

No. 714,019.

Patented Nov. 18, 1902.

L. G. NILSON.

AXLE.

(Application filed May 14, 1902.)

(No Model.)

Fig. 1,

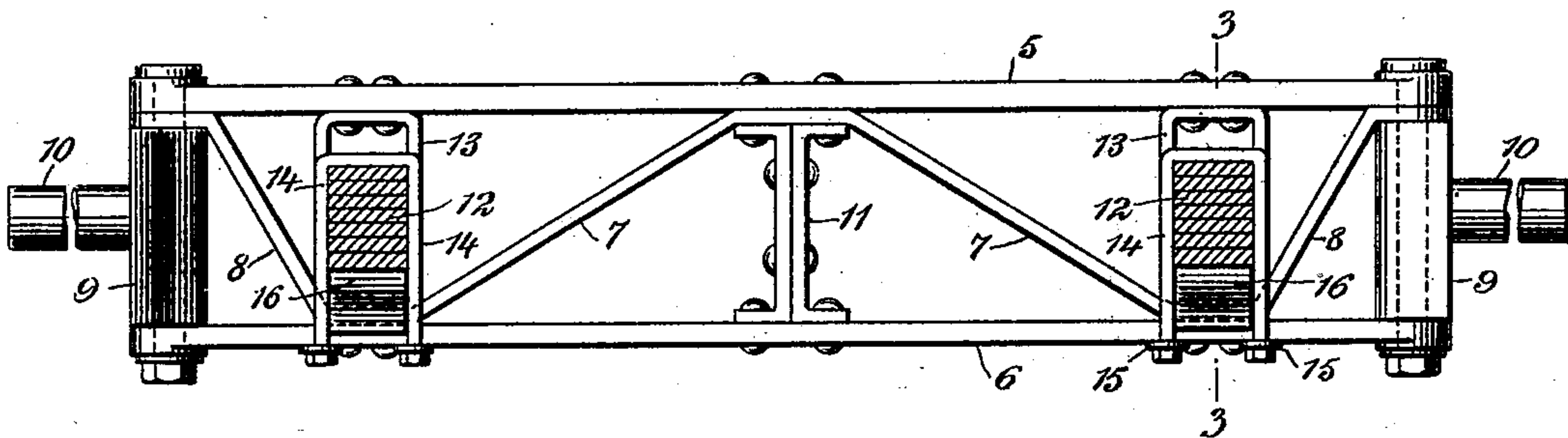


Fig. 2,

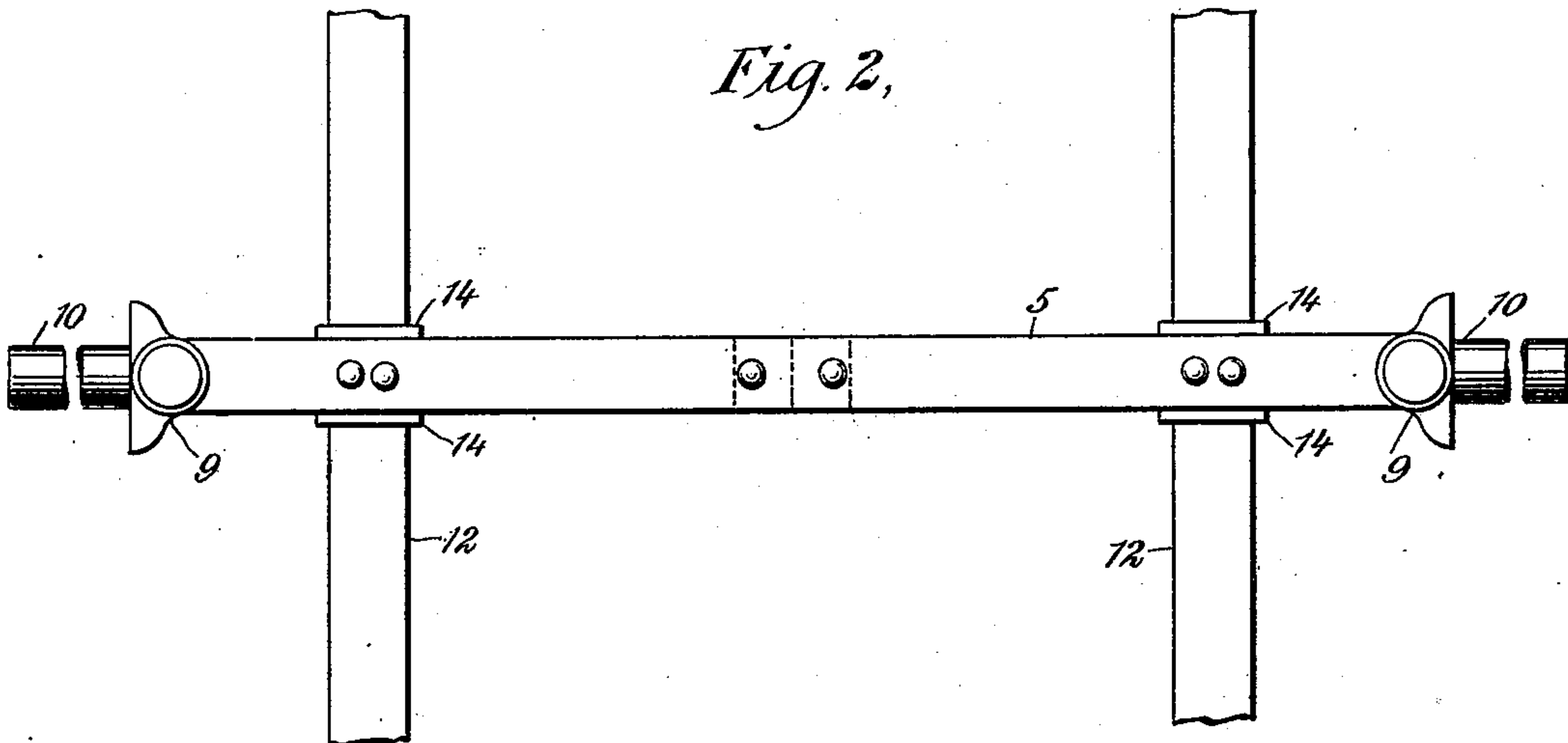
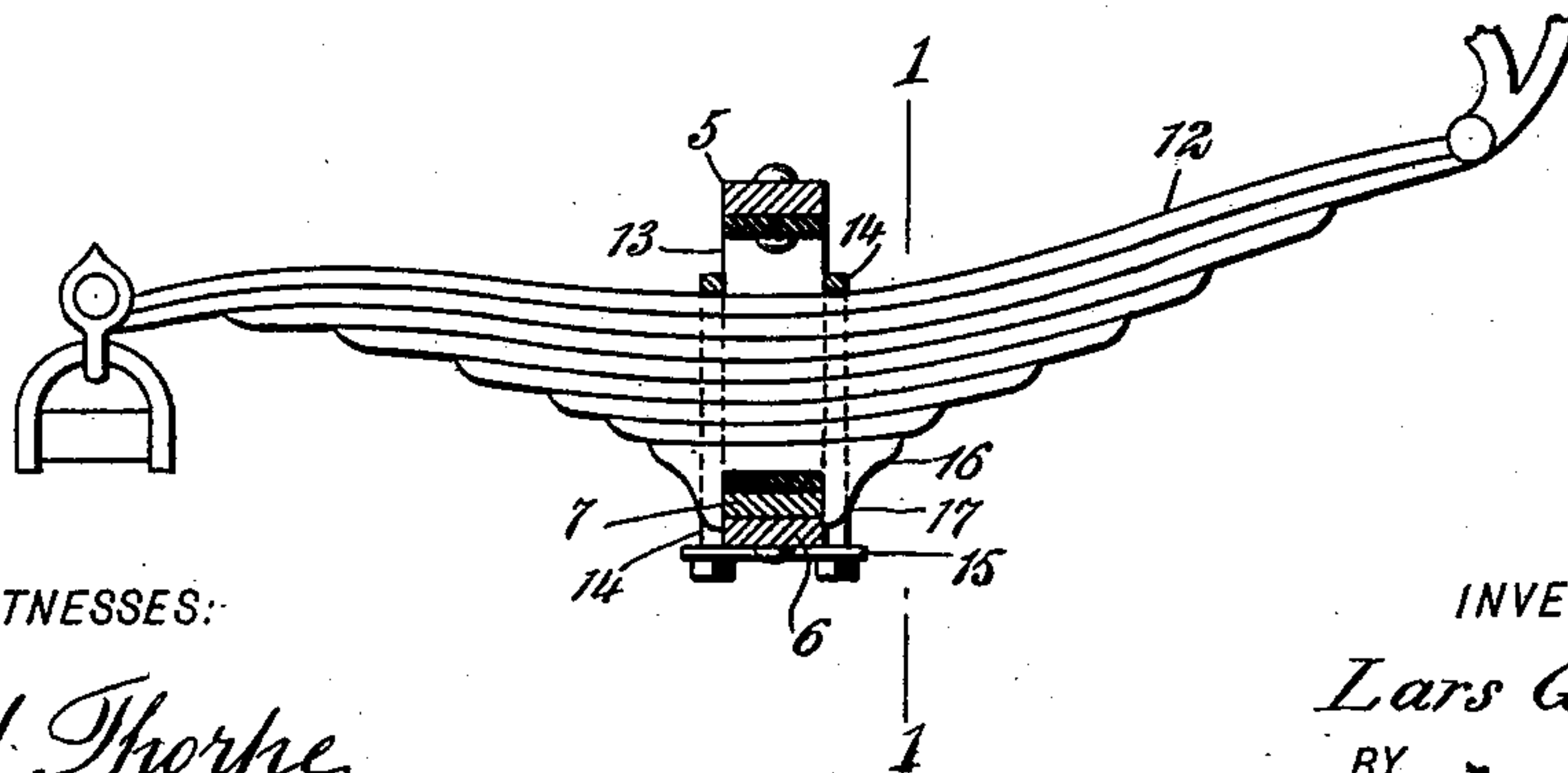


