

(No Model.)

2 Sheets—Sheet 1.

B. W. TUCKER.  
CAR TRUCK.

No. 598,651.

Patented Feb. 8, 1898.

Fig. 1.

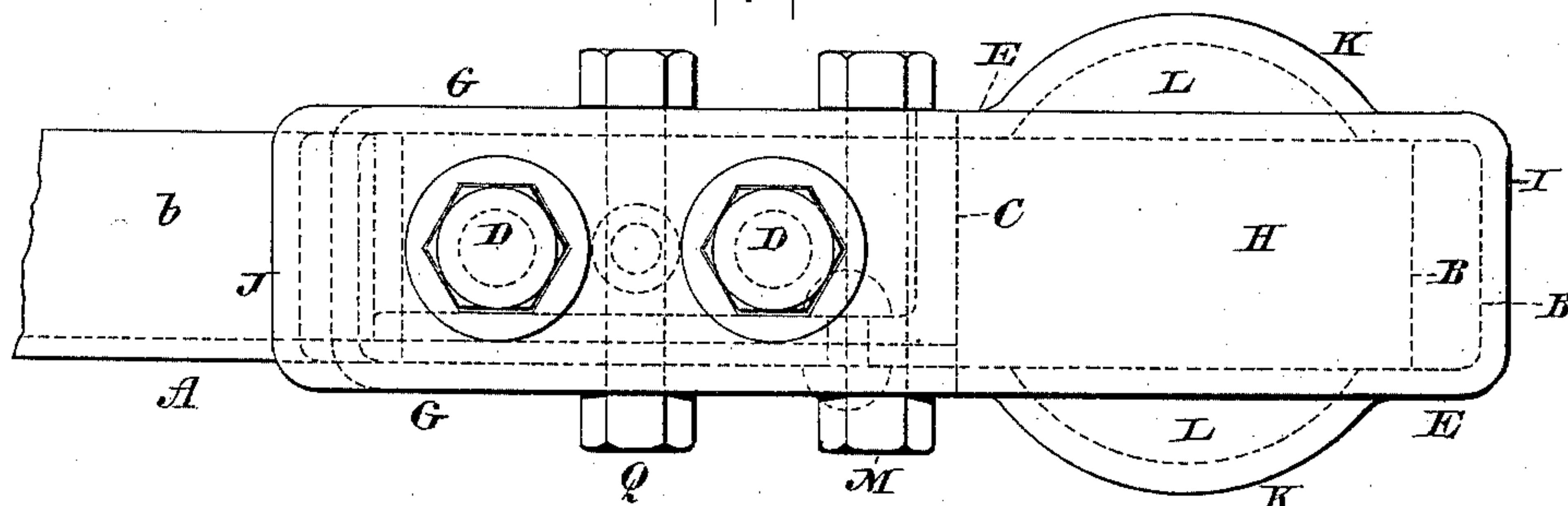
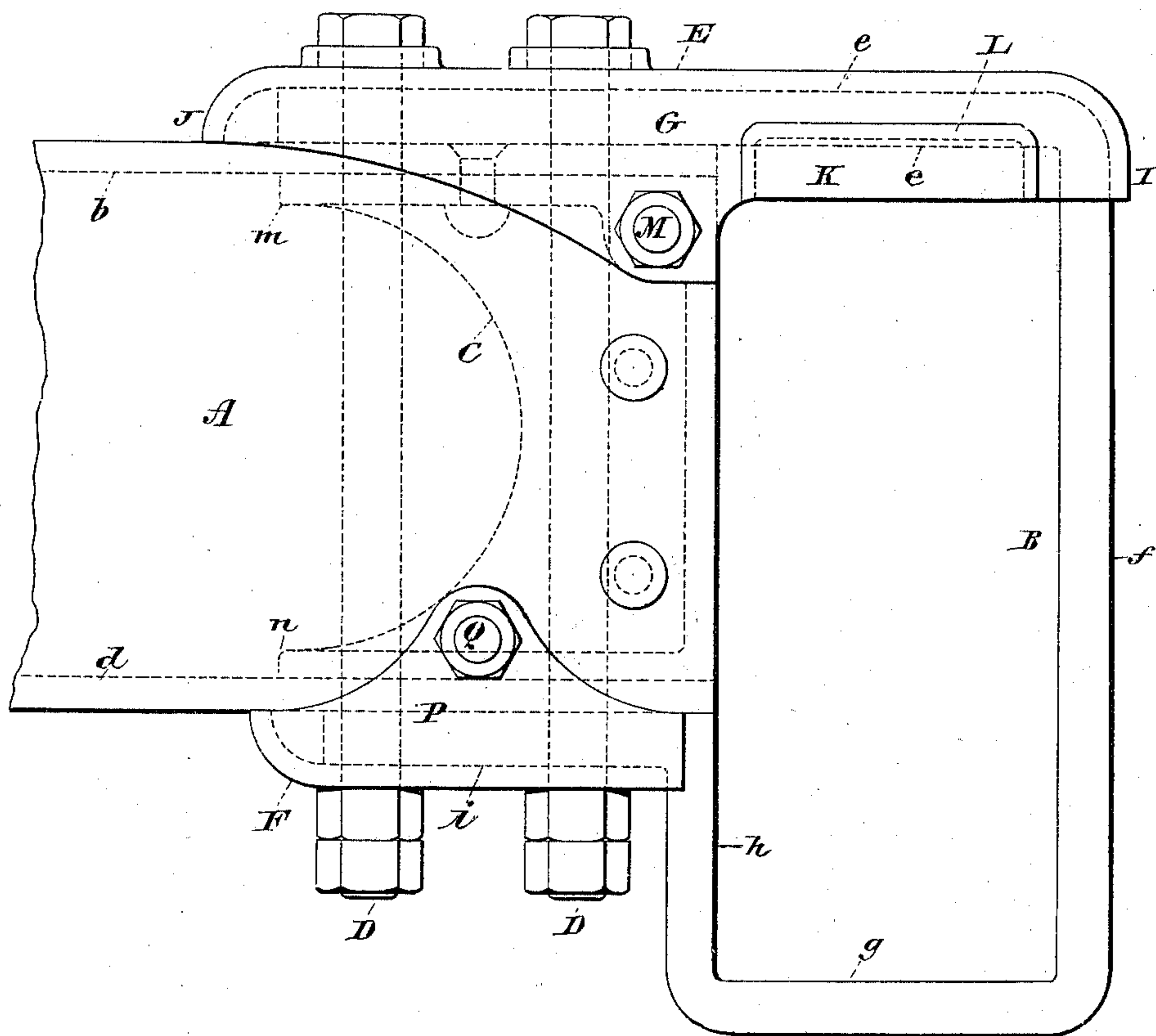


