

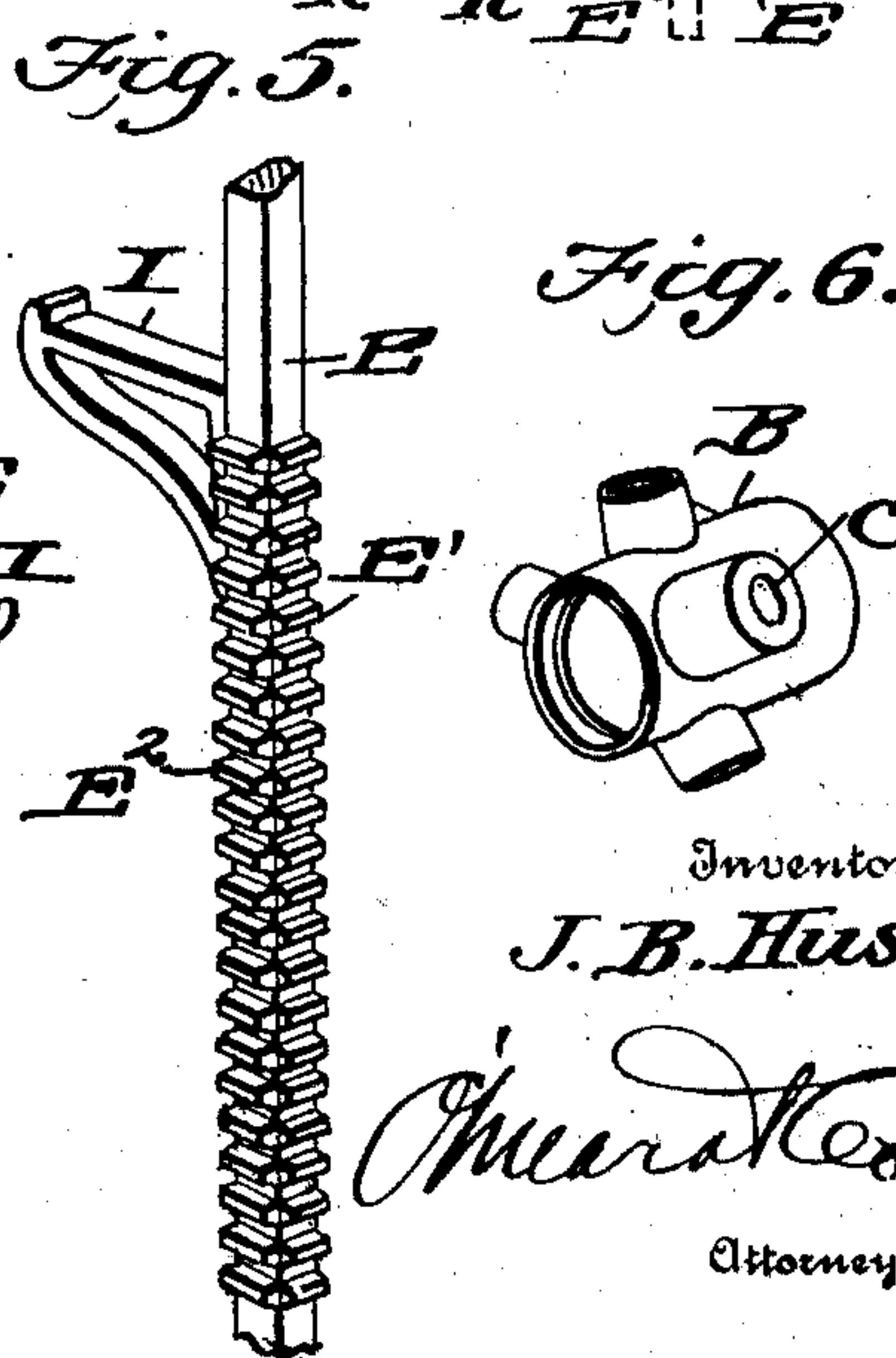
