

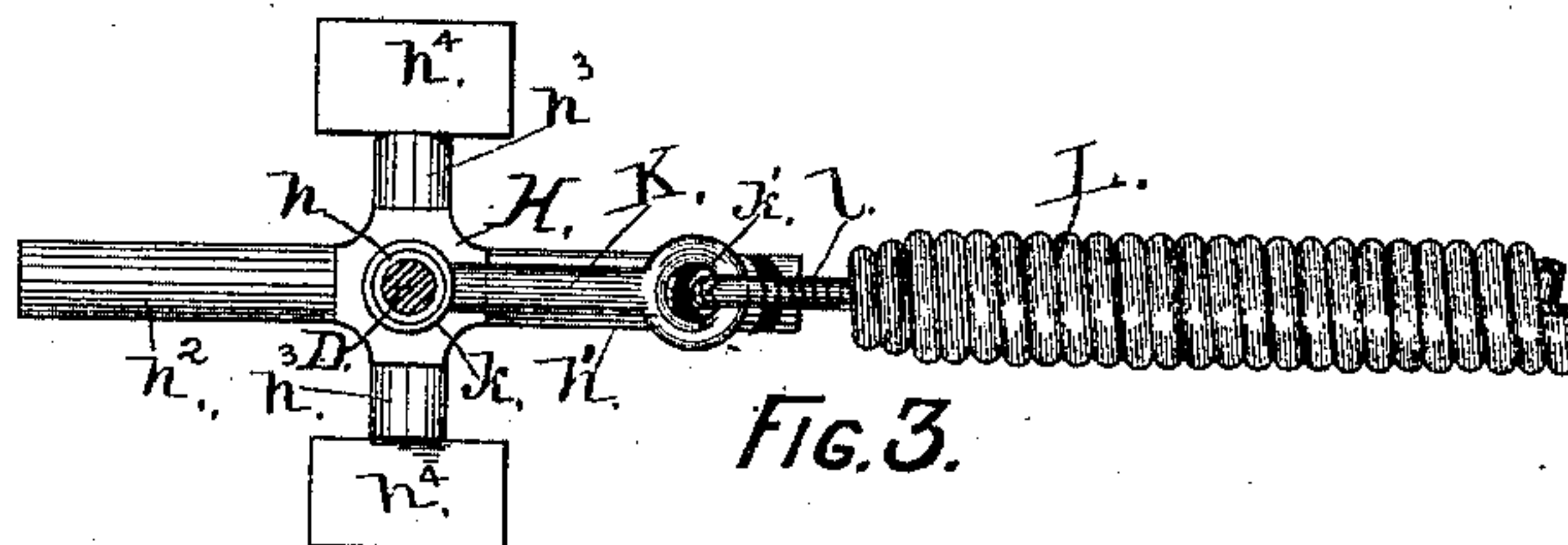
