

The Practical Fixing of Cotton Looms

By John Reynolds

Timing the Still Box-Motion.

When describing the multiplier motions the timing of the pattern-chain cylinder was omitted because this cylinder and the multiplier is operated by the cam J which also operates the still box motion. The movement of this cam must be timed to work in conjunction with the cam which operates the filling motion.

With double cam J, Fig. 107, in neutral position, set the stop plate so that the bottom edge of the slot will be level with the surface on which the push arm C slides. Have the cut out edge of this arm $\frac{1}{4}$ in. from the edge of the slot, with the shuttle on the hand side of the loom. Remove the filling from the filling-fork and move the lay forward until the filling-fork slide is being pushed outwards. With the lay in this position set the cam J so that it is just beginning to move the lever F upwards. This lever operates the push arm C. By the time the cut out part of the arm reaches the stop plate B, the slot in this plate will be raised and will present a blank surface with which the cut out on arm C will engage. Continue the movement of the lay and note the

opening of the levers D and F. This is the right method of timing the pattern chain cylinder, still box motion and filling stop motion so they will all work together.

The cam J, Fig. 107, is a double cam. The cam with the larger surface acts as a driver, and the smaller surface cam acts as a disconnecter. With a single surface cam it is obvious that every time the filling motion slide falls back after stopping the loom, the jaws of the levers D and F will come together, thus imparting motion to the driving rod. The double cam prevents this. As the bottom shaft continues to revolve, the depressed part of the large surface cam is brought under lever F. This permits the lever to come down, but the larger part of the smaller cam is pressing down on lever D at the same time, keeping this lever from

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Fig. 550f, which also shows the 4-color warp pattern and the 3-color filling pattern.

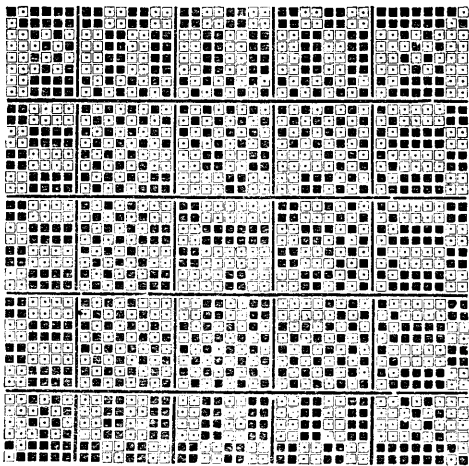


Fig. 550e.

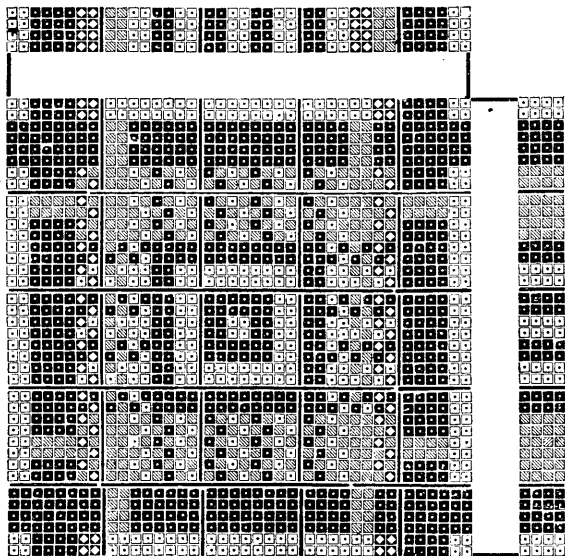


Fig. 550f.

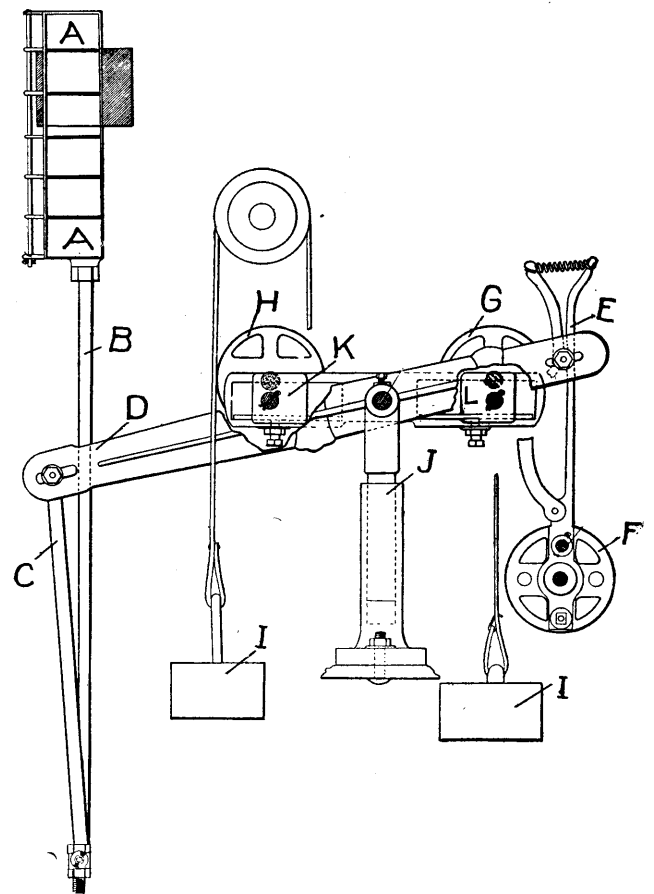


Fig. 109. 6 and 1 Box Motion. operating the driving rod. As the shuttle is again propelled to the other side of the loom the filling motion slide is pushed out again.

The 6 and 1 Box-Motion.

An explanation of this motion calls for little in addition to what has already been said regarding the 4 and 1 box motion. The same method is used to level the boxes as with the 2 and 1 and 4 and 1 box motions. The timing and adjusting are the same. The only difference is in the make-up of the box lever and the leveling of the boxes with the race plate of the loom. It will be noted that the release motion is located on the rear end of the box lever and that two box cranks are fitted to connect with the lever. Each crank is fitted with a large stud, which fits loosely into sliding blocks. These are fitted into a recess on each side of the lever stand.