

No. 835,214.

PATENTED NOV. 6, 1906.

H. P. CAMPBELL.
RAILWAY GATE.

APPLICATION FILED JULY 30, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

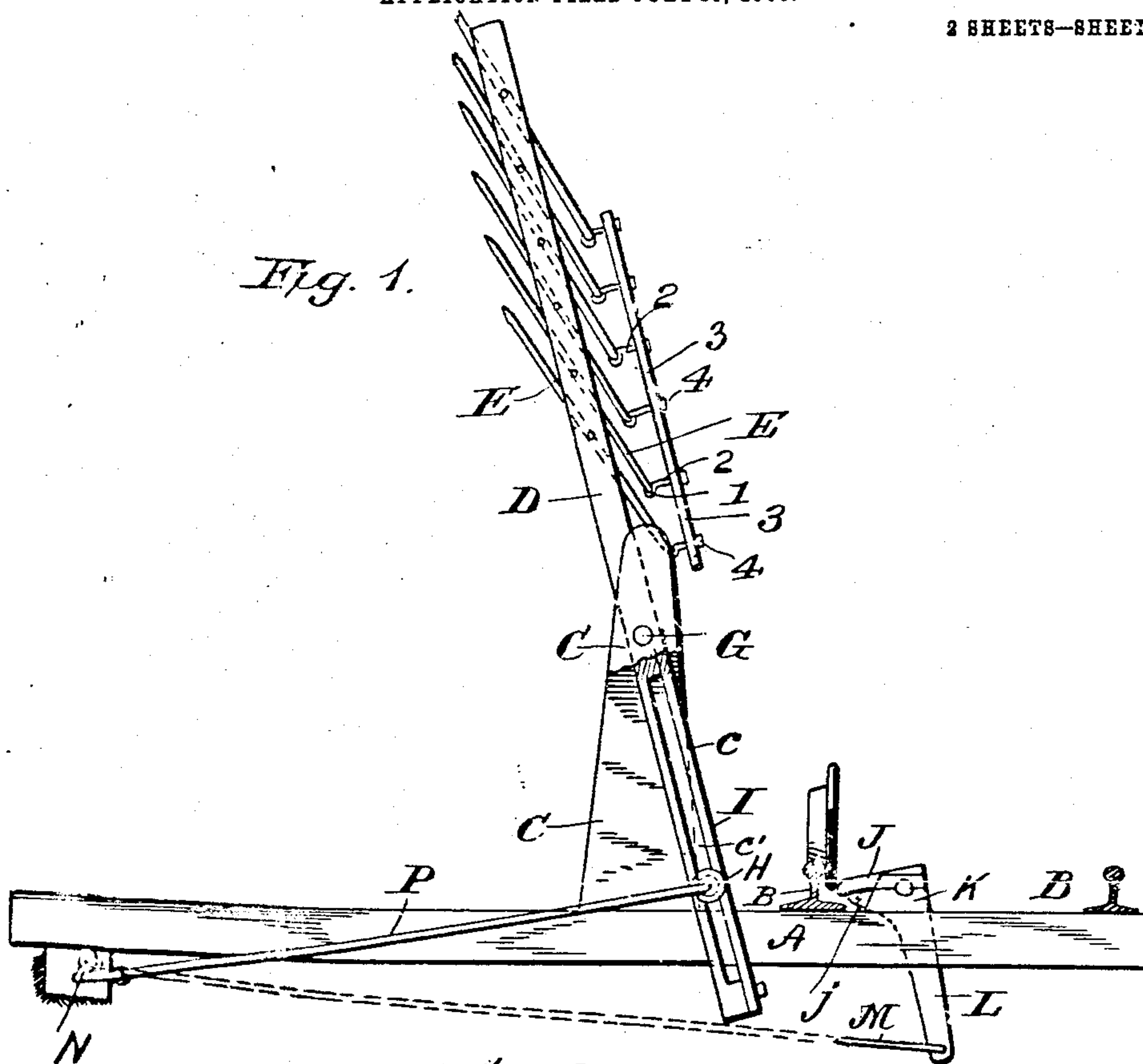
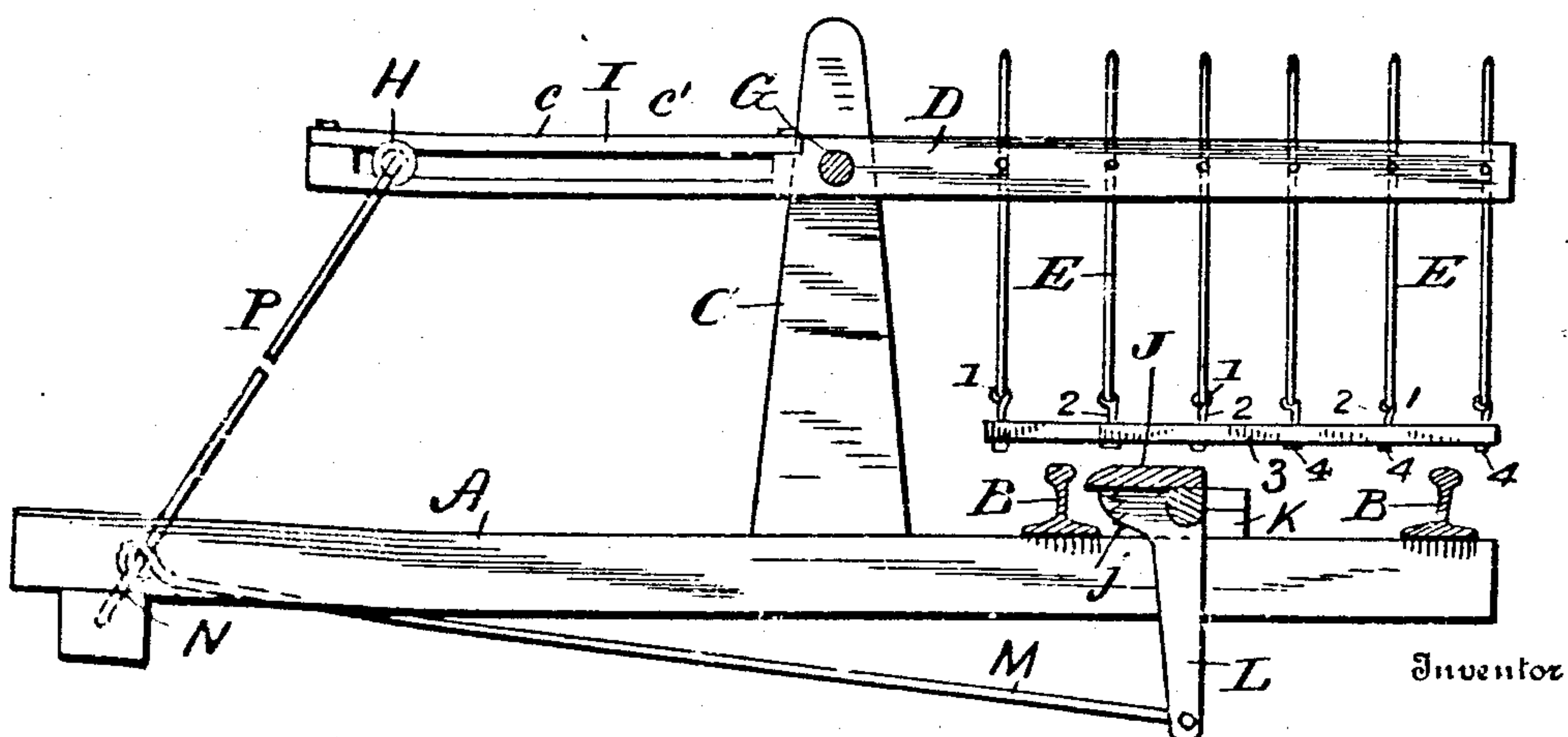


