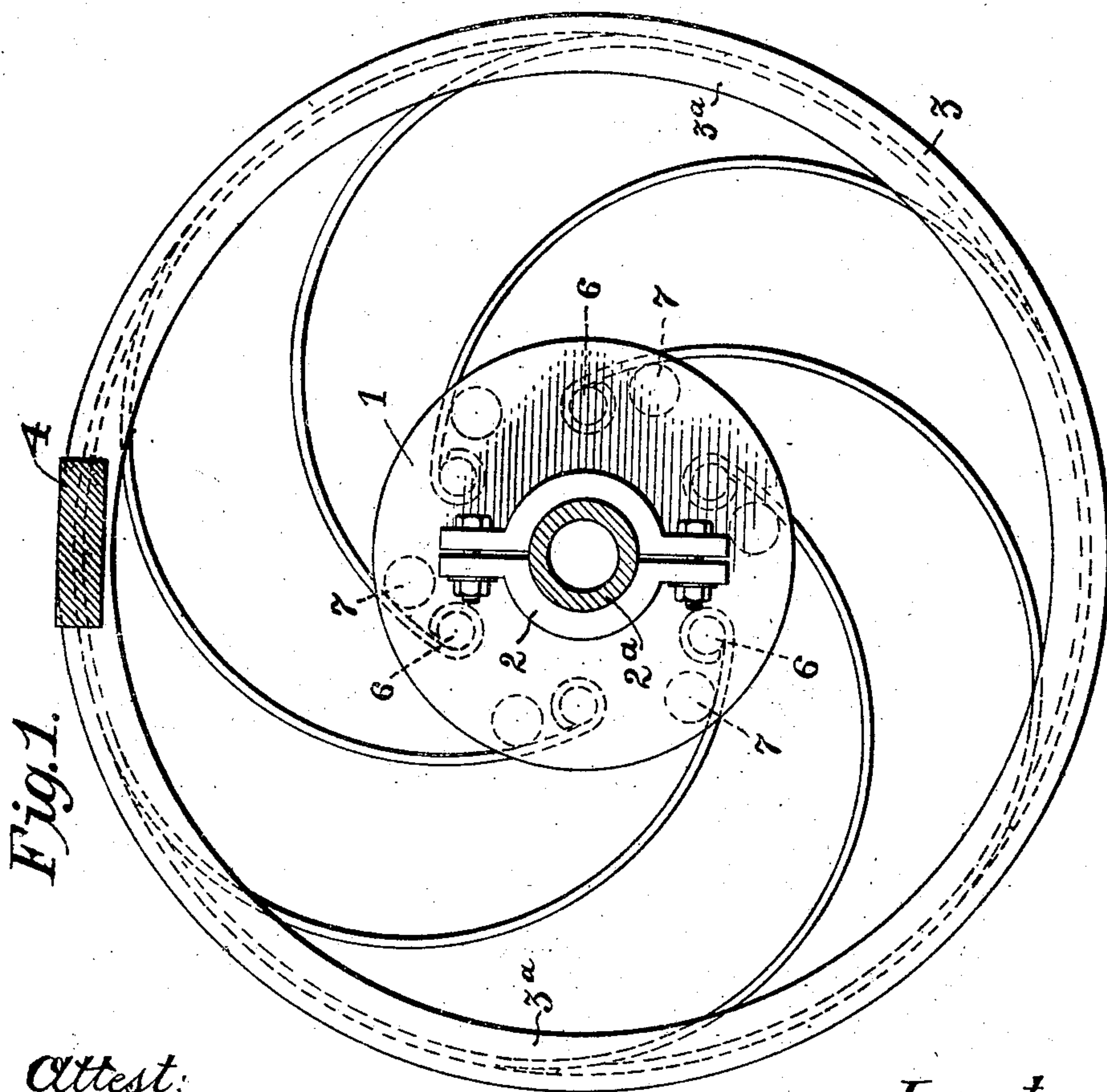
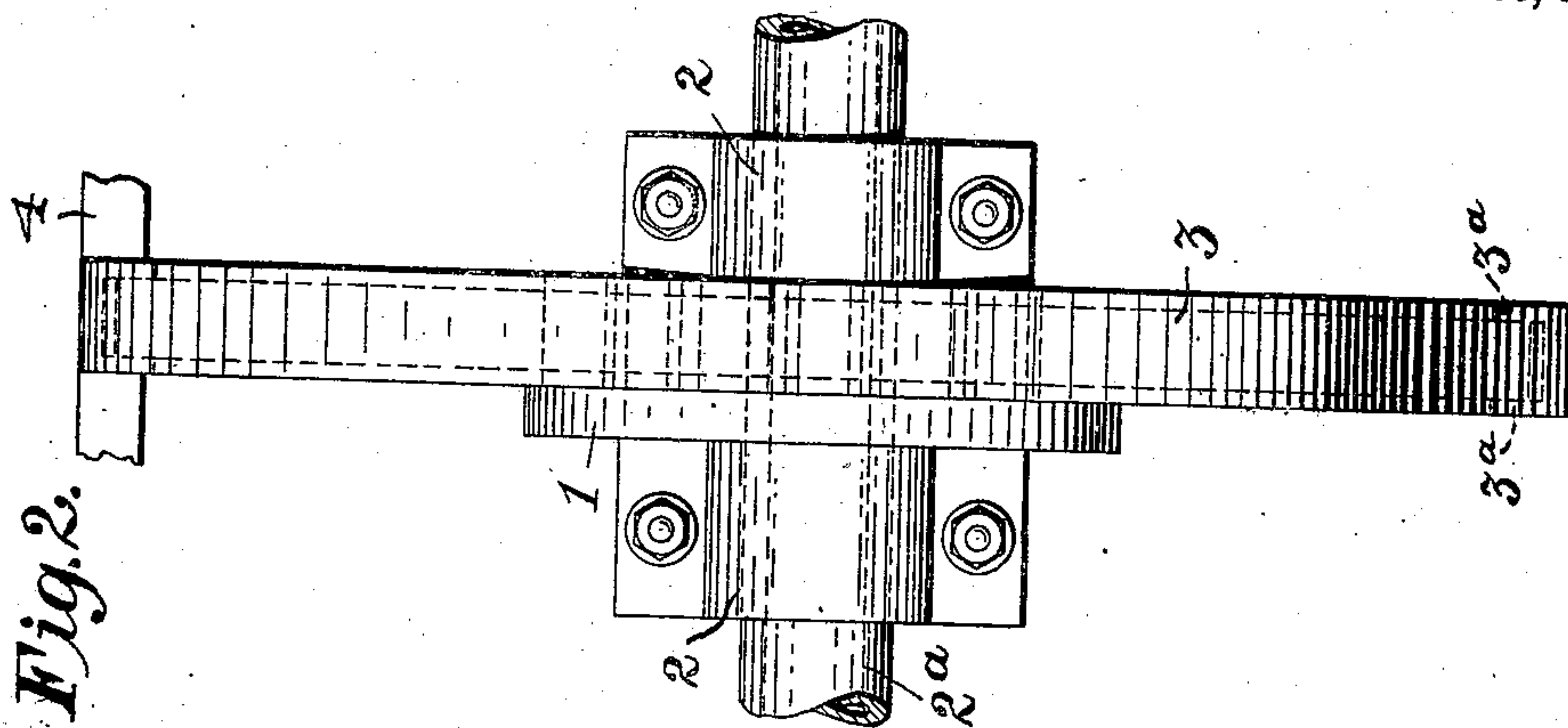


