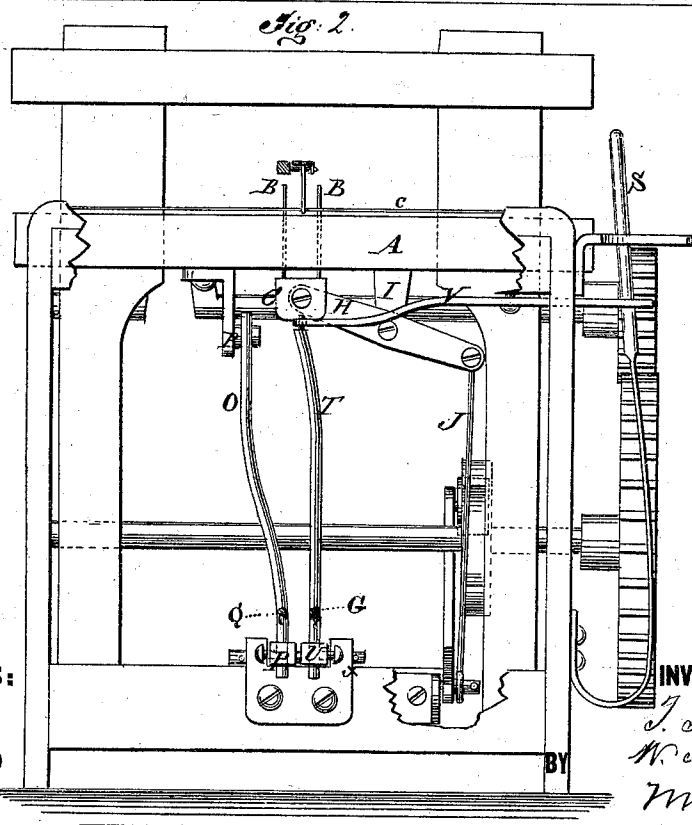
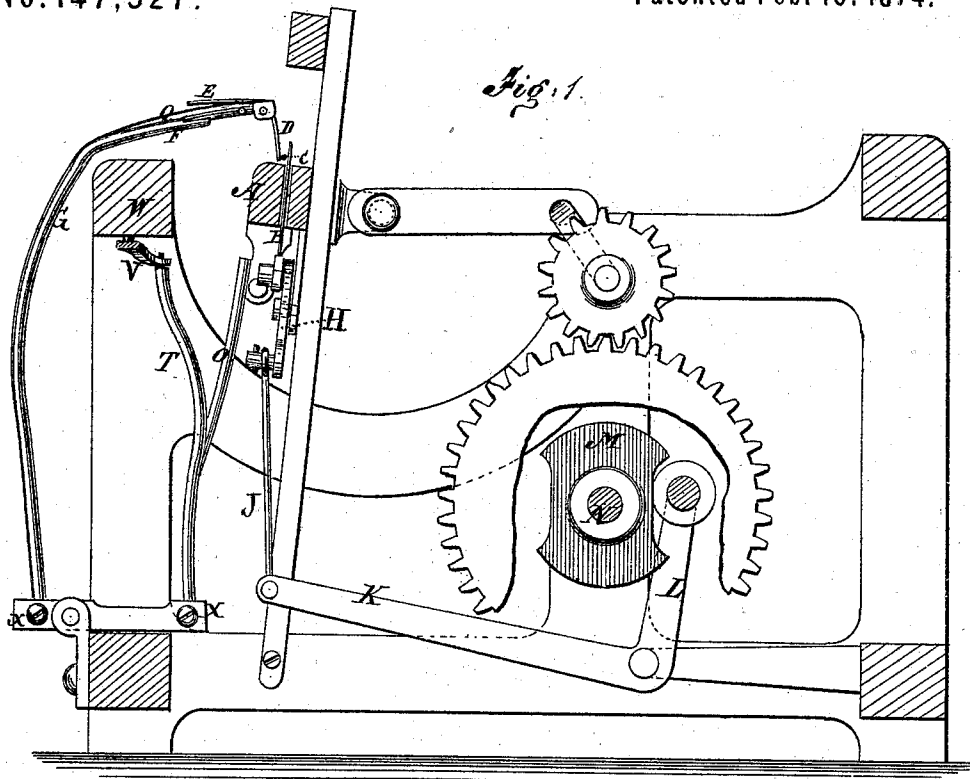


T. ISHERWOOD & W. NUTTALL.
Weft-Stop Mechanisms for Looms.

No. 147,327.

Patented Feb. 10, 1874.