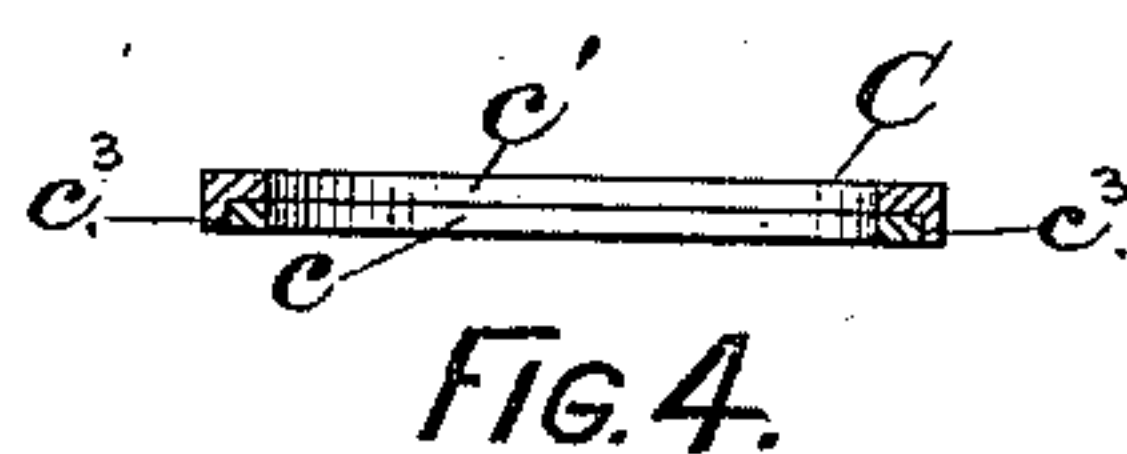
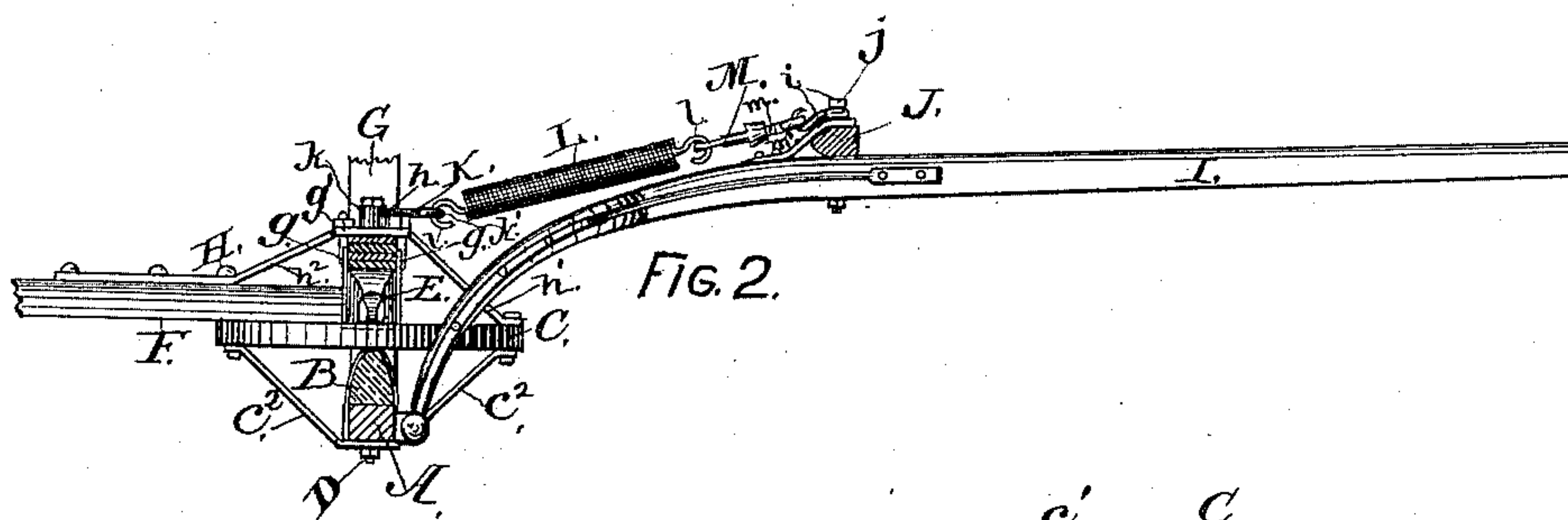
