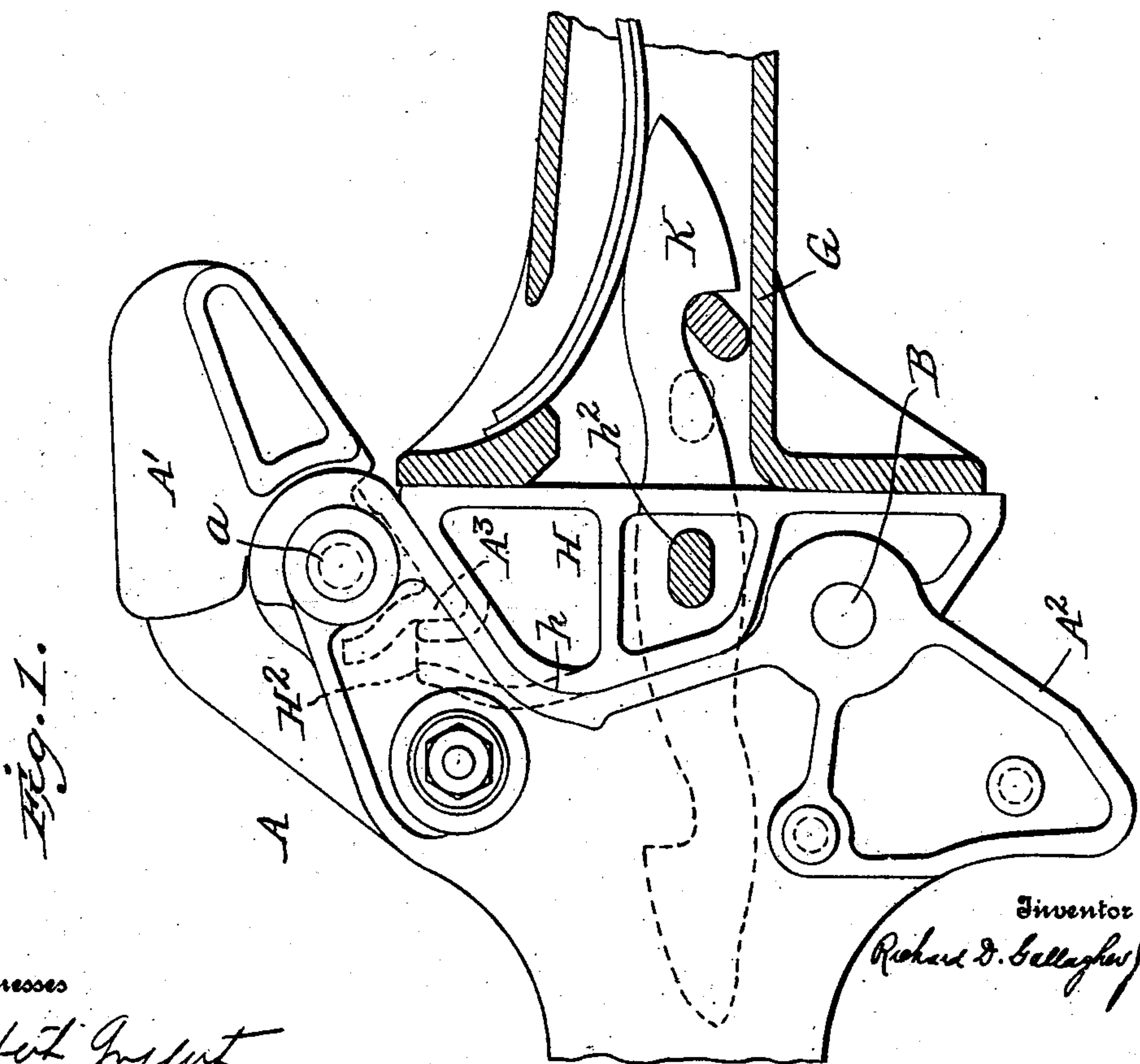
