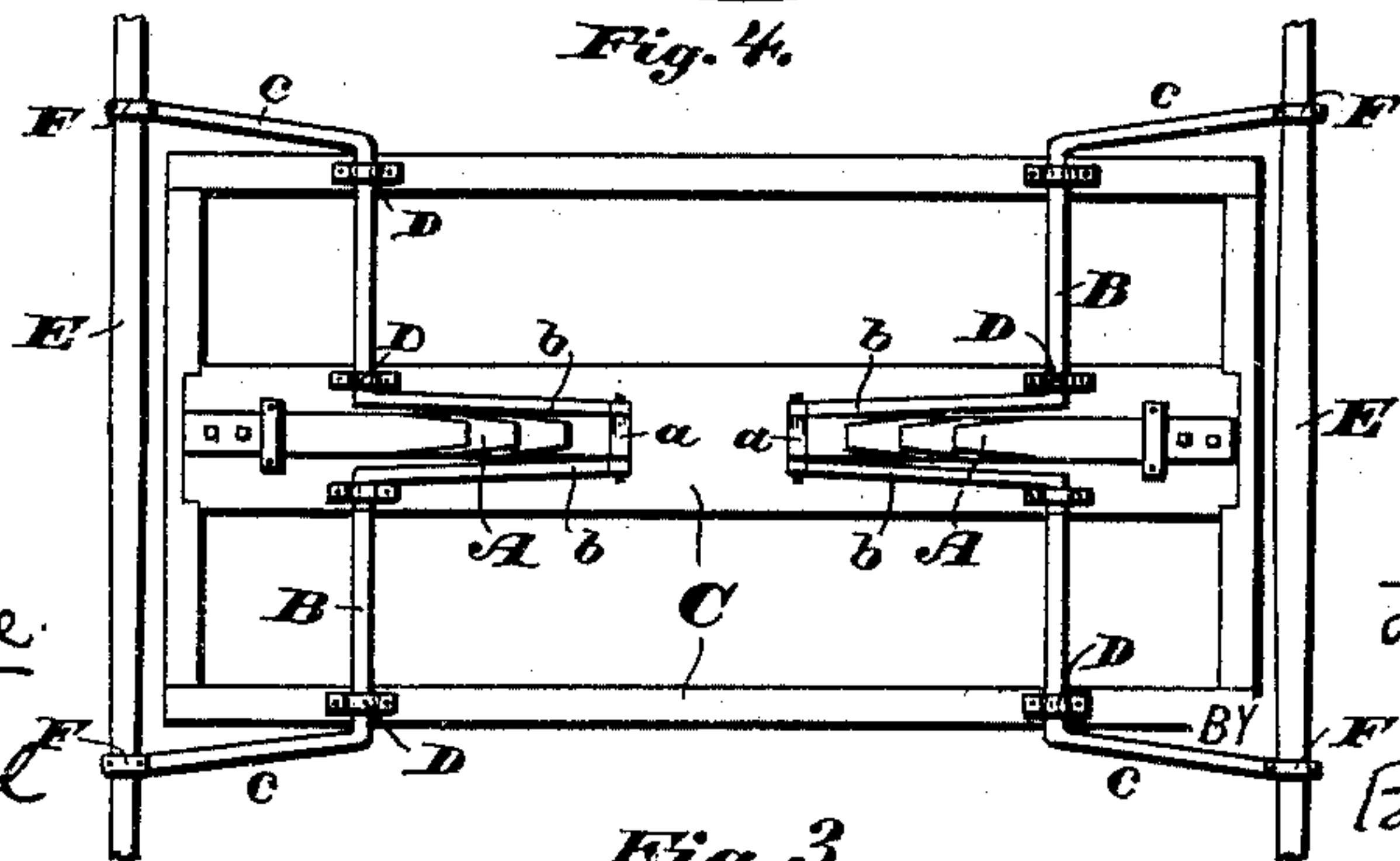
