

No. 656,570.

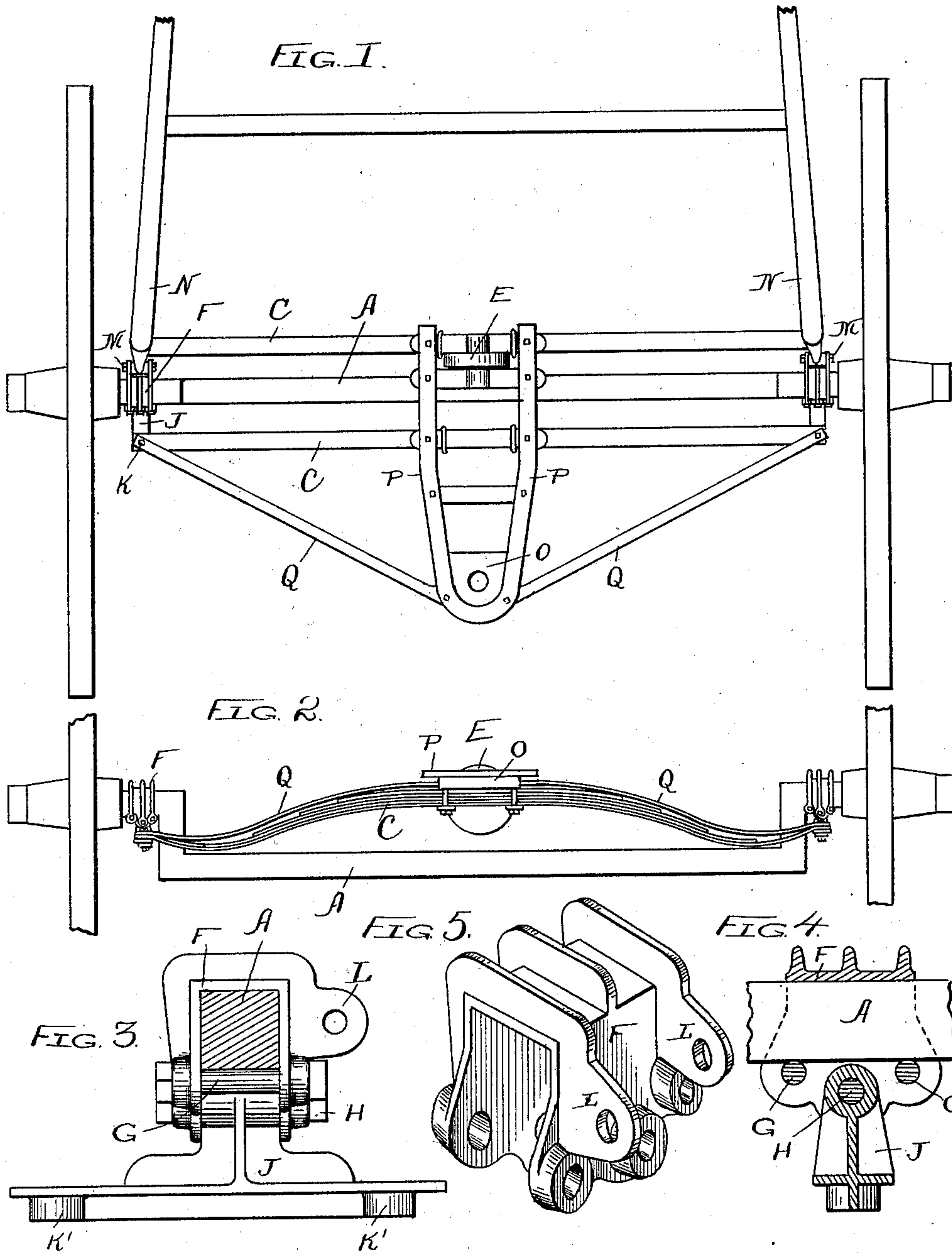
Patented Aug. 21, 1900.

S. F. PARSON.
SPRING WAGON GEAR.

(Application filed Nov. 8, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

Levi C. Curtis
H. W. Munday

INVENTOR:
SWEN F. PARSON.

BY *Wendell, Curtis & Adcock*
HIS ATTORNEYS

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FIG. 6.