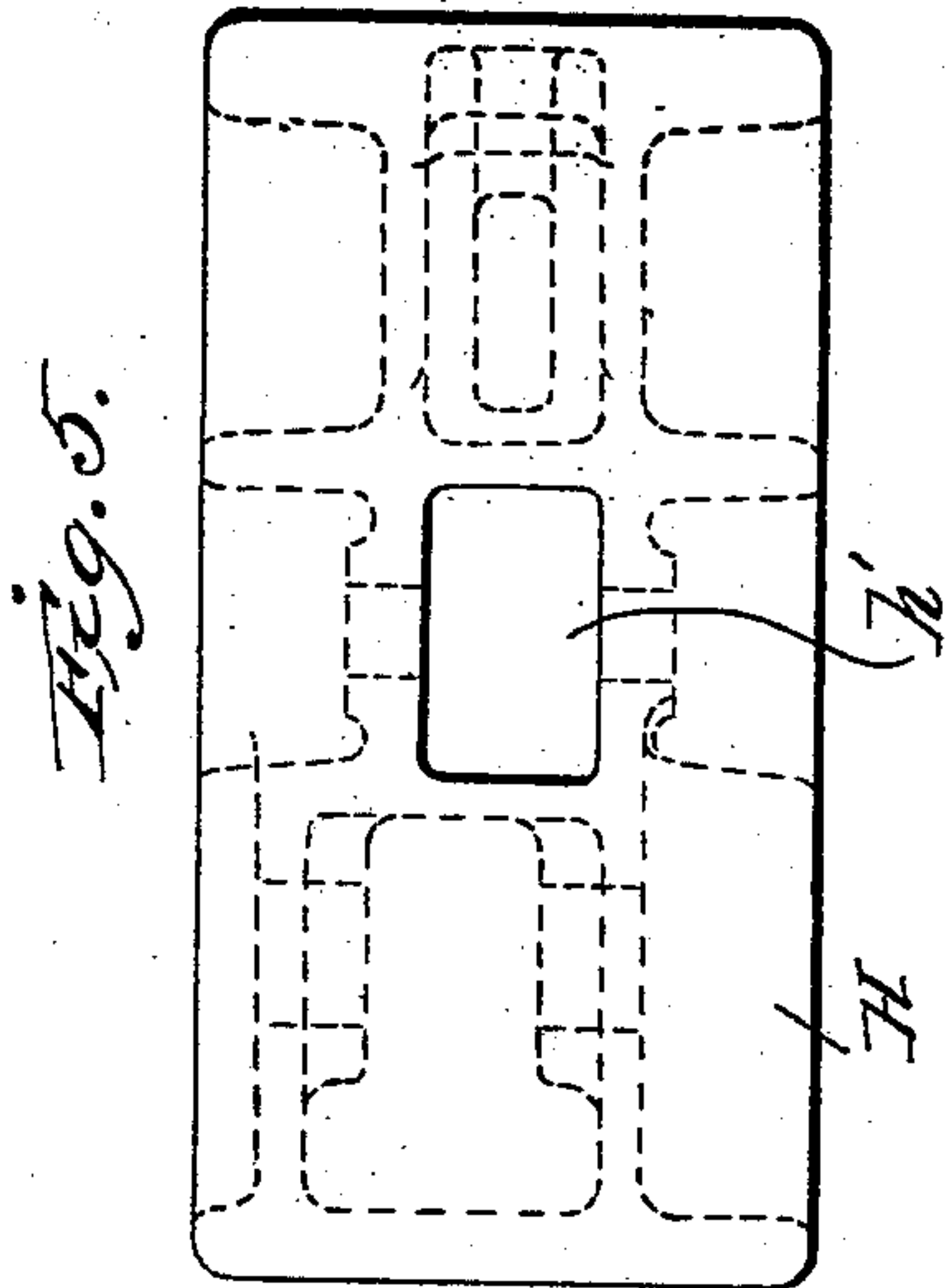