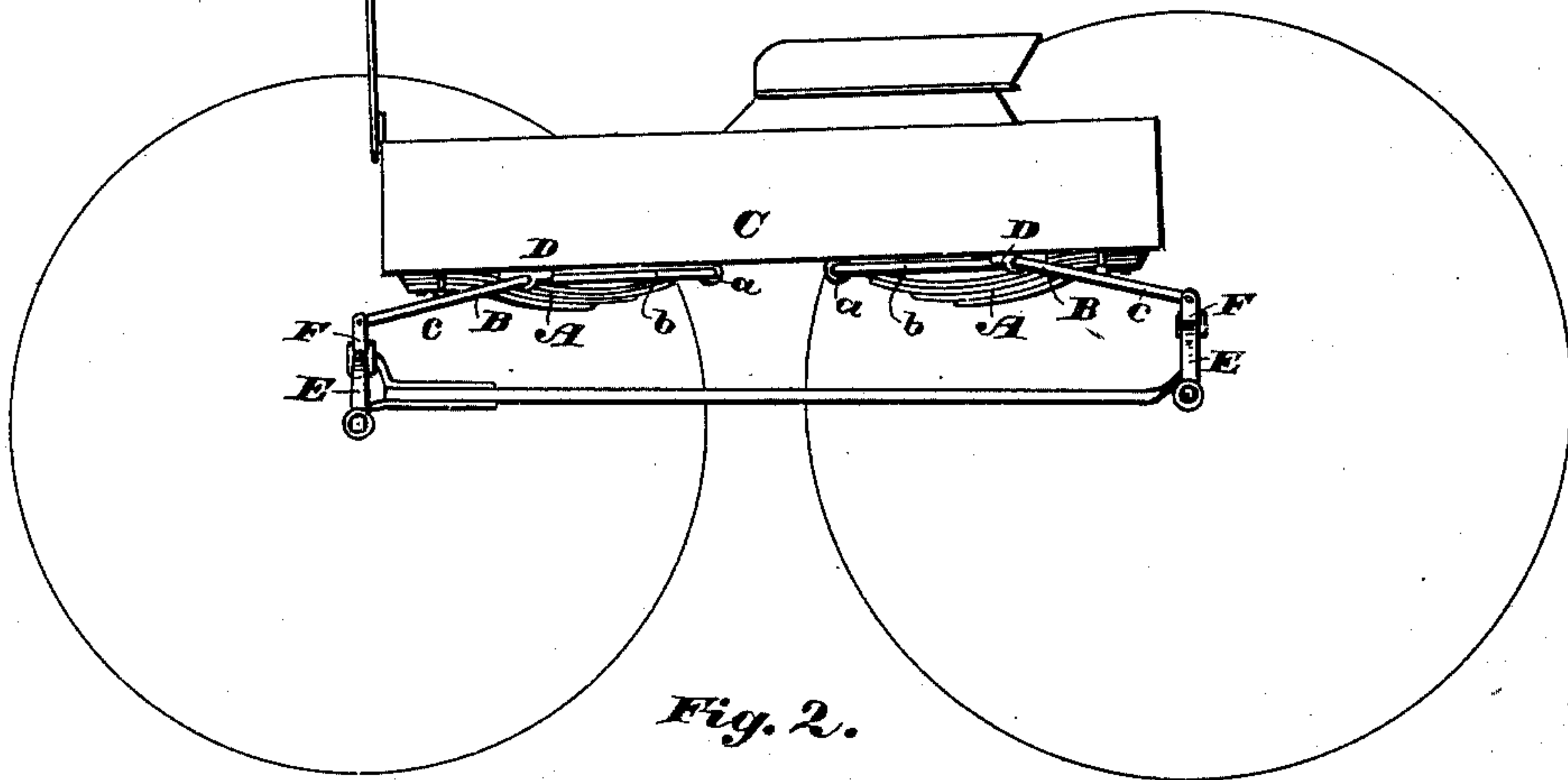