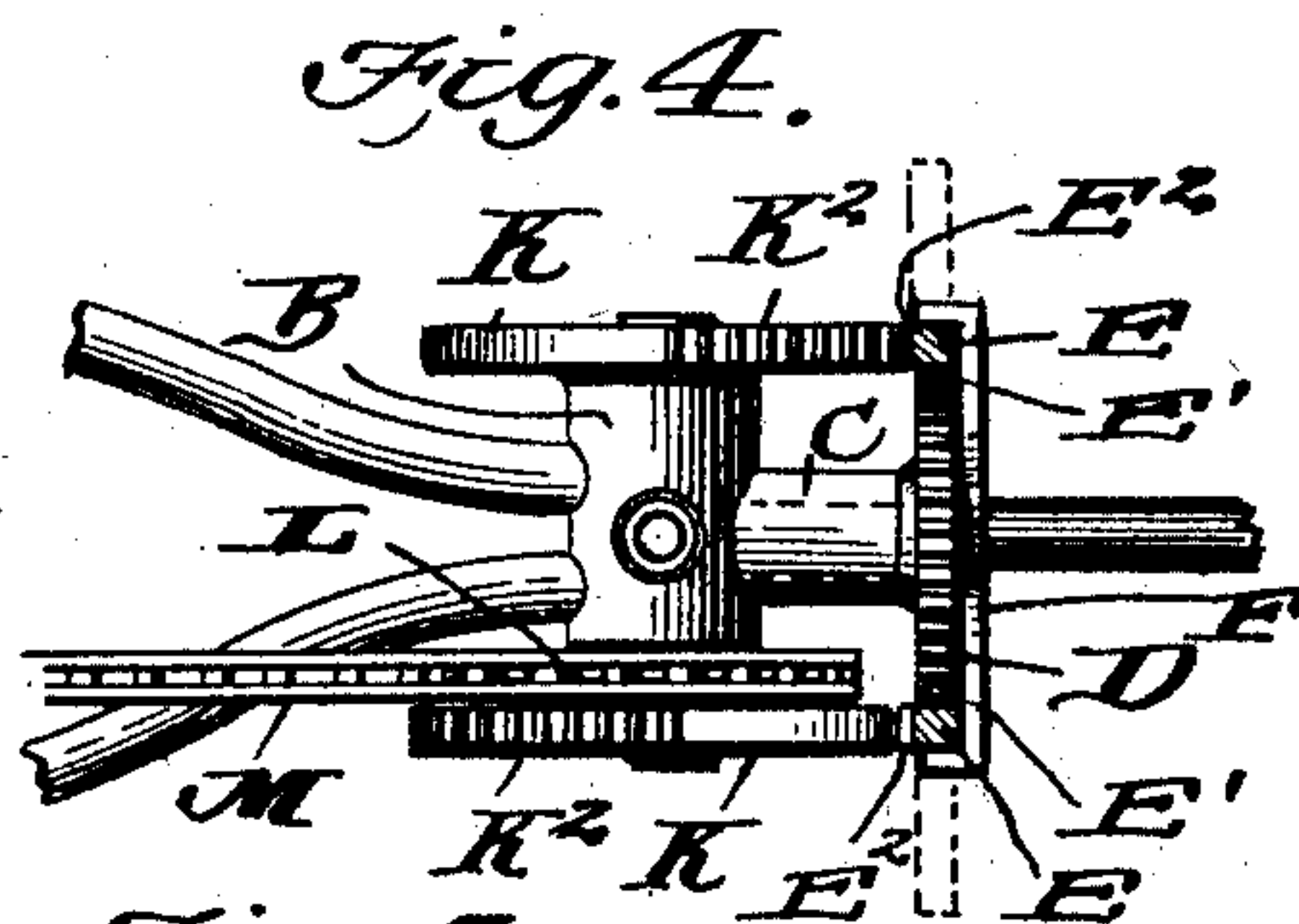
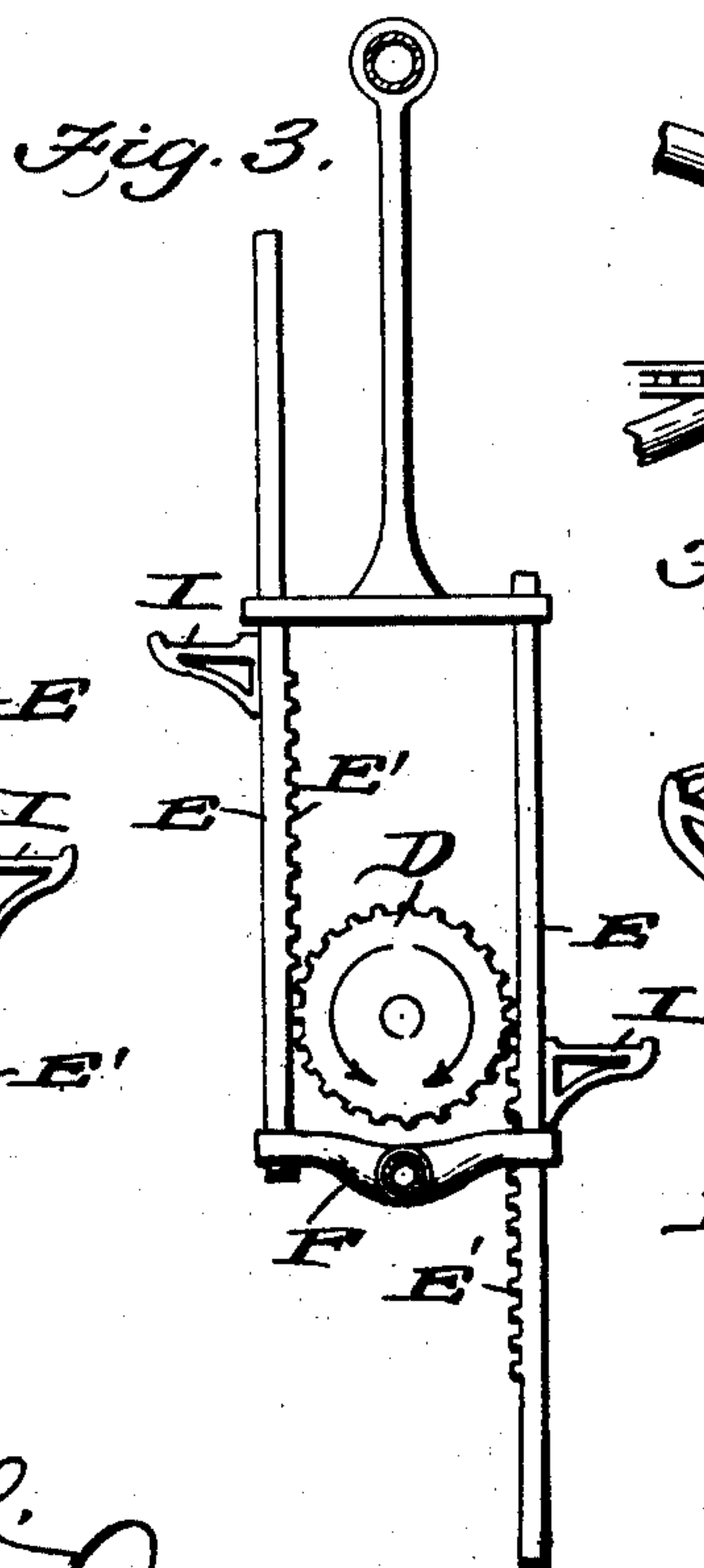
