

No. 731,120.

PATENTED JUNE 16, 1903.

T. E. NORMAN.
PICKER STICK CHECK FOR LOOMS.
APPLICATION FILED MAR. 16, 1903.

NO MODEL.

Fig. 1.

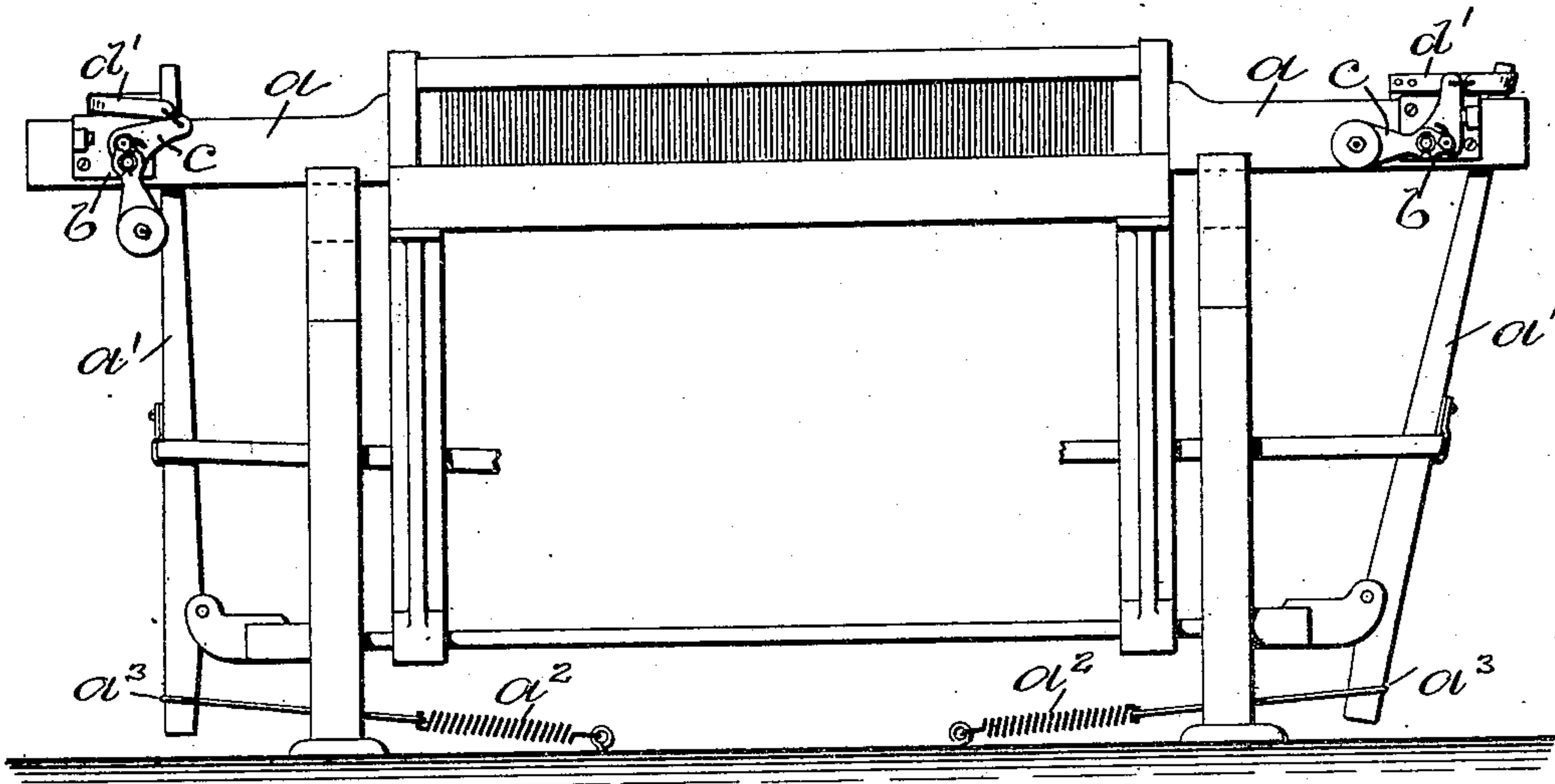


Fig. 2.