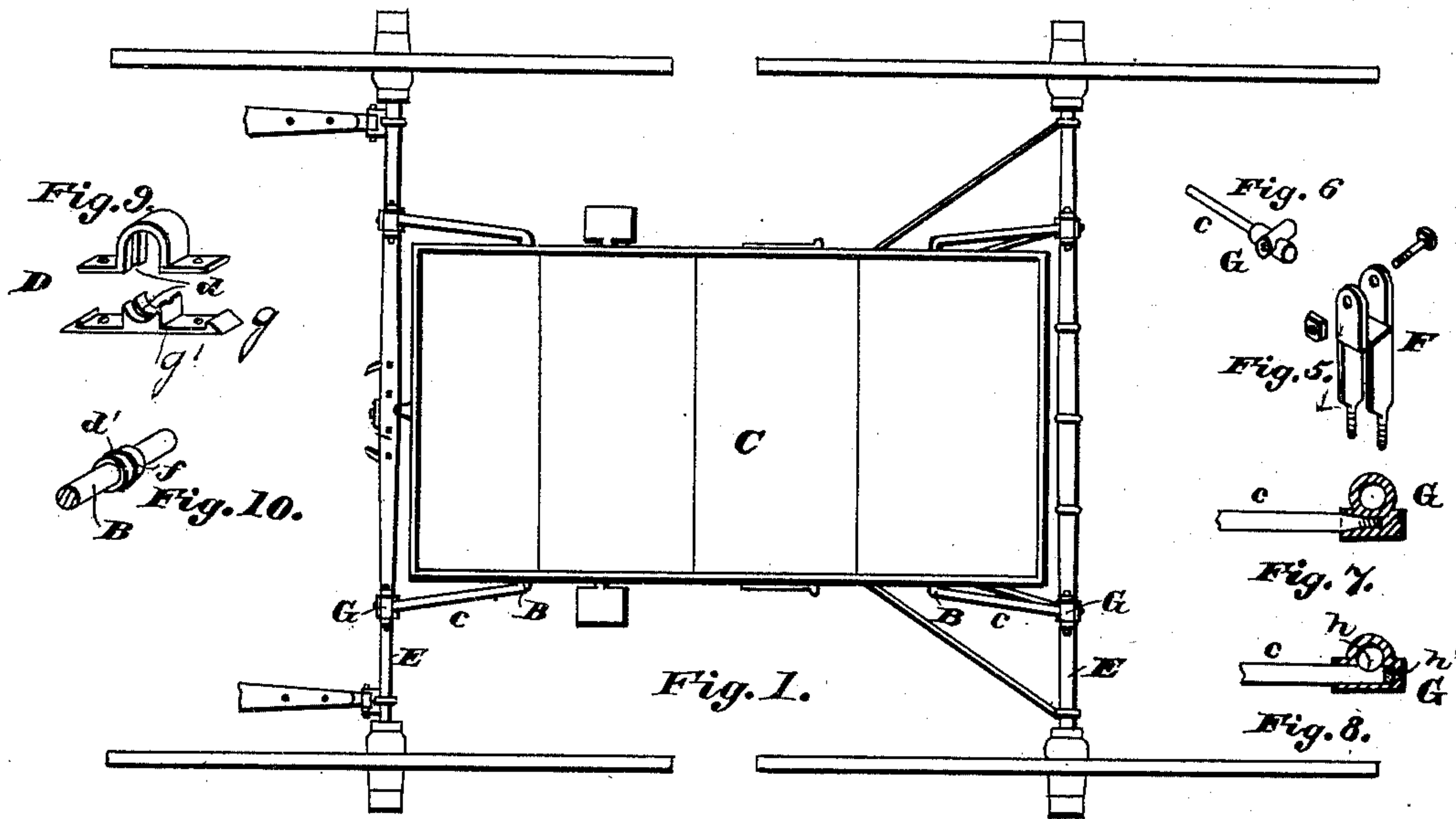