Fig. 3.



WITNESSES:

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AXLE.

SPECIFICATION forming part of Letters Patent No. 714,019, dated November 18, 1902.

Application filed May 14, 1902. Serial No. 107,241. (No model.)

To all whom it may concern:

Be it known that I, LARS G. NILSON, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Axle, of which the following is a full, clear, and exact description.

This invention relates particularly to improvements in steering-axles for automobiles or similar vehicles. It is a common practice to make the steering-axles for automobiles of solid forgings, with forks or sockets at the ends for receiving the steering-knuckles. This renders a heavy and expensive axle for the strength required.

It is an object of my invention to overcome the above-mentioned difficulties by providing an axle that shall be comparatively light, with sufficient strength, and so constructed that the knuckles and springs may be easily fastened in place.

I will describe an axle embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation, partly in section, on the line 1 1 of Fig. 3 of an axle embodying my invention. Fig. 2 is a plan view thereof, and Fig. 3 is a section on the line 3 3 of Fig. 1.

The axle comprises a top bar 5 and a bottom bar 6, which are secured together by the diagonal braces 7 8. These braces may consist of a single length of metal, the center portions of the braces 7 being riveted to the top bar 5 and the junctions of the braces 7 and 8 being riveted to the bottom bar 6 underneath the springs, as indicated. The ends of the brace members 8 may be welded or otherwise secured to the top bar. Mounted to swing between the top and bottom bars at the ends are the knuckles 9, to which the wheel-spindles 10 are attached. The centers of the top and bottom bars may be further braced by means of a post 11 at the center. The springs 12 for supporting the body of the vehicle are arranged between loops or hangers 13, secured to the top bar, and between clips 14, which extend downward along the sides of

the springs across the tops thereof, and the lower ends of opposite clips 14 are connected by plates 15. In practice I place saddles 16 between the lower sides of the springs and the bottom pieces of the loops or hangers 13. These saddles are provided with downwardly-extended portions 17 for engaging against the outer sides of the bottom pieces of the loops 13 to prevent displacement of the saddles.

It will be noted that the wheel-spindles 10 are in axial alinement with the transverse centers of the springs, and therefore the weight of the vehicle acting on the springs and the whole being supported through the steering-knuckles by the wheels on the spindles a compressive strain will be imparted to the top bar 5 and a tensive strain on the bottom bar 6, equalizing the pressure and making it possible to use the light axle described.

The knuckles and spindles may be easily placed or removed by removing their pintles, and the springs after placing the saddles in position in the hangers or loops 13 may be readily passed through said loops, after which the clips 14 are to be secured in place.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An axle comprising top and bottom bars, springs arranged between the bars and connected thereto, and wheel-spindles mounted to swing between the ends of the bars, the axes of the spindles being in alinement with the central point between the upper and lower surfaces of the spring portions between the bars.

2. An axle comprising top and bottom bars, braces connecting the bars, wheel-spindles mounted to swing between the bars at the ends, loops or hangers attached to the top bar, saddles supported in said loops or hangers, springs passing through said loops or hangers and resting on the saddles, and clips engaging around the springs and secured to the lower bar, substantially as specified.

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

LARS G. NILSON.

Witnesses:

JNO. M. RITTER,
C. R. FERGUSON.