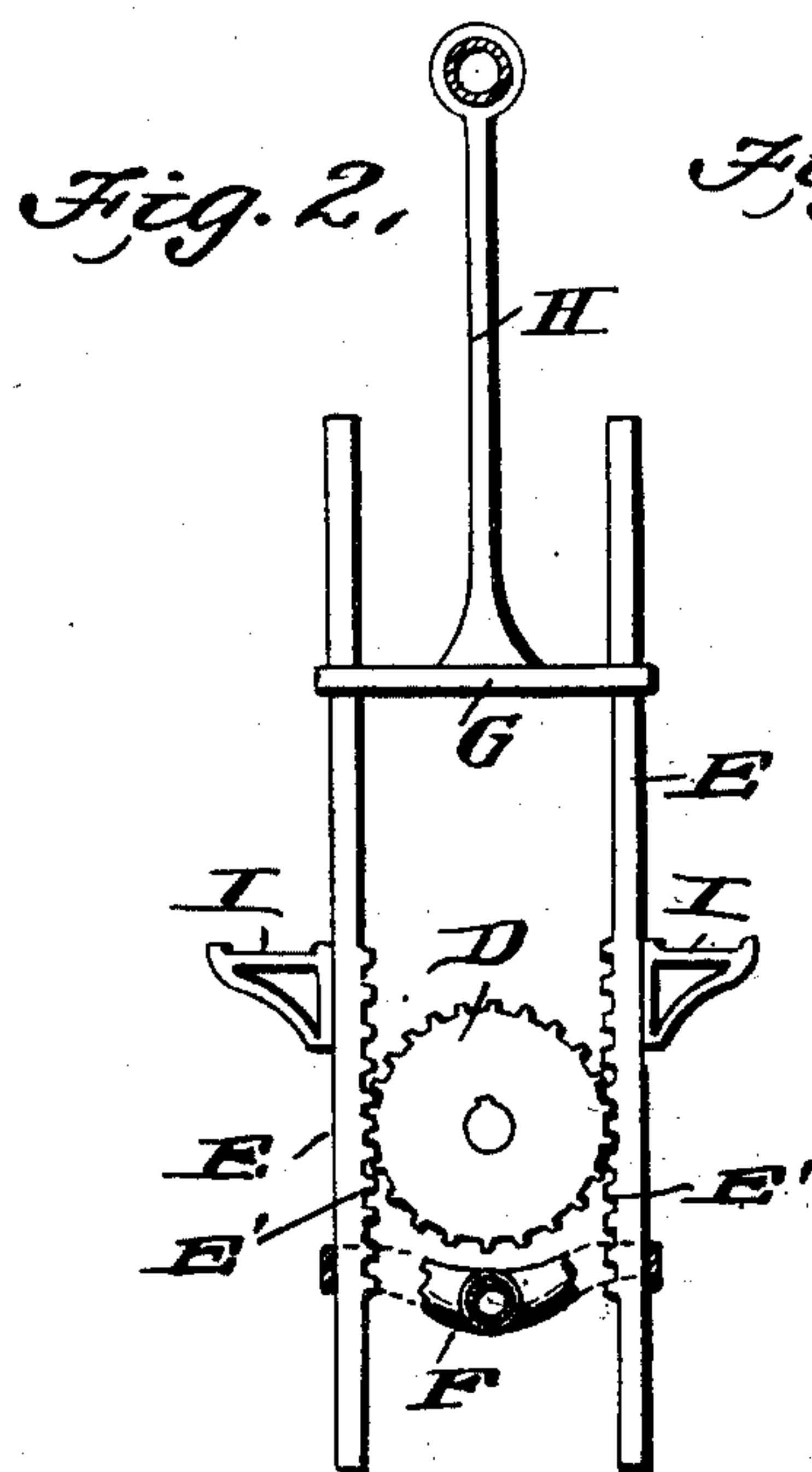
