

No. 687,461.

Patented Nov. 26, 1901.

C. P. NICHOLS.

LOOM.

(Application filed June 14, 1901.)

(No Model.)

Fig. 1.

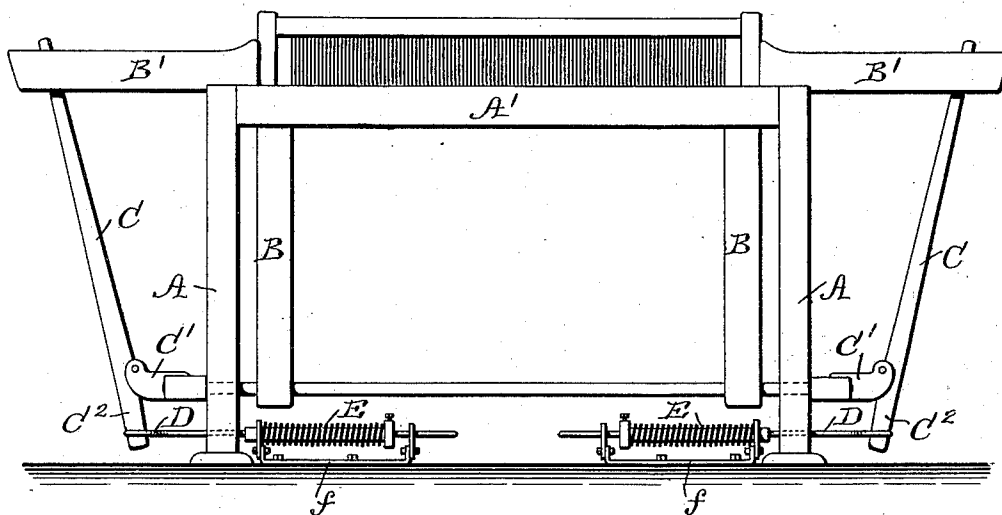


Fig. 2.

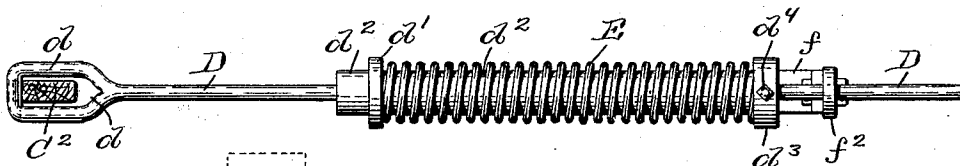
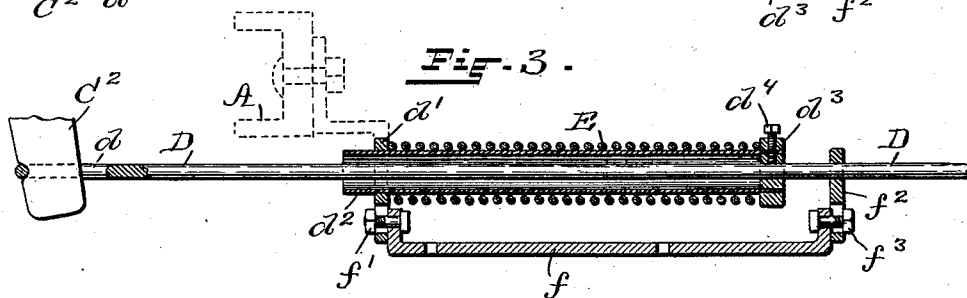


Fig. 3.



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LOOM.

SPECIFICATION forming part of Letters Patent No. 687,461, dated November 26, 1901.

Application filed June 14, 1901. Serial No. 64,501. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. NICHOLS, a citizen of the United States, residing at Cranston, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Looms, of which the following is a specification.

This invention has reference to an improvement in the picker-motion for looms; and it consists in the peculiar and novel construction and combination of the heel-spring, as will be more fully set forth hereinafter.

