(No Model.) 2 Sheets—Sheet 1.

J. SHERIDAN.

EVENER FOR RAILWAY HEADS.

No. 381,284. Patented Apr. 17, 1888.

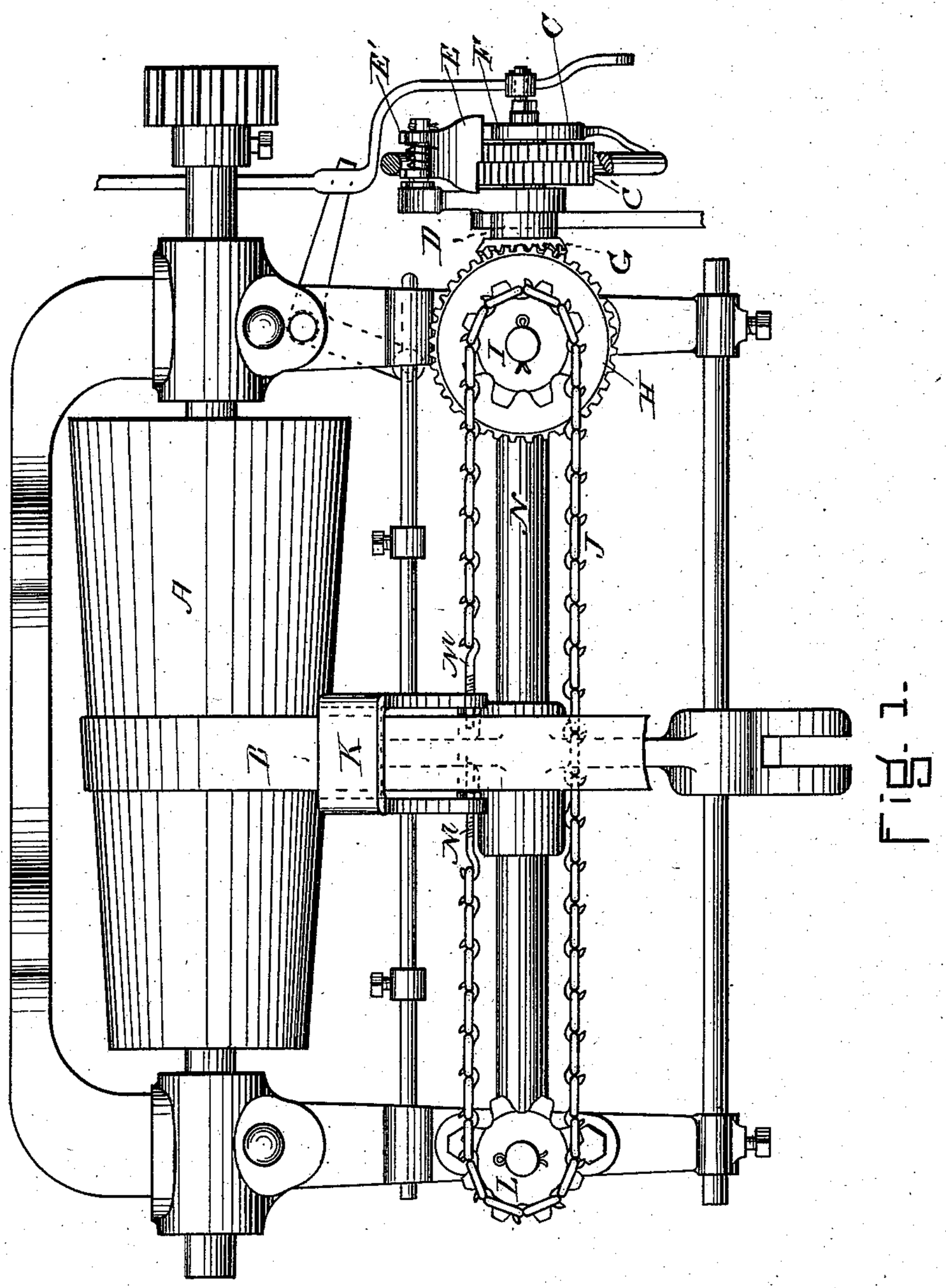

FIG. 1.

WITNESSES.

J. Henry Taylor.
E. B. Tomlinson.

INVENTOR.

James Sheridan
by Alex. P. Browne,
attorney.