WITNESSES:

Chas. Nida
Seaguer

INVENTOR:

T. Isherwood
W. Nuttall

BY *Wm. H. L.*
 ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS ISHERWOOD AND WILLIAM NUTTALL, OF WESTERLY, RHODE ISLAND, ASSIGNORS TO NATIONAL FANCY WOOLEN LOOM-STOP MOTION COMPANY, OF SAME PLACE.

IMPROVEMENT IN WEFT-STOP MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. **147,327**, dated February 10, 1874; application filed December 29, 1873.

To all whom it may concern:

Be it known that we, THOMAS ISHERWOOD and WILLIAM NUTTALL, of Westerly, in the county of Washington and State of Rhode Island, have invented a new and useful Improvement in Stop Mechanism for Looms, of which the following is a specification:

Our invention relates to looms having guard-wires to rise up in the lathe behind the weft-thread to insure the action of the weft fork or feeler for raising the latch when the weft is present to prevent throwing off the shipper-lever. The invention is more particularly an improvement on that for which we obtained Letters Patent No. 138,893. It consists of a cam on the cam-shaft, a bell-crank, and a rock-lever combined with said wires for operating them; and it also consists of an arm connected to the rock-lever which carries the latch and feeler arranged relatively to the lathe, so that immediately after the feeler has performed its function the lathe strikes said arm, and by it moves said rock-lever and the latch and feeler out of the way of the lathe at the moment of beating up; and it also moves the rock-lever, which throws off the shipper-lever whenever the weft is not present, and it is caught by the latch. Our invention also comprises a novel arrangement of devices by which the rock-lever, which the latch acts on to throw off the shipper-lever when the weft is not present, is connected to said shipper-lever.

Figure 1 is a sectional elevation of our improved loom, and Fig. 2 is a front elevation with some parts broken away.

Similar letters of reference indicate corresponding parts.

A represents the lathe, beam, or race; B, the wires to be thrown up behind the weft *c* to hold it against springing back when it strikes the feeler D, and thus failing to throw the latch E above the notch F of the rock-lever G connected with the shipper-lever, which it is very liable to do if the tension of the weft is a little slack. To present these wires and withdraw them at the proper time, they are

attached to a little block or head, C, pivoted to one end of a rock-lever, H, which is pivoted to bracket I on the lathe, and connected at its other end, by a rod, J, with the long arm K of a bell-crank or elbow-lever, whose short arm, L, is acted on by the cam M, on cam-shaft N, to present the wires. The return of the wires is effected by the weight of the long arm of said elbow-lever. To move the latch and feeler out of the way of the lathe when it beats up, also to move the rock-lever G and throw off the shipper-lever by it whenever the latch engages it, the arm O is attached to the foot P of rock-lever Q, which carries the latch, and arranged in such relation to the lathe that, as soon as the latch is carried beyond the notch F of rock-lever G, a stud, R, on the lathe strikes the upper end of said arm and swings the latch, carrying rock-lever Q back.

When, by reason of the failure of the weft, the latch is not raised, it catches in the notch F, when lever Q is thus swung back and forces lever G back to throw off the shipper-lever S, by the arm T, connected to its foot U, and the rock-lever V, connected to said arm T and pivoted on the front beam W, so that its outer end is forced against the shipper-lever.

The arms T and O and the rock-lever G and Q are detachably connected to their feet P and U, being fitted in holes in them and secured by binding-screws X, so that they can be readily taken out when it may be wanted to do so.

This stop mechanism is preferably arranged at the middle of the lathe to avoid the necessity for two sets, which exists when arranged near one side of the loom, in consequence of the ends of weft breaking long enough to raise the latches the same as the unbroken weft, which often happens, particularly in looms carrying several shuttles, owing to the cutting or straining of them in particular places by the shifting-boxes; but we do not limit ourselves to one set of apparatus in the middle, as we intend to have a set at each side if found necessary or preferable in any case.

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

1. The combination of the rock-lever H, head C, connecting-rod J, lever K L, and the cam M, on the cam-shaft N, with the guard-wires B and the lathe of a loom, substantially as specified.

2. The combination of the arm O with the rock-lever Q, latch E, feeler D, and the lathe A, substantially as specified.

3. The rock-lever G, arm T, and rock-lever

V, in combination with the lever Q, latch E, and the shipper-lever S, substantially as specified.

THOMAS ISHERWOOD.
WILLIAM NUTTALL.

Witnesses:

E. R. COTTRELL,
SANDY SUTCLIFFE,
THOMAS D. SHEFFIELD,
FRANCIS SHEFFIELD.