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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN STOP-MOTIONS FOR KNITTING-MACHINES.

Specification forming part of Letters Patent No. 127,539, dated June 4, 1872.

Specification describing a new and Improved Stop-Motion for Circular Knitting-Machines and Combination Looms, invented by THOMAS FRED. WYNN, of Atlanta, in the county of Fulton and State of Georgia.

Figure 1 represents a vertical section of a circular knitting-machine or combination loom provided with my improved stop-motion. Fig. 2 is a horizontal section of the same on the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention has for its object to provide an improved stop-motion for looms and knitting-machines of the class in which the motion of the machine is arrested, immediately on the breaking of a thread, by means of a drop-weight or its equivalent, operating, by aid of suitable intermediate mechanism, to disconnect the driving-wheel or shaft. The invention consists in the arrangement of wires, rotary rings, and other connected parts, as herein specified, whereby a simple, inexpensive, but efficient mechanism is produced.

*A* in the drawing represents the fixed frame of the machine. *B* is the needle-cylinder of the same, carrying a circular series of needles, *C C*, and provided at its lower end with a bevel-gear wheel, *a*, that gears into a pinion, *b*, of the driving-shaft *D*. Whenever the shaft *D* is revolved it will cause the rotation of the cylinder *B*, and consequently the necessary up-and-down motion of the needles. *E E* are the thread-guides, affixed to a stationary part of the machine. *F F* are the drop-wires, suspended from the threads near to the thread-guides, respectively. The lower ends of the wires *F* protrude through apertures in the

stationary table *d* of the machine, and are, by the threads, suspended close above the face of a ring, *G*. This ring has a slot or hole under each wire, the slots being indicated in Fig. 2. *H* is a ring about as large as the ring *G*, but connected with the rotary cylinder *B* by braces *e e*, so that it is revolved with the same. There are a series of apertures cut through the rotary ring *H*. Whenever, by the breaking or termination of a thread, a wire, *F*, is dropped, it falls through the slot or hole of the ring *G*, and as soon as an aperture of the revolving ring arrives under it it falls also through it, thereby connecting the ring *G* with *H*, and causing it to be revolved by the latter. By such revolution of the ring *G* a projecting pin, *f*, thereon is made to strike a lever, *g*, and swing it aside, so as to disengage a spring-slide, *l*, whose motion will disengage the sliding clutch *h* on the driving-shaft from the driving-pulley *i*, and thus stop the motion of the machine. The upper ring may have a handle, *j*, so that the machine can be arrested by hand whenever desired. A spring or weight holds the lever *g* in place before the pin *f* strikes it, as shown.

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

The combination of the slotted ring *G*, pin *f*, rotary ring *H*, needle-cylinder *B*, wires *F*, driving-shaft *D*, pulley *i*, clutch *h*, lever *g*, and spring-slide *l*, all constructed and arranged as shown and described.

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Witnesses:

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J. A. AUSLEY.