

**No. 629,333.**

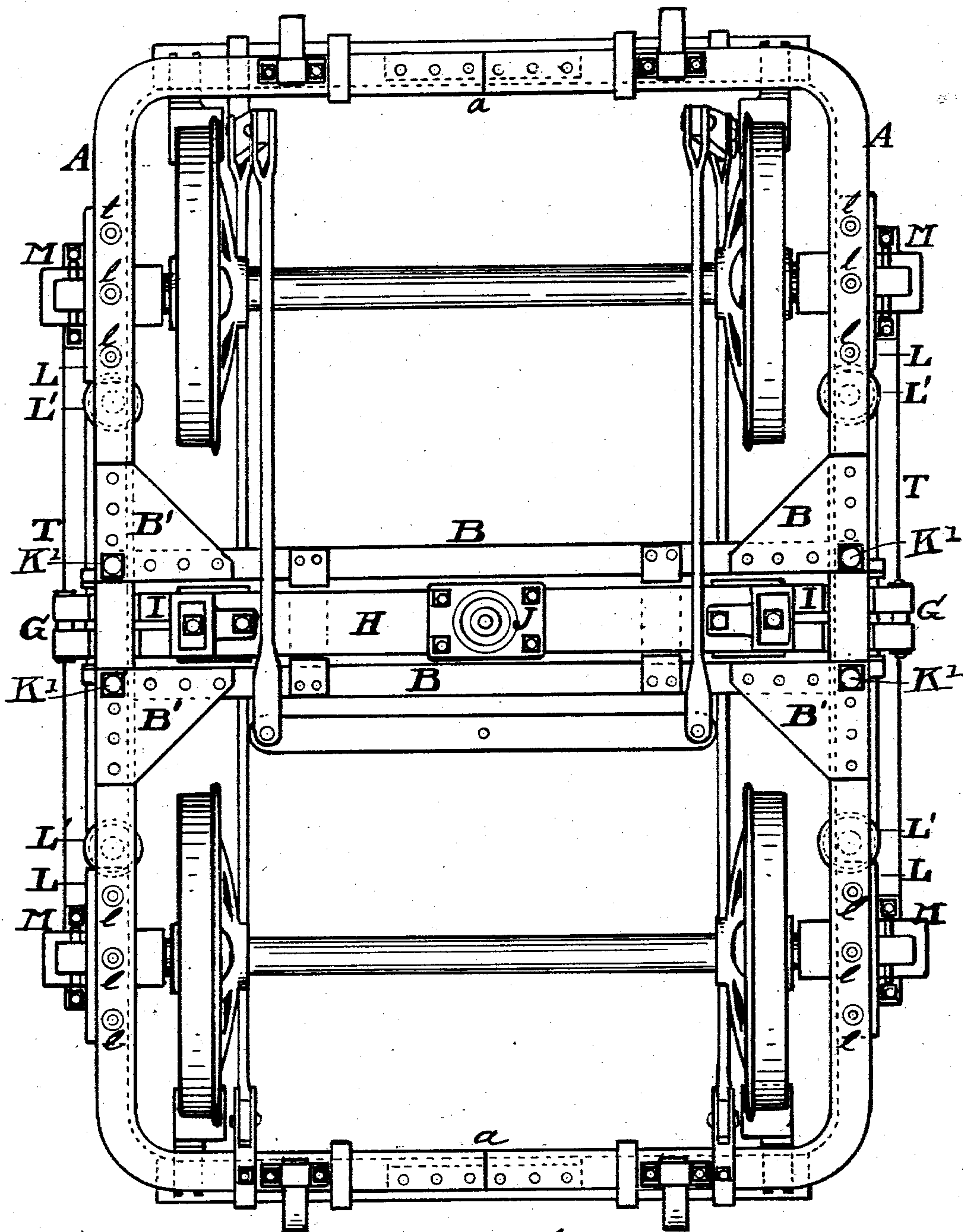
**Patented July 25, 1899.**

**C. A. BOYD.**  
**CAR TRUCK.**

(Application filed Nov. 7, 1898.)

(No Model.)

