2 Sheets—Sheet 1.

J. R. REILLEY.

Speed-Regulating Mechanism for Cotton-Sliver Eveners.

No. 216,630. Patented June 17, 1879.

Fig. 1.

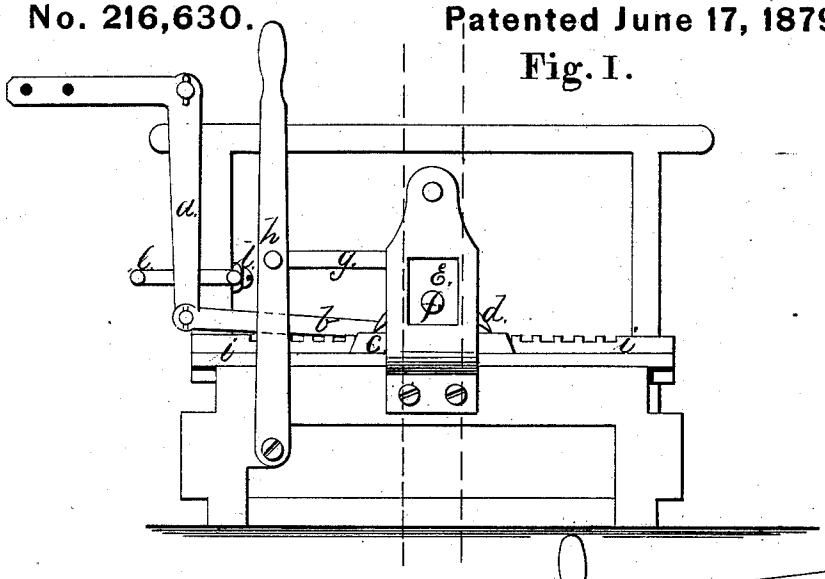


Fig. 2.

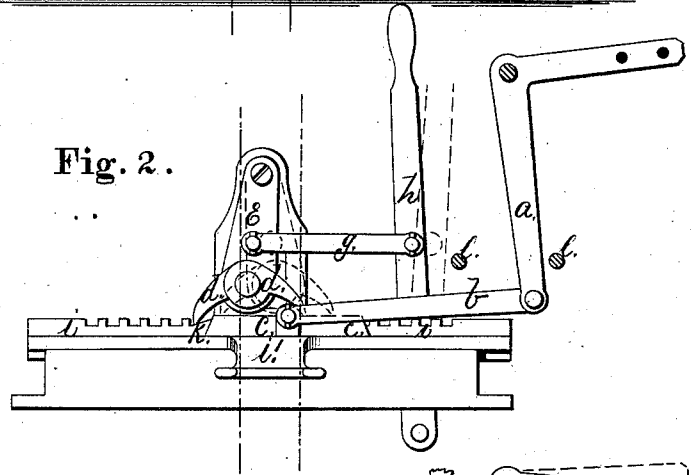
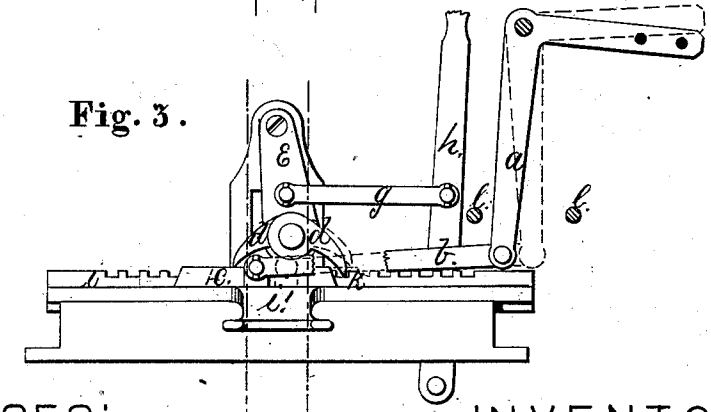


Fig. 3.



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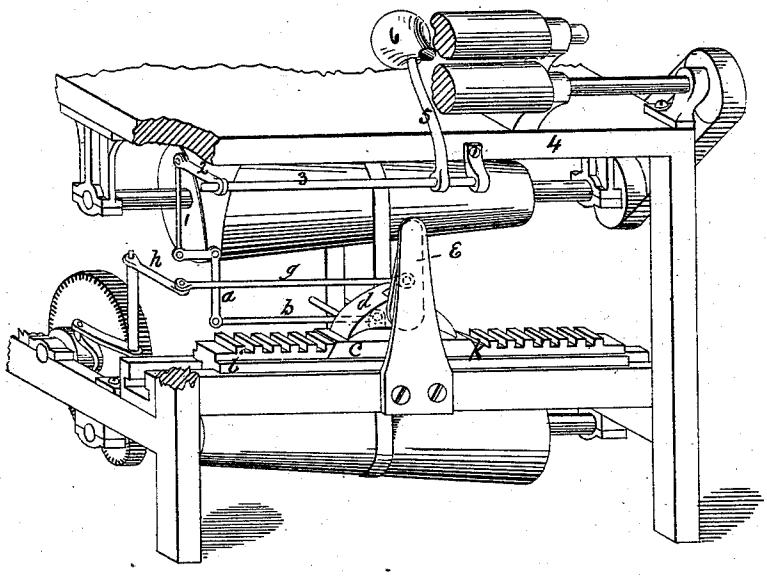
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Fig. 4.



