(No Model.)

G. A. COLLINS, Jr.

SPINNING MACHINE.

No. 496,083. Patented Apr. 25, 1893.

Fig. 1.

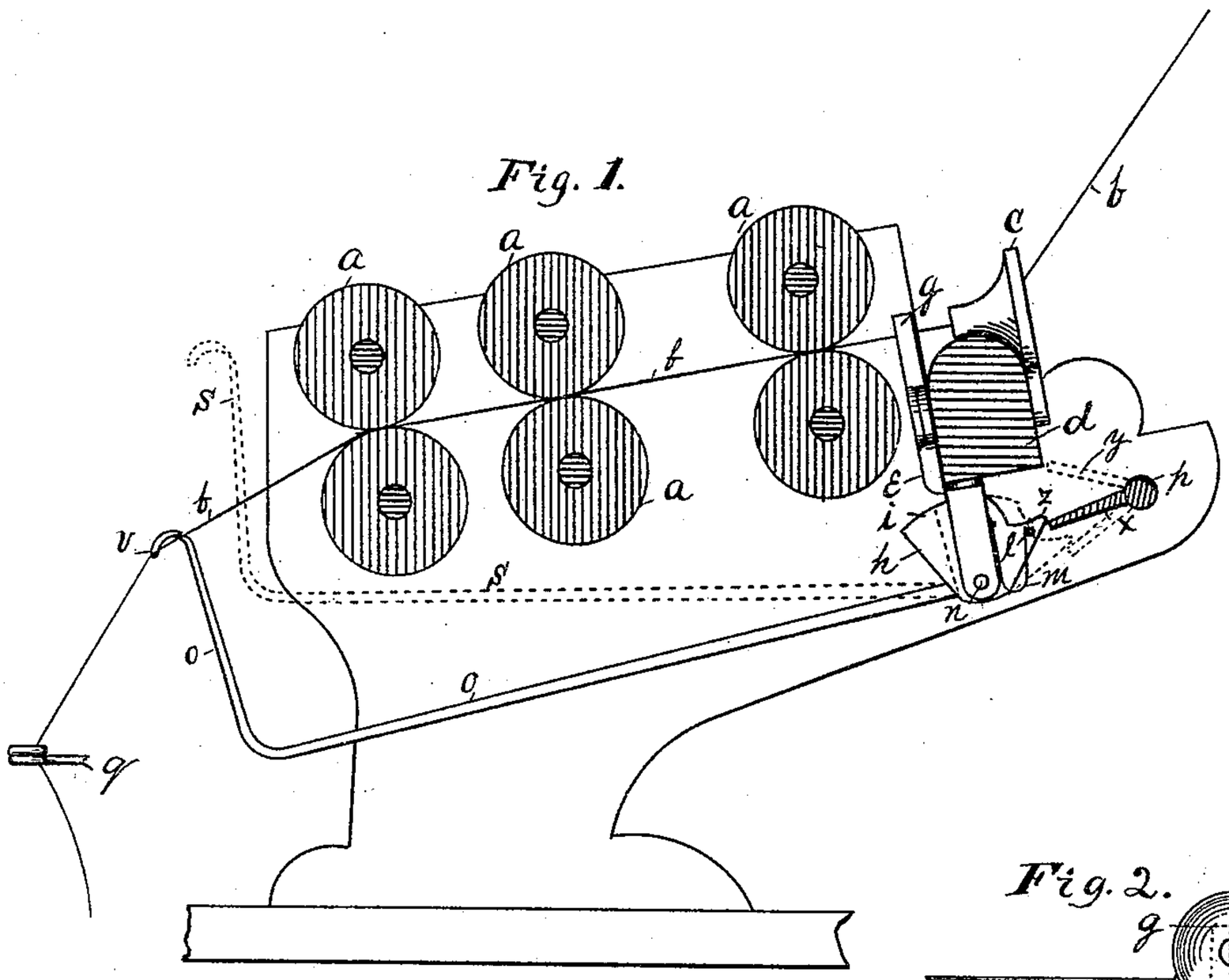


Fig. 2.

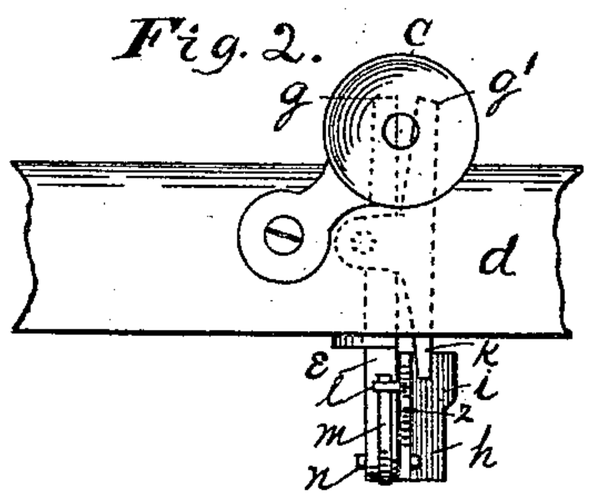
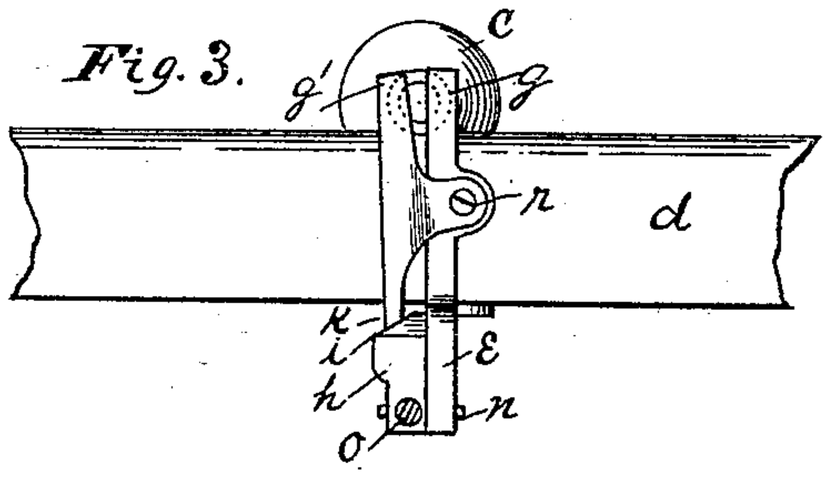