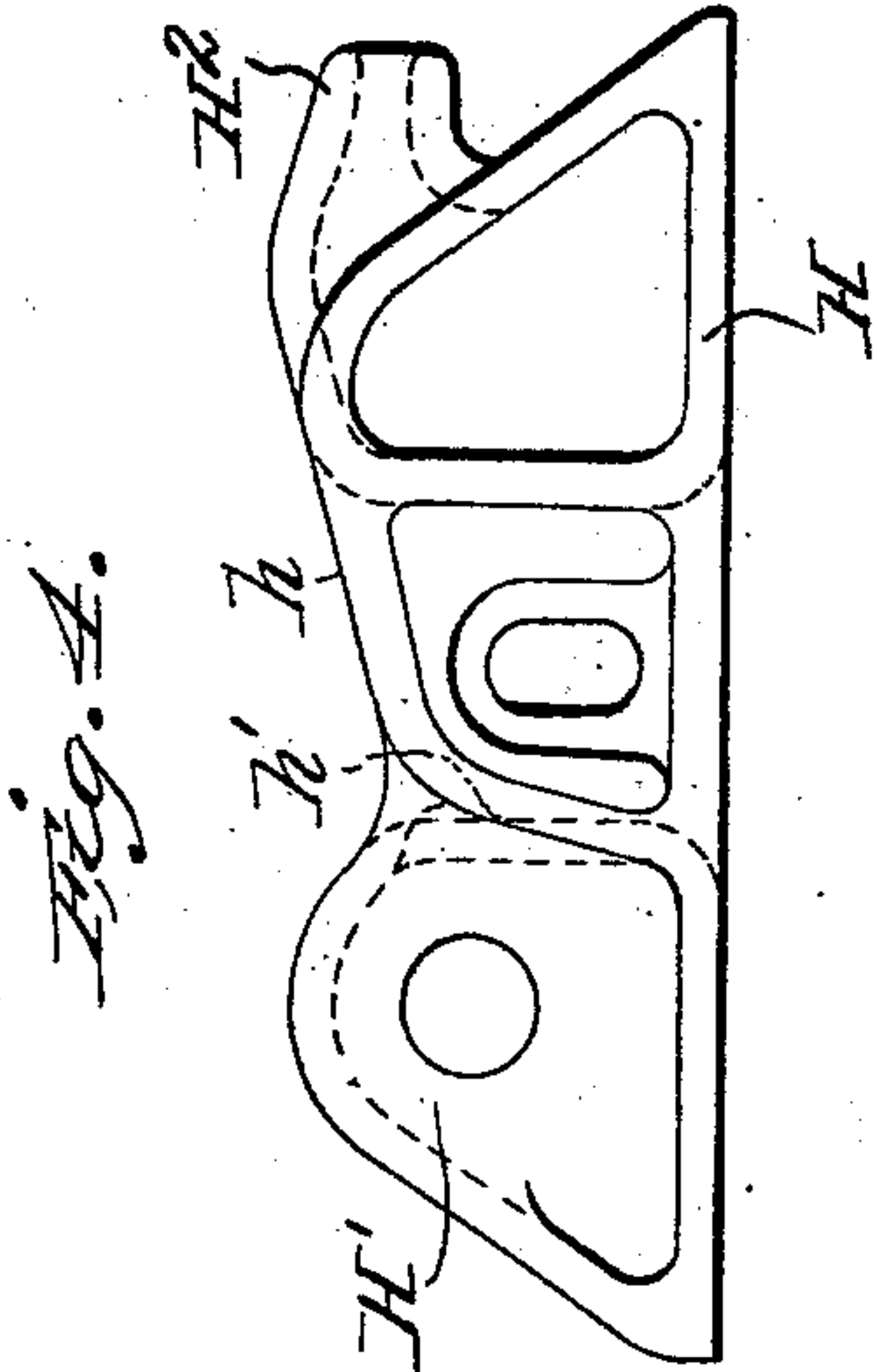