(No Model.)

L. PENTZ.
VEHICLE SPRING.

No. 375,831.

Patented Jan. 3, 1888.



WITNESSES:

Harry Grease

Fred W. Bond

INVENTOR

Leri Pentz

Bond & Wise

ATTORNEYS

UNITED STATES PATENT OFFICE.

LEVI PENTZ, OF CANTON, OHIO, ASSIGNOR OF ONE HALF TO CHARLES L. PAAR, OF SAME PLACE.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 375,831, dated January 3, 1888.

Application filed September 7, 1887. Serial No. 219,011. (No model.)

To all whom it may concern:

Be it known that I, LEVI PENTZ, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Vehicle-Springs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon, in which—

Figure 1 is a top view of a vehicle, showing the different parts placed in proper position. Fig. 2 is a side view. Fig. 3 is a bottom or under side view showing the springs properly attached to the vehicle-frame and the spring-connections. Fig. 4 is a detached view of one of the springs. Fig. 5 is a detached view of one of the axle-clips. Fig. 6 is a perspective view of the bar-connection. Fig. 7 is a longitudinal section of the bar-connection. Fig. 8 is a longitudinal section of the bar-connection, showing a modification. Fig. 9 is a detached view of the bearing for the spring-bar. Fig. 10 is a view of small portion of the spring-bar, showing packing located thereon.

The present invention has relation to vehicle-springs; and it consists in the different parts and combination of parts, hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the springs, which are substantially of the form shown in Figs. 2, 3, and 4, and, as shown, one end of these springs is securely attached to the bottom or underside of the vehicle body or frame, substantially as shown in Fig. 3. The free ends of each of the springs A are provided with the eyes *a*, which are for the purpose of receiving the spring-bars B, as shown in Figs. 2 and 3. The eyes *a* are preferably lined with brass or like material for the purpose of preventing the bars B from wearing, cutting, or rattling. The spring-bars B are substantially of the form shown in Fig. 3, and, as shown, are each provided with the arms *b*

and *c*, the arms *b* extending along the edges of the springs A and parallel therewith. These spring-bars B are pivotally attached to the vehicle body or frame C by means of the boxes D, and the arms *c* are pivotally attached to the axles E E by means of clips F and the sockets G. The boxes D are each provided with groove *d*, which is for the purpose of receiving the rib *d'* on the leather packing *f*, and thereby securely hold said packing in proper position. For the purpose of assisting in holding the two sections of the boxes D in proper position the flanges *g* and *g'* are provided. The flange *g'* is provided with a semi-circular recess, which forms the circular opening with the opposite section or half of the box D.

The boxes D are securely attached to the vehicle frame or body C by means of suitable clamping-bolts, and are located substantially as shown in Fig. 3. The ends of the arms *c* are screw-threaded, which enter the screw-threaded sockets G, as shown in Fig. 7. These sockets are securely attached to the clips F by means of suitable clamping-bolts.

In Fig. 8 is shown a modified form of attaching the bars or arms *c* to the sockets G. In this case the inner end of the arm *c* is provided with a recess or groove, *h*, which is for the purpose of receiving the clamping-bolt. The socket is also provided with the rubber cushion *h'*, which abuts against the end of the arm *c*, as shown in said Fig. 8, and is for the purpose of preventing rattling.

It will be seen that to regulate the stiffness of the springs said springs may be lengthened or shortened, and the arms *b* lengthened or shortened in proportion. The normal position of the springs A is shown in Fig. 2, and it will be seen that any vibration of the vehicle body or frame C will carry with it the springs A and the spring-bars B, thereby giving an easy motion to said vehicle body or frame C, and at the same time giving a long motion to the body or frame of the vehicle. It will be seen that by attaching the arms *c* above the pivoting point of the sockets G that the spring-bars B will act freely and not bind in the boxes D.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The box D, formed in two pieces or sections, said sections being provided with the groove *d*, and one of said sections having the flanges *g* and *g'*, the leather or like packing *f*, provided with the rib *d'*, and the spring-bar B, substantially as and for the purpose specified.

2. The combination of the springs A, attached to the frame C, the spring-bars B, pro-

vided with the arms *b* and *c*, the arms *b* being parallel with the springs A, the screw-threaded sockets G, the screw-threaded arms *c*, the boxes D, and the frame C, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

L. PENTZ.

Witnesses:

E. J. LOBDELL,

FRED W. BOND.

It is hereby certified that Letters Patent No. 375,831, granted January 3, 1888, upon the application of Levi Pentz, of Canton, Ohio, for an improvement in "Vehicle-Springs," was erroneously issued to the said "Levi Pentz and Charles L. Paar" as joint owners; that said Letters Patent should have been issued to said *Charles L. Paar* as sole owner, he being the assignee of the entire interest; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 24th day of January, A. D. 1888.

[SEAL.]

D. L. HAWKINS,
Acting Secretary of the Interior.

Countersigned:

BENTON J. HALL,
Commissioner of Patents.