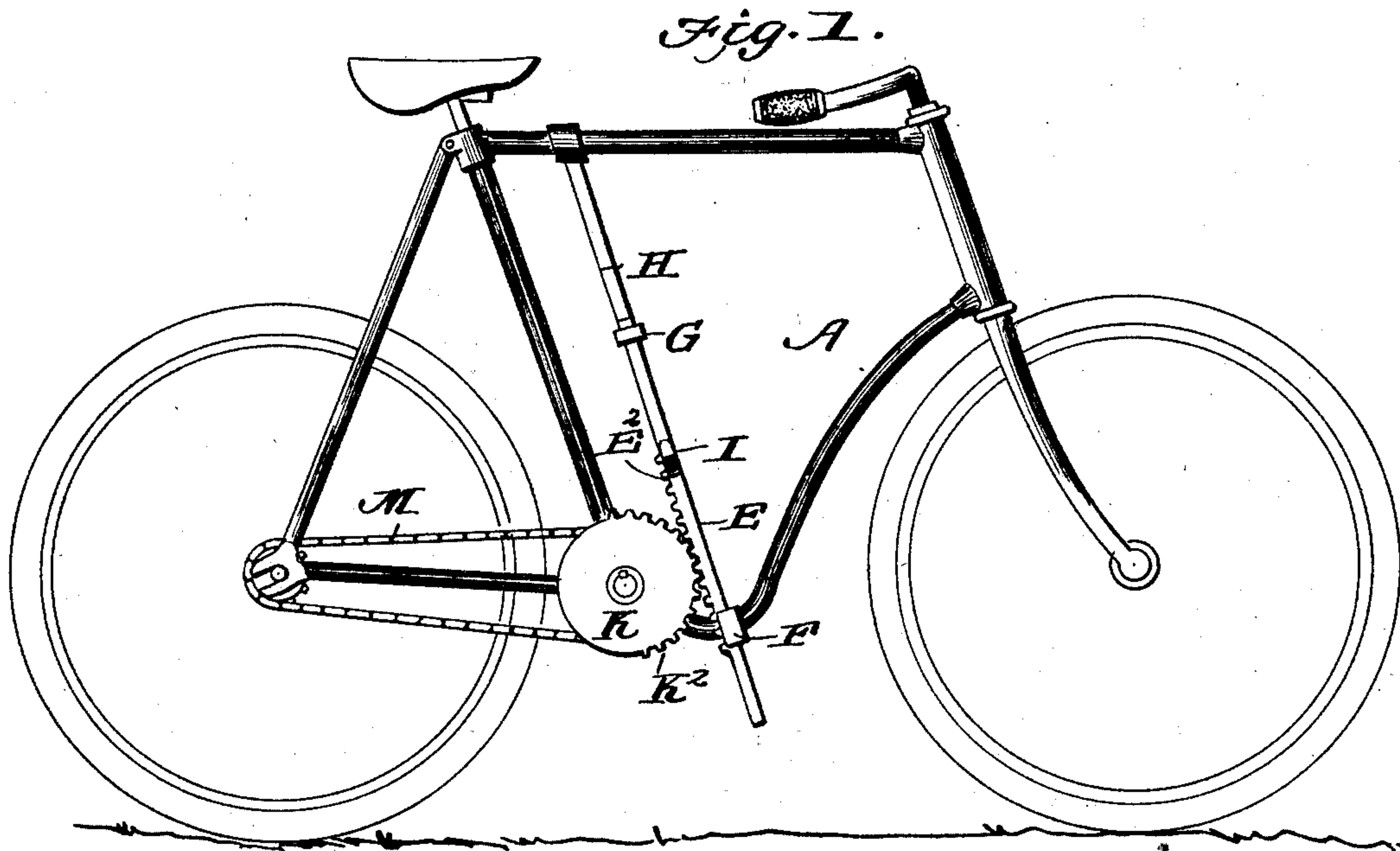
No. 719,595.

