

A. H. DOYLE.

WIRE REEL.

APPLICATION FILED SEPT. 18, 1908.

913,472.

Patented Feb. 23, 1909.

Fig. 1.

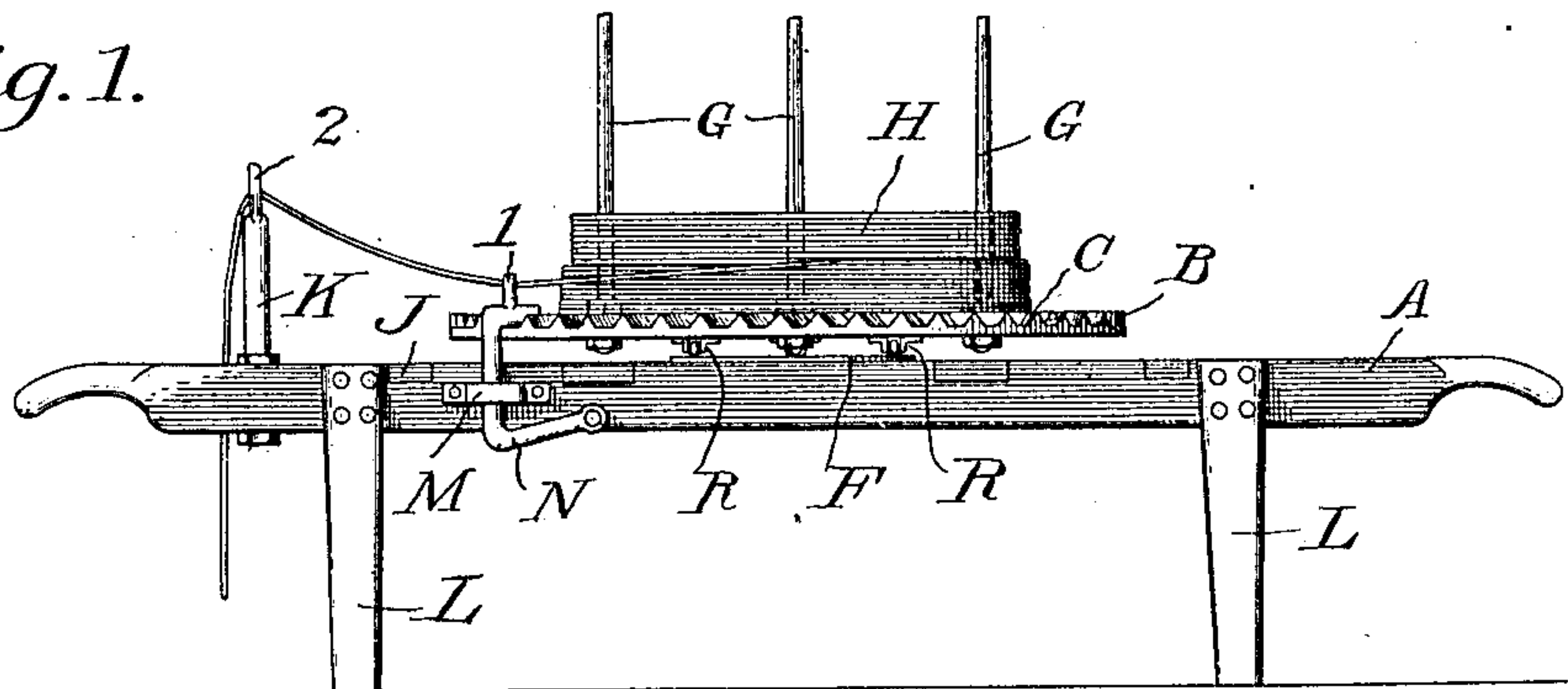


Fig. 2.