**4 Sheets—Sheet 1.**



Witnesses,  
Jacob Goldberg  
Lewis H. Ford

*Fig.1.*

3.1. Inventor.  
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Geo. W. Tibbitts Atty.

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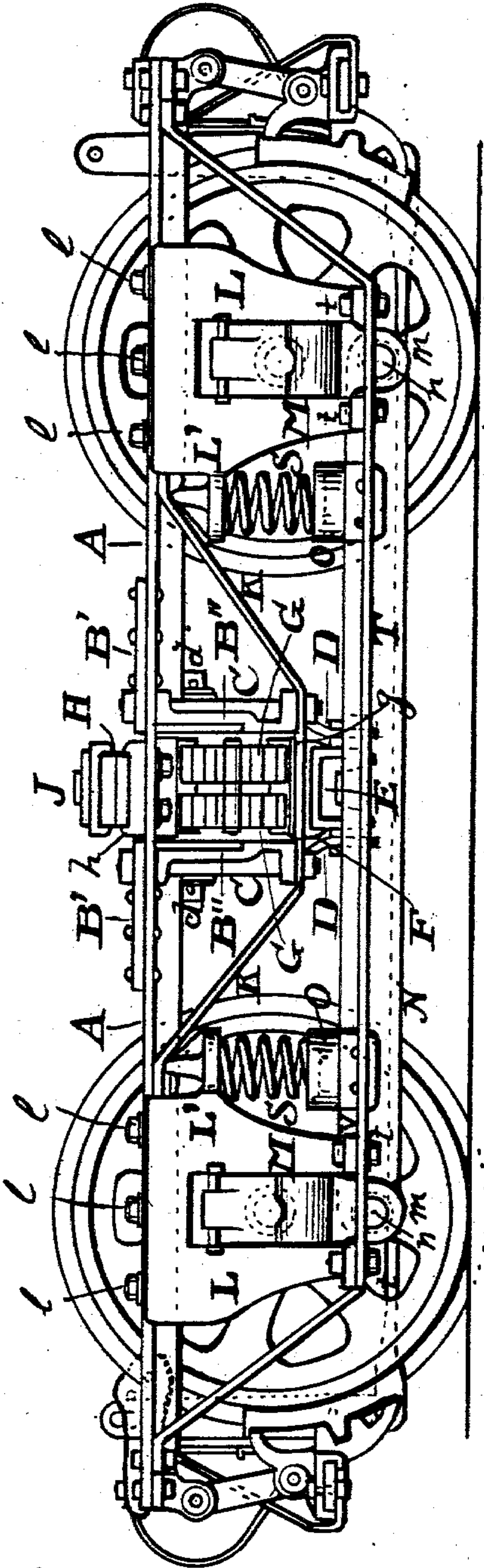


Fig. 2.