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

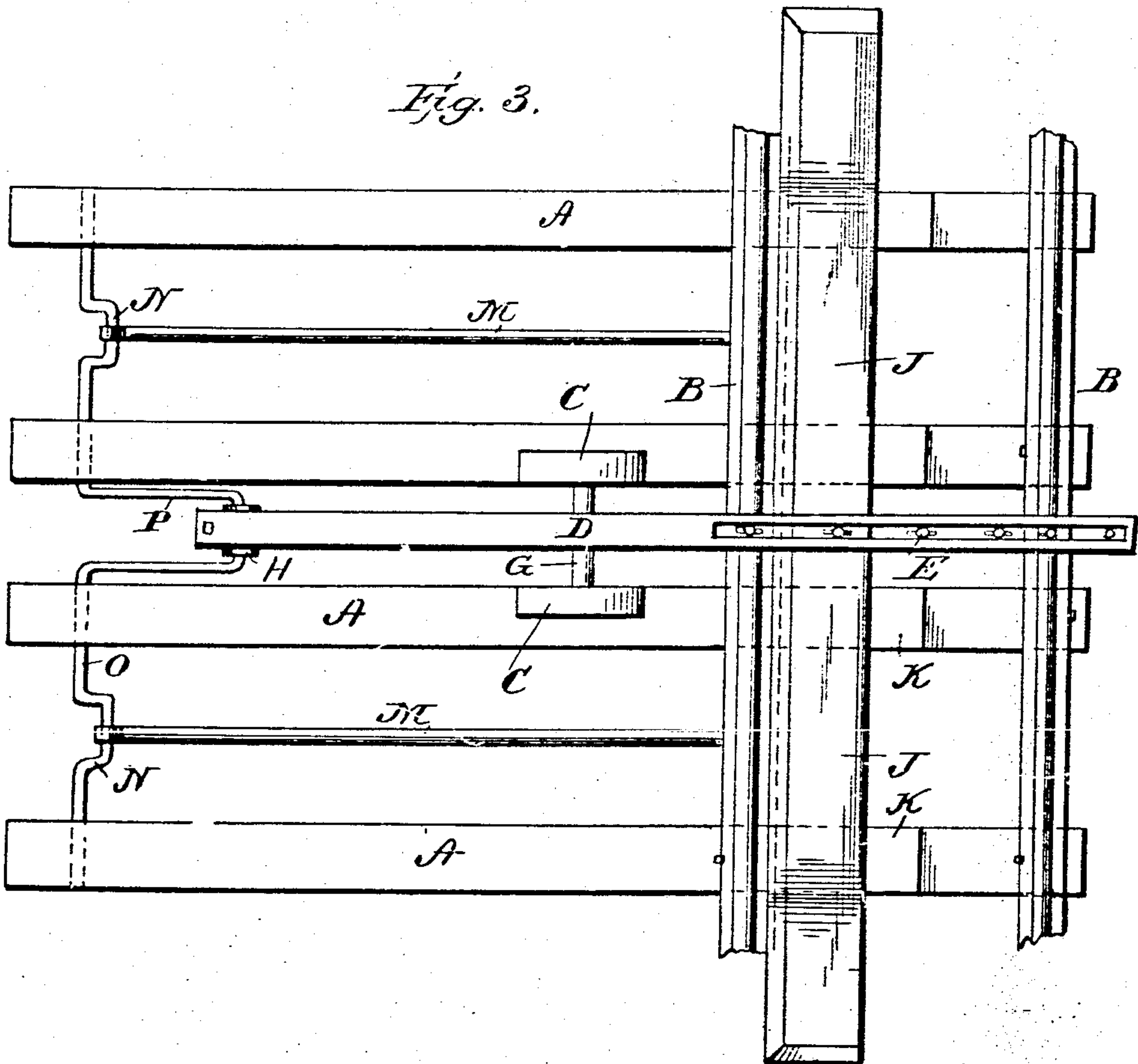
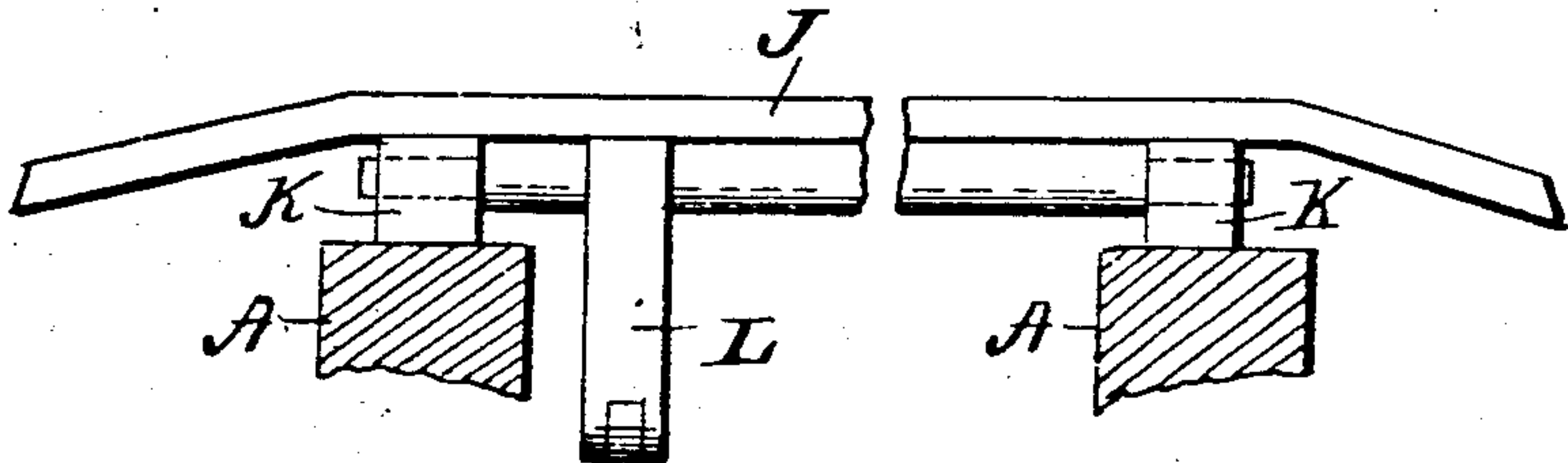


