B. F. ARNOLD.

Stop Motion for Looms.

No. 167,381. Patented Sept. 7, 1875.

Fig 1

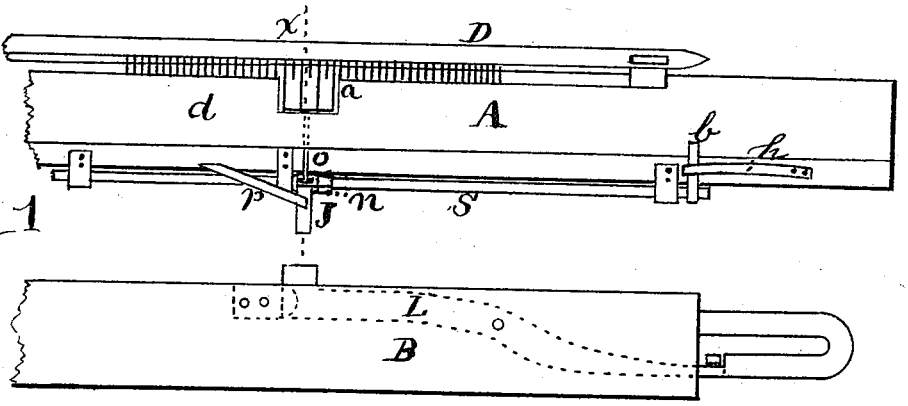
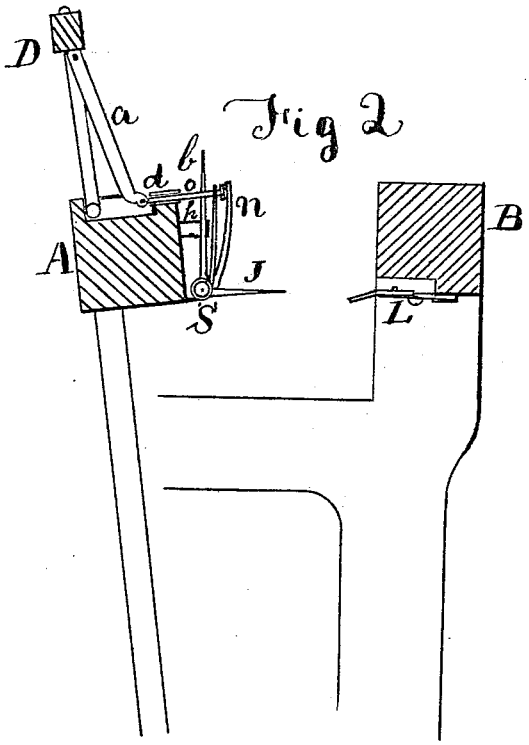


Fig 2



Attest

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BENJAMIN F. ARNOLD, OF WESTERLY, RHODE ISLAND.

IMPROVEMENT IN STOP-MOTIONS FOR LOOMS.

Specification forming part of Letters Patent No. **167,381**, dated September 7, 1875; application filed February 24, 1875.

To all whom it may concern:

Be it known that I, BENJAMIN F. ARNOLD, of Westerly, in the county of Washington and State of Rhode Island, have invented certain Improvements in Weft-Stop Motions for Looms, of which the following is a specification:

The object of my invention is to produce a simple weft-stop motion that may be applied to the middle of the lathe, as well as at the two sides of the warp, thereby dispensing with one of the two usually employed; and consists in constructing a "weft-feeler" of a section or part of the reed, containing one or more dents, made movable, and hung at the top edge of the reed on pivots, so that it will swing forward independently and come in contact with the weft-thread when it is held in place by the closing of the shed before the lathe beats up, as is the case in that class of looms for which the motion is intended.

The devices for connecting the weft-feeler with the shipper-lever may be constructed and arranged in various ways, one of which is herein shown and described, so as to enable any one skilled in the art to which my invention relates to use the same.

Figure 1 shows a top view. Fig. 2 is a vertical cross-section taken through the line *x*, Fig. 1.

A is the lathe. D is the reed, a section of which, *a*, comprising one or more dents, is made so as to swing forward and back independent of the rest of the reed, being hung on pivots at the upper edge of the reed. A recess is made in the race-plate *d*, to allow freedom of motion to the section *a*, and a small rod, *o*, attached to the lower end of it passes out under or through the race-plate to the front of the lathe. A knee-lever, J, is hung on the protector-rod *s* attached to the front of the lathe, and the rod *o* extends freely through the upper end of an arm of the knee-lever, which is kept on the rod by a head on the end. A light spring, *p*, fastened to the front of the lathe presses on the horizontal arm of the knee-lever U, so as to draw the section *a* forward by the rod *o*.

When the shuttle leaves the box the section *a* is instantly thrown back in a line with the rest of the reed, so as to be out of the way of the shuttle, by the pressure of the spring *h* on the arm *b*, which is the usual arm by which the shuttle operates the protector-rod *s*. This throws back the arm *n* against the rod *o*, which pushes the section *a* back to its place in the reed, the spring *h* being made stiff enough to overcome the resistance of the spring *p*.

Whenever the shuttle is in its box the arm *b* will be pressed out and the arm *n* will be held back from the rod *o*, thus allowing the spring *p* to bring forward the section *a* to feel the weft-thread, and if that thread is in its place it will prevent the section from coming further forward, and the horizontal arm of the lever J will be held up so as to pass over the shipper-lever L when the lathe beats up; but if the weft-thread is not in its place the section *a* will continue to come forward, and the horizontal arm of the lever J will be depressed so as to strike against the shipper-lever, and stop the loom by casting off the belt.

Having thus described my improvement, what I claim as my invention is—

In a weft-stop motion, a weft-feeler, consisting of a part or section of the reed made movable, substantially as and for the purpose herein set forth.

BENJAMIN F. ARNOLD.

Witnesses:

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CHARLES H. PENDLETON.