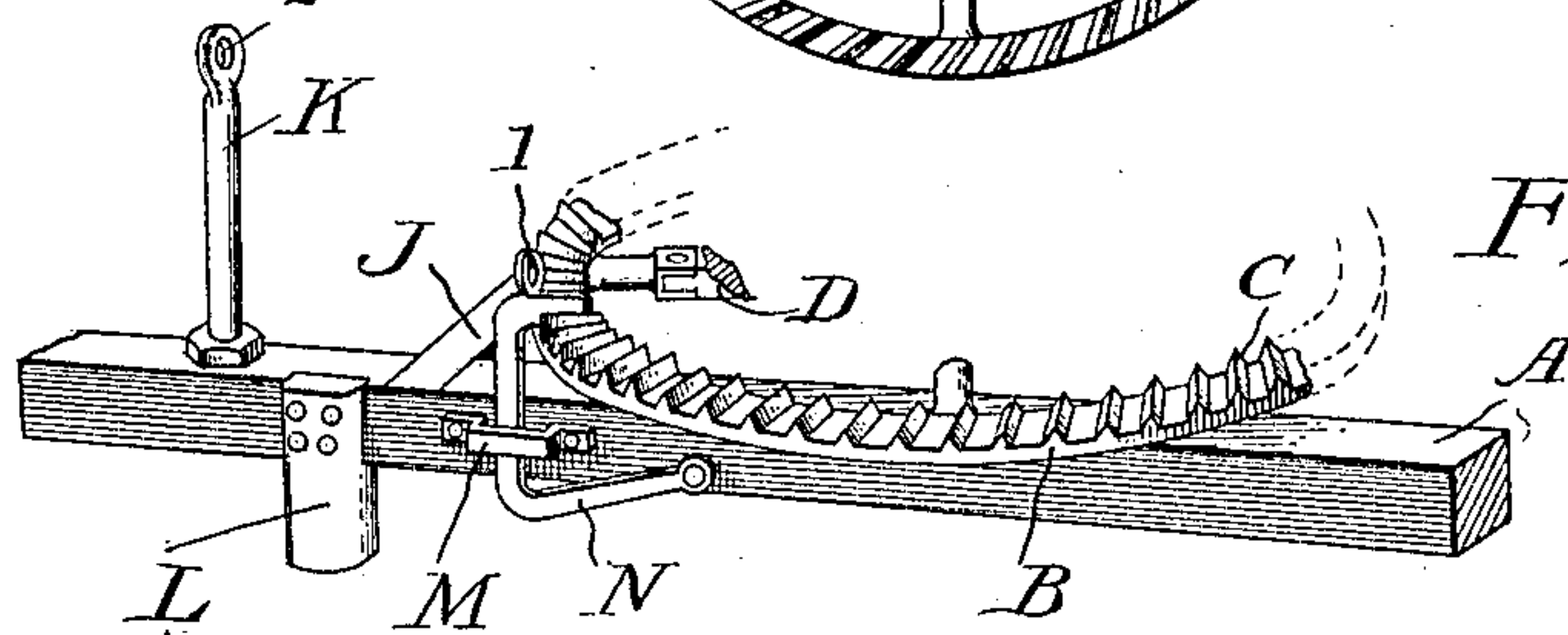
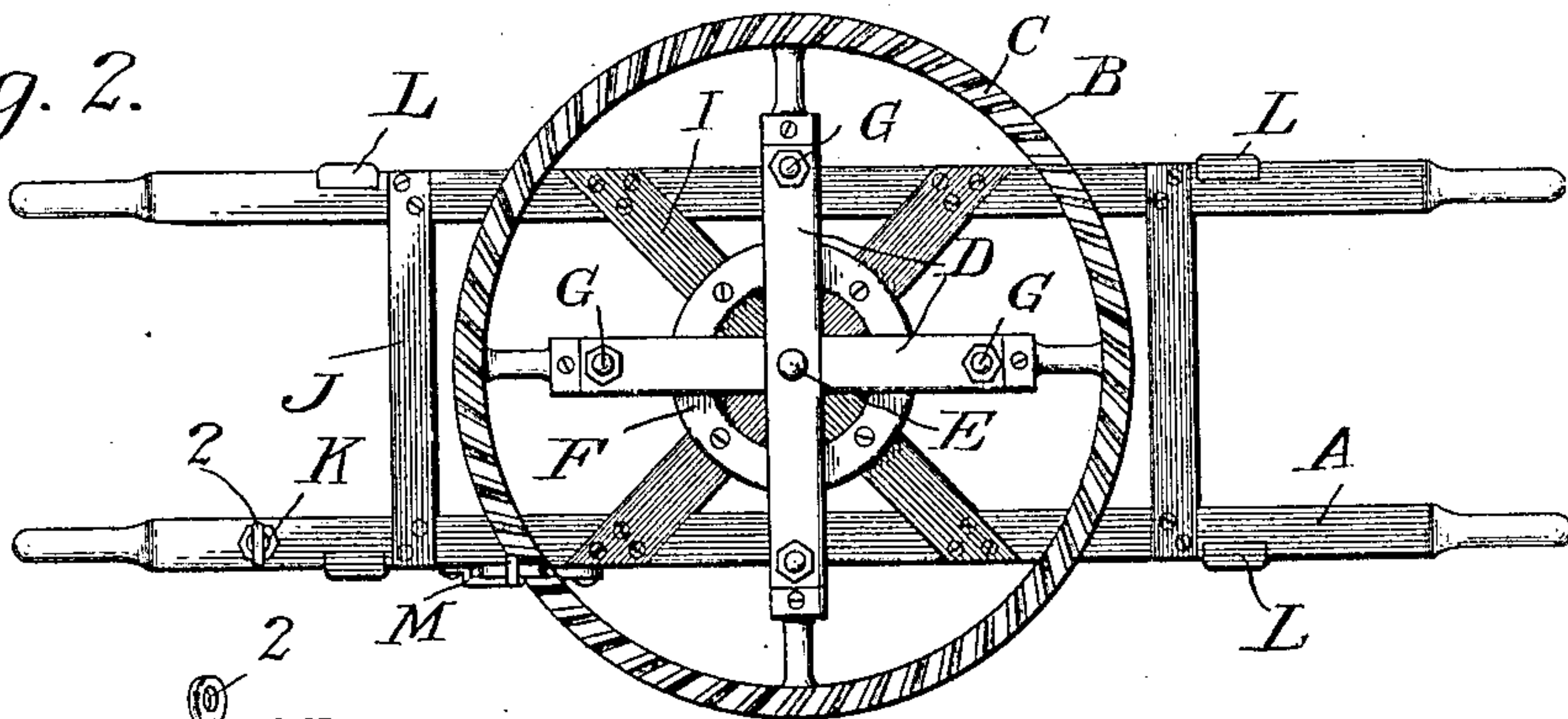