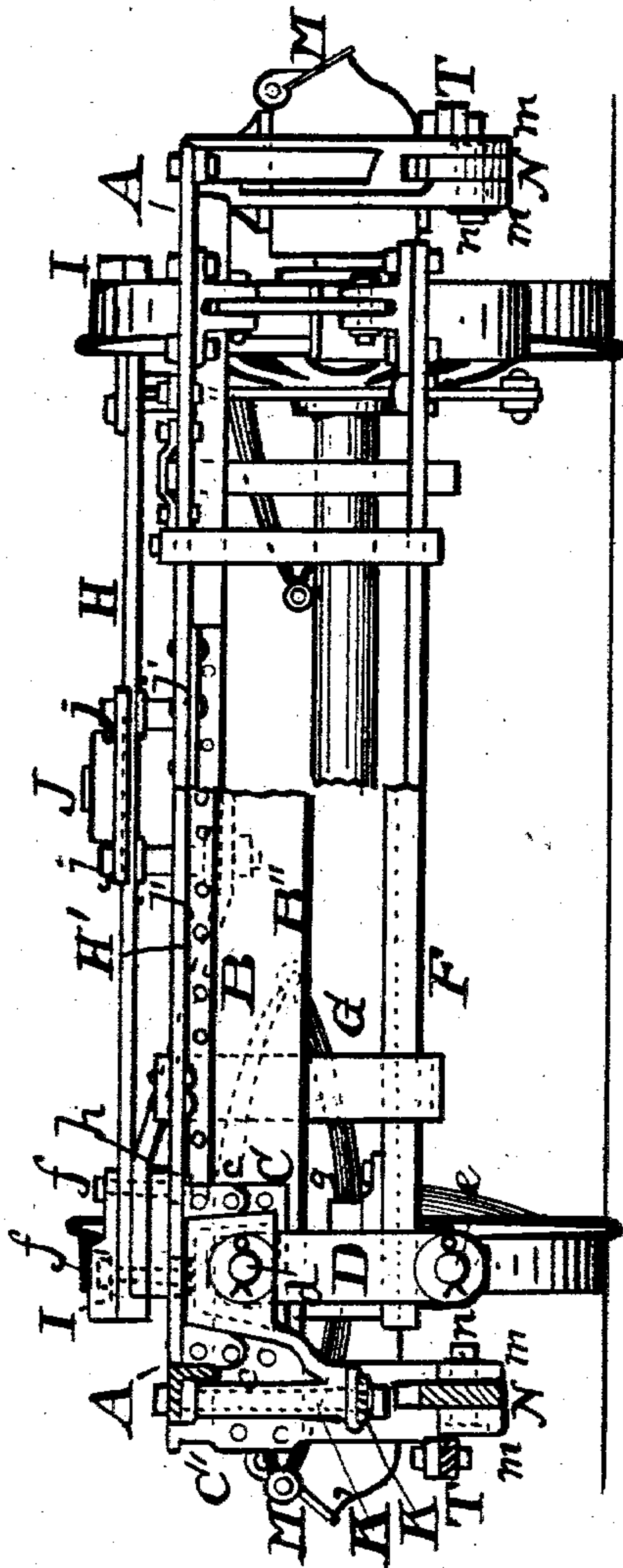


Fig. 3.

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per Geo. W. Tibbitts Atty.



