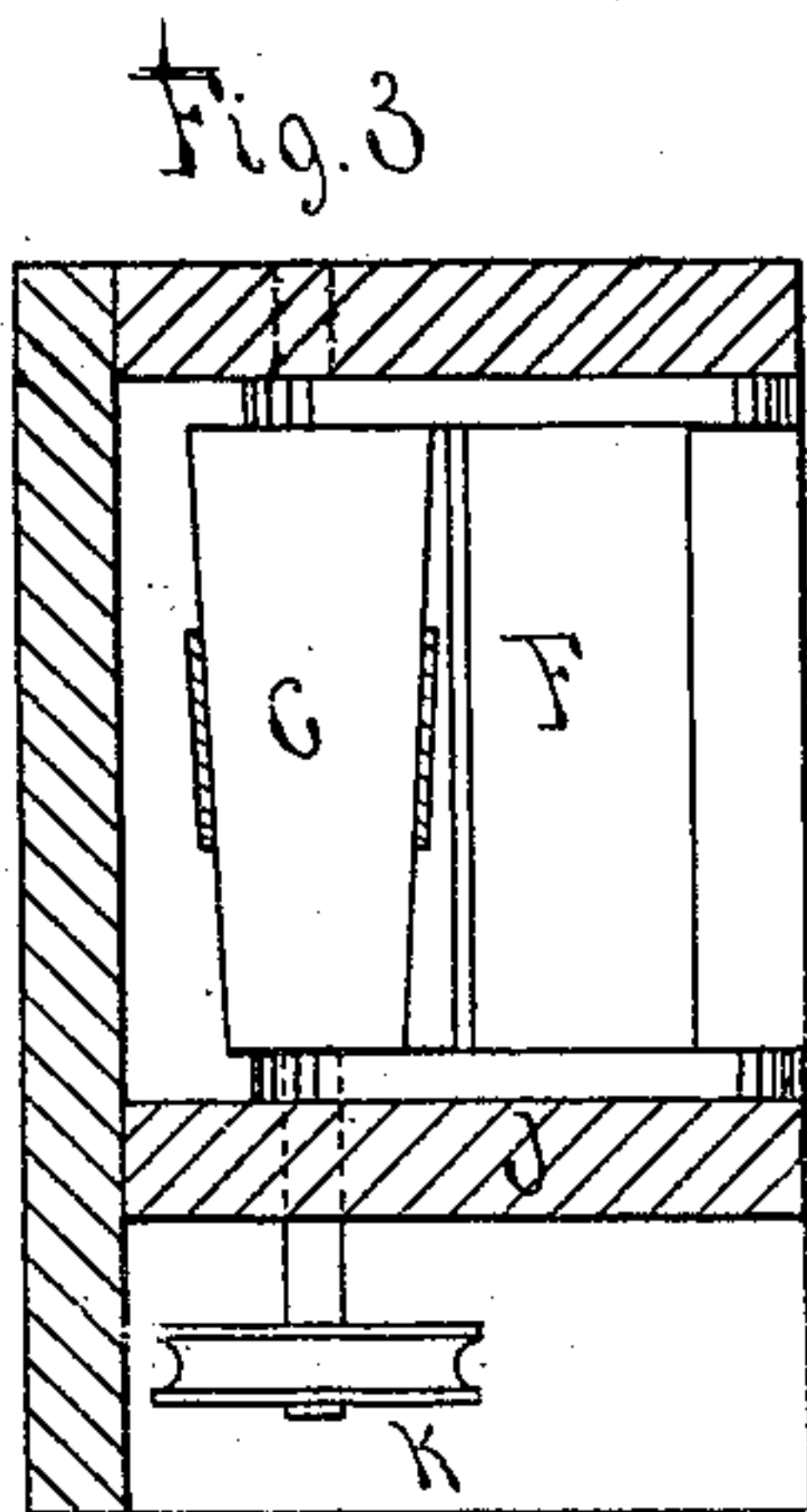
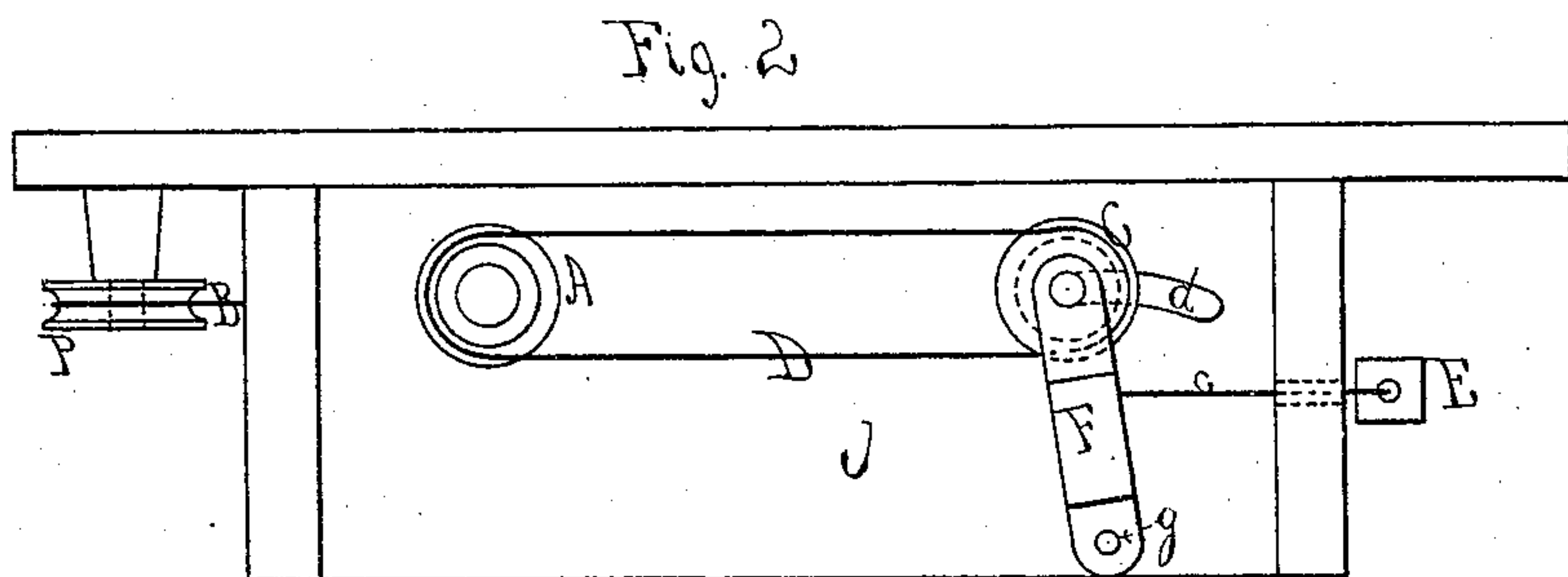