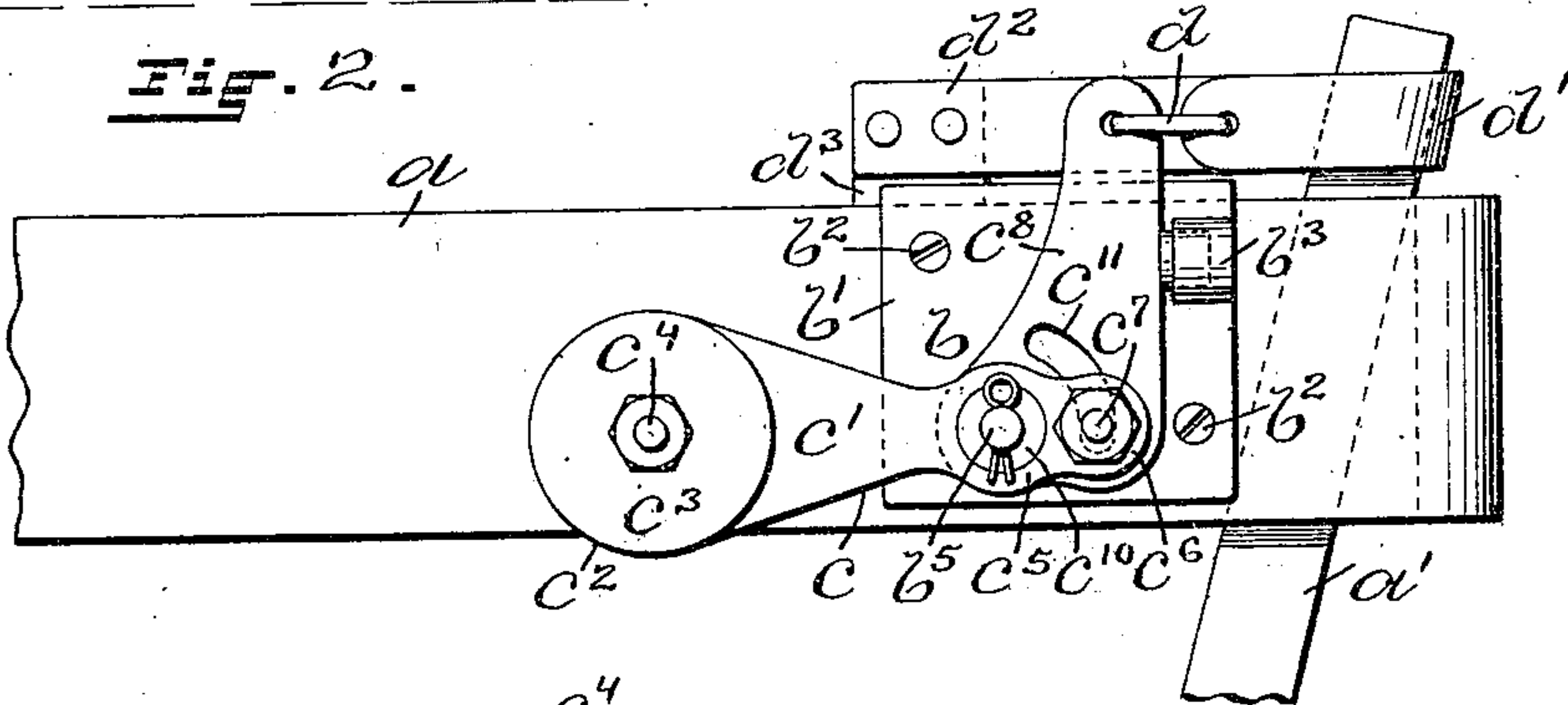
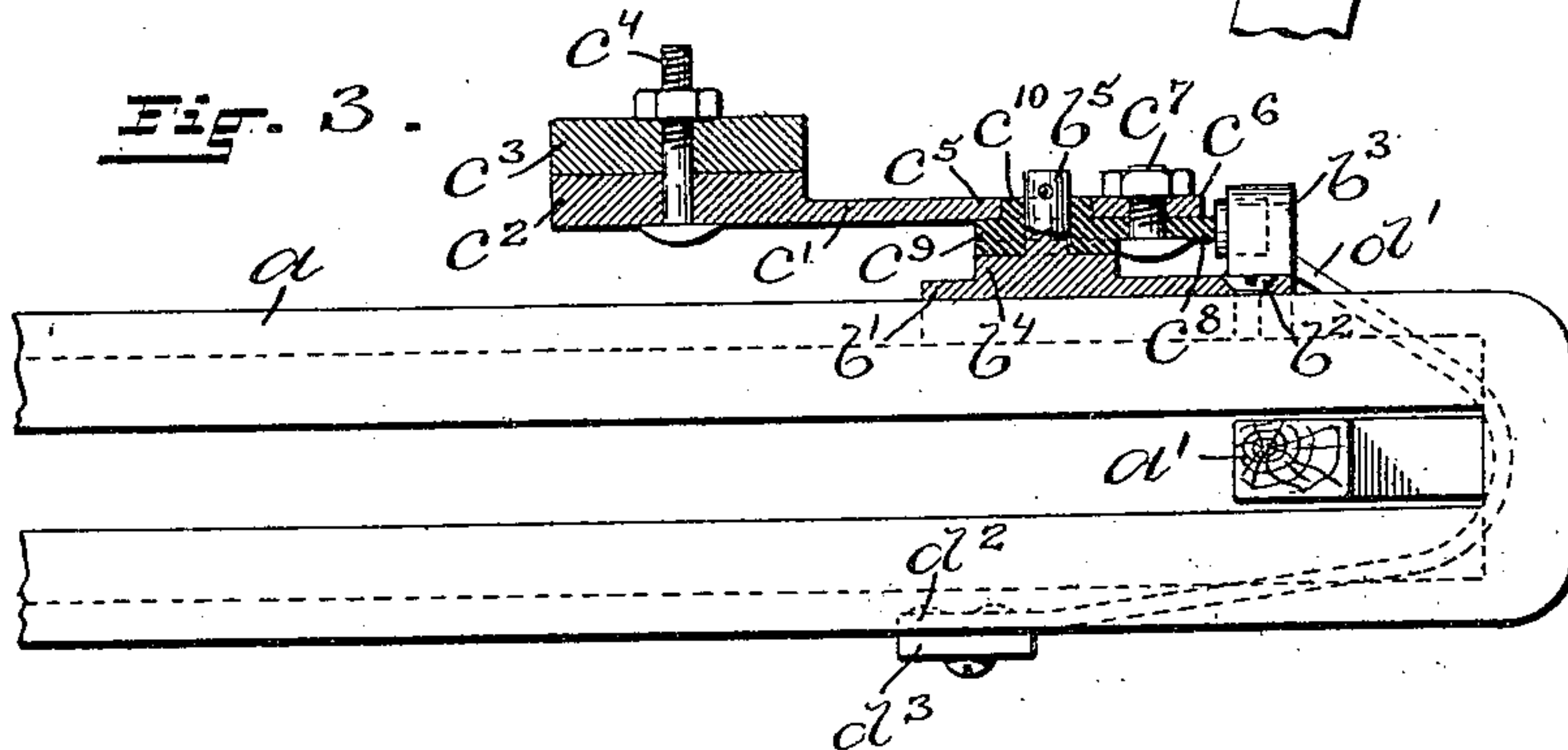