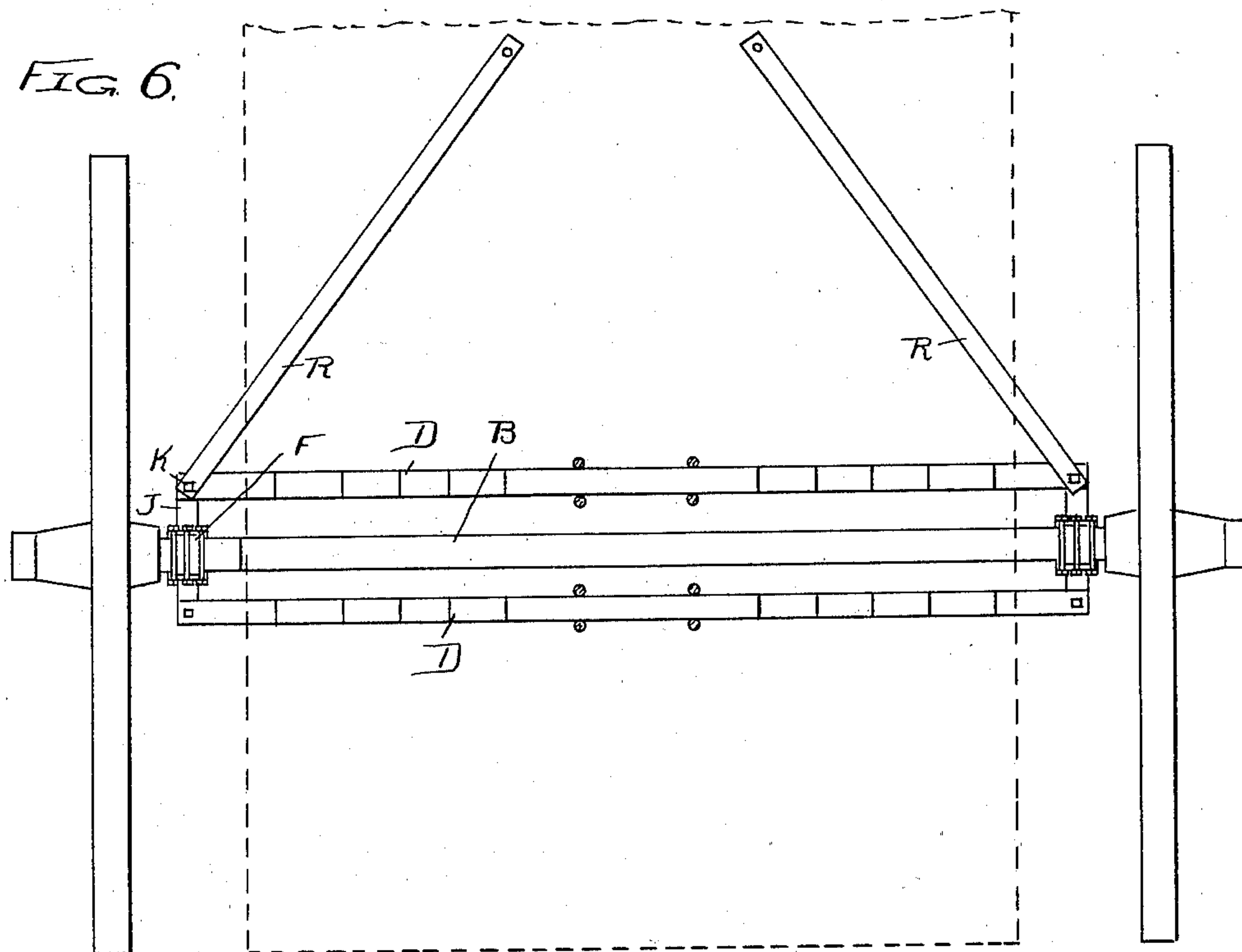
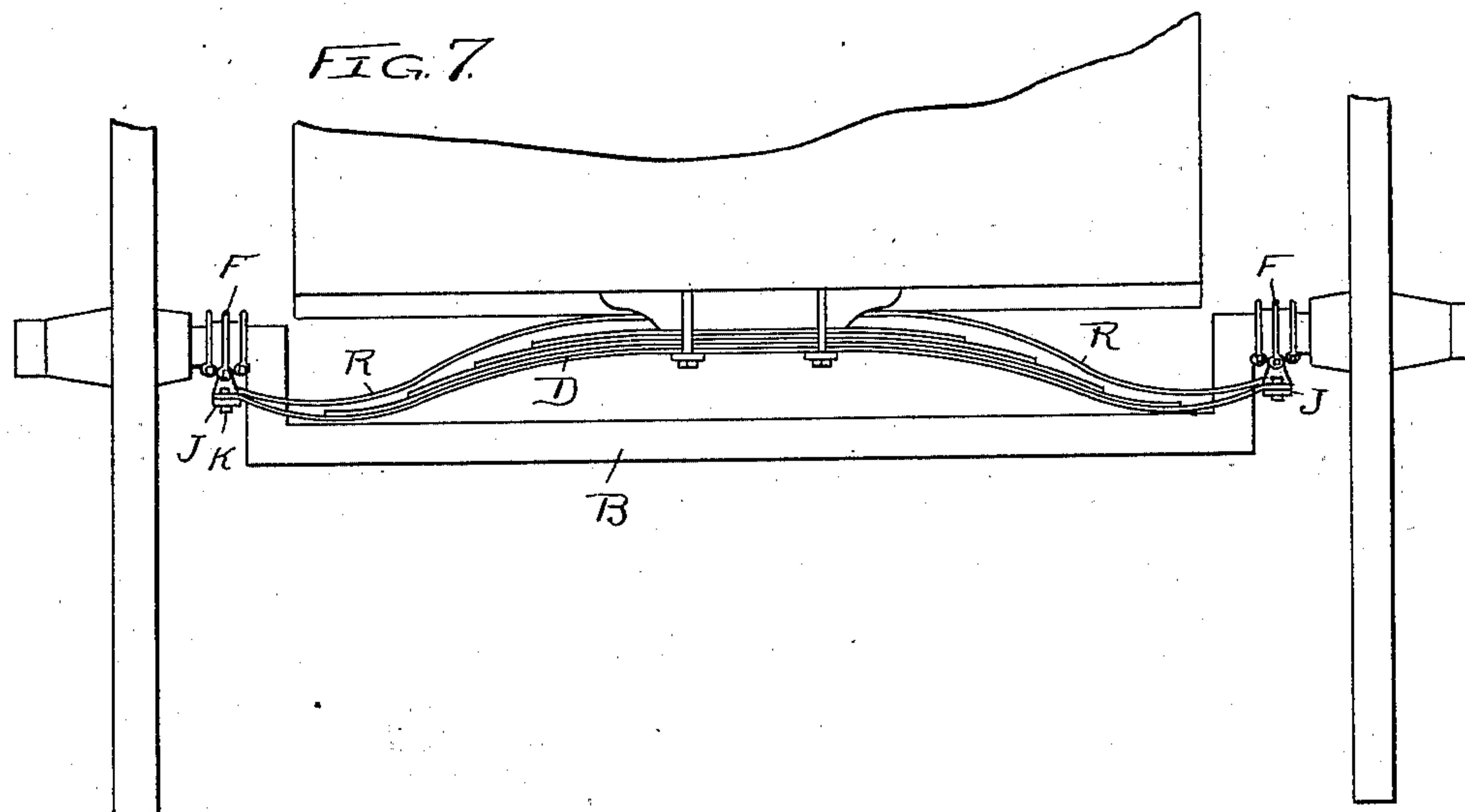