Fig. 2.



WITNESSES:  
*Gustave Dietrich*  
*John Kellenbeck*

INVENTOR  
*Benjamin W. Tucker*  
BY  
*Chas. C. Gill*  
ATTORNEY.

(No Model.)

2 Sheets—Sheet 2.

B. W. TUCKER.  
CAR TRUCK.

No. 598,651.

Patented Feb. 8, 1898.

Fig. 3.

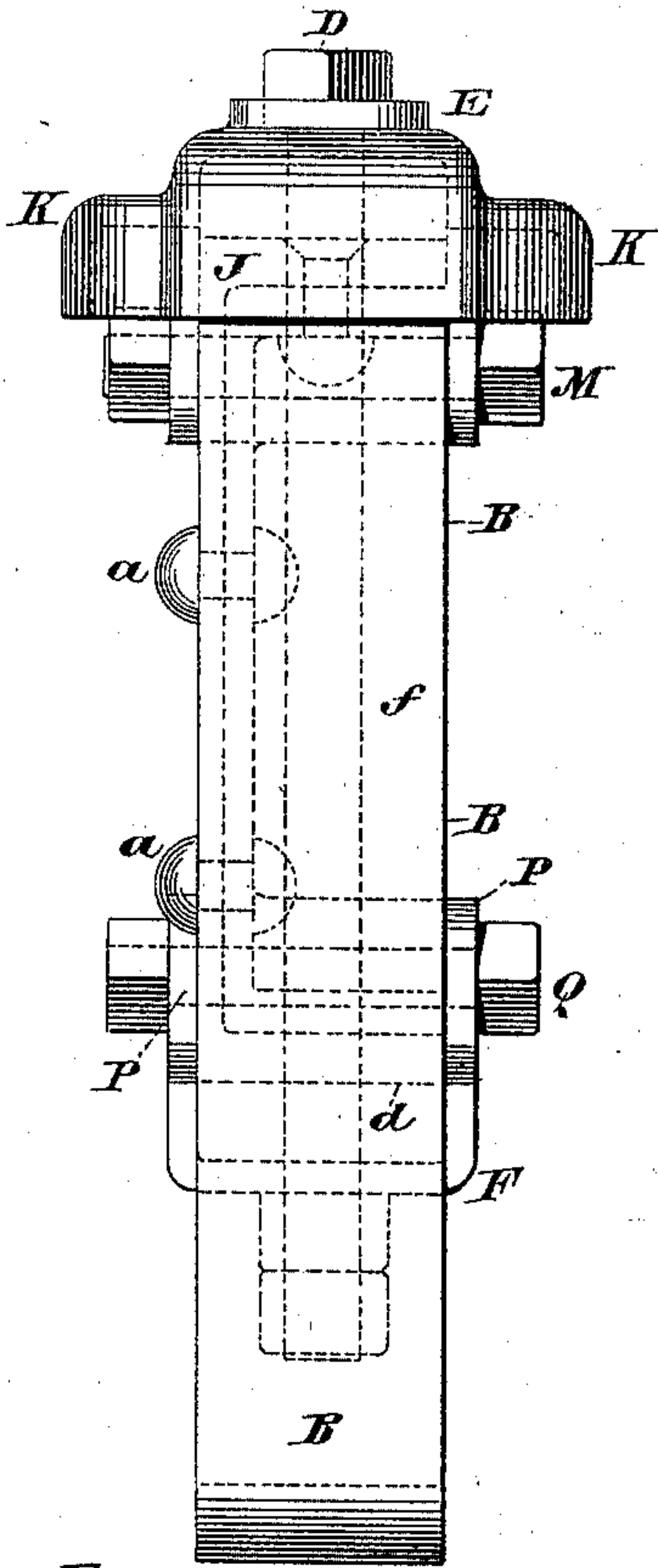


Fig. 6.