(No Model.) 2 Sheets—Sheet 2.

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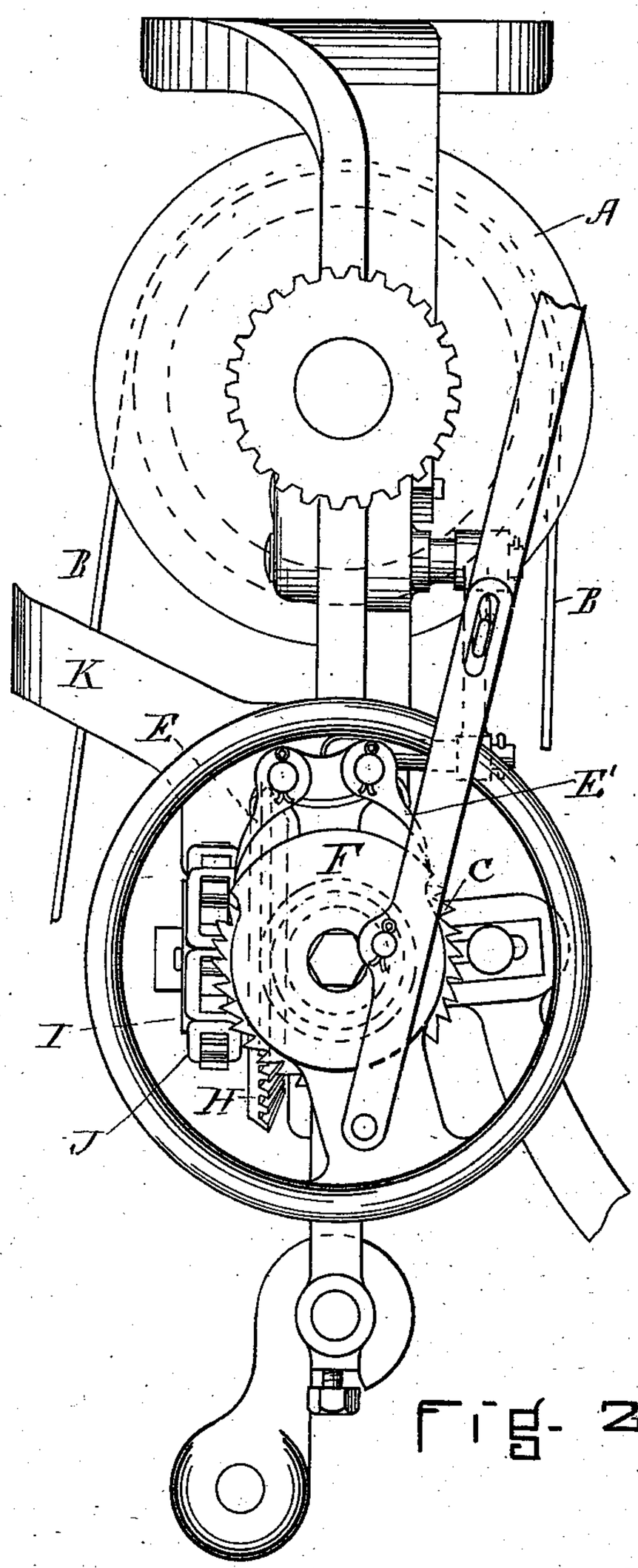

FIG. 2.

WITNESSES.

J. Henry. Taylor.

E. B. Tomlinson.

INVENTOR.

James Sheridan

by Alex. P. Browne,

attorney

UNITED STATES PATENT OFFICE.

JAMES SHERIDAN, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO THE PETTEE MACHINE WORKS, OF SAME PLACE.

EVENER FOR RAILWAY-HEADS.

SPECIFICATION forming part of Letters Patent No. 381,284, dated April 17, 1888.

Application filed June 27, 1887. Serial No. 242,680½. (No model.)

To all whom it may concern:

Be it known that I, JAMES SHERIDAN, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented certain new and useful Improvements in Eveners for Railway-Heads, of which the following is a specification.

My invention relates to improvements in the construction of eveners for railway-heads to be used in connection with carding machinery; and it has for its object to simplify and improve the construction of such devices.