Fig. 3.



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THOMAS E. NORMAN, OF FALL RIVER, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JOSEPH KIRKMAN, OF FALL RIVER, MASSACHUSETTS.

PICKER-STICK CHECK FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 731,120, dated June 16, 1903.

Application filed March 16, 1903. Serial No. 148,025. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. NORMAN, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Picker-Stick Checks for Looms, of which the following is a specification.

This invention has reference to an improvement in looms, and more particularly to an improvement in picker-stick checks for looms.

The object of my invention is to prevent misplacement of the shuttle in the shuttle-boxes by the chattering or rebounding of the picker-sticks after they have reached their outward limit in the shuttle-boxes under the impulse of the floor-springs.

My invention consists in the peculiar and novel construction of a picker-stick check adapted to be secured to the back of the shuttle-boxes, having an adjustable bell-crank lever weighted at the lower end and connecting at the upper end with a flexible strap to engage with the picker-stick, the said strap having its fixed end secured to the front of the shuttle-box, forming a loop to receive the picker-stick, as will be more fully set forth hereinafter.

Figure 1 represents a back view of a loom, showing my improved picker-stick checks secured to the backs of the shuttle-boxes and the position the checks would assume when engaged with and disengaged from the picker-sticks. Fig. 2 is an enlarged view looking at the back of a shuttle-box, showing the picker-stick check in its engaged position, with the picker-stick at its outward limit in the shuttle-box; and Fig. 3 is a plan view of Fig. 2 looking at the under side of the shuttle-box, showing the bell-crank lever of the picker-stick check and its support on the shuttle-box in section.