FIG. 7.



WITNESSES:

Sew. C. Curtis
H. W. Munday

INVENTOR:

SWEN F. PARSON

BY *Munday, Curtis & Adeock*
HIS ATTORNEYS.

UNITED STATES PATENT OFFICE.

SWEN F. PARSON, OF DE KALB, ILLINOIS, ASSIGNOR TO MADISON D. SHIPMAN, CHARLES E. BRADT, AND SAMUEL E. BRADT, OF SAME PLACE.

SPRING-WAGON GEAR.

SPECIFICATION forming part of Letters Patent No. 656,570, dated August 21, 1900.

Application filed November 8, 1899. Serial No. 736,297. (No model.)

To all whom it may concern:

Be it known that I, SWEN F. PARSON, a citizen of the United States, residing at De Kalb, in the county of De Kalb and State of Illinois, have invented a new and useful Improvement in Spring-Wagon Gear, of which the following is a specification.

This invention relates to improvements upon the construction shown in the patent to Reynolds, Reynolds, and Shipman, No. 594,099, of November 23, 1897. In the use of the patented construction it has been found difficult to obtain the right curvature or bend in the springs and that unless exactly the right bend were given them the results would not be satisfactory; also, that the bend which would work best with one length of hanger, such as shown at O in the patent, would not do at all with other lengths of hangers. The construction was also otherwise objectionable. To obviate said objections and to insure the proper working of the springs, to simplify the shackle and the support for the springs, and to produce a flexible and secure attachment of the axle to the body and springs, also to adapt the invention to a reachless wagon and to produce a simple and durable gear are the main objects of my invention.

The nature of my improvement is fully disclosed below, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan of the front axle and springs of my improved wagon. Fig. 2 is an elevation of the parts shown at Fig. 1. Figs. 3 and 4 are vertical sections, taken at right angles to each other, of the shackle or support for the springs. Fig. 5 shows the clevis or shackle detached. Fig. 6 is a plan, and Fig. 7 is a rear elevation, showing the same kind of springs, shackle, and head or spring-supports with braces attached to the rear axle, also showing the box or body. Figs. 3, 4, and 5 are enlarged.

In said drawings, A represents the front axle; B, the rear axle; C C, the front springs, and D D the rear springs.

E is a roller carried by the front springs and intended to sustain the weight of the box or body of the wagon.