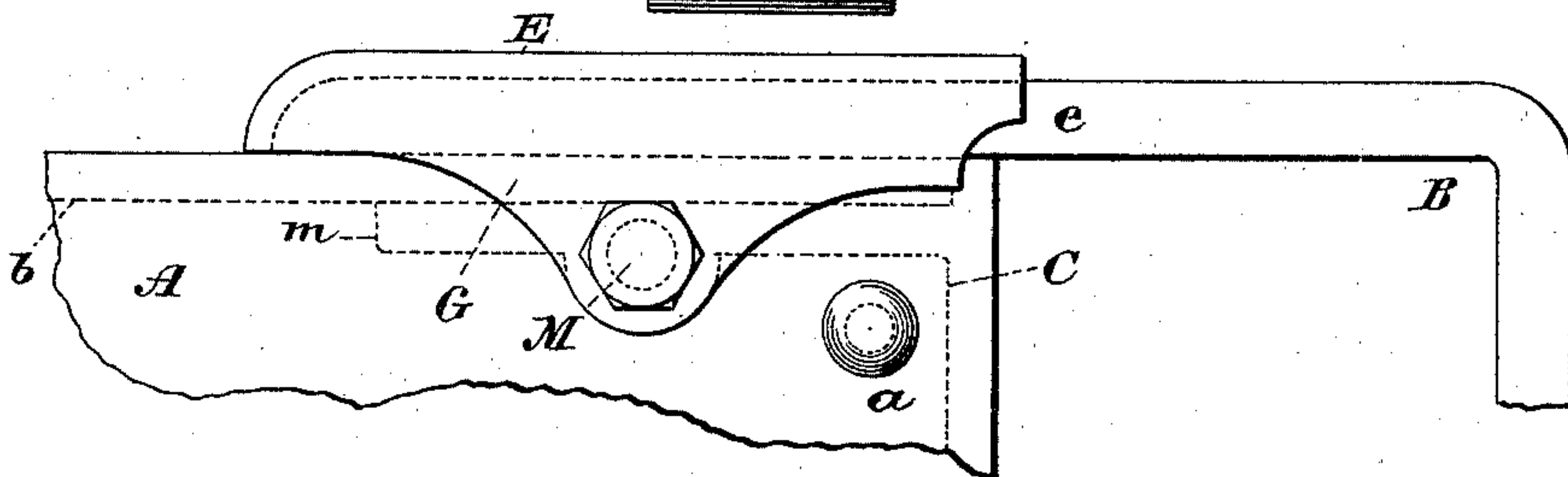
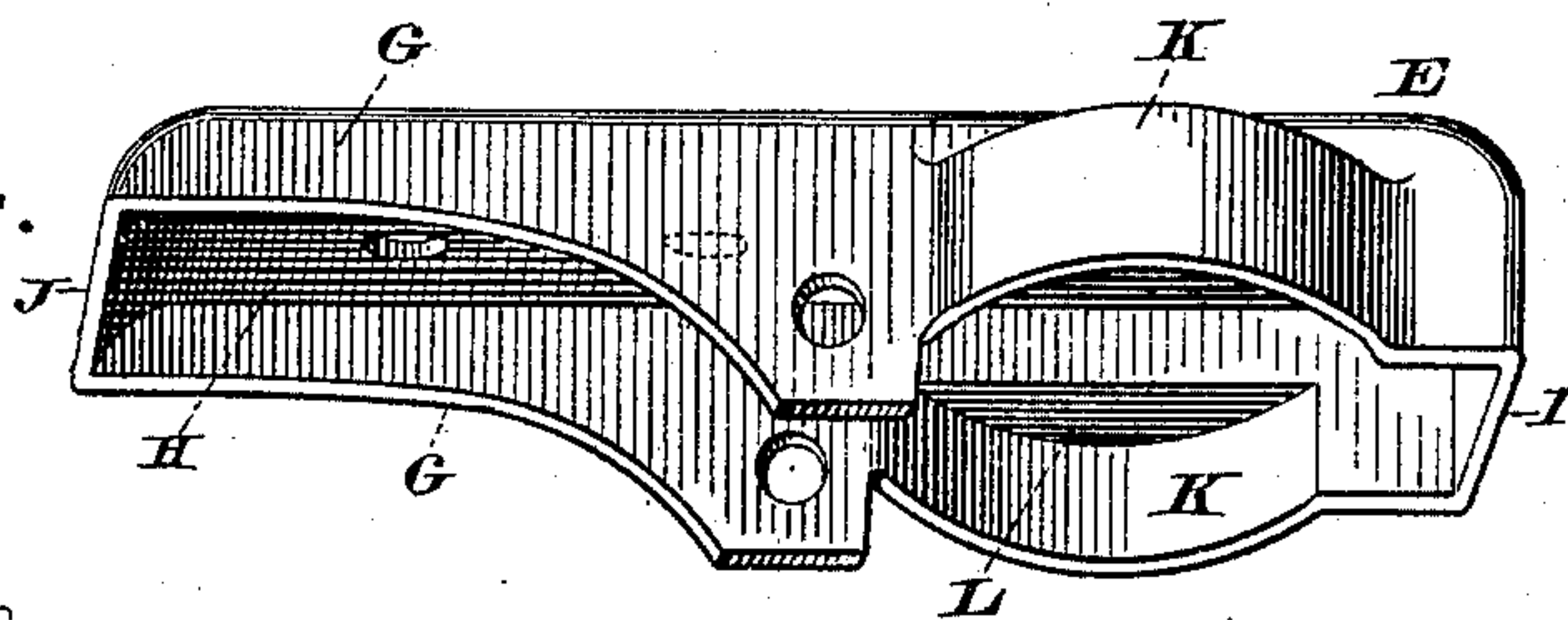