Fig. 4.



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HERSCHEL P. CAMPBELL, OF BLOCTON, ALABAMA.

RAILWAY-GATE.

No. 835,214.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed July 30, 1906. Serial No. 328,449.

To all whom it may concern:

Be it known that I, HERSCHEL P. CAMPBELL, a citizen of the United States of America, residing at Blocton, in the county of Bibb and State of Alabama, have invented certain new and useful Improvements in Railway-Gates, of which the following is a specification.

This invention relates to fences, and more particularly to railway-gates swinging vertically on a pivot.

An object of this invention is to provide novel means for causing a gate to open and close through the medium of mechanism actuated by the flanges of locomotive or car wheels, the said mechanism opening the gate when the flanges are in engagement with the operating mechanism.

A further object of this invention is to provide novel means for limiting the movement of the gate when it has reached a predetermined position, which is preferably vertical or parallel with the supporting-post, means being also provided for minimizing the friction between the parts and the vibration due to the operation.

With the foregoing and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts in the several views, in which—

Figure 1 is a view in elevation showing cross-ties and the parts of the gate mounted thereon, the said gate being swung open. Fig. 2 is a similar view showing the position of the parts when the gate is closed. Fig. 3 is a plan view of the gate and the parts coacting therewith. Fig. 4 is an enlarged detail view showing the rocking plate.

In the drawings, A indicates a series of cross-ties supporting the rails B of an ordinary track. Stationed at a point where the gate is to be supplied are two posts C, having their bases attached to two of the ties A. If desired, the posts C may be of such length as to have their ends embedded in the ground along the track, although the means for anchoring the posts is an immaterial detail

which can be varied to suit particular requirements.

