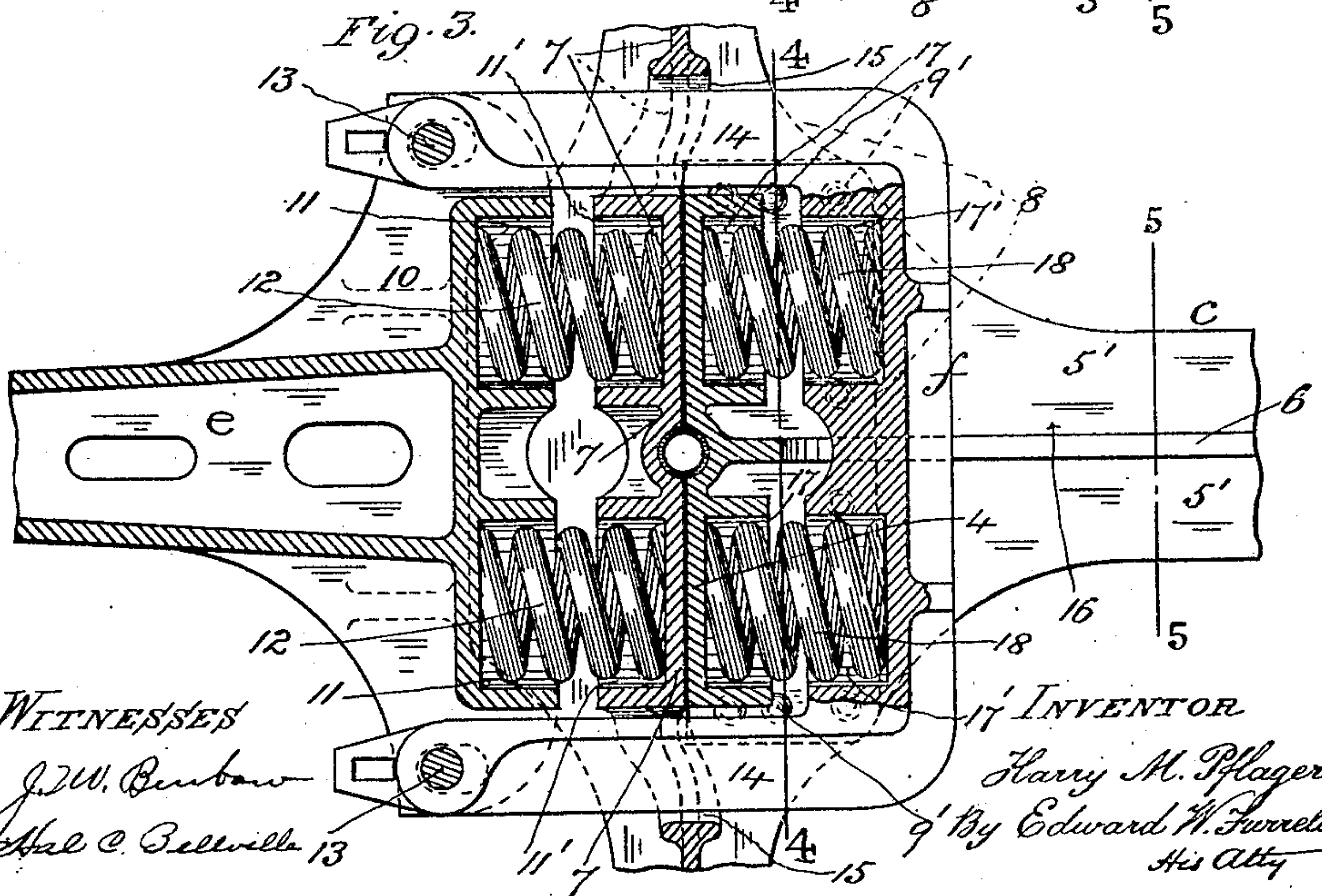
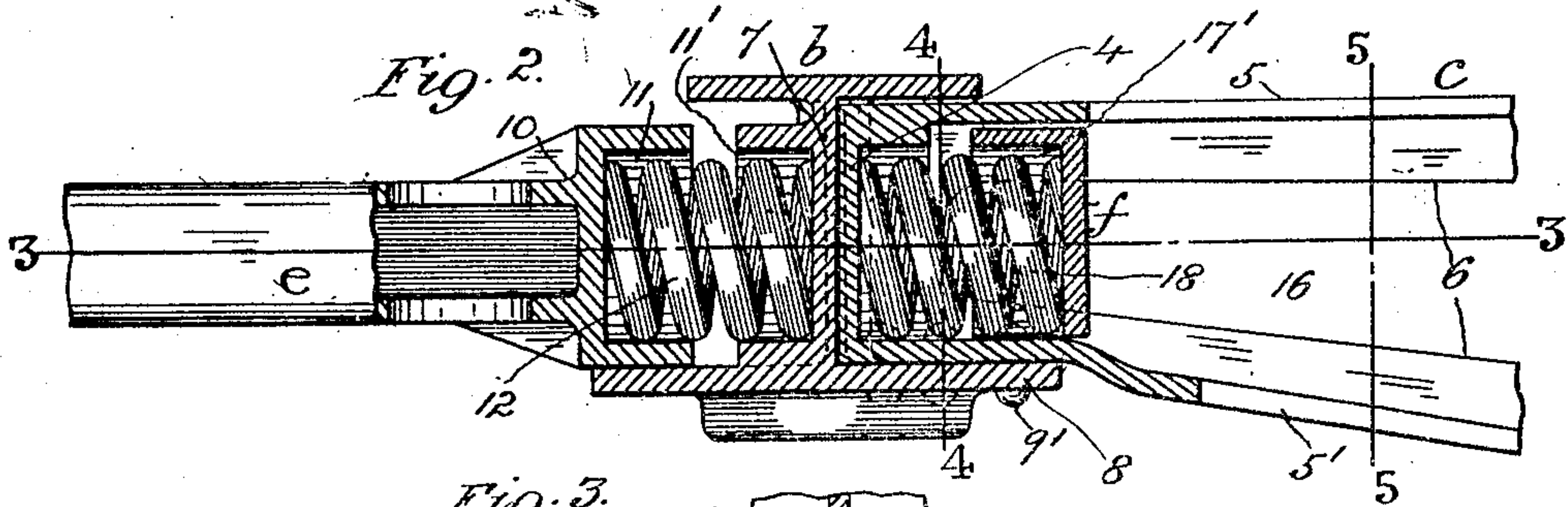
