W. TAYLOR.

Weft-Stop Mechanisms for Looms.

No. 146,618. Patented Jan. 20, 1874.

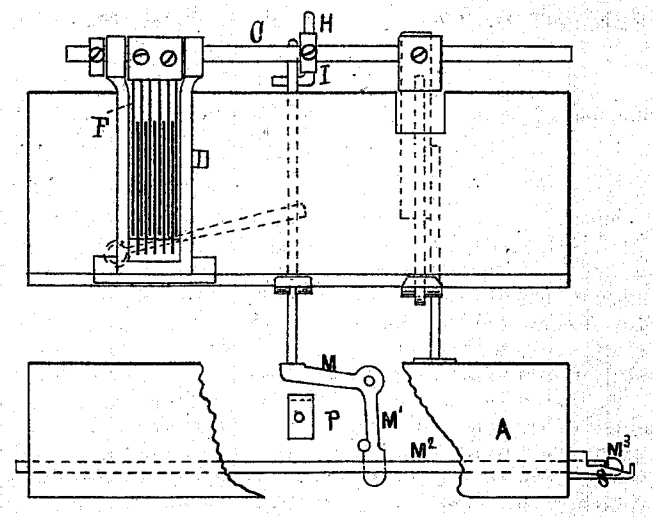

Fig. 1.

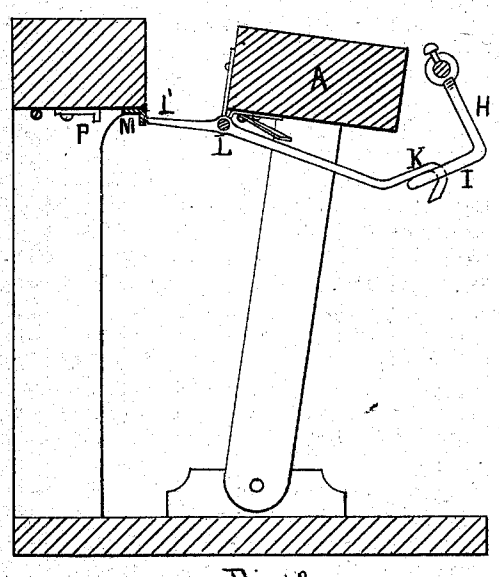

Fig. 2.

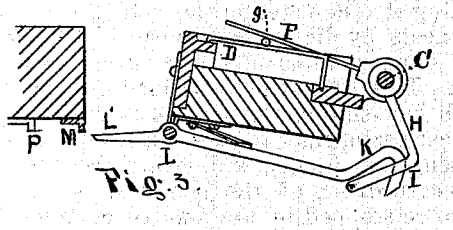

Fig. 3.

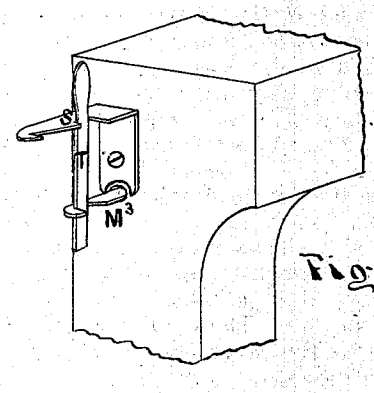

Fig. 4.

Witnesses.

Frank G. Parker

J. S. Lemcart

Inventor

William Taylor

per William Edson Atty

UNITED STATES PATENT OFFICE.

WILLIAM TAYLOR, OF MAYNARD, ASSIGNOR TO THE AMERICAN STOP-MOTION COMPANY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN WEFT-STOP MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. **146,618**, dated January 20, 1874; application filed October 27, 1873.

To all whom it may concern:

Be it known that I, WILLIAM TAYLOR, of Maynard, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful Weft-Stop Mechanism for Looms, of which the following is a specification:

Heretofore weft-stop motions have not practically stopped the lay instantly, but have allowed it to be impelled by its own momentum, and that of other parts, so far as to change the shed and add a pick before it really comes to a stop, thus impairing the utility of the stop-motion.

The object of my invention is to make a practical and instantaneous weft-stop motion; and consists in combining, with a lay of a loom, a positive stop-motion device, said device consisting of a detecter for the weft-thread, which connects by direct mechanism with a swinging dagger attached to the lower side of the lay. This dagger is so arranged, in connection with the shipping-lever and a check on the breast-beam, that in case the weft-thread is absent the dagger will strike the knock-off lever, throwing off the belt, and at the same time be stopped by the limited motion of the knock-off lever, which motion is arrested by a check on the breast-beam, thus bringing the lay of the loom to a sudden stop.

Figure 1 is a plan, showing a part of the breast-beam and lay, with my improvement connected. Figs. 2 and 3 are vertical sections of the same. Fig. 4 is a perspective view, showing a part of the device for throwing off the shipping-lever.

D F, Figs. 1 and 3, represent the detecter, consisting of a fixed grill, D, set in the lay, and of a swinging grill, F, attached to the rod C at the rear of the lay. These grills are attached at each end of the lay, and are arranged to operate as weft-detecters, in the usual manner. To the rod C, I attach a bent arm, H I, which swings with the said rod, and communicates motion, through the extension K, to the lever-dagger L′, as shown in Figs. 1, 2, and 3. This dagger L′ is made strong, and firmly attached by a pivot, L, to the front of the lay A, or, if desirable, to the protector-rod. M M^1 (shown in full at Fig. 1) is a bent knock-off lever hung on the under side of the beam. The end M^1 of this lever acts in a notch or against a collar made in or on the slide M^2, and causes it to partake of its motion. This slide terminates in an incline, (shown at M^3, Fig. 4,) which incline, acting on the shipping-lever T, throws the same out of the catch S, and thus ships the belt and stops the loom. P, Figs. 1, 2, and 3, is a check fastened to the under side of the breast-beam, and so placed as to limit the motion of the knock-off lever M, and through this lever to arrest the forward motion of the dagger L′, thus causing the lay to stop instantly.

The operation of my invention may be described as follows: The grill F is arranged, as usual, to fall at each forward stroke of the lay. The lever H I is so adjusted on the rod C, that if the grill F falls through the fixed grill D, as it will in case the weft-thread is absent, it will allow the extension K of the lever-dagger L′ to drop so far as to raise the dagger L′ into the position shown in Fig. 2—that is, so as to strike the knock-off lever M, which will, through the slide M^2, &c., ship the belt, and the lever M, being stopped in its forward motion by the check P, directly arrests the forward motion of the dagger L′, and consequently the lay A. In case the weft-thread *g* is on the grill, as represented in Fig. 3, then the lever H I will hold the dagger L′, so that in the forward motion of the lay it will pass clear of the lever M and check P, and allow the continued motion of the loom.

I claim as my invention—

The combination of the weft-stop mechanism F C H I, the lever-dagger K L′, the knock-off mechanism M M^1, and the check P, all operating together substantially as described, and for the purpose set forth.

WILLIAM TAYLOR.

Witnesses:

FRANK G. PARKER,

J. S. CONANT.