In woolen and similar looms the heel of the picker-stick is usually connected with the floor-spring at one end by means of a leather strap secured to the picker-stick by screws, and the floor-spring is usually provided at the other end with another strap secured to the floor by screws, the springs used being coiled tension-springs. In this prior construction the adjustment of the spring tension on the heel of the picker-stick was made by removing the screws and moving the strap connected with the floor or with the picker-stick and resecur ing the strap or straps by screws. The screw-holes weaken the picker-stick and make any accurate adjustment difficult. In cotton-looms the picker-stick is usually secured to a rocker, and a tension-spring is connected at one end to the rocker and at the other end to a fixed part, usually the floor.

Practice has demonstrated that a spiral tension-spring resisting force by the elongation of the spring is not as durable and reliable as a push-spring, which resists force by the compression of the spiral spring.

The object of this invention is to provide for the convenient adjustment of the force exerted on the picker-stick.

Figure 1 is a front view of part of a loom, illustrating my invention. Fig. 2 is a top view of my improved picker-stick spring. Fig. 3 is a sectional view of the same.

I have illustrated my invention in the drawings in connection with a supporting-frame adapted to be secured to the floor in the usual manner and have indicated in broken lines in Fig. 3 the manner in which the device may be supported on the end frames.

In the drawings, A A indicate the end frames of the loom; A', the breast-beam; B B,

the swords of the lay; B' B', the shuttle-boxes on the lay; C C, the picker-sticks; C' C', the brackets forming the pivotal support for the picker-sticks; D, a rod provided with the eye d , through which the heel C' of the picker-stick extends; d' , an abutment having a circular opening in which the tube d^2 slides; d^3 , a collar on the other end of the tube d^2 , and d^4 a clamp-screw by which the tube d^2 is adjustably secured to the rod D. The spiral push-spring E surrounds the tube d^2 and bears at one end against the abutment d' and at the other end against the collar d^3 . The tension of the spring E may be adjusted by loosening the clamp-screw d^4 , moving the tube d^2 longitudinally on the rod D, and securing the same in the adjusted position to the rod D by the clamp-screw d^4 .

In the preferred construction I secure the abutment d' to the base-plate f , which is secured to the floor, as shown in Fig. 1, by the bolt f' , extending through a slotted hole in the abutment to permit of the vertical adjustment of the abutment d' . The guide-bracket f^2 , in which the rod D has a loose sliding fit, I secure to the other end of the base-plate f by means of the bolt f^3 , extending through a slotted hole in the guide-bracket to permit of vertical adjustment.

When desired, the abutment d' may be provided with a bracket which may be secured to a convenient part of the end frame, as is indicated in broken lines in Fig. 3.

As the tube d^2 may rock in its bearing in the abutment d' and slide longitudinally in the said bearing, while the rod D may move laterally in the tube d^2 , the device will freely yield to the rocking movement of the heel of the picker-stick of the kind illustrated in the drawings.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a loom, the combination with the heel of the picker-stick, a rod connected with the heel and a fixed abutment, of a tube, of greater internal diameter than the diameter of the rod, having a sliding bearing on the fixed abutment on one end, a collar on the other end of the tube, a coiled spring surrounding the tube and bearing on the fixed abutment and the collar, and means for se-

curing the rod connected with the picker-stick to the farther end of the tube, whereby the rod is free to move within the tube with the picker-stick, as described.

- 5 2. In a loom, the combination with a fixed abutment, a tube having a sliding bearing in the fixed abutment, a collar on the tube and a coiled spring surrounding the tube and bearing on the fixed abutment at one end and
10 the collar on the tube at the other end, of a rod having an eye through which the picker-stick extends, said rod being free to move radially in the tube, and means for connecting the rod adjustably with the tube, as de-
15 scribed.

3. In a loom, the combination with the picker-stick, the rod D, the eye d on the rod

through which the picker-stick extends, the abutment d' and the guide-bracket f^2 , of the tube d^2 of sufficient internal diameter to per- 20
mit the rod D to follow the movement of the picker-stick, the sliding bearing of the tube in the abutment, the collar d^3 , the clamp-screw d^4 for securing the rod D to the tube, and the coiled spring E interposed between the collar 25
and the abutment, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES P. NICHOLS.

Witnesses:

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