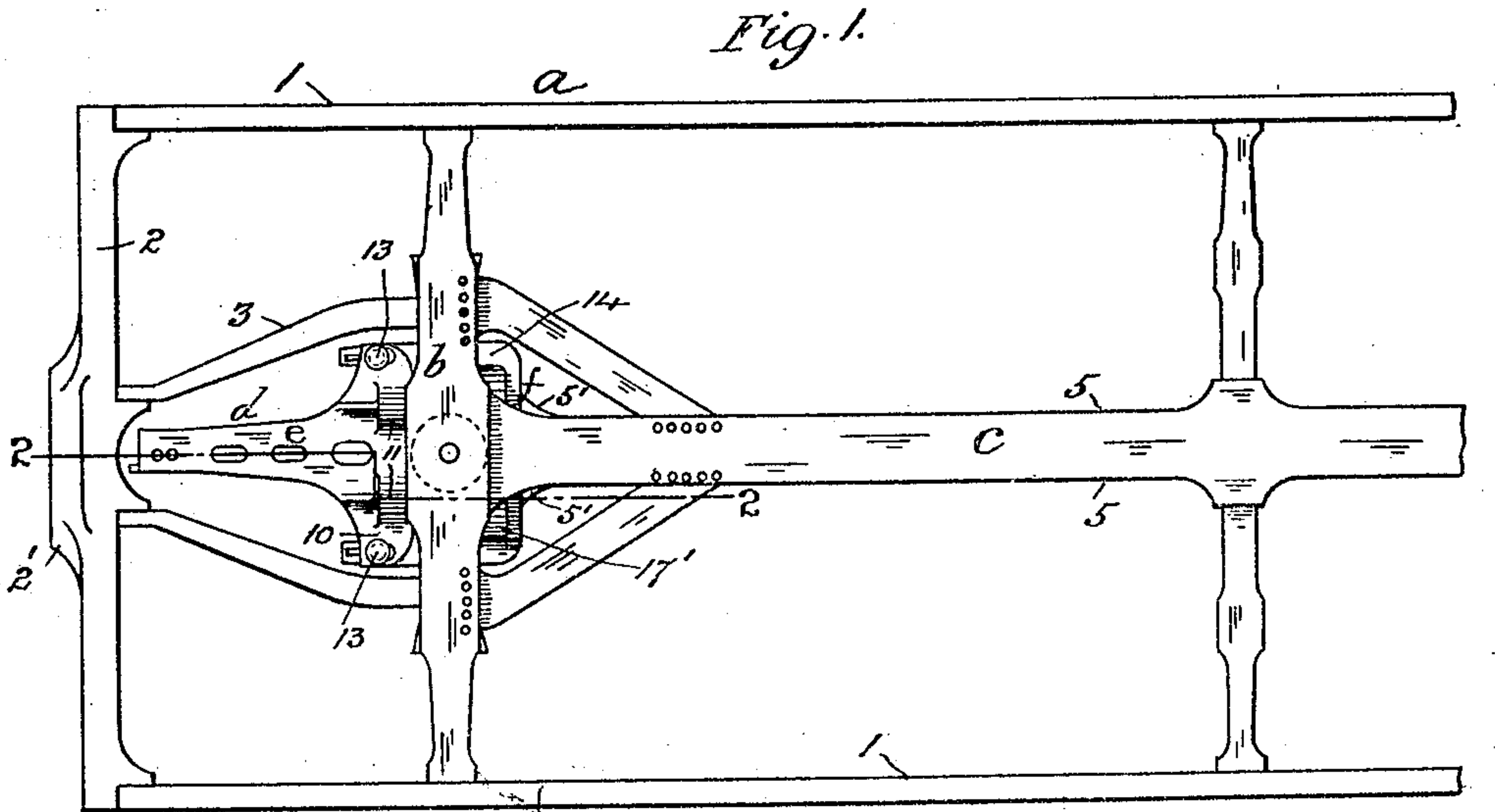


