

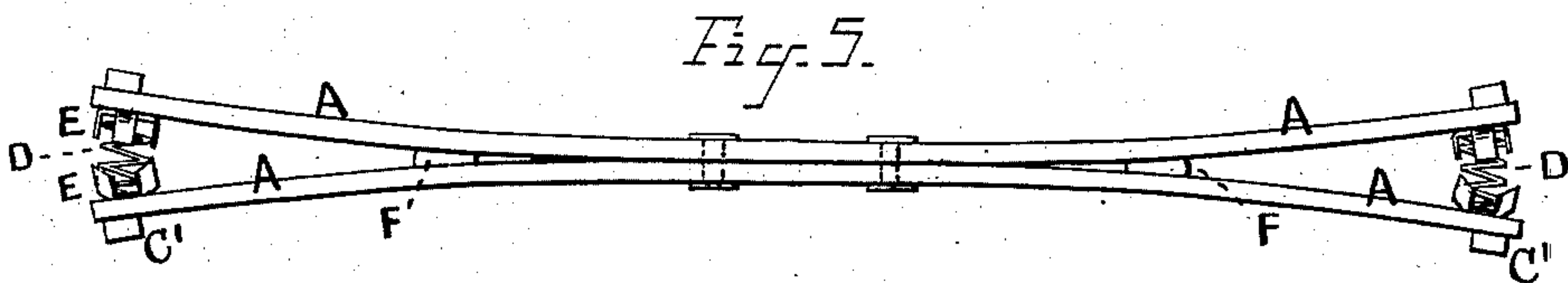
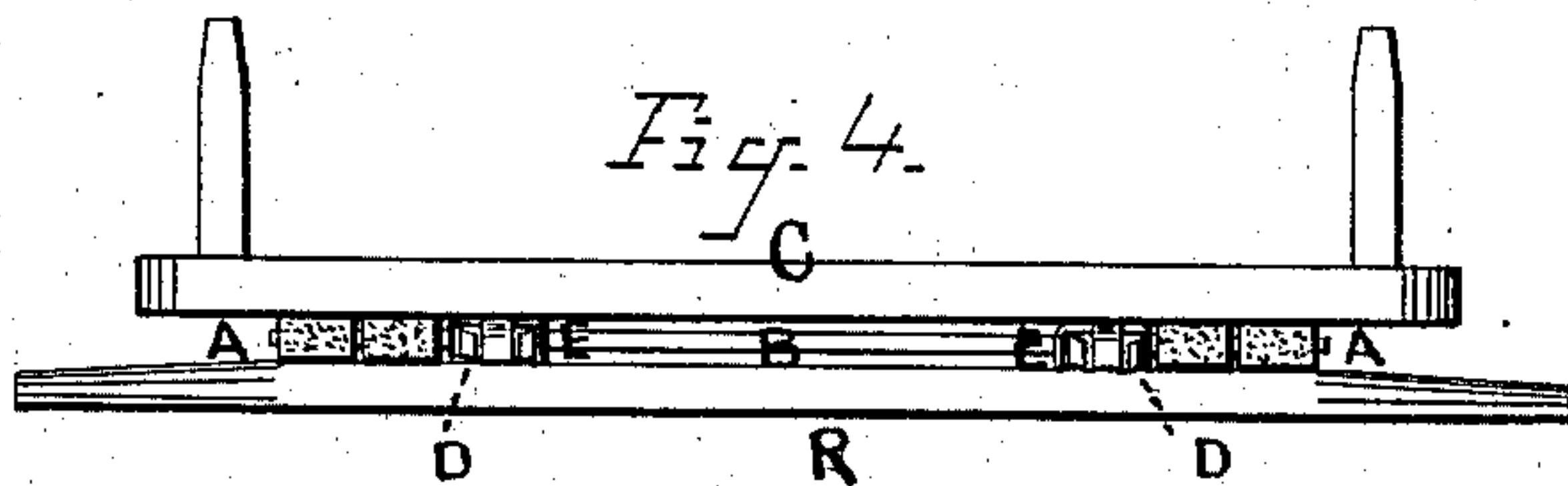
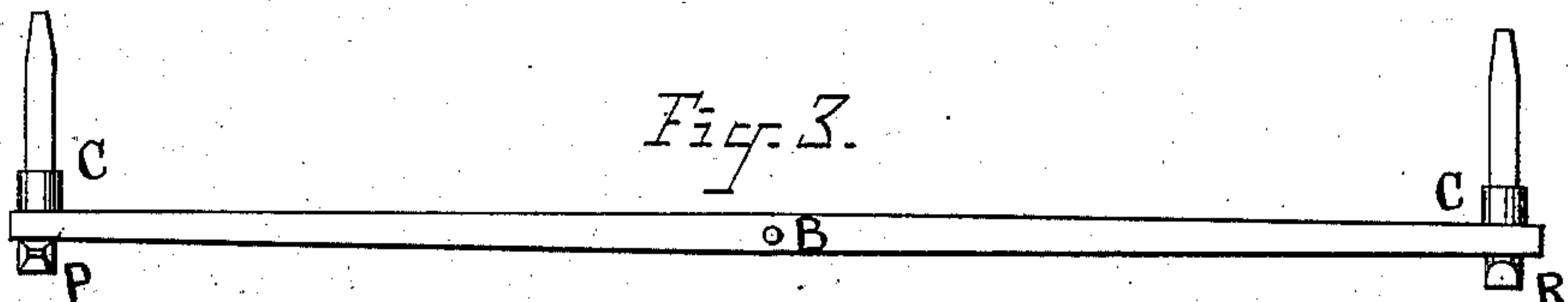
