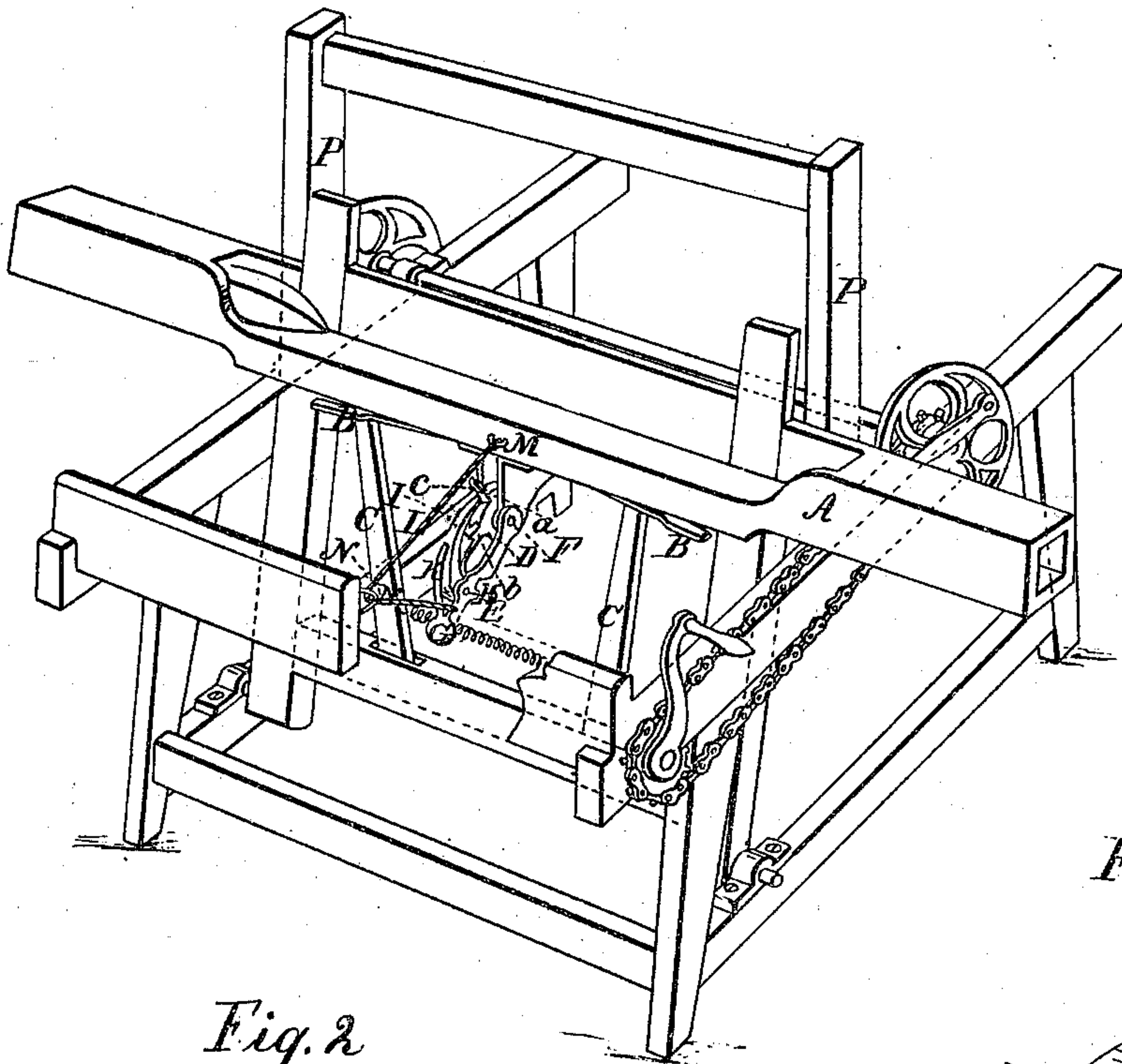


# *J. L. Branson.* *Hand Loom.*

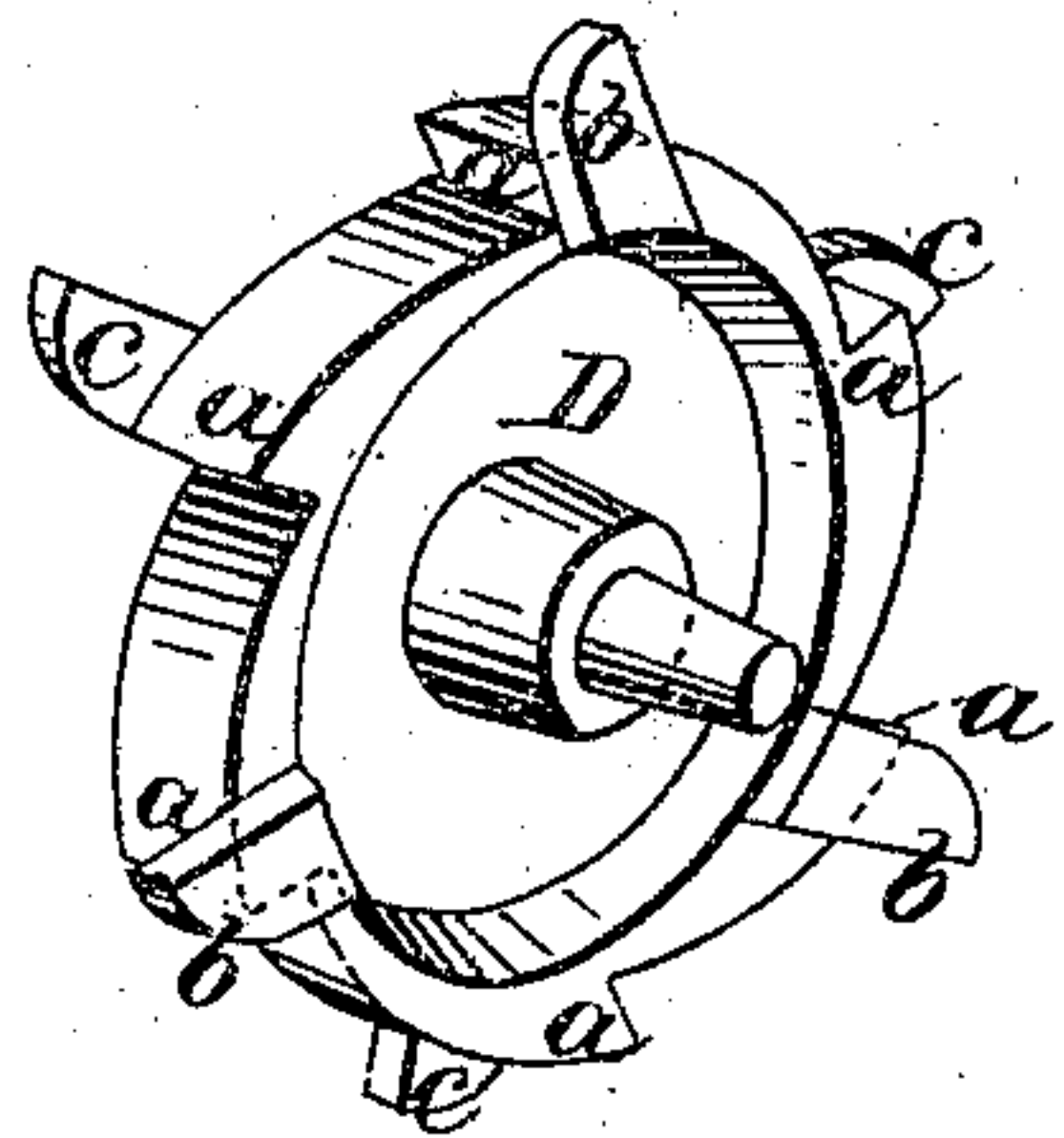
*Nº 79,946.*

*Patented Jul. 14, 1868.*

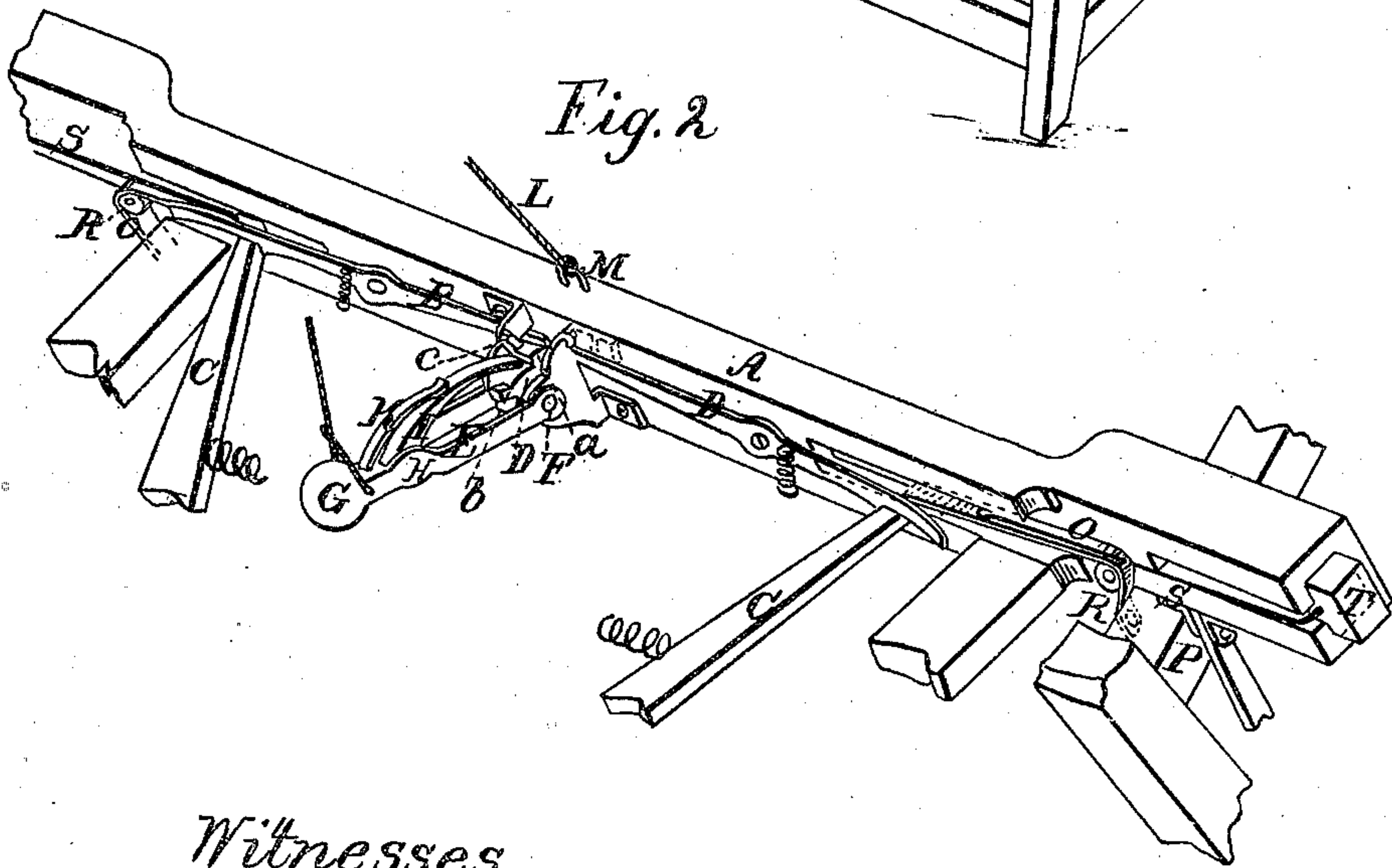
*Fig. 1*



*Fig. 3*



*Fig. 2*



*Witnesses*  
*S. C. Hall*  
*C. G. Hall*

*Inventor*  
*James L. Branson*



# United States Patent Office.

JAMES L. BRANSON, OF CINCINNATI, OHIO.

*Letters Patent No. 79,946, dated July 14, 1868.*

## IMPROVEMENT IN HAND-LOOMS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES L. BRANSON, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented certain new and useful Improvements in Hand-Looms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 represents a perspective view of a loom containing my improvements.

Figure 2 is a perspective view of the under side of the batten, showing the details of the improvement.

Figure 3 is a view of the ratchet-wheel.

The nature of my improvement consists in a device for giving motion to the ratchet-wheel and trips, and also in the employment of a wire or rigid connection between the picker-block and the strap which retracts the pickers.

In the drawings, A represents the batten of a hand-loom, upon the under side of which are located the triggers B B, which release the pickers C C. Between the ends of the triggers the ratchet-wheel D is hung, and is provided with four, six, or more ratchet-teeth, *a a a a*, every