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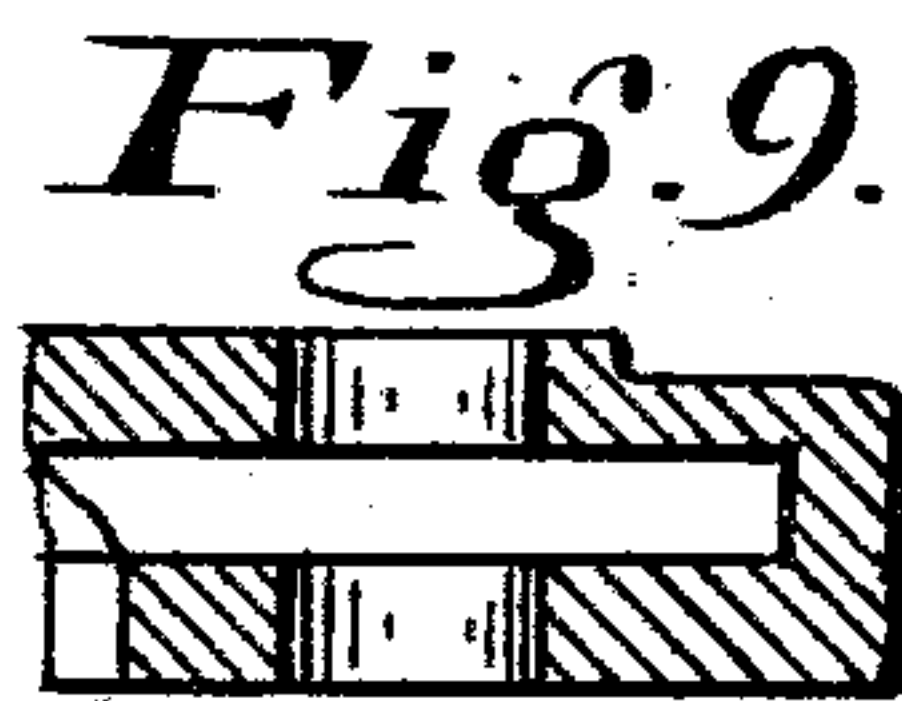