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UNITED STATES PATENT OFFICE

JAMES R. REILLEY, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN SPEED-REGULATING MECHANISMS FOR COTTON-SLIVER EVENERS.

Specification forming part of Letters Patent No. **216,630**, dated June 17, 1879; application filed January 2, 1879.

To all whom it may concern:

Be it known that I, JAMES R. REILLEY, of the city and county of Providence, and State of Rhode Island, have invented new and useful Improvements in Speed-Regulating Mechanism for Cotton-Sliver Eveners; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in that kind of eveners used in cotton-mills at the railway-head, by which the sliver is evened by means of drawing-rolls driven by or through a pair of conical rolls connected by a belt or intermediate friction-wheel.

The object of the invention is to allow of rapid changes in the speed of the drawing-rolls within the limit of the sliver's resistance in passing through the trumpet, so as to prevent the shipper mechanism from passing too far on one side of the center of its traverse when the trumpet chokes and too far on the other side when the sliver breaks; and consists in the peculiar arrangement by which two reciprocating pawls are controlled through the trumpet and allowed to enter, either one or the other, a rack, by which the shipper is operated, as will be more fully set forth hereinafter.

Figure 1 represents my improved shipper mechanism for cotton-sliver eveners. Fig. 2 represents in solid lines the same mechanism at a point when the reciprocating pawl has reached the limit of lateral traverse of the shipper-rack and is sliding over the beveled tooth in the rack, the other extreme point of reciprocation of the pawls being shown in broken lines. Fig. 3 represents the pawl as engaged in the rack in solid lines and the pawl as raised off the rack in broken lines. Fig. 4 shows the method of connecting the double pawl and the slide with the operative mechanism.

In the drawings, *a* is a lever operated through or connected with the trumpet of the evener. *b* is a rod connecting the lever *a* with the slide *c*, so that this slide *c* may be operated through the trumpet, either as shown or in any other manner, provided the motion of the trumpet be transmitted to the slide *c*. *d d* are hinged pawls, to which reciprocating motion is imparted. They are shown supported on the pendulum *e*, and reciprocated by means of the lever *h* and rod *g*, the pendulum being provided with the stop *f*. When, however, the pawls are reciprocated by connecting the pendulum with a crank or similar device the stop *f* is not required, as seen in Fig. 4.

i is a rack, to which the shipper *i'* is secured, and is provided with teeth, into which the pawls enter, and thus slide the rack and shipper in the desired direction. The rack *i* is also provided with two beveled teeth, *k*, which are beveled in opposite directions; and as they do not present any surface against which the pawls can press, but allow the pawls to slide over the same, the rack or shipper will not be forced beyond the proper point when either the sliver breaks or the trumpet becomes choked.

To the crank *a* is attached a connecting-rod, 1, (see Fig. 4,) which is jointed to an arm, 2, of a rock-shaft, 3, supported in suitable bearings on the frame 4. This rock-shaft has another arm, 5, the outer end of which carries the trumpet 6, through which the roving passes. When the trumpet chokes or the roving breaks the end of arm 5 moves the rock-shaft, and with it arm 2, and, by means of rod 1, crank *a*, and connecting-bar *b*, the slide *c* is moved, so that one of the pawls *d* is allowed to drop into the rack *i*, for the purpose more fully explained in the following paragraphs.

When in the normal condition, with a sliver of uniform size, the trumpet will maintain the slide *c* in the position shown in Fig. 1, and the pawls *d* will pass over the slide without entering the rack. As soon, however, as the weight or size of the sliver increases the additional strain on the trumpet will move the slide to one side or the other, and the pawl *d* will enter the rack and move the same laterally until either the slide passes under the pawl or the pawl reaches the opposite beveled tooth, when it merely slides up the inclined side of the same without moving the rack. When the sliver becomes too light the lessened friction produces the opposite result, and the other pawl moves the rack and belt-shipper in the opposite direction.

l l are two stops limiting the reciprocation of the slide *c*.

The apparatus is very simple and operates very rapidly, thus accurately regulating the speed of the drawing-rolls to the sliver and producing uniform results. It can be readily applied to any evener, is strong and durable, and operates with little friction.

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

1. The combination, with the hinged pawls *d* and mechanism for reciprocating the same, of the rack *i* and the slide *c*, operated by the trumpet-connecting mechanism, substantially as and for the purpose described.

2. The combination, with the hinged pawls *d* and mechanism for reciprocating the same, of the rack *i*, provided with the two beveled teeth *k*, and the slide *c*, operated by the trumpet-connecting mechanism, substantially as and for the purpose described.

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