R. D. GALLAGHER, JR.
CAR COUPLING DEVICE.
APPLICATION FILED JUNE 29, 1908.

915,341.

Patented Mar. 16, 1909.

2 SHEETS—SHEET 1.



Witnesses
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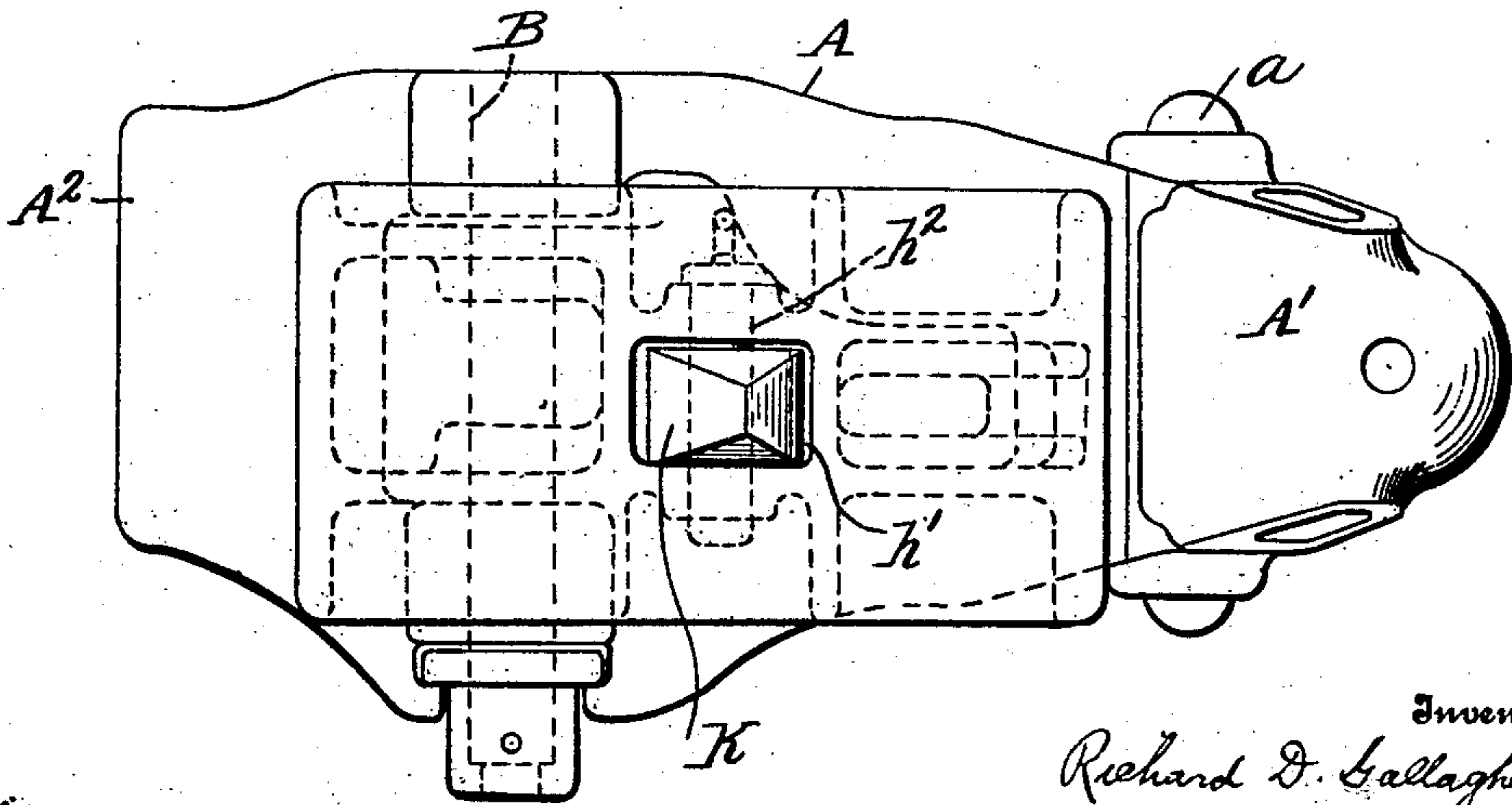