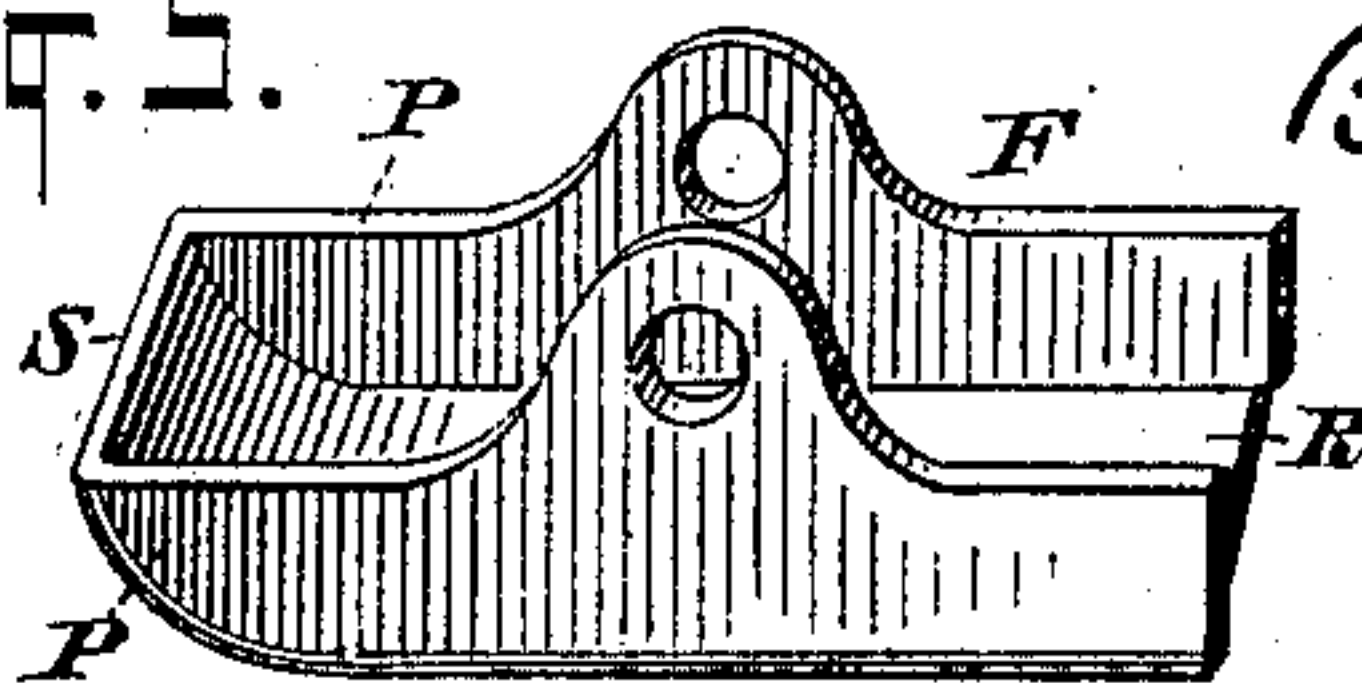
Fig. 4.



WITNESSES.

*Gustave Dietrich.*  
*John W. Kehlenbeck.*

Fig. 5.



INVENTOR

*Benjamin W. Tucker,*

BY

*Chas. C. Gill*

ATTORNEY.