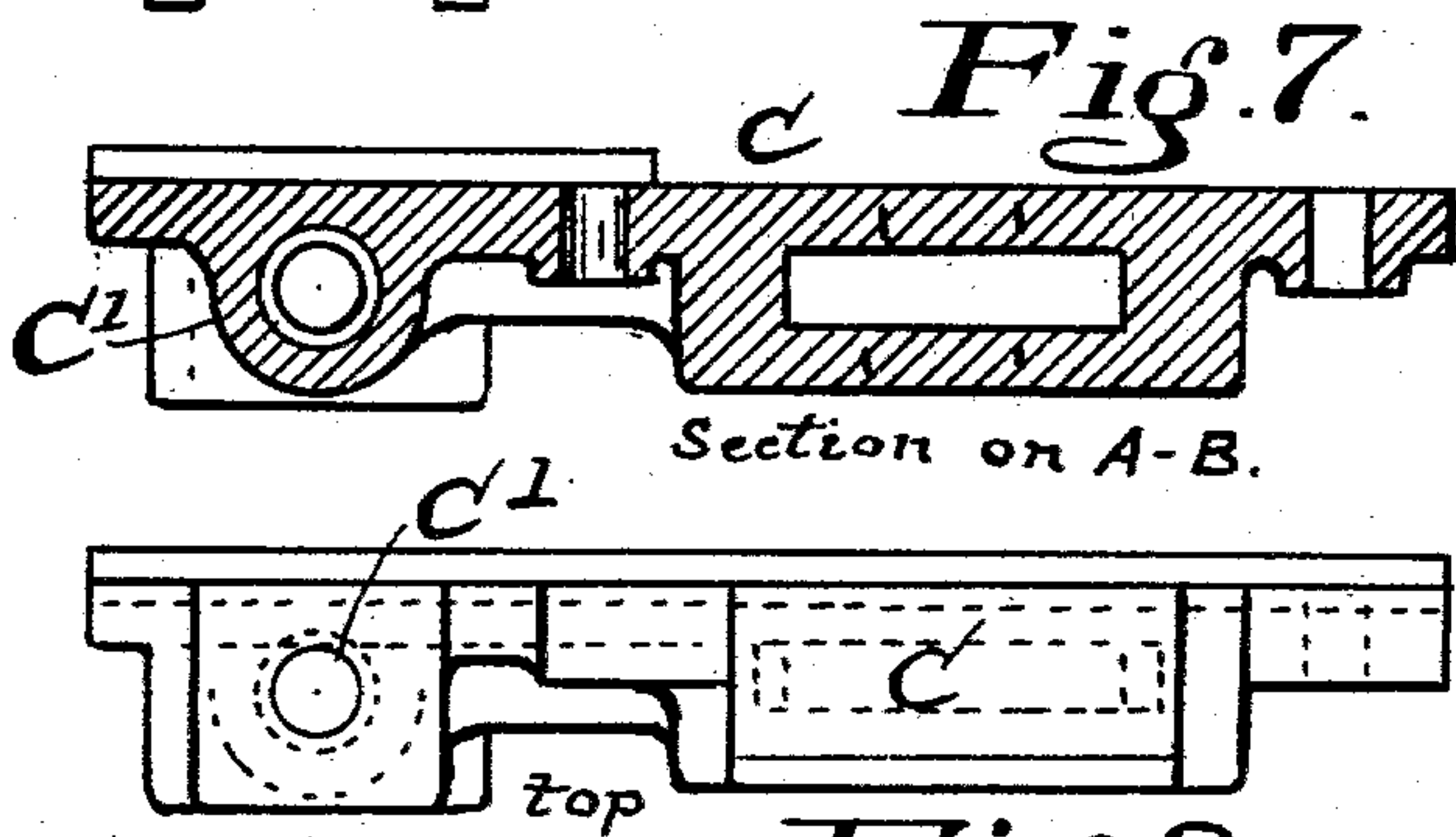
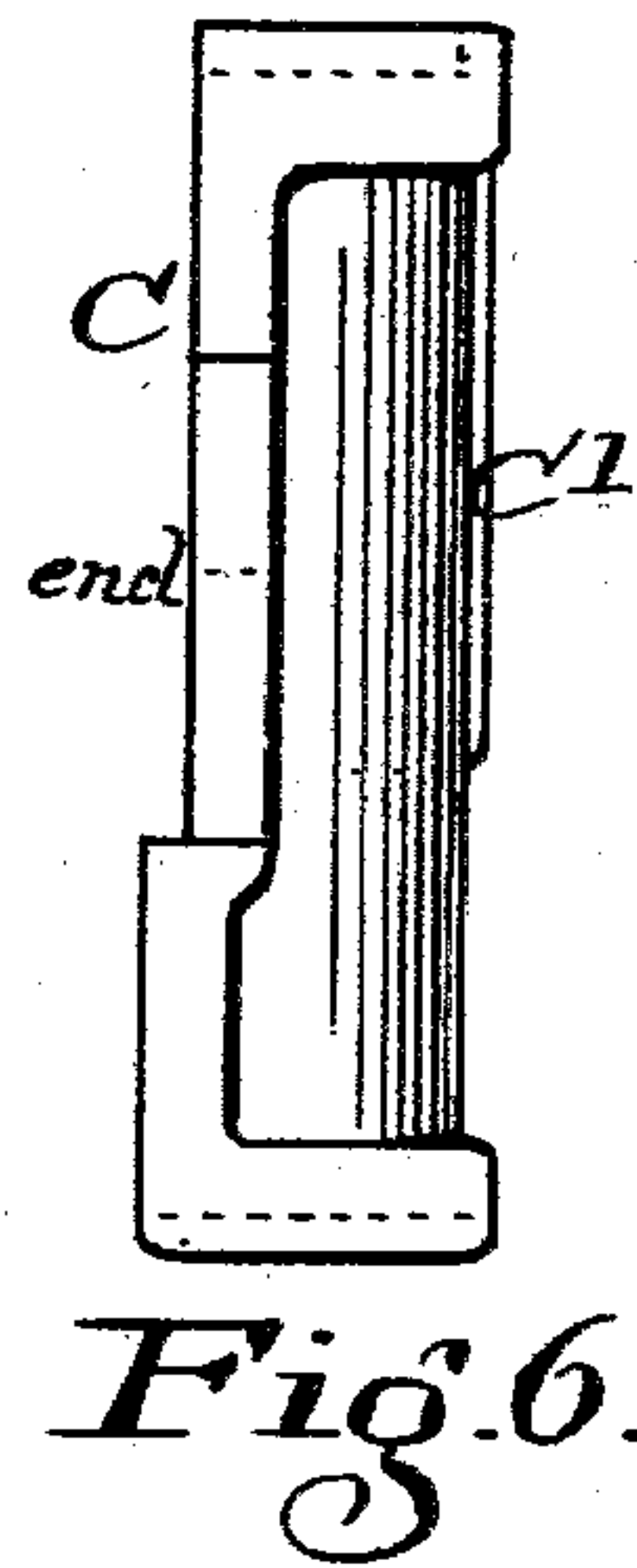
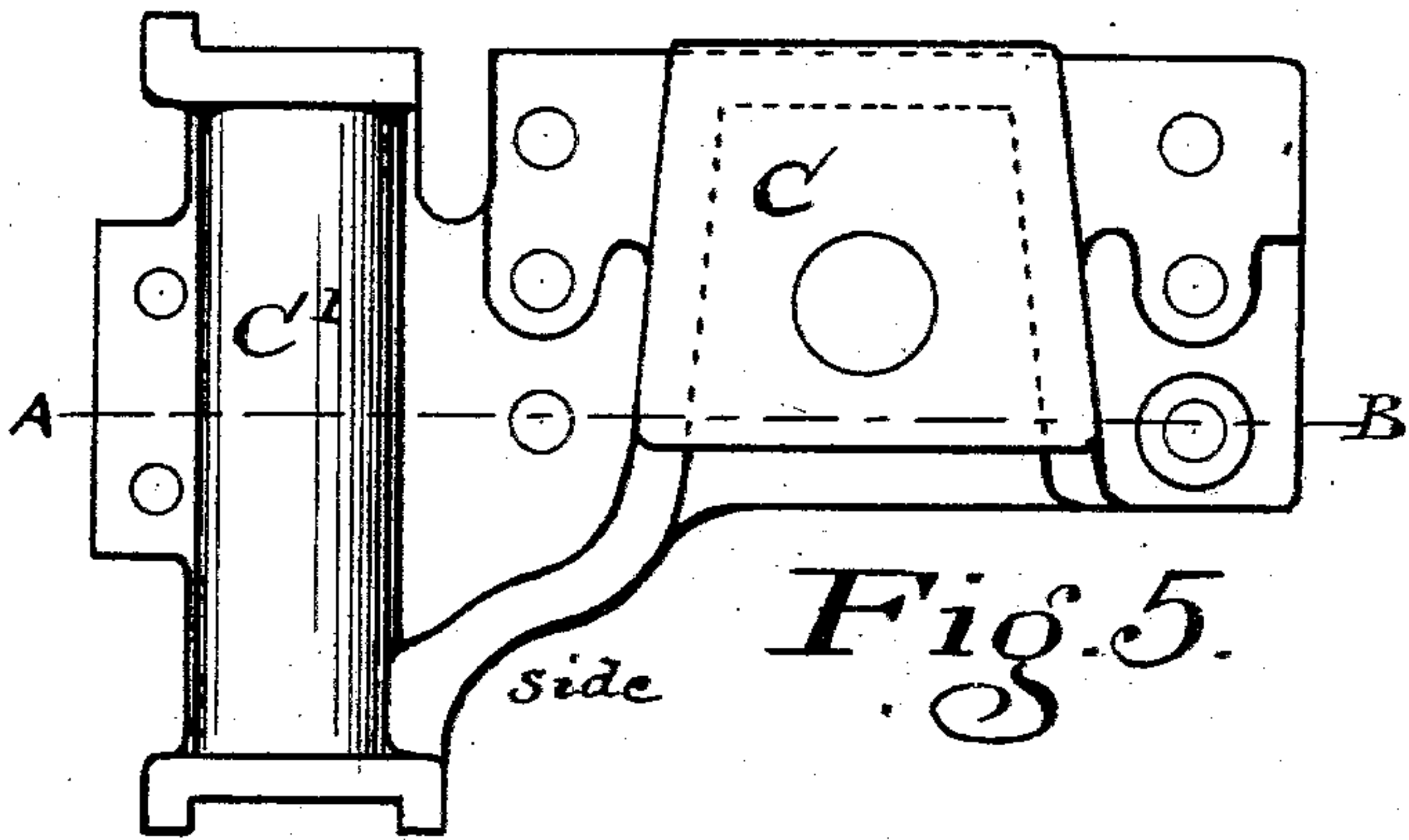
