

Practical Fixing of Cotton Looms

By John Reynolds

The Still Box-Motion.

This device is for the purpose of preventing the boxes from changing when the filling is exhausted or broken, or when the filling fork is not working right. If the brake on a loom is in working order there is little need of a still box-motion because the brake should stop a loom with the shuttle on the box side and the lay of the loom no farther forward than at the bottom center.

No matter what position the shuttle is in when the filling breaks or becomes exhausted, the shuttle must come to the handle side of the loom and the lay must come forward to full front center before the filling stop motion becomes operative and the handle of loom is disengaged. When the lay has passed the front center and is moving towards the back center, the loom should come to a full stop with the lay no farther than bottom center.

If the loom should swing over for another pick and the boxes be changing on this pick, the weaver will find the loom stopped, but a shuttle containing another color with

filling unbroken will be in the box. This often puzzles the inexperienced weaver. It is very easy to discover the cause and apply the remedy. Start up the loom and place the finger on the filling fork so that the handle will knock off. If the loom does not stop on the pick with the shuttle at the box or dobbie side and the loom no farther forward than at the bottom center, it is evident the brake is not working right. If the still box motion is working properly the boxes will not change, no matter how many times the loom swings over after the handle has been knocked off. Fig. 107 shows the still box motion as used on a 2 and 1, 4 and 1, and 6 and 1 gingham loom. The lifting finger A is attached to a rod which extends to the handle side of the loom and is operated by pressure from the filling motion slide. B is the stop plate; C, push arm connected to lever D with a stud. The lever D works freely on the stud E. The lever F also works freely on the stud E. The release yoke G is attached to the

WHEN A TARIFF DOES NOT PROTECT.

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that a tariff alone will give the necessary protection to the American dyestuff industry? The fact that there are textile and other manufacturers who make this ridiculous claim can be explained on the supposition that they have been misled and have not had an opportunity to study the facts.

Textiles As Well As Dyestuffs.

Moreover in making that unfounded claim these manufacturers are not only obstructing the development of an American dyestuff industry, which it is their duty as citizens as well as manufacturers to protect, but they are encouraging a policy that may prove disastrous to their own business. This tariff and exchange problem is not merely a dyestuff question. The depreciation of exchange, which we have shown would wipe out a compound tariff on dyestuffs and land the German product in the United States at 30 cents on the dollar affects all imports and would also prove equally destructive to the textile industry of the United States.

If the hosiery, cotton, woolen and worsted manufacturers who are now opposing a license system for dyestuffs want to know how depreciated exchange will affect them when German mills resume operations, let them sharpen their pencils and calculate the effect of a 4½-cent German mark on the ad valorem rates of 30 to 50 per cent. on hosiery, 5 to 25 per cent. on cotton cloth, and 35 per cent. on woolens and worsteds, which the Underwood tariff provides as protection against the products of Chemnitz, Augsburg, Greiz and Gera. They will discover that the depreciation of German exchange would not only wipe out the protection they are supposed to have, but would enable importers to land German textile goods in the United States at a cost far below the value in Germany.

Having brought the depreciated German mark home to their own trades, they would then be the better able to recognize that the only thing that is saving them from destructive competition by Germany is the temporary paralysis of the German textile industry, and that the only way to protect the American dyestuff industry against the annihilating competition of the vigorous and highly organized color trust of Germany is by a combination of a tariff and a license system as provided by the Longworth bill, under which for a term of years German dyestuffs, subject to the tariff, will be admitted by license only when the particular product cannot be supplied on reasonable terms by the American dyestuff industry.

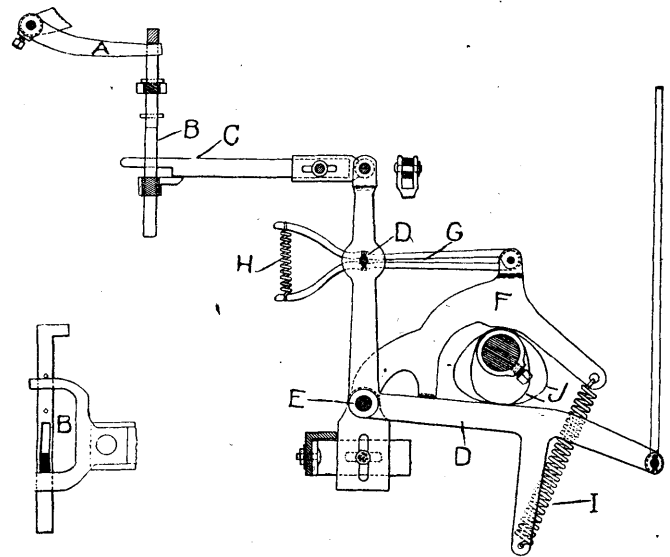


Fig. 108.

Still-Box Motion.

Fig. 107.

lever F and works freely on a stud. The two parts of the yoke extend from this stud and clamp together on a stud located on the lever D, being held together by the spring H. The spring I holds the levers D and F clamped to the double cam J, which imparts motion to the entire mechanism and also to the rod A, Figs. 104 and 105.

Fig. 108 is a front view of the stop plate B showing the slot in which the push arm C slides. When the filling is not broken or exhausted the push arm C is free to pass through the slot in the stop plate B. When the filling is broken or exhausted the filling motion slide is pushed back and acts on the rod, which actuates the lifting finger A, raises the stop plate, and a blank instead of a slot is presented to the point on C. This arm is prevented from moving any farther, and by the continued rise of the lever F pressure is exerted against the stud which holds the yoke G together. The yoke is forced to open up, throwing F out of engagement with the cam J. The jaws open and the cam J revolves between the open jaws without imparting any movement to the rod A, Figs. 104 and 105.

The pattern chain cylinder does not move and the boxes cannot change. This condition continues as long as an empty shuttle or a shuttle with broken filling is running in the loom. When the filling is replenished the stop plate B is allowed to fall and the jaws D and F automatically close again.