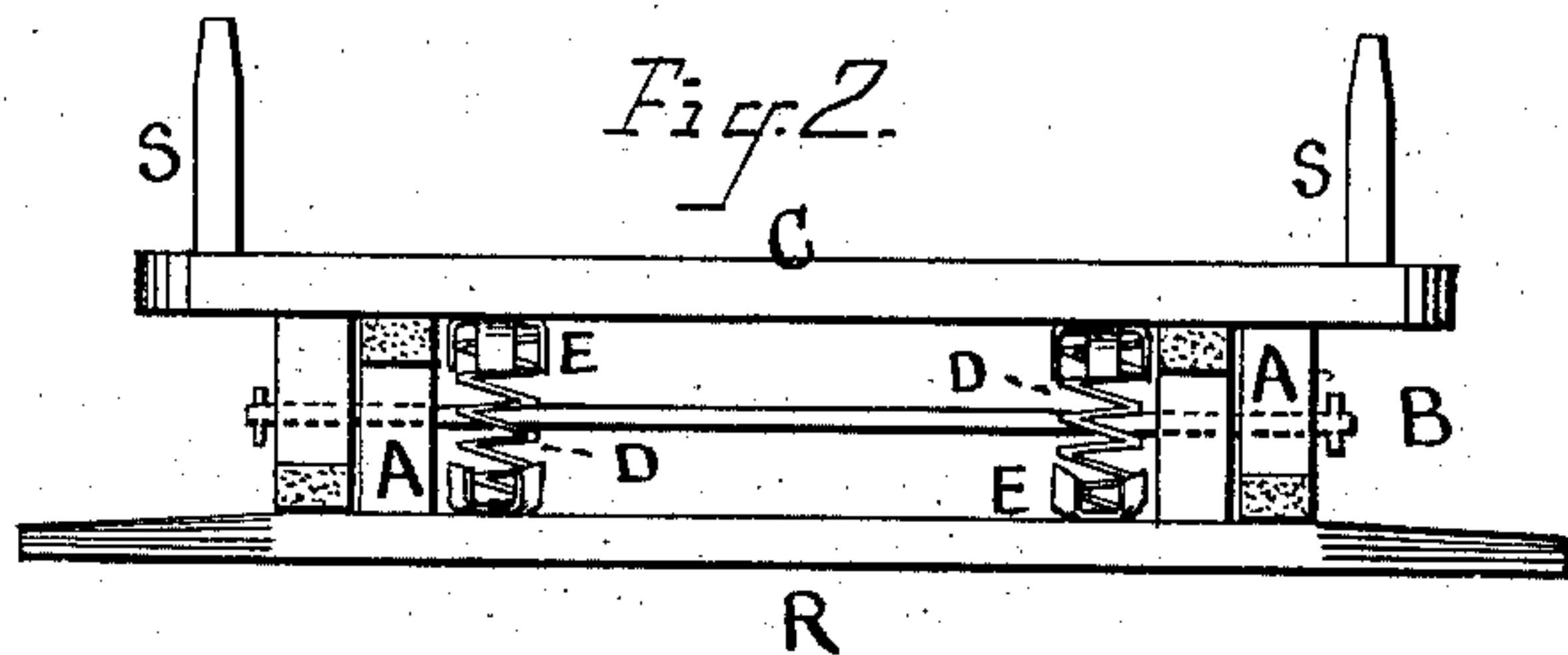
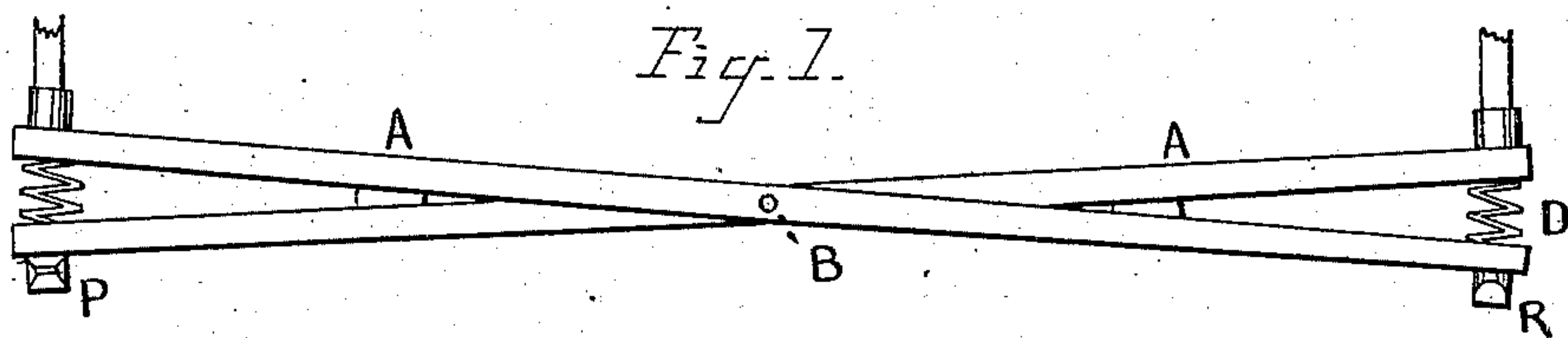
(No Model.)