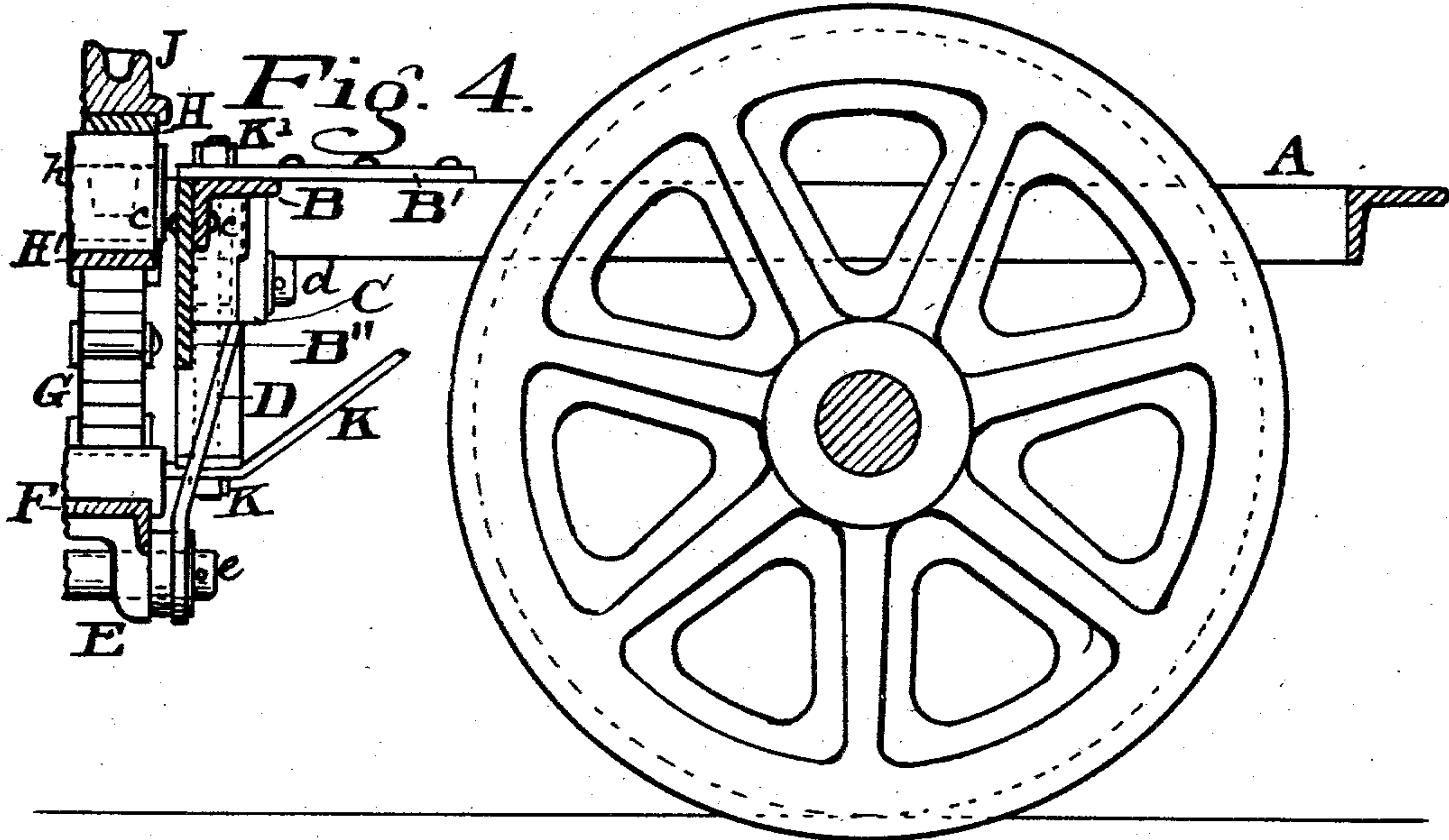
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4 Sheets—Sheet 3.



