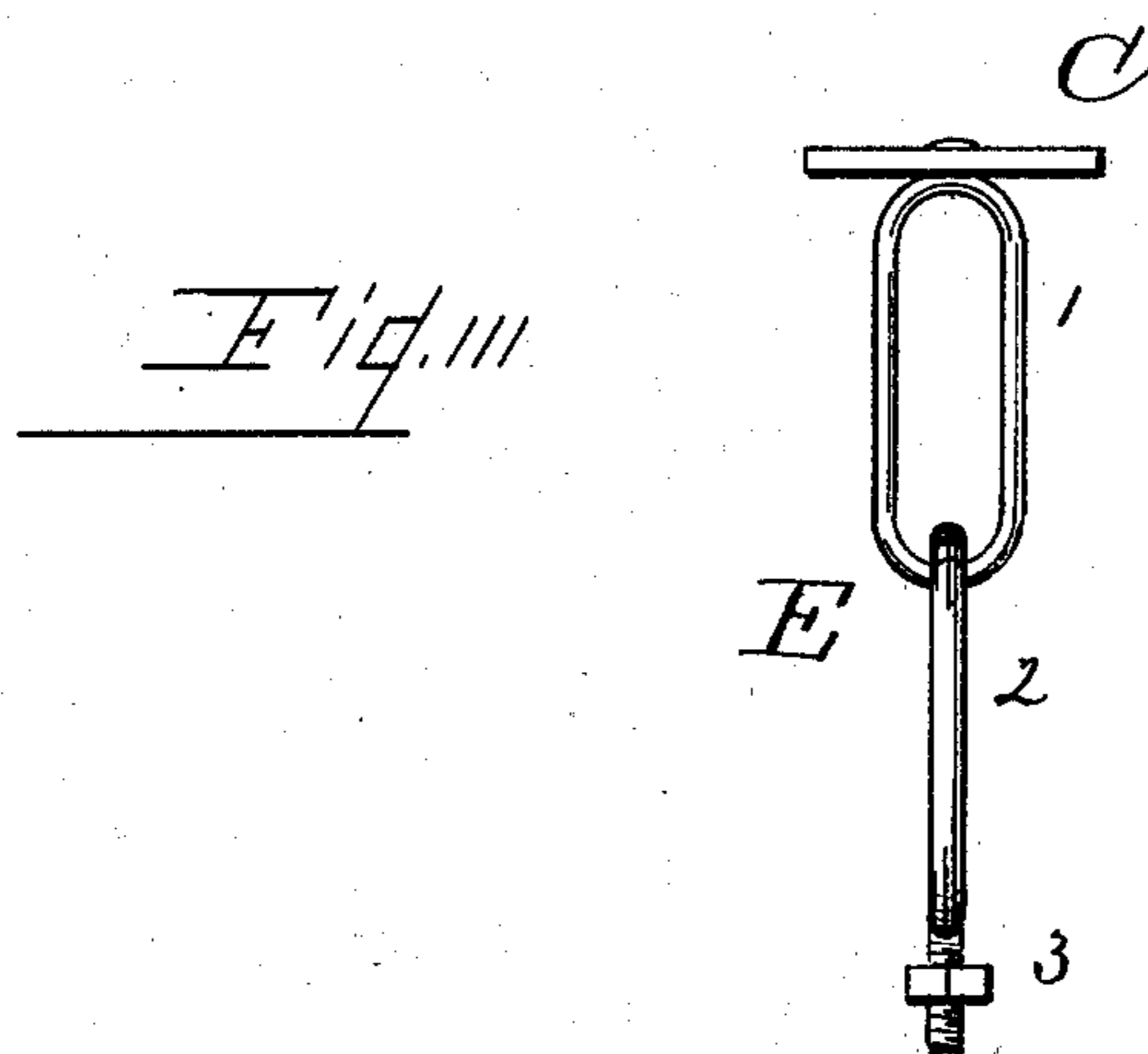
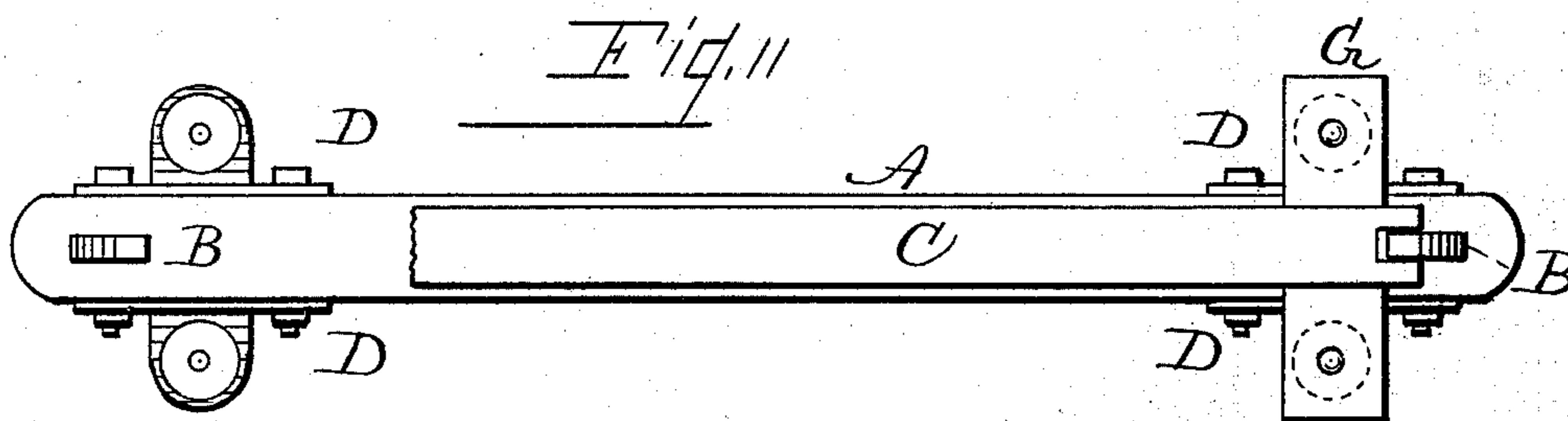
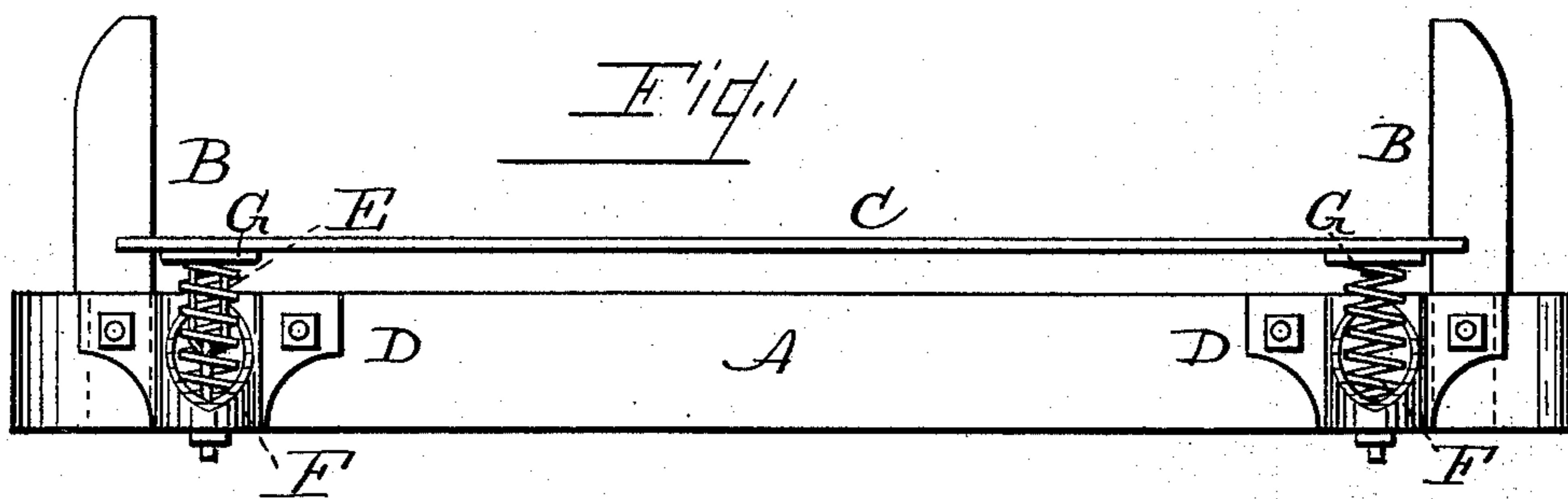