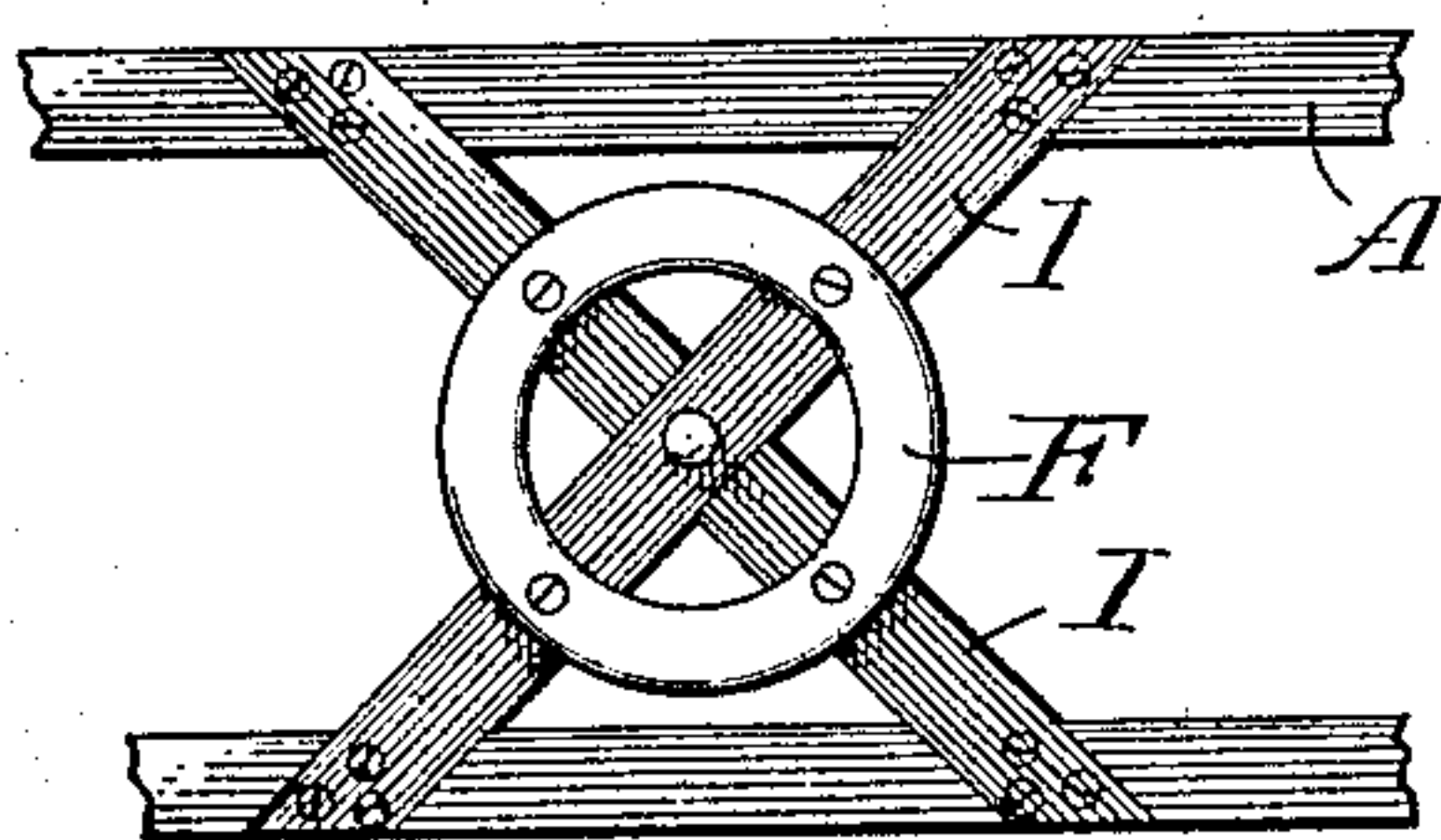