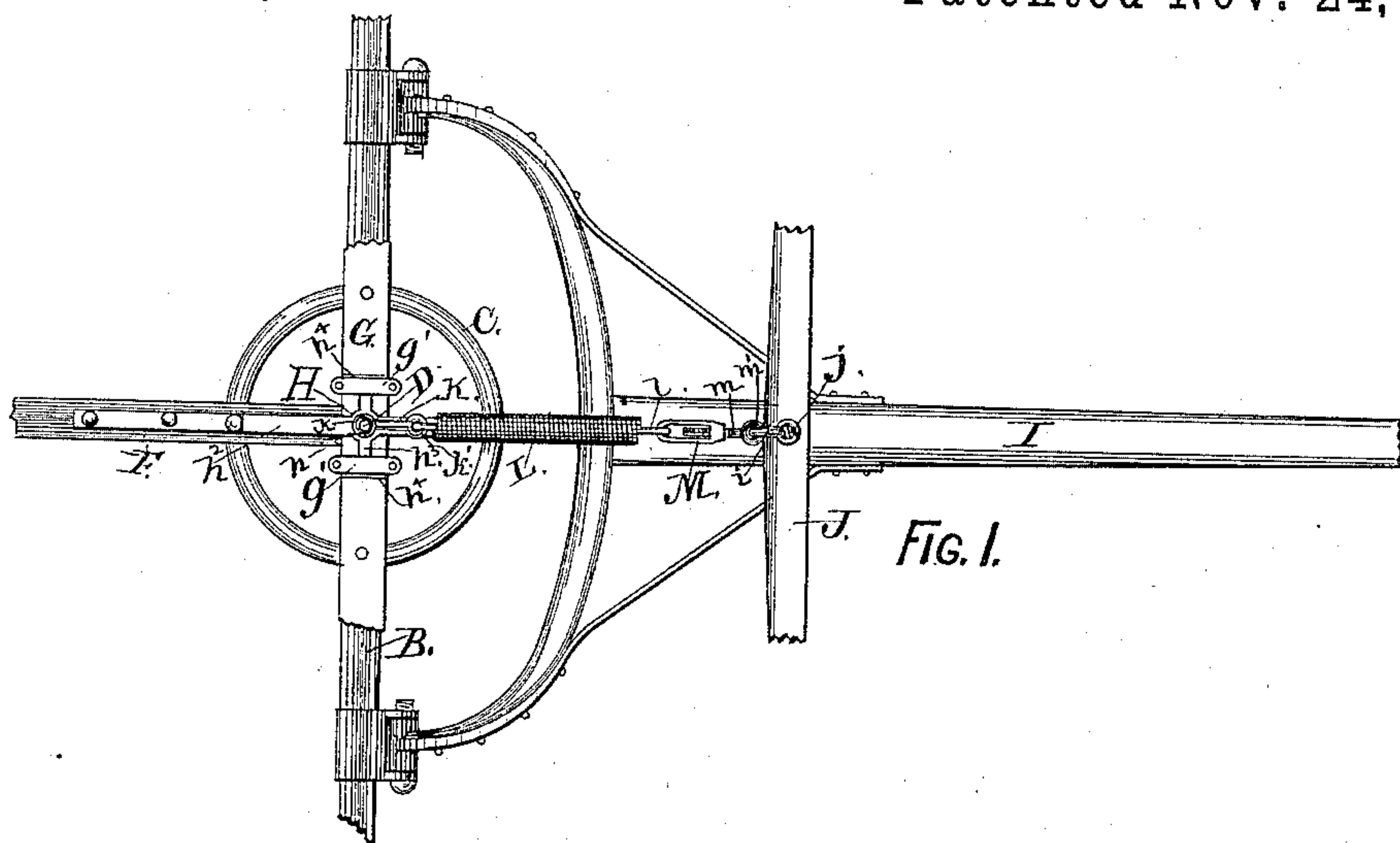
(No Model.)