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE A. COLLINS, JR., OF NEW BEDFORD, MASSACHUSETTS.

SPINNING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 496,083, dated April 25, 1893.

Application filed June 4, 1892. Serial No. 435,475. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. COLLINS, Jr., a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Spinning-Machines, of which the following is a specification.

My invention relates to spinning machines and has for its object, to provide improved means, whereby when an end breaks down, the roving is clamped and prevented from being delivered through the drawing rolls, until the end is again pieced up.

The accompanying drawings illustrate my invention, in which

Figure 1. represents a side elevation of a section of a spinning machine, showing my improvement attached thereto. Fig. 2. represents a rear view of the trumpet or roving guide-rail, showing my improvement attached thereto. Fig. 3. represents a front view of the same.

Similar letters refer to similar parts, in the several views.

a, *a*, represent the drawing rolls of a spinning machine, and *d*, represents the trumpet, a roving guide-rail, having the trumpets *c*, attached thereto. To the front of the rail *d*, is secured my device for clamping the roving *b;* consisting of the bar *e*, secured to the rail *d*, having the jaw *g*, and projecting below said rail, where is pivoted to it, by the pivot *n*, the block *h*, having the inclined side *i*, and provided with the projection *l*. The block *h*, is further provided with the wire *o*, projecting forward under the drawing-rolls and turned upward and provided with an end *v*, adapted for the thread to pass under.

The bar *e*, has pivoted to it at *r*, a lever-arm *k*, provided at its upper end with a jaw *g'* designed to coact with the jaw *g*, and extending downward and adapted to be operated by the inclined side of the block *h; i. e.* when the inclined side *i*, of the block *h*, is forced between the bar *e*, and lever arm *k;* the jaws *g* and *g'*, are closed; and when said inclined side *i*, is retracted, the jaws open.

p, is a shaft extending the length of the spinning machine, and provided with the continuous projection *x*. The shaft *p*, is connected with suitable mechanism to give it a slight reciprocating motion on its axis; this causes the projection *x*, to have a vibratory motion as indicated by its represented position, and the dotted lines *y*.

m, represents a flat spring, one end of which is made fast to the bar *e*, and its free end bears against the projection *l*, on the block *h;* the force of the spring, causing the block *h*, to partially rotate on its axis, when the tension of the thread on the end *v*, of the wire *o*, is removed.

The operation of the device, is as follows: When the thread leading from the front drawing rolls through the thread guide *q*, to the spindle, breaks, the pressure exerted on the end *v*, of the wire *o*, is relieved, and the spring *m*, causes the block *h*, to partially rotate on its axis, and causes the device to assume the position as shown in dotted lines in Fig. 1. which brings the point *z*, of the block *h*, within the sweep of the projection *x* on the shaft *p*, which projection, in its vibration, causes the block *h*, to still farther rotate on its axis, and thereby brings the inclined side *i*, of the block *h*, to act forcibly on the lever arm *k*, and thus causes the jaws *g*, and *g'*, to firmly clamp the roving *b*, and prevent it from being delivered between the drawing-rolls, until the end is again pieced up and placed on the end *v*, of the wire *o*, so as to cause it to assume the position as shown in Fig. 1, when, the jaws open and allow the roving to pass freely between the drawing-roll.

What I claim, and desire to secure by Letters Patent, is—

1. In a spinning machine, the combination with the drawing-rolls and the trumpets, of a stationary bar secured to the trumpet-rail and having a jaw arranged in the path of travel of the roving, a pivotal lever-arm having a jaw to coact with the jaw of the bar, a pivoted block having an inclined surface adapted to engage the lever-arm, a wire connecting with the block and having a hooked end to engage the roving to keep the jaws normally open, and a spring coacting with the block to close the jaws when the roving breaks, substantially as described.

2. In a spinning machine, the combination with the drawing-rolls and the trumpets, of a

stationary bar secured to the trumpet-rail and having a jaw arranged in the path of travel of the roving, a pivoted lever-arm having a jaw to co-act with the jaw of the bar, a pivoted block having an inclined surface adapted to engage the lever-arm, a wire connecting with the block and having a hooked end to engage the roving to keep the jaws normally open, a spring co-acting with the block to close the jaws when the roving breaks, and a vibratory shaft having a projection for engaging the said block to increase its rotation, substantially as described.

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