As is known to those familiar with the art to which my improvement relates, there is a class of machines or appliances now in use for evening or regulating the speed of the roller by which the sliver is drawn, which include a cone-pulley, a belt driven therefrom and transmitting motion to the drawing-roller, and mechanism by which the belt is shifted laterally upon the cone-pulley to vary the speed of the roller by means of two ratchet wheels mounted upon a common shaft, and two pawls, one for moving each of the ratchet-wheels, these pawls being held away from the ratchet-wheels by a pivoted guard-piece, the position of which is regulated by the tension of the sliver as it passes through the trumpet. By this construction, when the tension is normal, the guard-piece is interposed between both pawls and their respective ratchets; but if the tension becomes greater or less than normal the guard-piece is correspondingly shifted by means of a lever on which the trumpet is mounted, to allow one or the other of the pawls, which have a constant motion, to engage with and drive its ratchet-wheel. The rotary motion of these ratchet-wheels thus obtained is transmitted by suitable apparatus to and regulates the position of the belt upon the cone-pulley. It is to improvements in this apparatus for so transmitting motion from the ratchet-wheels to the belt-guide that my present invention relates.

Heretofore the driving motion from the ratchet-wheels has been transmitted to the belt-guide by means of a screw formed upon the shaft on which the ratchet-wheels are mounted and engaging with a nut in the belt-guide, as shown in Letters Patent No. 86,719, of February 9, 1869. This construction has been found defective in several respects, and it is the object of my present invention to provide a mechanism whereby these defects are obviated.

In the drawings, Figure 1 is a front view, and Fig. 2 an end view, of the mechanism embodying my improvements.

A represents the cone-pulley, and B the belt.

C and C′ are the ratchet-wheels, mounted upon a common shaft, D.

E and E′ are the pawls, and F is the guard-piece.

By my present improvement I provide upon the shaft D of the ratchet-wheels, and which turns with them, a beveled gear, G, arranged to engage with a second beveled gear, H, which revolves upon a stud attached to the frame of the machine in which the shaft D is supported and which carries a sprocket-wheel, I, and its chain J. This chain is connected with a sliding belt-guide, K, which surrounds the belt B and slides it to and fro upon the pulley. At the other end of the chain I prefer to employ a second sprocket-wheel, L, although any other suitable form of roller for giving tension to the chain may be substituted. To allow for convenient adjustment in the length of the chain and to take up slack, I attach one or both of its ends to the belt-guide by means of hooks M, threaded and provided with lock-nuts *m*.

By means of the substitution of the endless chain, sprocket-wheels, and beveled gears, as described, for the screw of the old machine an important improvement is made in the efficiency and economy of the device as a whole. In previous machines in which the screw was used it has been found that when rapid working is desired the screw must be of so quick a pitch, and consequently acts with so much strain, that the teeth of the ratchets are often broken. Furthermore, with such a construction there is great waste of power followed by corresponding excessive wear, which soon produces so much looseness between the screw and its nut that the belt-guide moves too late, and when this result is reached the machine is unfit for use. By my present improvement the belt-guide is moved more efficiently, with

greater economy of power, and more rapidly. Furthermore, if any wear should occur it could be taken up by the adjustment devices described without in any way impairing the efficiency of the machine.

The belt-guide K may be arranged to slide upon a fixed rod set in the frame of the machine, or, as I prefer to construct it, upon an extension, N, of the shaft D, as shown in the drawings.

I claim—

1. The combination, with the cone-pulley and its belt and the ratchets C C′, provided with their pawls E E′ and mounted upon a common shaft, of the beveled gears G H, the latter carrying the sprocket-wheel I, an endless chain, J, engaging with said sprocket-wheel and attached to a sliding belt-guide which surrounds and moves the belt, a suitable tension-roller for giving tension to the chain, and a rod or sliding support for the belt-guide, all substantially as set forth.

2. The combination, for the purposes described, of the belt-guide K, provided with a suitable sliding support or rod, the endless chain attached to the said guide and provided with devices for taking up the slack, as described, the tension-sprocket L, and the sprocket I, mounted upon the beveled gear H, whereby the motion to and fro is imparted to the belt-guide, and the belt is thereby moved correspondingly to regulate the speed of the drawing-roll.

In testimony whereof I have hereunto subscribed my name this 18th day of June, A. D. 1887.

JAMES SHERIDAN.

Witnesses:
J. HENRY TAYLOR,
E B. TOMLINSON.