Witnesses.

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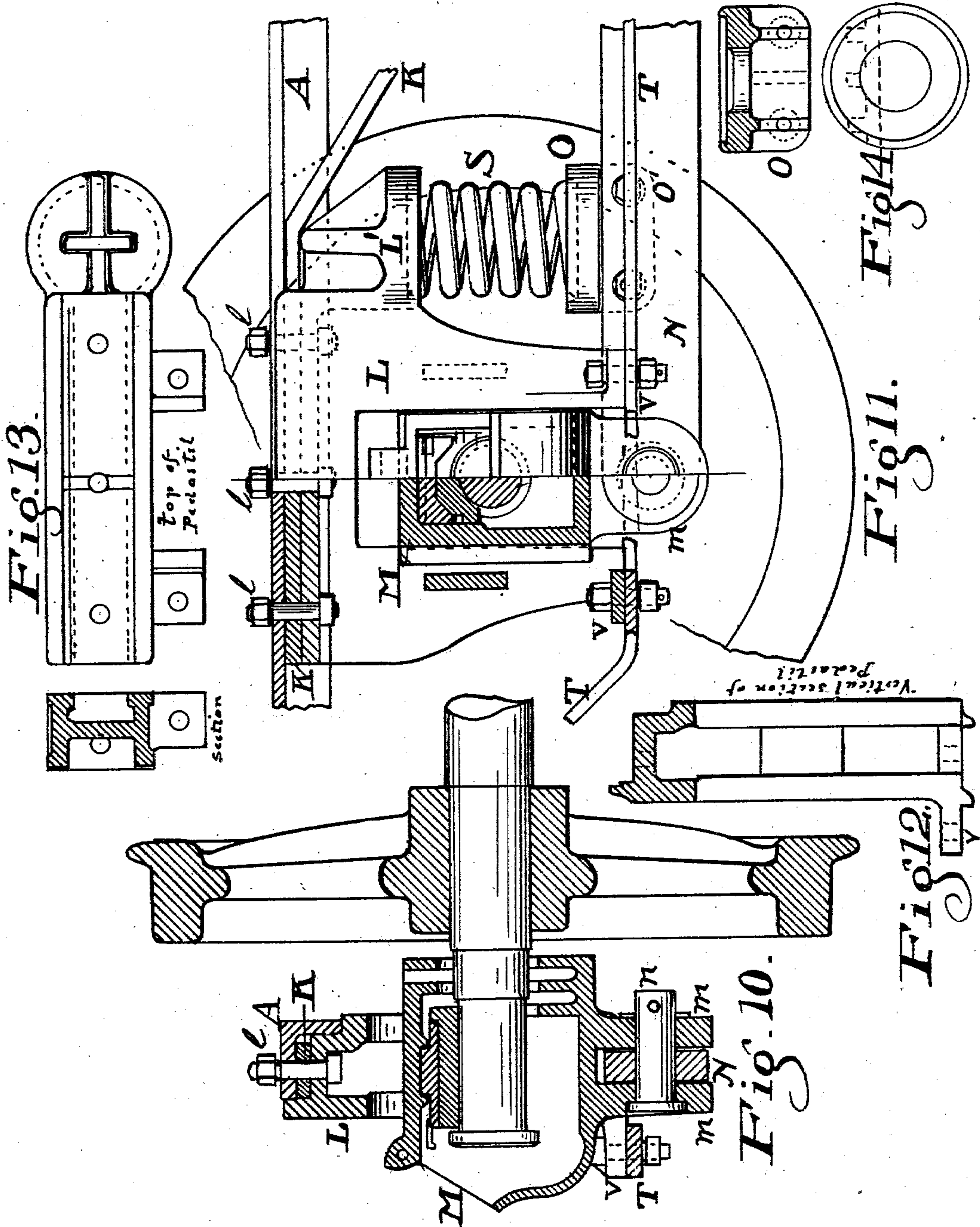
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4 Sheets—Sheet 4.