915,470.

C. OWENS.  
VEHICLE SPRING.  
APPLICATION FILED JUNE 17, 1907.

Patented Mar. 16, 1909.



Attest:  
Edw. L. Tolson.  
Edward H. Sartor

Inventor,  
Charles Owens.  
By *[Signature]* Spear, Middleton, & Smallwood  
Attys.

# UNITED STATES PATENT OFFICE.

CHARLES OWENS, OF CHATTANOOGA, TENNESSEE, ASSIGNOR TO MONTAGUE MAILING MACHINERY CO.

## VEHICLE-SPRING.

No. 915,470.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed June 17, 1907. Serial No. 379,463.

*To all whom it may concern:*

Be it known that I, CHARLES OWENS, a citizen of the United States, residing at Chattanooga, Tennessee, have invented certain new and useful Improvements in Vehicle-Springs, of which the following is a specification.

My invention relates to improvements in springs for vehicles and may be used with special advantage in connection with motor vehicles, though not limited to such use.

The object of the invention is to provide a construction which while simple and effective will yield more readily and cause the body of the vehicle to ride much more easily than springs as heretofore constructed.

The invention is illustrated in the accompanying drawing, in which,—

Figure 1 is a side elevation. Fig. 2 a view at right angles to Fig. 1.

Referring by reference characters to this drawing, the numeral 1 designates a central member which is carried by a box or casing 2 clamped or otherwise secured upon the axle 2<sup>a</sup> where the axle is of the stationary, or what is sometimes called "dead" type, the wheels rotating in this instance upon the axle in the manner well understood by those familiar with this art. Of course where a rotating axle is used without any axle sleeve or casing, as in some types of motor vehicles, the element 2 will be in the form of a journal box, it being simply representative of any desired form of spring carrying member designed to support upon the axle the springs carrying the load.

The numeral 3 designates a ring concentrically arranged with relation to the axle carrying member 1 and which supports at the top the bolster 4, which is representative of any suitable manner of supporting the body not shown upon the ring. The ring is

connected to the carrying member 1 by a plurality of spirally arranged springs which have their inner ends connected in a suitable manner to the carrying member 1 and their outer ends bearing against the inner surface of the ring 3, and confined against lateral movement by the inwardly extending flanges 3<sup>a</sup>. A convenient manner of effecting this connection is by having their inner ends bent to encircle the pins 6 projecting from the side of the carrying member 1 as shown. At a suitable distance from the pins 6 the carrying member is provided with lugs or projections 7, one for each spring in position to bear against the concaved face of the spring.

Such a spring as above described is strong and durable and yields readily to shocks, and furthermore, yields readily in every direction, causing the vehicle to ride much more easily than any of the springs heretofore constructed so far as I am aware.

Having thus described my invention what I claim is:—

In a vehicle, a carrying member supported from the axle, a ring concentrically arranged with relation thereto, a bolster supported by said ring, a plurality of spirally arranged springs having their inner ends pivotally connected to said carrying member and their outer ends bearing with a sliding contact against the inner surface of the ring, means for confining the outer ends of the springs against lateral displacement, and lugs or projections on the carrying member bearing against the springs, substantially as described.

In testimony whereof, I affix my signature in presence of two witnesses.

CHARLES OWENS.

Witnesses:

R. M. IRWIN,  
ANNIE PATTERSON.