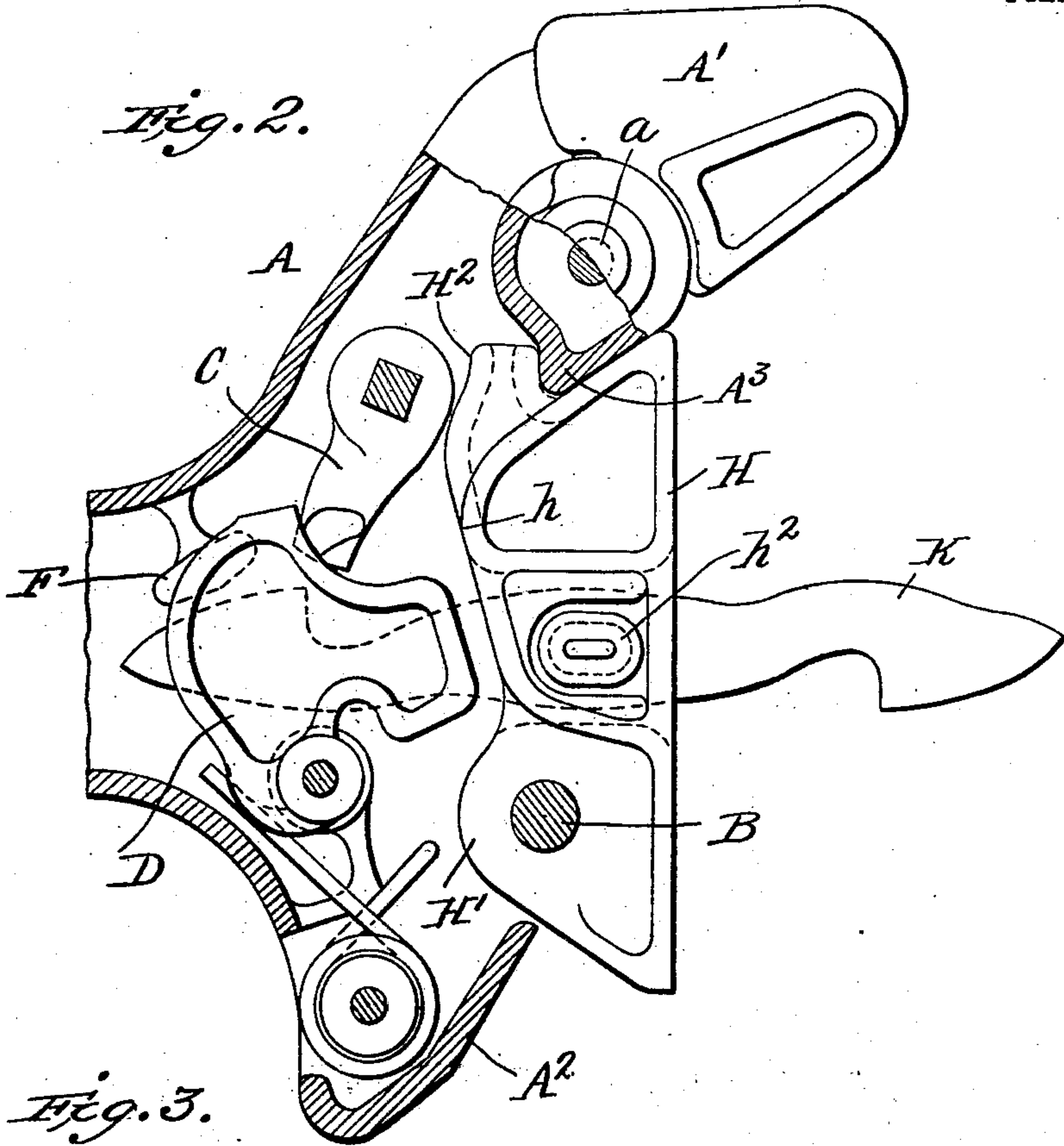
Charles K. Kline
his Attorneys

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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

RICHARD D. GALLAGHER, JR., OF NEW YORK, N. Y.