H. M. PFLAGER.
CAR UNDERFRAME.
APPLICATION FILED FEB. 4, 1909.

Patented June 22, 1909.
2 SHEETS—SHEET 1.

926,074.



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2 SHEETS—SHEET 2.

Fig. 4.

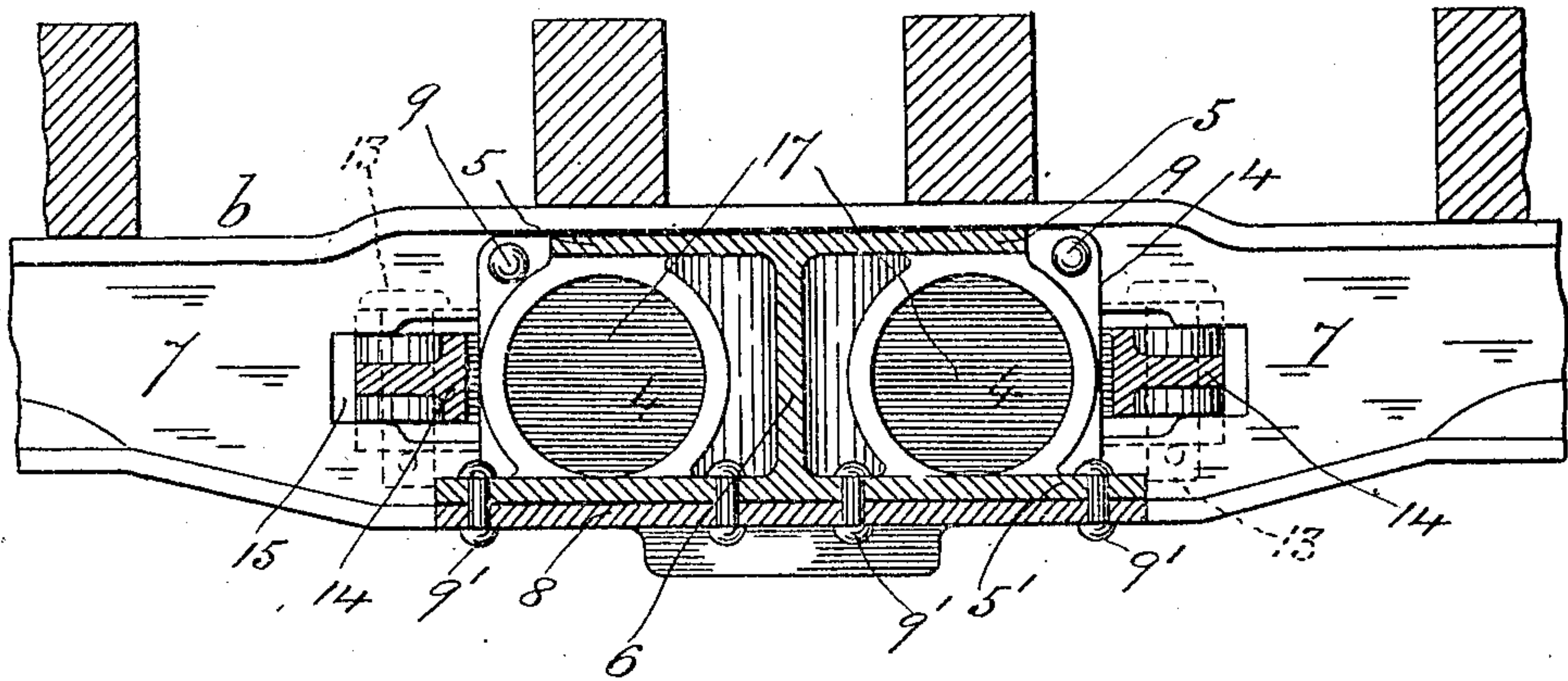
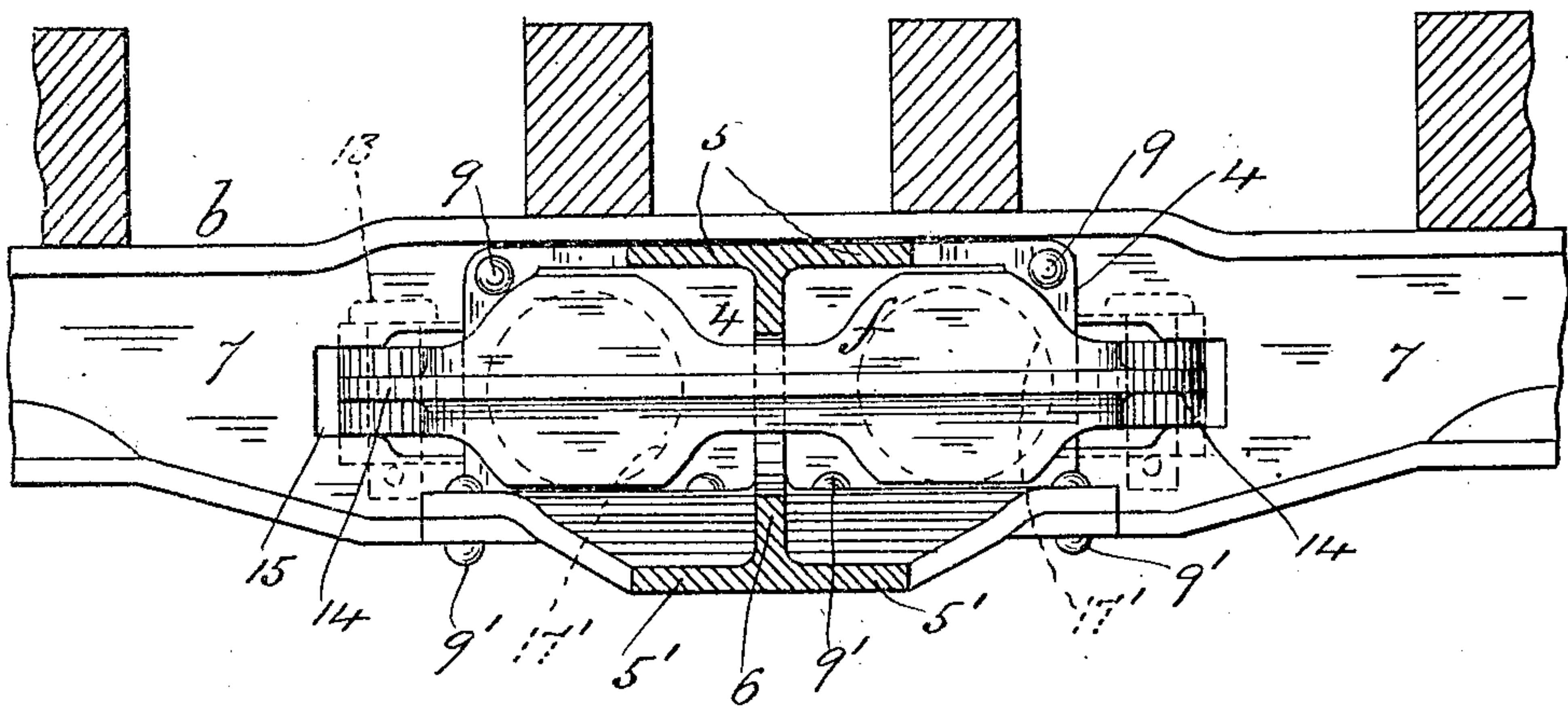