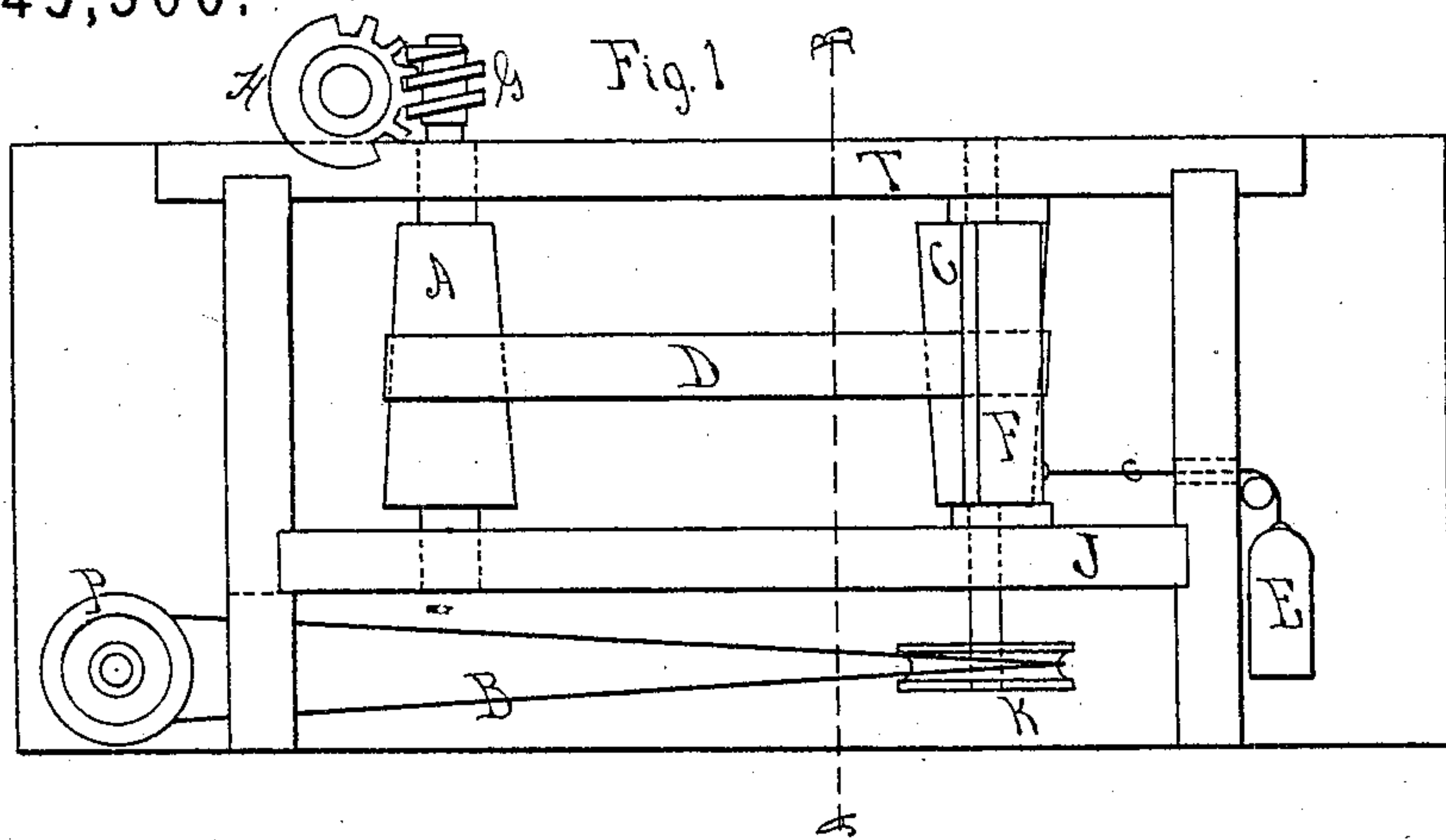