Fig. 3.

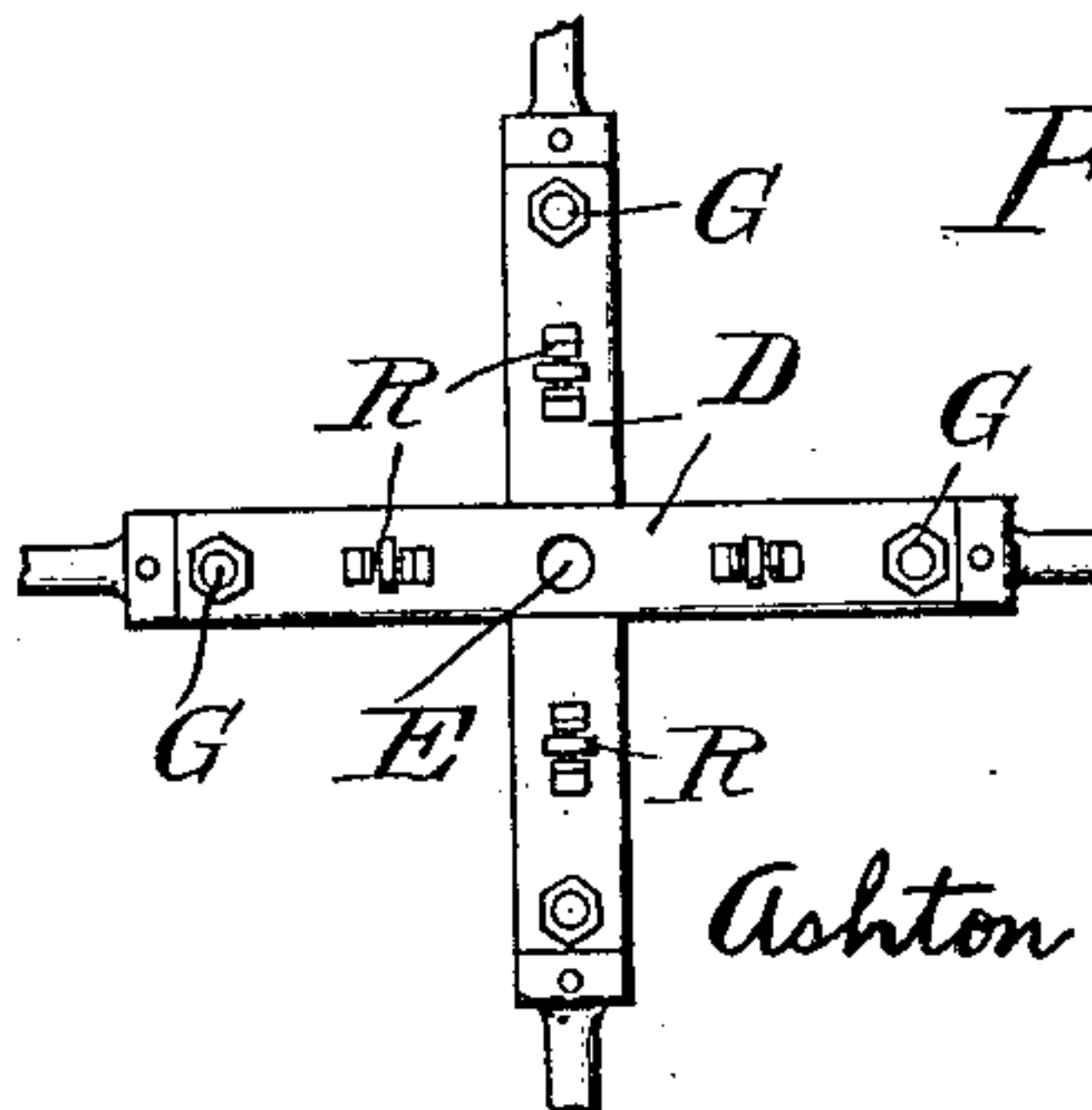
Fig. 4.