C. M. BLYDENBURGH.

Wagon Spring.

No. 239,708.

Patented April 5, 1881.



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CHARLES M. BLYDENBURGH, OF RIVERHEAD, NEW YORK.

WAGON-SPRING.

SPECIFICATION forming part of Letters Patent No. 239,708, dated April 5, 1881.

Application filed February 7, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. BLYDENBURGH, of Riverhead, county of Suffolk, and State of New York, have invented certain new and useful Improvements in Wagon-Springs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to the construction of spring-supports for wagon-bodies, and has for its object the production of cheap, strong, and durable spring-frames, especially adapted for farm-wagons, and which will admit of adjustment for use with either light or heavy loads.

It consists of a light frame to be interposed between the running-gear and body of the wagon, or to be attached directly to the running-gear as a part thereof, this frame being constructed of elastic slats or bars projecting longitudinally to the ends of the wagon from a central point of support, and whose outer free ends are united transversely, and are made to rest upon spiral or other form of auxiliary springs.

It consists, furthermore, in the use of a transverse fulcrum-bar interposed between the upper and lower longitudinal slats, close to their point of juncture and confinement, for the purpose of stiffening their elasticity.

In the accompanying drawings, Figure 1 is a side elevation, and Fig. 2 an end view, of my improved slat spring-frame, when constructed with slats arranged in pairs which cross each other centrally, and are centrally confined by means of a transverse rod, forming a hinge-joint between the intersecting slats. Fig. 3 is a side elevation, and Fig. 4 an end view, of the same frame when folded completely down, as occurs when the spiral springs are either removed or fully compressed, as appears in Fig. 4. Fig. 5 is a side elevation of my slat spring-frame constructed with superimposed instead of intersecting slats, the slats being placed upon each other in pairs and fastened together so that their free projecting ends shall spring apart; and Fig. 6 is an elevation of a similar frame constructed with single instead of double slats, the confined ends or portions of the slats being secured in a stiff supporting-frame.