other tooth being furnished with a projection or prolongation upon the right-hand side of the tooth, and the intermediate teeth being provided with similar projections on the left-hand side. The right-hand projections are marked *b b b b*, and the left-hand projections are marked *c c c c*. These projections I call trips, and their office, as the wheel revolves, is to engage the ends of the triggers alternately, so as to give sufficient motion to them to release the pickers. Motion is imparted to the ratchet-wheel D, which carries these trips, by means of a swinging dog, E, hinged at F, provided at its outer end with a weight, G, and having the latch I attached to it by hinge at H. This latch is pressed toward the ratchet-wheel by means of a spring, K. A cord, L, is fastened to the front of the batten at M, passes through the ring or pulley N, on the breast-beam, and thence to the dog E, where it is attached, near the weight G. In operation, as the batten is drawn forward, the dog falls, and the latch I drops below a tooth in the ratchet-wheel. As the batten is thrown back, the cord L is drawn taut, raising the outer end of the dog E, and so, by means of the latch, moving the ratchet-wheel. This brings one of the trips in contact with the trigger on that side of the batten, imparting motion to it, and releasing the picker. As this operation is repeated, the dog again falls, the latch engages the next tooth, and, as it rises, moves the wheel so as to bring the next trip against the other trigger.

After the pickers have thrown the shuttle, they are drawn back again by means of straps, O O, which are attached to the uprights P P, at one end, and at the other to the pickers, passing around the pins or pulleys R R. To these straps the inner ends of the wires S S are fastened, the outer ends being curved upward, and fastened to the under side of the picker-blocks, as shown at T. The lower side of the batten is slotted, to permit the passage of this wire, the operation of which is to throw back the picker-block as the picker is retracted by the forward movement of the batten.

It is obvious that the ratchet-wheel and trips may be divided and applied near the ends of the batten, either separately or upon a common shaft; a ratchet-wheel being located on each side, carrying only the trips which operate the trigger on that side; or that the ratchet-wheel may be placed upon the centre of a long shaft, and the trips on the extremities.

What I claim as new, and desire to secure by Letters Patent, is—

1. The swinging dog E, in combination with the ratchet-wheel and trips, substantially as and for the purpose described.
2. The rigid connecting-wire S, combined with the strap O and picker-block T, substantially as and for the purpose described.

JAMES L. BRANSON.

Witnesses:

S. C. HALL,  
E. G. HALL.