The springs are supported from the axles

by shackles or clevis-shaped pieces F, placed on the axles and secured thereon by bolts G G, connecting the limbs of the shackles below the axles; but in lieu of the bolts G G the shackles may be secured in any other suitable manner. The depending sides of these shackles also receive pivotal bolts H, upon which swinging heads J are hung, and each of said heads is adapted to be secured to and to support one end of each set of springs by bolts or rivets, as K, passing through holes in the ends of the springs and the ends of the swinging heads or they may be attached in any secure and permanent manner. The bolts K are preferably passed through bosses K' on the heads. The pivots H lie at right angles to the axles, so that the heads swing freely toward and from the wheels, and are thus adapted to yield outwardly to the springs when the latter are straightened and to move inwardly when the springs are relieved. By the use of these single swinging heads, each located below the axle and swinging on a single pivot, I produce a shackle-hanger which insures the freest flexure of the springs and by using the fewest possible joints have reduced the liability to wear and rattle to the minimum and have overcome the objections, above noted, to said patented construction and other previous constructions of this nature. By the use of a cranked axle and my swinging support hung underneath the axle I am also enabled to get a long soft spring and to produce a wagon with a very low-hung body, a most desirable feature in many classes of wagons.

The shackles employed upon the forward axle are provided with forwardly-projecting ears L, which are pierced, and thus adapted to receive the pivot-bolts M, which attach the thills N to the axle.

The king-bolt is received at the opening in the plate O, supported by the frame P, attached to and carried by the front springs, and braces Q Q also extend from the frame P to the swinging heads J, carried by the front axle, as shown. In the case of the rear axle similar braces R R extend from the wagon-body to the swinging heads J, carried by the rear axle, as shown at Figs. 6 and 7. The braces Q and R are preferably made of flat spring metal and are given a curvature

or bend substantially agreeing with that of the springs, (see Figs. 2 and 7,) and they are thus adapted to yield freely with the springs in vertical directions and also to lengthen
5 and shorten with the springs. They thus conform to the springs in all conditions of the latter and do not interfere with or limit the action of the springs in any way.

While I have shown both the front and rear
10 axles with duplex springs hung with my shackles and swinging supports or heads, I do not wish to confine myself to the use of my invention with both axles, as I may use some other style of spring with either the
15 front or rear axle, as may be preferred.

I claim—

1. The combination with the springs C C and axle A, of heads J pivotally supported under the axle and swinging toward and from
20 the axle, and each attached to the ends of both springs, substantially as specified.

2. The combination with the axle and accompanying springs arranged parallel to and each side of the axle, of heads J pivotally supported under the axle one at each end, and
25 each supporting the ends of both springs, substantially as specified.

3. The combination with the springs, the axle and the swinging heads supporting the
30 springs from the axle, of spring-braces, substantially as shown.

4. The combination with the springs, the axle and the swinging heads supporting the springs from the axle, of spring-braces bent
35 in substantial conformity to the bend of the springs, substantially as specified.

5. In a wagon, the springs C and D supported upon swinging heads J, and the axles to which the heads are attached, in combination with spring-braces connecting said heads
40 to the king-bolt and body, substantially as specified.

6. The combination with the axle A, springs C C, and swinging heads J supporting
45 the springs at their ends, of the king-bolt and

braces connecting said bolt to said heads, substantially as specified.

7. The combination with the body of the wagon, and axle and a spring at each side of the axle, of swinging heads J attached to the
50 axle and supporting the springs at their ends, and spring-braces connecting said heads with the body, substantially as specified.

8. The combination with the springs and axle, of means for supporting the springs
55 from the axle, consisting of the shackles secured to the axle, and the swinging heads pivoted to said shackles under the axle and attached to the ends of the springs, substantially as specified.

9. The combination with the axle, the springs, the pivoted hanger to which the springs are attached, and the thills, of shackles F supported upon and rigidly attached
60 to the axle, and serving as means for the attachment to the axle of both hangers and the thills, substantially as specified.

10. The combination of the axle, the shackles engaging the axles and having an extension on each side below the axle provided with
70 means for securing the swinging heads as J to said axle, and the springs attached to said heads, substantially as specified.

11. The combination with the axle, of a swinging head as J, having supporting-arms
75 extending at right angles to and in a plane below the axle, and a shackle secured to the axle, to which shackle said head is hung, substantially as set forth.

12. The combination of the cranked axle, 80 the shackles secured to each end of the axle, and the swinging heads supported by the shackles, in a plane below the axle, with duplex springs supported on the swinging heads, and the body supported on the spring, sub- 85
stantially as specified.

SWEN F. PARSON.

Witnesses:

H. M. MUNDAY,
EDW. S. EVARTS.