In the drawings, *a a* are the shuttle-boxes of a loom. The picker-sticks *a' a'* are operated in the usual way by the picking-cones and picker-straps to throw a shuttle from the shuttle-boxes. The floor-springs *a² a²* are secured to the floor at one end and to the lower ends of the picker-sticks by the straps *a³ a³*, the tension of the floor-springs returning the picker-sticks to their outward or normal po-

sition after the throw of the shuttle by the picker-stick.

The picker-stick check *b*, as shown in Fig. 2, has the plate *b'* secured to the back of the shuttle-box by the screws *b² b²*. On the plate *b'* is the buffer *b³*, forming a stop, and the boss *b⁴*, having the short outwardly-extending stud *b⁵*, pivotally supporting the adjustable bell-crank lever *c*. The lever *c* is composed of the arm *c'*, having the weighted end *c²*, with the weight *c³* secured to it by the bolt *c⁴*, the bearing *c⁵* and the end *c⁶* carrying the clamping-bolt *c⁷*, and the arm *c⁸*, having the bearing *c⁹* on the stud *b⁵*, with the sleeve *c¹⁰* in the bearing *c⁵* of the weighted arm *c'* and the semi-circular slot *c¹¹* for the clamping-bolt *c⁷*. Secured to the upper end of the arm *c⁸* at one end by the link *d* is the flexible strap *d'*, made of any suitable material, such as leather. This strap forms a loop to receive the picker-stick and has its fixed end *d²* riveted to the plate *d³*, secured to the front of the shuttle-box by screws or similar means.

As the blows from the outward movement of the picker-stick vary in different looms, I adjust the weight of the arm *c'* by adding more weights or removing the weight *c³* and by adjusting the arm *c'* on the arm *c⁸* by loosening the clamping-bolt *c⁷*. The arm *c'* is now moved on its bearing on the sleeve *c¹⁰* into the position required to give more or less weight to the lever and secured in the adjusted position by the clamping-bolt.

In the operation of my improved picker-stick check the picker-stick in its outward movement under the impulse of the floor-springs strikes the strap *d'*, lifting the weighted arm *c'* and bringing the arm *c⁸* into contact with the stop or buffer *b³*. The weight of the bell-crank lever *c* is adjusted to neutralize the blow of the picker-stick, retarding and stopping the picker-stick in its extreme outward position and preventing chattering or rebounding of the picker-stick on the shuttle.

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

1. In a picker-stick check, a weighted lever connecting with a flexible strap forming a loop to receive the outward blow of the picker-

stick, means for pivotally securing the weighted lever to the back of a shuttle-box, the flexible strap, means for securing the fixed end of the flexible strap to the front of the shuttle-box, and means for adjusting the weights on the lever, for the purpose as described.

2. A picker-stick check consisting of a two-part lever pivotally secured together at its fulcrum, and connecting with a flexible strap to receive the outward blow of a picker-stick, weights on the lever, means for pivotally securing the lever to the back of the shuttle-box, a flexible strap, means for securing the fixed end of the strap to the front of the shuttle-box, and means for adjusting the two parts of the lever, for the purpose as described.

3. A picker-stick check consisting of a lever connecting with a flexible strap to receive the outward blow of a picker-stick, an arm adjustably and pivotally secured to the lever at its fulcrum, adjustable weights on the arm, means for pivotally securing the lever to the back of a shuttle-box, a flexible strap, means for securing the fixed end of the strap to the front of the shuttle-box, and means for ad-

justing the weights on the arm and the arm on the lever, for the purpose as described.

4. In a picker-stick check, the combination with a shuttle-box and picker-stick, of the plate b' secured to the back of the shuttle-box and having the buffer b^3 forming a stop, the boss b^4 with the stud b^5 pivotally supporting the lever c , the lever c having the arm c' with the weighted end c^2 and the weight c^3 secured to it by the bolt c^4 , the bearing c^5 and the end c^6 carrying the clamping-bolt c^7 , and the arm c^8 having the bearing c^9 with the sleeve c^{10} and the semicircular slot c^{11} for the clamping-bolt, the flexible strap d' connecting with the lever c by the link d and having the fixed end d^2 riveted to the plate d^3 secured to the front of the shuttle-box, all for the purpose as described.

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

THOMAS E. NORMAN.

Witnesses:

ADA E. HAGERTY,
J. A. MILLER, Jr.