Witnesses

C. E. Smith.
Albert P. Plevins

Fig. 5.



Inventor

Ashton H. Doyle

By

Sturtevant & Mason

Attorneys

UNITED STATES PATENT OFFICE.

ASHTON HARGRAVE DOYLE, OF SELMA, ALABAMA, ASSIGNOR OF ONE-THIRD TO ALEXANDER K. CAWTHON, OF SELMA, ALABAMA.

WIRE-REEL.

No. 913,472.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed September 18, 1908. Serial No. 453,603.

To all whom it may concern:

Be it known that I, ASHTON H. DOYLE, a citizen of the United States, residing at Selma, in the county of Dallas, State of Alabama, have invented certain new and useful Improvements in Wire-Reels, of which the following is a description, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon.

My invention relates to new and useful improvements in wire reels and has for its object to provide a reel of this character which will run with little friction and which is held from tilting or dipping during the pulling off of the wire.

In wire reels which are used for paying off long lengths of wire as in the stringing of telegraph or telephone wires, as heretofore constructed, an attendant is required to watch the reel and to stop the movement of the reel due to the momentum of the same when the draft on the wire ceases or the wire will at this time uncoil and tangle, causing a great deal of trouble.

A further object of my invention therefore, consists in providing a reel of the above character with automatic means for stopping the movement of the reel when the draft on the wire for any reason ceases.

These and other objects will in part be obvious, and will in part be hereinafter more fully described.

In the drawings which show by way of illustration one embodiment of the invention: Figure 1 is a side view of a carrier with my improved wire reel mounted thereon. Fig. 2 is a top plan view of the same. Fig. 3 is a detail view showing the automatic means for locking the reel against movement. Fig. 4 is a detail view showing the circular track for preventing the tilting or dipping of the reel. Fig. 5 is a bottom plan view of the reel.

In carrying out my invention, I have provided a suitable support for the wire reel, which as herein shown, is a hand carrier A having supporting legs L depending therefrom, and located at a short distance from the ends of the side bars so as to provide suitable handles at each end of the carrier. Said side bars are connected by the cross bars J and also by the cross bars I, I, which are arranged diagonally and crossed centrally of the carrier, so as to form a support

for a pivot pin E, about which the reel may rotate. A circular track F is located concentrically with the pivot pin E. My improved reel consists of the cross bars D, D, which are suitably connected and provided with a bearing which engages over the pivot pin E.

On the under side of the cross bars D, I have provided anti-friction rollers R. It will be obvious that anti-friction balls or any other suitable anti-friction device may be used in place of the rolls herein shown. The cross bars D, D, have rising therefrom, retaining fingers G, which are suitably disposed so that a coil of wire may be placed about the fingers G and rest upon the cross bars D. The purpose of the circular track F and anti-friction rollers R, is not only to make the reel run freely and smoothly as the wire is drawn therefrom, but said track is located a sufficient distance from the pivot pin E, so that said reel is supported and all tendency of the reel to tilt or dip, is thus avoided.