PATENTED FEB. 3, 1903.

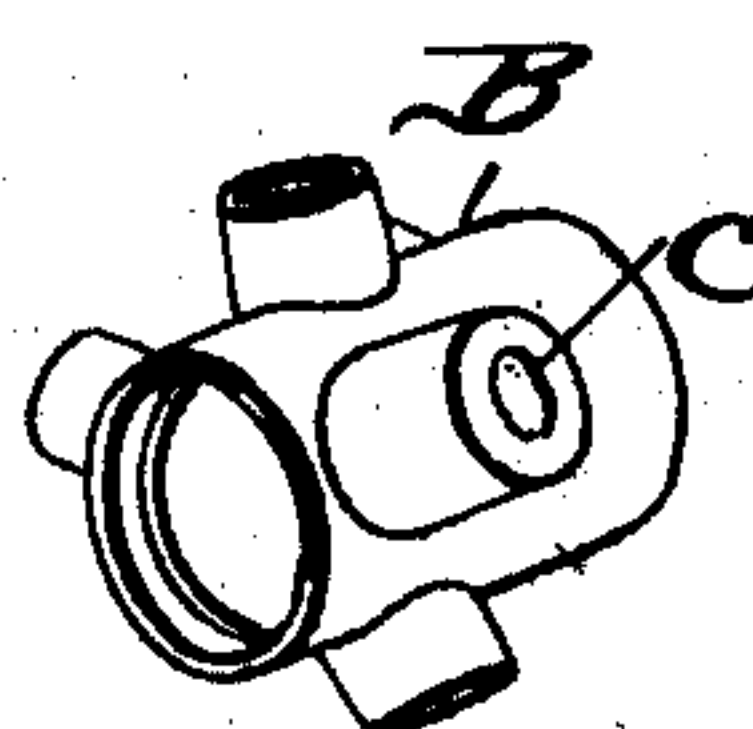
J. B. HUSS.  
BICYCLE DRIVING MECHANISM.