# UNITED STATES PATENT OFFICE.

BENJAMIN W. TUCKER, OF NEWARK, NEW JERSEY.

## CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 598,651, dated February 8, 1898.

Application filed December 8, 1897. Serial No. 661,160. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN W. TUCKER, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Car-Trucks, of which the following is a specification.

The invention relates to improvements in car-trucks, and particularly to the class of car-trucks referred to in Letters Patent of the United States Nos. 583,612 and 583,613, granted to me June 1, 1897, and No. 584,489, granted to me June 15, 1897.

The present invention pertains particularly to means for securing and strengthening the pedestal-frames and enabling said frames to withstand the strain which in use comes upon them.

The present invention is not limited to any special side frame, nor in its broader scope to any special pedestal-frame, but consists in the means hereinafter described and claimed applied to the ends of the side frames of the truck and extending over portions of the pedestal-frames, whereby said pedestal-frames are firmly secured and their strength and durability increased.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of one end of the side frame of a metal car-truck frame embodying the features of the present invention. Fig. 2 is a side elevation of same. Fig. 3 is an end view of same. Fig. 4 is a detached perspective view of a cap embracing the invention and applicable to the upper portion of the side frame and pedestal-frame. Fig. 5 is a like view of a cap applicable to the lower portion of the side frame and pedestal-frame, and Fig. 6 is a side elevation of a detached portion of a truck-frame embodying the invention in one of its modified forms.

In the drawings, A designates the side frame of a car-truck, B the pedestal-frame, and C an inner rear section secured by the rivets *a* to the web of the side frame and having the vertical transverse flange intermediate the outer ends of the upper and lower flanges *b* *d* of said side frame and constituting a rubbing-surface for the usual axle-box, which in

use will be confined by the pedestal-frame B and be adapted to have a limited vertical reciprocating motion therein. The side frame A, pedestal-frame B, and inner section C shown in the accompanying drawings are substantially identical with the devices shown, described, and claimed in the aforesaid Letters Patent Nos. 584,489 and 583,613, and hence need not be more specifically described herein.

The pedestal-frame B in its outline is clearly illustrated in Fig. 2, in which it will be seen that said pedestal-frame comprises an upper horizontal member *e*, an outer vertical member *f*, a lower horizontal member *g*, an inner vertical member *h*, and a lower horizontal member *i*, the members *e i* extending inward upon the flanges *b d* of the side frame A and being preferably secured by means of the two vertical bolts D D, which extend vertically through said members *e i*, said flanges *b d*, and the horizontal upper and lower flanges *m n* of the inner rear section C, all of which is clearly illustrated in Fig. 2.

The present invention is also illustrated in Fig. 2, in which E denotes the upper cap applied to the side frame and pedestal-frame and F the lower cap applied to the side frame and pedestal-frame. The upper cap E in its preferred form is illustrated in a perspective view in Fig. 4, in which it will be seen that said cap is in one integral cast or pressed steel piece and formed with the sides G G corresponding with one another, the horizontal top H apertured to receive the bolts D D, the outer vertical end I, which passes downward over the upper outer corner of the pedestal-frame B, the inner curved or substantially vertical end J, which extends downward over the inner end of the upper member *e* of the pedestal-frame B, and the laterally-curved or rounded portions K K, which extend outward from the sides G G, centrally over the axle-box, and constitute retaining-sockets for the usual springs, which are of known form and construction and are arranged intermediate the lower surface of the upper member *e* of the pedestal-frame B and the upper surface of the axle-box. As clearly illustrated in Figs. 2 and 4, the outwardly-curved portions K K of the cap E have top surfaces L L, which, as more clearly indicated



by dotted lines in Fig. 2, are slightly above the lower surface of the upper member *e* of the pedestal-frame B, and the purpose of thus arranging the said top surfaces L above the lower surface of the pedestal member *e* is to prevent the usual springs employed above the axle-boxes from pressing directly upon any portion of the cap E, but on the contrary to confine the pressure of said springs to the pedestal member *e*, which is strengthened by the cap E much more effectively than if the force of said springs came upon said cap. The sides G G of the cap E snugly inclose the sides of the upper portion of the pedestal-frame B and extend downward upon the opposite sides of the side frame A and inner section C, whereby the cap E may be secured in place by the transverse bolt M, passing through said side frame, said inner section C, and said sides G G, as clearly illustrated in Figs. 1, 2, and 3.