(No Model.)

B. SMITH.  
WAGON SPRING.

No. 410,211.

Patented Sept. 3, 1889.



Witnesses

*L. C. Adams*  
*J. A. Minder*

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*Benjamin Smith*  
By *His Attorney D. Pickering*

# UNITED STATES PATENT OFFICE.

BENJAMIN SMITH, OF MECHANICSBURG, OHIO.

## WAGON-SPRING.

SPECIFICATION forming part of Letters Patent No. 410,211, dated September 3, 1889.

Application filed April 12, 1889. Serial No. 306,986. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN SMITH, a citizen of the United States, residing at Mechanicsburg, in the county of Champaign and State of Ohio, 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 of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in wagon-springs, which consist of spiral springs held in brackets bolted to both sides and near the ends of the bolster, the same being supported at the top by transverse plates, and the same being connected by a plate extending from plate to plate directly over the bolster.

The object of my invention is to attach spiral springs to ordinary wagons so that the bed will be but slightly elevated above the bolsters. I attain the object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a bolster with the spring attached. Fig. 2 is a fragmentary top view of the same. Fig. 3 is an enlarged view of the arresting-links.

Like letters designate like parts throughout the several views.

A represents a wagon-bolster, and B B are the ordinary standards, held within mortises of the same.

D are cast-iron brackets, held on both sides and near the ends of the bolster by strong bolts, which pass through the flanges of said brackets and through the bolster. The bracket has flanges for the bolts and a circular recess, which forms a bearing for the spiral spring.

The springs F are spiral steel coils, and are held between the bottoms of the brackets and the cross-plate G.

C is a bar of iron, notched in the ends to embrace the sides of the standards, and to the under side of which, near the ends, are securely attached the cross or bearing bars G.

Though not necessary, it is desirable to arrest the upward movement of the springs, and for this purpose I use an arresting-link, which is shown in proper position at the left end of Fig. 1 and shown enlarged at Fig. 3.

The upper link 1 is riveted to the cross-plate. It interlocks with its fellow 2, and to the threaded end is held the nut 3. This threaded part passes through an orifice central in the bottom of the bracket. By turning this nut against the bracket the spiral springs may be held compressed as much as may be desirable. The wagon-bed rests on the top plate, and is thereby carried by the springs, and as the bed is held only a little above the bolster there can be no objection to their use.

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

In combination with a wagon-bolster having standards, the brackets D, having flanges for bolts and annular recesses, spiral coils F, front and rear, cross-plates G G, and bar C, connecting said plates and engaging said standards, substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

BENJAMIN SMITH.

Witnesses:

W. C. PANGBORN,  
C. S. PANGBORN.