APPLICATION FILED JULY 6, 1901.

NO MODEL.



*Fig. 6.*



Inventor  
J. B. Huss.

*Murphy*  
Attorneys

Witnesses  
*M. H. Alonzo*  
*Clayton Shaw*



# UNITED STATES PATENT OFFICE.

JACOB B. HUSS, OF SPRINGVALLEY, ILLINOIS.

## BICYCLE DRIVING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 719,595, dated February 3, 1903.

Application filed July 6, 1901. Serial No. 67,321. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB B. HUSS, a citizen of the United States, residing at Springvalley, in the county of Bureau and State of Illinois, have invented a new and useful Bicycle Driving Mechanism, of which the following is a specification.

This invention relates generally to bicycles, and more particularly to an improved propulsion device.

The object of this invention is to provide a propulsion device which shall avoid the use of crank-pedals and will employ reciprocating pedals in place of the same; and with these objects in view the invention consists in the peculiar construction of the various parts and their novel combination or arrangement, all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a side elevation illustrating the practical application of my invention. Fig. 2 is a sectional elevation illustrating the pedal-bars in their intermediate positions. Fig. 3 is a similar view illustrating one pedal-bar completely depressed and the other one completely elevated. Fig. 4 is a sectional plan illustrating the coaction between the pedal-bars and driving-gears. Fig. 5 is a detail perspective view of one of the pedal-bars, and Fig. 6 is a detail perspective view of the shaft-hanger.

Referring to the drawings, A indicates the ordinary bicycle - frame, and B the shaft-hanger, which in addition to the tube connections has a bearing C, in which is journaled a shaft carrying a pinion D. Pedal-bars E are arranged upon opposite sides of this pinion D and are provided with rack-teeth E', adapted to alternately engage the said pinion D. These pedal-bars E work through a guide - bracket F at their lower ends and through a guide-bar G at their upper ends, said guide-bar being supported by means of a depending bracket-arm H, which is attached to the upper member of the bicycle-frame, as most clearly shown in Fig. 1.

Pedals I are arranged upon the outer sides of each pedal-bar, the feet being placed upon said pedals, and by pushing down the rack-teeth of the pedal-bar contact with the pin-

ion and elevate the opposite pedal-bar and its pedal. In addition to the rack-teeth E' each pedal-bar is provided with rack-teeth E<sup>2</sup> upon the rear faces, said rack - teeth being adapted to engage with the teeth K<sup>2</sup> of the mutilated gears K, said gears being arranged upon the end of the drive-shaft which carries the ordinary sprocket L and operates the chain M.

The rack-teeth E<sup>2</sup> are so arranged with reference to the teeth K<sup>2</sup> that when the teeth of one bar are in engagement with one set of teeth the teeth of the opposite bar will not be in engagement with the teeth of its adjacent gear, and in this manner it will be noted that a continuous rotary motion is imparted to the drive-shaft through the medium of the two mutilated gears, and it will be understood that the pinion D is employed only for the purpose of elevating the pedal-bar to a position ready to receive the next stroke.

It will thus be seen that I provide a bicycle driving mechanism employing reciprocating pedal-bars and doing away with the ordinary crank-pedals now in common use.

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

1. In a bicycle driving mechanism, a frame provided with a guide - bracket below the hanger, a shaft journaled in the hanger, each end of which is provided with a mutilated gear, a bracket-arm secured to the bicycle-frame at its upper end and having a guide-bar secured at its lower end above the hanger, two toothed pedal-bars mounted in the guide-bracket and the bar respectively, one upon each side and in position to alternately engage with one of the mutilated gear-wheels, a pedal rigidly secured to each pedal-bar intermediate the guide bracket and bar and means for returning each pedal-bar to its operative position.

2. In a bicycle mechanism, a frame provided with a guide-bar below the hanger and having its hanger provided with a bearing, a shaft journaled in the hanger, each end of which is provided with a mutilated gear, a shaft journaled in the bearing provided with a gear-wheel, a guide-bar secured to the frame above said gear-wheels, the pedal-bars mount-

ed on the guide-bracket and in the bar, and having pedals formed on their outer sides intermediate of the guiding devices, the teeth upon the rear and inner sides of each bar, the  
5 teeth upon one side being in position to engage with the mutilated gear-wheels respectively, and the teeth upon the other side being in position to engage with opposite sides of the gear-wheel upon the shaft.

JACOB B. HUSS.

Witnesses:

JOSEPH HERCER,  
J. H. STEDMAN.