The gate comprises a mast D, having a series of pivoted pickets E, which stand vertically when the mast is in a horizontal position. The pickets are pointed on their upper ends and extend above the mast a suitable distance, the full length of the pickets being approximately six feet. The portions of the pickets below the mast are longer than those above and the lower ends are bent to form eyes which are engaged by eyebolts 2, whereby the said pickets are pivotally connected at the bottoms through the medium of the strip 3, through which the shanks of the eyebolts extend and in which they are secured by the nuts 4. As the mast is swung on its pivot to assume a vertical position the pickets fold in such a way as to lie approximately parallel with their edges in contact. When the mast is in horizontal position, the pickets form an impassable barrier to the guarded structure. The mast is mounted on a pivotal pin G, which is supported by the posts, and the rear section c of the mast is cut away, as at c', to form a space for the reception of the antifriction-roller H. The antifriction-roller is confined in the cut-away portion by the retaining-bar I, which is bolted to the upper surfaces of the rear section c. The gate is swung on its pivot by the power communicated to the roller H to cause it to travel in the cut-away portion of the rear of the mast, and power is applied to the said antifriction-roller through the action of the engines or cars moving on the track by the following mechanism.

Extending parallel with one of the rails of the track is a rocking plate J, trunnioned in suitable bearings K, attached to the cross-ties, and said rocking plate has beveled ends and a slightly-beveled edge which is parallel with the rail and over which the flanges of the wheels travel. The pivots of the rocking plate are along that edge of the rocking plate remote from the rail in order to permit the said rocking plate to swing downward when engaged by the flange of the wheel. The lower sides of the plate have arms L, to which the links M are pivoted, the said links extending under the rail and having their ends pivoted to cranks N of the crank-shaft O. The crank-shaft is mounted in bearings

on the under sides of the cross-ties, although when possible it would be preferable to mount these bearings on the upper surfaces of the cross-ties. Where underground construction is required, however, the first-mentioned method would be found preferable, and therefore such method is illustrated.

The crank-shaft is provided with a long crank-arm P, on which the antifriction-roller H is mounted, and this crank-arm P stands at an angle with relation to the cranks N. The angle between the cranks N and P must be determined by the throw desired in the gate and the length of the rear section c of the mast.

As shown in Fig. 1, the tilting of the rocking plate will partially rotate the crank-shaft and carry the crank-arm to an approximately horizontal position, where it will hold the mast in an approximately vertical position until said rocking plate is released by the flanges of the car or engine wheels. The rocking plate is returned to its normal position through the medium of the coiled springs j, which are interposed between the said plate and the cross-ties and attached to the cross-ties by screws or other anchoring devices. As the springs exert pressure on the plate and lift it to its normal position the crank-shaft is partially rotated and the crank-arm is brought to an approximately vertical position to carry the mast back to its normal position to close the entrance to the guarded structure.

In construction the rocking plate must be of such length as to cause it to be engaged by the flanges of one truck until the flanges of the next succeeding truck engage it in order that the said rocking plate may be held down until the passage of the train through the opening of the guarded structure.

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

1. In a railway-gate, suitable posts, a mast pivotally connected thereto, the rear section of the mast having a way, an antifriction-roller therein, a crank-arm on which the antifriction-roller is mounted, a crank-shaft from which the crank-arm projects, a rocking plate pivoted between the rails of a track and adapted to be depressed by flanges of a car or locomotive wheel, and suitable connections whereby the movement of the rocking plate is communicated to the crank-shaft.

2. In a railway-gate, a rocking plate extending along a rail, bearings for pivotally supporting the said plate whereby the edge of said plate is permitted to swing down when engaged by flanges of the wheels of cars or locomotives, arms depending from the said rocking plate, springs interposed between the plate and cross-ties of a track for holding the said plate normally elevated, links pivotally connected to the depending arms, a crank-shaft to which the ends of the links are pivoted, a crank-arm carried by the crank-shaft, an antifriction-roller mounted on the crank-arm, a mast having a rear extension provided with a groove in which the antifriction-roller travels, a retaining-plate for confining the antifriction-roller, and suitable posts on which the mast-arms are mounted.

In testimony whereof I affix my signature, in the presence of two witnesses, this 15th day of May, 1906.

HERSCHEL P. CAMPBELL.

Witnesses:

T. R. E. LAWSON,
L. E. BARKLEY.