C. HEIN.

WAGON TONGUE SUPPORT.

No. 331,235.

Patented Nov. 24, 1885.



Witnesses:

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W. W. Seeley

Inventor:

CHRISTIAN HEIN.

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UNITED STATES PATENT OFFICE.

CHRISTIAN HEIN, OF MCKOWNVILLE, NEW YORK.

WAGON-TONGUE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 331,235, dated November 24, 1885.

Application filed September 24, 1885. Serial No. 178,025. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN HEIN, of McKownville, in the county of Albany and State of New York, have invented certain new and useful Improvements in Wagon-Tongue Supports, of which the following is a specification.

The object of my invention is to provide a support that will act with equal power upon the tongue in any divergence from the central position which the tongue is likely to be thrown into, and to maintain the outer end of the tongue at a uniform height through any of said divergencies. This object I attain by means of the mechanism illustrated in the accompanying drawings, which form part of this specification, and in which—

Figure 1 is a plan view of parts of the tongue, whiffletree, front axle, and reach of a wagon provided with my improvement; Fig. 2, a side elevation of the same; Fig. 3, an enlarged plan view of the fifth-wheel brace with the link and part of tongue-supporting spring connected thereto, and Fig. 4 a longitudinal section of the fifth-wheel.

As shown in the drawings, A is the front axle, and B the axle-bed for same, fixed thereto in the usual manner; C, the fifth-wheel, which consists of a lower circle, *c*, and an overlapping upper circle, *c'*, as shown in Fig. 4. The lower circle, *c*, is secured to the upper surface of the axle-bed B, so as to be concentric to the king-bolt D, and is supported by means of the braces *c*², which pass beneath the axle A. The overlapping upper circle, *c'*, is provided with a pendent annular flange, *c*³, which shuts over the outer circumference of the lower circle, *c*, in such manner that the fifth-wheel C will receive all the strain of the horses in pulling or backing, and thereby that strain on the king-bolt D is avoided. The upper circle, *c'*, is secured to the under side of the head-block E and to the under side of the reach F. The front wagon-spring, G, (of which only a small portion of the lower part is shown in the drawings,) is secured by clips *g* to the upper edge of the head-block E. Said clips are provided with clip-bars *g'*, of the usual form. A four-armed brace-piece, H, is centrally fixed on the upper face of the lower part of the wagon-spring G, and has an annular collar, *h*, through which the king-bolt D

passes. The foremost arm, *h'*, of said brace-piece is bent downward to engage with the foremost part of the upper circle, *c'*, and is secured thereto by means of a bolt or rivet, which finishes flush with the lower face of said circle. The rearmost arm, *h*², is bent downward to meet the upper face of the reach F, to which it is secured by means of bolts or rivets. The foremost one of said bolts passes through the rearmost part of the upper circle, *c'*, the head of said foremost bolt finishing flush with the under face of said circle, so as to present no obstruction to the free circular movement of said circle. The lateral arms *h*³ extend perpendicularly from the center line of the arms *h'* and *h*², and their extremities, as shown in Fig. 3, are expanded into thin flat flanges *h*⁴, which pass under and are securely held by the clip-bars *g'* of the clips *g*. By means of the brace-piece G the strain of the weight of the tongue is thrown in a direct line on the reach F.

The pole or tongue I is connected to the front axle, A, in the usual manner, and is provided with a whiffletree, J, of the usual form. Said whiffletree is pivoted to the pole I by means of the bolt *j*, to which I preferably attach the hook *i*, to which one end of my tongue-supporting device is connected; but, when preferred, said hook may be attached directly to any convenient point on the pole I.

My tongue-supporting device consists of the following parts: a link, K, which has an eye, *k*, that fits over the collar *h* of the brace-piece H in such manner that the link K will swing in a horizontal plane in both directions from a central line until said link is brought into contact with one or the other of the clip-bars *g'*, which movement I find will usually give ample latitude of action for turning all ordinary curves with a wagon. At the opposite end of the link another eye, *k'*, is formed for receiving one of the hooks *l*, which are formed at opposite ends of the spiral spring L, which forms an elastic medium for supporting the weight of the tongue. The opposite hook *l* engages in a turn-buckle, M, the screw-bolt *m* of which is provided with an eye, *m'*, that engages with the hook *i*, and thereby completes the connection of the tongue-support between the pole I and collar *h*. By means of the turn-buckle M the length of the supporting device can be adjusted so that the spring L

will sustain the outer end of the pole I at any required height.

It will be seen that by means of the link K provision is made for permitting the tongue
5 to swing sidewise in either direction, the eye *k* of said link allowing of any ordinary movement of the tongue; but when this point is exceeded the flexible joint formed by the eye *k'* and the hook *l* of the spring yields to ac-
10 commodate the extraordinary movement.

While I have shown and described my supporting device as applied to a pole or tongue, it must be fully understood that it is fully

adapted, without further invention, to use on the thills of a one-horse wagon. 15

I claim as my invention—

The combination, with the link K, having a pivotal center that coincides with the king-bolt D, of the spiral spring L, turn-buckle M, and the hook *i*, attached to the pole I, all being
20 constructed and connected to operate as and for the purpose specified.

CHRISTIAN HEIN.

Witnesses:

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WM. H. LOW.