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

HARRY M. PFLAGER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO TRANSOM DRAFT GEAR COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF DELAWARE.

CAR-UNDERFRAME.

No. 926,074.

Specification of Letters Patent.

Patented June 22, 1909.

Original application filed June 5, 1908, Serial No. 436,839. Divided and this application filed February 4, 1909, Serial No. 476,111.

To all whom it may concern:

Be it known that I, HARRY M. PFLAGER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Car-Underframes, of which the following is a specification:

My invention relates particularly to a metallic car underframe having a single longitudinal center sill extending between and adapted to butt endwise against the body-bolsters, to which the end portions of the sill are riveted or otherwise fixed, and is a division of the invention for which I have obtained Letters Patent of the United States, dated March 30, 1909, Number 916,586, for improvement in car underframes, and my invention has for its object to increase the efficiency and resistance of the underframe to the stress of the draft-gear and abnormal end shock.

It consists in features of novelty as herein-after described and claimed, reference being had to the accompanying drawing forming part of this specification, whereon,

Figure 1, is a top plan view of one end and adjacent portion of my improved metallic car underframe with a preferable form of draft-gear applied thereto; Fig. 2, a vertical longitudinal section to enlarged scale, through the underframe and draft-gear on line 2, 2, in Fig. 1; Fig. 3, a horizontal section thereof on line 3, 3, in Fig. 2, and Figs. 4 and 5, vertical transverse sections through the underframe and draft-gear (omitting the springs) on lines 4, 4, and 5, 5, respectively, in Fig. 3.

Like letters and numerals of reference denote like parts in all the figures.

a represents one end and the adjacent portion of a metallic car underframe embodying my improvement and comprising in the present case, two opposite longitudinal side sills 1, an end sill 2 having the dead-block 2' and fixed at its ends to the corresponding ends of the side sills 1, a body-bolster *b* fixed at its ends to the side sills 1 adjacent to the end sill 2 and secured to the latter by two opposite horizontal braces 3 which converge from the body-bolster *b*, one on each side of and at a suitable distance from the longitudinal center of the underframe *a*, to the end sill 2 at its middle portion, and a single longitudinal center sill *c* which is adapted to butt endwise against the rear side of the

body-bolster *b* to which it is fixed as herein-after more particularly referred to, the body-bolster *b* and center sill *c* being respectively, preferably composed of cast steel integral throughout and I-shaped in cross section as shown.