The upper portion or top H of the cap E fits snugly upon the upper surface of the pedestal-frame B, while the outer end I of said cap passes downward over a portion of the outer vertical member *f* of the pedestal-frame, and the inner end J of said cap passes downward over the inner end of the upper member of said pedestal-frame and engages the upper flange *b* of the side frame A. The top of the cap E is apertured, as above described, to receive the bolts D D, and hence the latter bolts while performing their usual functions also aid in securing the cap E upon the pedestal-frame and also upon the side frame, thus materially aiding the transverse bolt M, which passes through the sides G G of said cap. The cap E resists any vertical or lateral motion in the pedestal-frame B, and in addition thereto imparts to said pedestal-frame its own strength and the additional strength which comes from the connection of said cap to the side frame of the truck. When the cap E extends outward over the upper outer corner of the pedestal-frame, greatly-increased strength and durability are not only imparted to the pedestal-frame, but said cap furnishes the socket represented by the curved portions K K, which, without taking the force of the usual springs, centers said springs below the upper member of the pedestal-frame. If it should be at any time desired to employ an individual socket for the spring over the axle-box, the outwardly-curved portions K K may be omitted from the cap E, and a socket, such as that indicated by the letter R in the aforesaid Letters Patent No. 584,489, may be applied to the pedestal-frame.

The modification of the cap E just above referred to is indicated in Fig. 6, which illustrates the cap E secured by the transverse bolt M, but not provided with the outer portion which furnishes the socket for the spring. The cap shown in Fig. 6 imparts material strength to the pedestal-frame and holds the same downward upon the upper flange of the side frame and also prevents any vertical or

lateral movement in the pedestal-frame, but the complete form of the cap illustrated in Fig. 4 is preferred, since greater advantages are attained by its use.

The lower cap F, applied to the pedestal-frame and to the side frame, is more clearly illustrated in Figs. 2 and 5, in which it will be seen that said cap is formed with the upwardly-extending vertical sides P P, which are apertured to receive the transverse bolt Q, the bottom R connecting said sides P P and the end S, which closes in the inner end of the lower member *i* of the pedestal-frame B, as indicated by the dotted lines in Fig. 2. The sides P P closely fit upon the opposite sides of the pedestal-frame B and said frame A and receive the bolt Q, which passes transversely through said sides and through the side frame A and inner section C, whereby the cap F may be effectually supported from the side frame. The bottom R of the cap F closely fits against the lower surface of the pedestal member *i*, as indicated by the dotted lines in Fig. 2, and is apertured to receive the bolts D D, which also pass through said cap F and are utilized in securing the same. The outer end of the lower inverted cap F has its sides P P extending outward a little farther than the bottom R, in order that the outer edges of said sides P P may extend slightly upon the vertical pedestal member *h*, as indicated in Fig. 2, the said sides P P not extending outward farther than indicated, so as not to interfere with the usual movement of the axle-box.

The cap F imparts material strength, rigidity, and durability to the pedestal-frame B, and combines with the cap E in so securely maintaining said pedestal-frame that entire safety in use is attained. The transverse bolts M Q and vertical bolts D D most effectually secure the parts comprising the end of the side frame, and it will be apparent that in case of breakage to either or both of the bolts M Q the bolts D D could be safely relied upon for temporary use, and that in case of the breakage or loss of either or both of the bolts D D the bolts M Q could be relied upon for temporary use in maintaining the pedestal-frame.