R. KITSON.

Feed-Regulators for Cotton-Openers.

No. 145,300.

Patented Dec. 9, 1873.



Witnesses.

*L. Kitson*  
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# UNITED STATES PATENT OFFICE.

RICHARD KITSON, OF LOWELL, MASSACHUSETTS.

## IMPROVEMENT IN FEED-REGULATORS FOR COTTON-OPENERS.

Specification forming part of Letters Patent No. **145,300**, dated December 9, 1873; application filed August 29, 1873.

*To all whom it may concern:*

Be it known that I, RICHARD KITSON, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Eveners or Feed-Regulators for Cotton-Lappers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 represents a front-side elevation; Fig. 2, a plan or top view after the top T has been removed; and Fig. 3, a cross-section on the line A B of Fig. 1.

This invention relates to a new and useful improvement in the eveners or feed-regulators which are used in cotton-lappers, whereby two or more important objects are accomplished. The first object is to prevent accelerated motion of the evener, and the connected feeding mechanisms which control the formation of the lap of cotton, thereby making a lap of uniform thickness. The second object is to simplify the construction by reducing the number of parts in certain machines, and to reduce the cost of construction and operation. This invention and improvement in cotton-lapper eveners consists of the movable motor-cone C, in combination with the shipping-cone A, the cone-belt, and the feed-connecting mechanisms, all operating together to prevent accelerated motion, and insure the formation of an even and uniform lap of cotton, and at the same time making a cheaper construction than has been done in certain machines.

The motor-cone is hung in a swinging gate or frame, which is pivoted to the top and bottom of the case or frame, and actuated so as to be automatically adjustable in a slot, *d*, by a weight, E, and a cord, *c*, to keep a constant draft upon the motor-cone and the belt, whether such belt is inclined to slacken by the movement of the shipping-cone, or by running up or down on the cone surfaces while being traversed by the shippers. The belt B, which drives the motor-cone, runs from a pulley, P, on a counter-shaft, to a pulley, K, on the lower end of the motor-cone shaft.

In the ordinary evener or feed-regulator for cotton-lappers, when the operating shippers traverse the cone-belt, this belt has a tendency on its leading sides to run up on the higher

part of one cone, and downward on the larger part of the other cone, and the belt frequently slips or slides on either cone, which momentarily checks the speed of one cone or accelerates the motion of the other, sometimes very suddenly, and this breaks the uniformity or regularity of motion of the feeding mechanisms which constitute the evener, and, consequently, prevents a uniform and even formation of the lap.

By the introduction of my said improvement, as above described, the uniform tension, draft, and binding friction of the cone-belt are constantly maintained, and accelerated motion is prevented, regardless of the movement of the shipping-cone, or the slipping tendency of the belt, or its inclination to rise or run to the larger part of either cone, however sudden or varied the slipping inclination, tendency, or motion of the belt. The swinging frame F, which carries the motor-cone, is hung between the bottom and top of the case or frame, or adjustably supported on pivoting-screws *g*, on which it swings, and the bottom J of the frame is provided with an opening or a curved slot, on which the cone-shaft moves when actuated by the weight.

It will be understood that, when the feed-connecting mechanisms of the ordinary cotton-lapper evener operate the slides to disconnect the worm G from the feed-gear H, the top end of the cone A is moved toward the cone C, and by this movement the cone-belt is suddenly slackened, and is liable to get out of place, or be caught by one of the shippers and injured or broken or severed; but my improvement prevents all such accidental injury, inconvenience, accelerated motion, or other trouble. It is, therefore, of considerable importance, as it insures the successful operation of all the connected machinery.

I claim—

In a cotton-lapper evener or feed-regulator, the movable swinging motor-cone C, in combination with the shipping-cone A, the cone-belt, and the feed-connecting mechanisms, all arranged and operating in the manner and for the purpose set forth.

RICHARD KITSON.

Witnesses:

S. KITSON,  
JOHN E. CRANE.