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# UNITED STATES PATENT OFFICE.

CHARLES A. BOYD, OF CLEVELAND, OHIO.

## CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 629,333, dated July 25, 1899.

Application filed November 7, 1898. Serial No. 695,803. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. BOYD, a citizen of the United States of America, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Car-Trucks, of which the following is a specification.

This invention relates to car-trucks, and has for its object to simplify, cheapen, and strengthen the construction and arrangement of the various parts in the construction and assemblage of the parts. The truck is composed largely of merchantable steel bars, avoiding much forging and reducing the expense and labor in the construction and repairs to a minimum.

The invention therefore consists in the new constructions and combinations substantially as hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top or plan of the new truck. Fig. 2 is a side elevation of the new truck. Fig. 3 is an end elevation and half cross-section of the new truck. Fig. 4 is a vertical section of a part of the truck, showing the construction of the transom. Figs. 5, 6, 7, 8, and 9 represent the details of a casting used in the construction at the ends of the transom. Figs. 10, 11, 12, 13, and 14 represent the details of the pedestals and journal-boxes, showing their peculiar construction and arrangement.

A is the frame of the truck and is composed of but two angle-bars bent at right angles at *aa* to form the corners. Said bars are joined together at the middle of the ends of the frame at *a'* by means of a piece of angle-bar *A'*, riveted to the abutting ends of the bars *A*, thus forming a very strong frame having very rigid corners.

The transom consists of two cross-bars of angle-steel *B B*, joined to the said bars *A A* at the middle part of the frame by means of triangular brace-plates *B' B'*, riveted onto both the bars *A* and *B*, forming a stiff and strong joint. *B'' B''* are wide cross-plates riveted to the cross-bars *B B* and depending therefrom. *C C* are cast-metal brackets secured to the said cross-bars *B B* and plates *B'' B''* by means of rivets *c c*.

*D D* are strong links suspended from the brackets *C C* by large bolts *d d*. The lower

ends of said links are connected to blocks *E E* by large bolts *e e*, passing through said links and blocks.

The brackets *C C* have vertical tubular side projections *C'*. The upper ends of said tubular projections abut against the under side of the top frame-bars *A*, and their lower ends rest upon the arch brace-bars *K K*. Large bolts *K'* pass through the plates *B'*, the frame-bars *A*, the tubular projections *C'*, and the arch-bars *K*, thus making a strong support for the springs *G G* and bolster.

*F* is a channel-bar extending across the frame *A*, having its ends resting on and supported by the blocks *E E*, and forms the lower cross-bar of the transom.

*G G* are elliptic springs supported in the seats *g g* on the transom cross-bar *F*.

*H* is a top or bolster cross-bar having its ends resting upon and secured to the spring cap-blocks *h h* on the said springs *G G*.

*I I* are the rub-blocks, secured on the ends of the bolster-bar *H* and cap-blocks *h h* by the bolts *f f*.

*J* is the center turning-plate on the bolster *H*.

The bolster-bar *H* is strengthened by the truss-bar *H'*, secured at its ends between the ends of the bolster-bar and the spring cap-blocks *h h* by the bolts *f f*. The bolts *j j*, which secure the center plate *J* to the bar *H*, pass through sleeves *j' j'*, put between the bolster-bar *H* and the truss-bar *H'*.

*L L* are the pedestals, provided on one side with heavy projections *L' L'*, which form the upper bearings for the coil-springs *S S*. The pedestals are secured to the top frame *A* by the large bolts *l l l*. The ends of the arch-bars *K K* are also secured between the top of the pedestals and the frame *A* by the same bolts, as seen in Fig. 11.

*M M* are the axle journal-boxes, on the under sides of which are provided the heavy lugs *m m*.

*N N* are heavy equalizing-bars having eyes on their ends connecting the two axle-boxes at each side of the truck by having their ends secured between the said lugs *m m* by the large bolts *n n*.

*O O* are the lower spring-seats, secured to the said equalizing-bars *N N* by the bolts *O'*.

*T T* are tie-bars reaching from one end of



the truck to the other and extending under the pedestals and secured thereto by bolts *tt* through the lugs *vv* on the lower ends of the pedestals.

5 Having described my invention, what I claim is—

1. The improved car-truck consisting of the angle-bar frame *A*, the angle-piece cross-bars *B B* and plates *B'' B''* secured to said  
10 cross-bars *B B*, the gusset-plates *B' B'* secured to the frame-bars *A A* and cross-bars *B B*, the brackets *C C* secured to the cross-bars *B B* and gusset-plates *B' B'* and plates *B'' B''* the arch brace-bars *K K* extending between the  
15 pedestals; the tubular projections *O'* on the brackets *C C*, bolts *K'* through the plates *B'*, frame *A*, tubular projections and the arch-bars *K*, binding them together, the blocks *E E* supported on the arch-bars *K K*, the links  
20 *D D* suspended from the brackets *C C* by the bolts *d d*, and connected to the blocks *E E* by the bolts *e e*, and the lower cross-bar *F* sup-

ported on the blocks *E E*, the springs *G G* supported on the cross-bar *F*, and the bolster *H* supported on the springs *G G*, constructed 25 and combined substantially as described.

2. In car-trucks, the combination with the pedestals *L L*, having the spring-bearing projections *L' L'*, the axle-boxes *M M*, having lugs *m m*, the equalizing-bars *N N* secured 30 in said lugs, spring-seats *O O* supported on the equalizing-bars, and the coil-springs *S S*, supported in said seats and supporting the pedestals; of the frame *A* composed of the two angle-bars *A A*, joined at the middle of the 35 ends of the frame, and comprising the sill, side and ends of the truck-frame, as shown and described.

Signed by me; at Cleveland, Ohio, this 31st day of May, 1898.

CHARLES A. BOYD.

Witnesses:

GEO. W. TIBBITTS,

EDWARD F. SPURNEY.