While in the drawings I illustrate a pedestal-frame and side frame of substantially the exact construction shown, described, and claimed in the aforesaid Letters Patent No. 584,489, it is to be understood that the present invention is not limited to the pedestal-frame or side frame shown in said patent, but is equally applicable to other side frames and pedestal-frames—such, for illustration, as those shown in the aforesaid Letters Patent No. 583,613—and especially to those shown in the aforesaid Letters Patent No. 583,612, in which the upper and lower flanges of the side frame extend beyond the vertical end of the web of the side frame pedestal members.

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



1. In a car-truck, the side frame, and the pedestal-frame at the end of said side frame, combined with the cap applied upon said side frame and extending over the upper member of said pedestal-frame; substantially as set forth.

2. In a car-truck, the side frame and the pedestal-frame at the end of said side frame, combined with the cap applied upon said side frame and extending over the upper member of said pedestal-frame and having the outwardly-projected portions which form a retaining-pocket for the spring; substantially as set forth.

3. In a car-truck, the side frame, and the pedestal-frame at the end of said side frame, combined with the cap whose vertical sides extend downward over the upper edges of said side frame and the upper member of said pedestal-frame, and whose upper portion bears upon said pedestal-frame, and the transverse bolt passing through the sides of said cap and said side frame; substantially as set forth.

4. In a car-truck, the side frame, and the pedestal-frame at the end of said side frame, combined with the cap whose vertical sides pass downward upon the sides of said side frame and said pedestal-frame and whose upper portion bears upon said pedestal-frame, and the vertical bolt extending through said cap and through the flanges of the side frame; substantially as set forth.

5. In a car-truck, the side frame and the pedestal-frame at the end of the said side frame, combined with the cap whose vertical sides extend downward upon the sides of said pedestal-frame and said side frame and whose upper surface bears upon said pedestal-frame, combined with the transverse bolt passing through said sides and said side frame, and the vertical bolts which pass through said cap and the flanges of said side frame; substantially as set forth.

6. In a car-truck, the side frame having the upper and lower inwardly-turned flanges and the pedestal-frame at the end of said side frame and corresponding in width with said flanges, combined with the cap having the upper portion and vertical sides and adapted to receive the upper member of said pedestal-frame and a portion of said side frame and means for securing said cap in place, the sides of said cap being parallel with one another and closely fitting the vertical sides of said

pedestal-frame and said side frame; substantially as set forth.

7. In a car-truck, the side frame, and the pedestal-frame at the end of said side frame, combined with the cap applied upon said side frame and extending over the upper member of said pedestal-frame and having the oppositely-projected portions forming a socket for the spring, the upper inner surfaces of said socket being above the lower surface of said pedestal-frame member, whereby the direct force of the spring is confined to said pedestal-frame member; substantially as set forth.

8. In a car-truck, the side frame and the pedestal-frame at the end of said side frame, the upper member of said pedestal-frame extending over upon the upper edges of said side frame, combined with the cap applied over said side frame and said pedestal-frame, and means securing said cap to said side frame; substantially as set forth.

9. In a car-truck, the side frame and the pedestal-frame at the end of said side frame, combined with the cap applied upon said side frame and the upper member of said pedestal-frame and extending downward over the upper outer corner of said pedestal-frame, and means securing said cap to said side frame; substantially as set forth.

10. In a car-truck, the side frame and the pedestal-frame at the end of said side frame, said pedestal-frame having its inner lower horizontal member extending along the lower edges of said side frame, combined with the cap applied upon said inner lower pedestal-frame member and means securing said cap to the side frame; substantially as set forth.

11. In a car-truck, the side frame and the pedestal-frame at the end of said side frame, said pedestal-frame comprising the bar bent to form the pedestal-space and having its ends extended over upon said side frame, combined with the caps applied to said side frame and extending over the upper and lower members of said pedestal-frame; substantially as set forth.

Signed at Newark, in the county of Essex and State of New Jersey, this 6th day of December, A. D. 1897.

BENJAMIN W. TUCKER.

Witnesses:

ROBERT S. GRUNNION,  
FRANK BARTLETT.