CAR-COUPLING DEVICE.

No. 915,341.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed June 29, 1908. Serial No. 440,917.

To all whom it may concern:

Be it known that I, RICHARD D. GALLAGHER, Jr., a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Car-Coupling Devices; 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 this specification, and to the figures and letters of reference marked thereon.

This invention relates to improvements in devices for enabling cars equipped with different types of couplers to be successfully and quickly coupled together, the invention being particularly designed to couple the cars with a substantially rigid connection in order to maintain the radial relation of the couplers.

The so-called radial couplers mounted so as to swing on centers well within the car body and with their meeting faces so arranged as to prevent material pivotal action between them have come to be a practical necessity on urban and suburban passenger lines. Great difficulty has been experienced in enabling cars equipped with the usual radial couplings to be coupled to and used in connection with cars equipped with the so-called Janney or M. C. B. type of couplers.

It is one of the objects of the present invention to overcome this difficulty and to provide a means whereby the so-called Janney or M. C. B. type of couplers may be quickly converted into couplings adapted to cooperate with and maintain the proper relative alinement of radial couplers of the ordinary Van Dorn and similar types.

In the accompanying drawings: Figure 1 is a top plan view partly in section of a pair of couplers, one being a Van Dorn and the other a Janney or M. C. B. type of coupling head embodying ordinary contour lines for the knuckle faces and equipped with a supplemental head in accordance with the present invention. Fig. 2 is a similar view with the Janney or M. C. B. coupling head partly in section and the Van Dorn coupling head omitted. Fig. 3 is a front elevation of the parts shown in Fig. 2. Fig. 4 is an enlarged top plan view of the supplemental head, and Fig. 5 is a front elevation of the same.

Like characters of reference indicate the same parts in all the views.

The Janney or M. C. B. type of coupling head illustrated is one designed by me espe-

cially for radial couplings and, except in some of the minor details of construction to be hereinafter referred to, forms no part of the present invention. As illustrated, the coupler head A is provided with a supplemental or extended guide arm A' pivotally mounted on the coupling head at *a* and on the opposite side the head is provided with an inclined faced projection A² adapted to cooperate with the extended guide arm of a cooperating coupling. The knuckle, not illustrated, is adapted to be pivotally mounted on the knuckle pin B carried in a vertically arranged pin opening, the said knuckle itself being adapted to work in a knuckle opening in the front face of the coupling head indicated in dotted lines in Fig. 3. Within the coupler head there is pivotally mounted at one side of the knuckle opening, a lock C, adapted to cooperate with the shank of the knuckle and pivotally mounted at the opposite side of the said opening is a lock-set D, the latter being adapted to cooperate with the shank of the knuckle and also with the lock, but the lock set itself is located in a plane above the shank of the knuckle, whereby a space or opening is left below the lock set and between the lock and lock set pivot, into which space the end of a coupling hook may project, as indicated in Fig. 2.

To afford additional guiding means for the coupling hook, a projection F is formed within the coupling head, which projection also serves as a support for the outer or free part of the lock-set.

In accordance with the present invention, and in order to provide a substantially flat transverse face for cooperation with the flat transverse face of the ordinary Van Dorn and similar types of coupling heads indicated at G in Fig. 1, a supplemental head indicated by the letter H is provided. The rear face or side of this supplemental coupling head H has contour lines corresponding to the knuckle recess in the face of the coupler head A, as shown at *h* in Figs. 1, 2 and 4. In addition it is provided with projections, one lettered H' adapted to enter the knuckle recess at the point where the hub of the knuckle ordinarily enters the said recess and to cooperate with the knuckle pin B for holding the supplemental head H in place while the other projection H² is adapted to enter the opposite side of the knuckle opening and to pass behind the end wall A³, in which position it is retained by the pin B and itself con-