d represents the car draft-gear which may be of any suitable type, preferably as shown and similar to that described in the United States Letters Patent granted to me January 23, 1906, Number 810,805, for improvement in draft-gear for railroad cars, except that in carrying out my invention the draft-springs are applied directly to the center sill *c* in lieu of to the body-bolster as in the said patent, for which purpose the end of the center sill *c* is closed or formed transversely with an upright rectangular-shaped end-plate 4 which unites with the top and bottom flanges 5, 5', and web 6 of the center sill *c* and is adapted to butt at its outer face against the web 7 of the body-bolster *b*, to which it is preferably fixed by rivets 9, the adjacent portions of the bottom flanges 5' of the center sill *c* being preferably widened, according to the lateral extension of the end-plate 4 beyond the body of the center sill *c*, and adapted to be supported thereat on the bottom flanges 8 of the body-bolster *b* to which it is rigidly secured by rivets (or bolts) 9'. The draft-gear *d* in the present case comprises the draw-bar *e* having a horizontally arranged cross-head 10 at its inner or rear end in the face of which opposite to the front side of the body-bolster *b* is formed at each side of the longitudinal center of the underframe *a* and center sill *c*, a cylindrical housing or pocket 11, while on the front side of the web 7 of the body-bolster *b* opposite to and in central longitudinal alignment with each housing 11, is preferably formed a cylindrical housing or pocket 11', the housings 11, 11', being in the same horizontal plane with each other.

Within the housings 11, 11' are placed the "buffing" springs 12 which in the normal position of the draft-gear *d* bear at their outer or front ends against the bottom of the housings 11 (or cross-head 10 of the draw-bar *e*) and at their inner or rear ends against the web 7 of the body-bolster *b*.

To the cross-head 10, at or adjacent to each end thereof, is coupled by a pin 13 the arm 14 of a yoke *f* which is arranged horizontally in the plane of the draw-bar *e* and

adapted to straddle the end-plate 4 of the center sill *c* from its rear side, the arms 14 being slidable through openings 15 formed therefor transversely through the web 7 of the body-bolster *b*, and the center sill *c* having an elongated longitudinal lightening hole or opening 16 through its web 6 adjacent to the end-plate 4 for enabling the yoke *f* to be assembled and removed, and for permitting free play thereto at all times in the operation of the draft-gear *d*.

On the inner or rear side of the end-plate 4, at each side of the longitudinal center of the underframe *a* and web 6 of the center sill *c*, is formed a cylindrical housing or pocket 17, while on (or in) the face of the yoke *f* opposite to each housing 17, is formed a similar housing 17', the housings 17, 17', being in central longitudinal alinement with each other and preferably, with the housings 11, 11'.

Within the housings 17, 17', are placed the "draft" springs 18 which in the normal position of the draft-gear *d* bear at their outer or rear ends against the bottom of the housings 17' (or yoke *f*), and at their inner or front ends against the bottom of the housings 17 or inner side of the end-plate 4 of the center sill *c*.

In operation, when pulling on the draw-bar *e*, the yoke *f* is drawn forward, and in so doing compresses the "draft" springs 18 between the yoke *f* and the end-plate 4 of the center sill *c* on its inner or rear side, and simultaneously releases the head 10 of the draw-bar *e* from the "buffing" springs 12 which lie free within their housings 11, 11'.

In buffing, the draw-bar *e* with its head 10 is forced rearward so as to compress the "buffing" springs 12 against the front side of the web 7 of the body-bolster *b*, and at the

same time release the yoke *f* from the "draft" springs 18 which lie idle within their housings 17, 17'.

By my invention the pressure of the "draft" springs 18 is applied initially and directly to the center sill *c* instead of to the body-bolster as in the said patent, while the pressure of the "buffing" springs 12 although initially applied directly to the body-bolster as in the said patent, is nevertheless practically transmitted by the latter to the center sill *c* through its end-plate 4, whereby the maximum rigidity, strength, and resistance of the underframe *a* are insured in the operation of the draft-gear or when subjected to abnormal end shock.

What I claim as my invention and desire to secure by Letters Patent is:—

In a metallic car underframe, the combination of the body-bolsters having respectively, a housing at each side of the longitudinal center of the underframe for the "buffing" spring of a suitable draft-gear, a center sill extending longitudinally between the body-bolsters, an upright plate forming part of the said sill across each end thereof and adapted to butt on its front side against the corresponding body-bolster, housings for the "draft" springs of the said gear on the rear side of the said plate, the said "buffing" and "draft" springs being adapted to bear at their inner ends respectively, against the body-bolster and the rear side of the said plate within the said housings, and means for fixing the said sill to the body-bolsters, substantially as described.

HARRY M. PFLAGER.

Witnesses:

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HAR C. BELLVILLE.