A A are longitudinal bars, slats, or strips of tough elastic wood or spring metal, made long enough to extend from end to end of the wagon. These longitudinal slats are preferably arranged in pairs, the slats in each pair being either laid side by side, and hinged together centrally by a transverse rod, B, so as to open apart at each end, as shown in Figs. 1 to 3, or else superimposed and bolted together centrally, their ends being left free to spring apart, as shown in Fig. 5. The free upper ends of the slats at each end of the frame are connected, so as to move together, by a transverse strip or bar, C, and the lower ends are connected and secured respectively to the front bolster, P, and hind axle, R, in which case the longitudinal slats connect the front and rear axles, and the ordinary coupling-pole or reach is dispensed with. Where the spring-frame is intended to be made detachable, instead of forming part of the running-gear, as shown in the drawings, the lower ends of the slats are connected by separate transverse bars C' C', Fig. 5, which take the place of the bolster P and axle R, upon which they rest, however, when in use. The upper transverse bars, C C, form body-rests for the wagon, and are provided with stud-staves S S.

Spiral springs D D, or elliptic or other equivalent forms of auxiliary springs, may be inserted either under the transverse bars C' C' or directly between the ends of the slats. When spiral springs are employed they are confined between cups or sockets E E, whose sides are notched, and each pair of sockets securing and confining the opposite ends of each spring are so placed as that the tongues projecting from the one socket shall intermesh with those of the other, so that when the spring is wholly compressed the two sockets shall interlock, as shown in Fig. 4.

F F, Fig. 5, are transverse fulcrum-bars inserted between the upper and lower members of the several pairs of slats A A outside of their point of confinement, at or about the center of the running-gear. These bars are held in position by dowel-pins in the bar fitting into sockets in the slats, or vice versa, so as to be readily detachable therefrom.

In the modification of my invention, in which the slats are hinged so as to close down one alongside of the other, as illustrated in Figs. 1,

2, and 3, the elasticity of the frame, when the transverse fulcrum-bars (F, dotted lines, Fig. 1) are removed, is due wholly to the interposed spiral springs D D; but by inserting the transverse fulcrum-bars F F in the angle formed by the intersection of the slats, (see dotted lines, Fig. 1,) the elasticity of the free ends of the slats is added to that of the spiral springs. Hence, in this form of frame or spring-support, when a light load is to be carried the fulcrum-bars are removed and the load rests wholly upon the spiral springs D D, the full play of which is permitted by the interlocking sockets E E, which, while confining the ends of the springs, permit their close compression, as shown in Fig. 4. When a heavier load is to be placed upon the wagon the transverse fulcrum-bars F F are inserted and the resilient power of the slats A A is added to that of the spiral springs. When, however, it is desirable to lower the body of the wagon and carry a very heavy load, such as sand, grain, fertilizers, &c., the transverse bars F and the spiral springs D may both be removed and the slats allowed to fold down side by side upon the axles or upon the transverse end bars, as shown in Fig. 3.

In the form of spring-frames shown in Figs. 5 and 6 the elasticity of the slats is in constant play, but is supplemented by the inter-

position of the spiral springs D D, and is modified by the interposition or withdrawal of the interposed fulcrum-bar F on either side.

The slatted spring-frames are cheaply made, are very durable, easily repaired, and very effective in operation.

Two or more pairs of slats may be employed in the construction of each frame.

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

1. A wagon-supporting frame constructed of longitudinal slats or bars A A, hinged so that their ends may close together, and combined with interposed springs D D, substantially in the manner and for the purpose herein set forth.

2. The combination, with intersecting longitudinal slats A A, hinged together and separated by interposed springs D, of interposed transverse fulcrum-bars F, substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES M. BLYDENBURGH.

Witnesses:

J. ACKER, Jr.,
DAVID A. BURR.