As a means for locking the reel against movement when the draft on the wire ceases, I have provided the wire reel with outwardly extending arms, which support at their outer ends, a circular rack which is located concentrically with the pivot pin E. A locking dog or pawl N is pivoted to one of the side bars and has an upwardly extending portion moving freely in a keeper or guide M. The upper end of the pawl or dog N extends over the circular rack and is provided with a lug having an eye 1 through which the wire in passing from the reel is led. A guiding standard K is also provided with an eye 2 through which the wire passes as it is drawn from the reel. The eye 1 is located relative to the eye 2 in the standard, and the body of the wire on the reel so that when the wire is taut between the coil of wire and the eye 2, said pawl N is lifted free from the circular rack. If however, the draft on the wire ceases, the pawl N is of sufficient weight so that it will immediately drop into contact with the circular rack.

The teeth C of the circular rack are preferably made V-shaped so that when the locking pawl is dropped into engagement with the rack, said pawl will ride over one or more of the teeth, thus gradually bringing the reel to a rest. As herein shown, the teeth on the circular rack are inclined so as to

properly cooperate with the locking pawl N which is mounted on one of the cross bars. It is obvious however, that the locking pawl N may be arranged radially to the reel and the teeth on the circular rack may be correspondingly located. By placing the locking dog or pawl on the outside of the side bar A, the lateral force against the pawl, due to the movement of the reel, will be taken up by the side bar of the carrier as the reel moves in the direction of the arrow, Fig. 2.

It will be obvious that the form of the carrier may be varied and likewise the form of the reel, the essential features of my invention residing in the means for preventing the reel from tilting or dipping upon the drawing off of the wire and also in the automatic means for stopping the reel when the draft on the wire ceases.

Having thus particularly described my invention, what I claim as new and desire to secure by Letters Patents, is;

1. The combination of a carrier including side frames having projecting handles supporting legs for said carrier, cross bars connecting said side frames, a circular track carried by said cross bars, a pivot pin mounted on said cross bars, a reel having means for supporting a coil of wire mounted on said pivot pin, and anti-friction rollers carried by said reel and engaging said circular track.

2. The combination of a carrier, a reel mounted thereon, a circular track mounted on said carrier, anti-friction rollers carried by said reel, and engaging said track, a brake member carried by said reel and having V-shaped teeth, a brake mounted on said carrier and cooperating with said V-shaped teeth for gradually retarding the reel and stopping the same, and means for operating said brake when the draft on the wire ceases.

3. The combination of a reel, a carrier therefor, a brake member mounted on said reel and having means for gradually retarding the reel, a brake mounted on said carrier and cooperating with said brake member on the reel, a wire guide mounted on said carrier, a wire guide mounted on said brake, said wire guides being so disposed that a draft on the wire will release the brake from the brake member.

4. The combination of a reel, a carrier therefor, a brake wheel carried by the reel and having means for gradually retarding the reel, an arm pivoted to the carrier and engaging said brake wheel, a wire guide mounted on said arm, a second wire guide mounted on said carrier, the wire guide on said carrier being so disposed relative to the wire guide on said arm that said arm is normally held out of engagement with the brake wheel when the wire is taut.

5. The combination of a carrier, a wire reel carried thereby, a circular track carried by said reel and having V-shaped teeth, a stop dog mounted on said carrier, and having an eye through which the wire is led, a standard mounted on said carrier, and having an eye for said wire, the eye on said standard being so disposed relative to the eye on said stop dog, that said stop dog is normally held out of engagement with the track when the wire is taut, said stop dog engaging said track and gradually stopping said reel when the draft on the wire ceases.

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

ASHTON HARGRAVE DOYLE.

Witnesses:

IDA B. DE CAMP,
W. A. REID.

It is hereby certified that in Letters Patent No. 913,472, granted February 23, 1909, upon the application of Ashton Hargrave Doyle, of Selma, Alabama, for an improvement in "Wire-Reels," an error appears in the printed specification requiring correction, as follows: In lines 64, 72, and 74, page 2, the word "track" should read *rack*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 20th day of April, A. D., 1909.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.