finer that end of the supplemental head closely to the coupling head. Obviously, the particular configuration or contour lines of the projections may be considerably varied, 5 the only requirement being that the projection at one end shall be undercut so as to form a shoulder for cooperation with a similar shoulder formed by a portion of the main coupler head, and that the projection for co- 10 operation with the pin shall, when the supplemental head is in position, prevent the transverse movement of the supplemental head, and disengagement of the cooperating shoulders. The projection and pin lock the 15 supplemental head firmly in place and the latter in effect becomes a rigid part of the coupler head itself, but at the same time it may be readily removed.

The supplemental coupling head is provided with a central hook aperture h' , Fig. 3, and a transverse aperture for a pin h^2 to secure the coupling hook in place.

The usual hook coupling K is shown in its proper relation for connecting the two types 25 of coupling heads in Fig. 1, and in Fig. 2 the end of the said coupling hook is shown projected into the coupling head A, in which position it is guided by the projection F, lock and lock set pivot and the lock set itself, 30 whereby the outer end of the hook is held in proper position for entry into and cooperation with the parts of the Van Dorn coupler head G, illustrated in Fig. 1.

With a coupling head equipped with the 35 supplemental coupling head of the present invention, a substantially flat transverse face is provided and the parts are so arranged that pivotal action between the coupled heads of adjacent cars is effectually resisted 40 and overcome by parts best calculated and adapted to withstand pivotal strains. The strength of the coupler is not impaired, but, on the contrary, both draft and buffing 45 strains are distributed even more effectually throughout the main coupler heads than where the ordinary pivoted knuckles are employed.

Having thus described the invention, what I claim as new and desire to secure by Letters- 50 Patent, is:

1. The combination with a coupler head having a knuckle and knuckle pin openings therein, of a supplemental head having a substantially flat face, central coupling hook 55 opening and rearwardly extending projections adapted to enter the knuckle opening, cooperating shoulders on the heads at one side of the knuckle opening and a pin mounted in the knuckle pin opening for holding 60 the supplemental head in position.

2. The combination with a coupler head having knuckle and knuckle pin openings therein, of a supplemental head having a substantially flat face, central coupling hook opening and rearwardly extending projec- 65 tions adapted to enter the knuckle opening, one of said projections having a transversely extending end adapted to seat behind the end wall of the knuckle opening, and a pin mounted in the pin opening and cooperating 70 with the supplemental head to retain the latter in place.

3. The combination with a coupler head having a knuckle opening therein and a supplemental head having a substantially flat 75 face, central coupling hook opening and projections extending into the knuckle opening for holding the supplemental head in position, of a vertical hook retaining pin in the supplemental head and hook guiding means 80 within the main coupler head in rear of the supplemental head.

4. The combination with a coupler head having a knuckle opening, a knuckle lock and lock set pivotally mounted on opposite 85 sides of the opening with the head, of a supplemental head mounted in the knuckle opening and having a substantially flat face with a central coupling hook aperture in line with the space between the lock and lock set 90 pivots and below the lock set, whereby the entry of a coupling hook is not obstructed.

5. A supplemental head for use in Janney type coupler heads, and having a substantially flat face, a central coupling hook opening, a 95 vertical hook pin opening, and projections adapted to enter the knuckle opening, one formed to engage within one end wall of the opening and the other to engage the knuckle pin, whereby the supplemental head will be 100 held in position.

6. In a car coupling mechanism, the combination with the coupling head having the knuckle and knuckle pin openings and an internal shoulder located at the opposite side 105 of the knuckle opening from the pin opening, of a supplemental head having a substantially plane face and projections on the rear side extending into the knuckle opening, one of said projections being adapted to cooperate with 110 the said shoulders and the other having an opening adapted to aline with the pin opening, a pin for retaining the supplemental head in place, and means carried by said supplemental head for cooperating with a coup- 115 ling hook.

RICHARD D. GALLAGHER, JR.

Witnesses:

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