

No. 855,873.

PATENTED JUNE 4, 1907.

J. B. BERNIER.
PICKER STICK CHECK FOR LOOMS.
APPLICATION FILED JUNE 12, 1906.

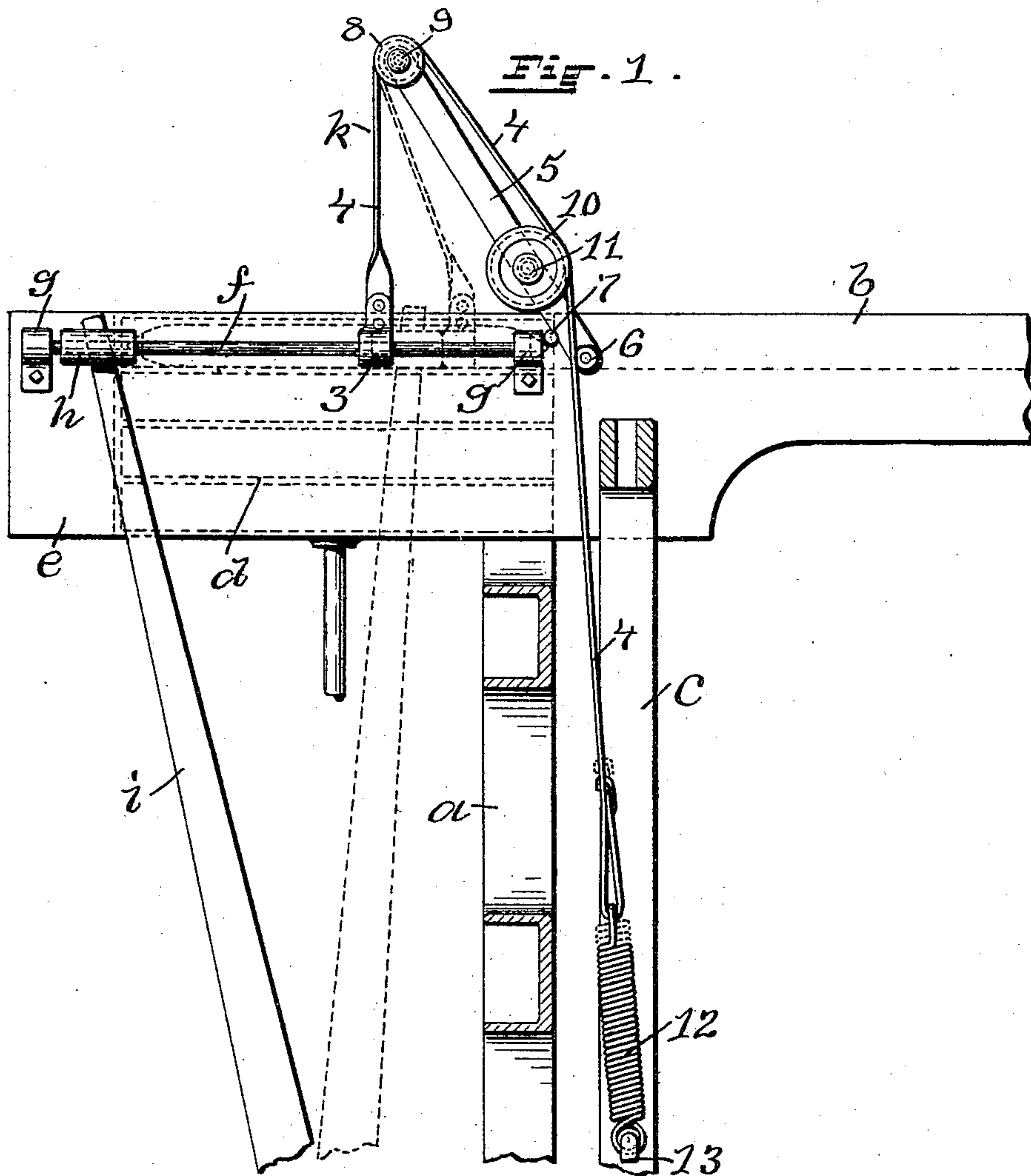
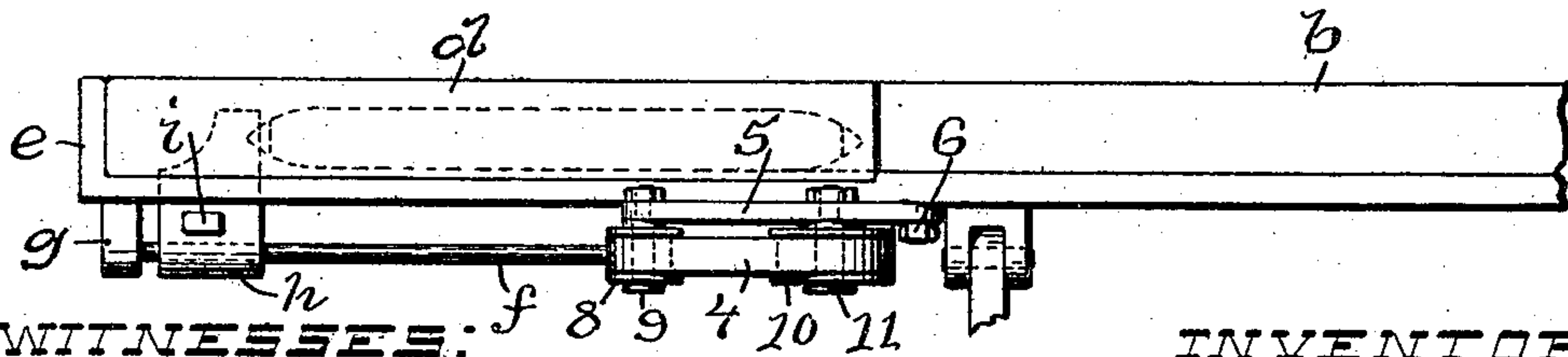


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN B. BERNIER, OF MANVILLE, RHODE ISLAND, ASSIGNOR OF ONE-HALF
TO FREDERICK H. ROCHE, OF MANVILLE, RHODE ISLAND.

PICKER-STICK CHECK FOR LOOMS.

No. 855,873.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed June 12, 1906. Serial No. 321,370.

To all whom it may concern:

Be it known that I, JOHN B. BERNIER, a citizen of the United States, residing at Manville, in the county of Providence and State Rhode Island, 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.

In the running of looms and particularly in high speed looms the picker sticks are often broken by the sudden arresting of the pickers caused by the pickers coming to an abrupt stop against the picker rod supports or the end of the picker slots at the inward limit of the throw of the pickers.

The object of my invention is to prevent the breaking of picker sticks from this cause and I accomplish this object by providing the loom with picker stick checks having spring actuated buffer slides placed intermediate the picker and the inner picker rod support and adapted to receive the blow of the picker at the end of its throw to gradually bring the picker and picker stick to a full stop and prevent the picker from striking the picker rod support or the inner end of the picker slot, which in the usual construction limits the throw of the pickers and picker sticks.

My invention consists in the peculiar and novel construction of a picker stick check for looms, said picker stick check having details of construction, as will be more fully set forth hereinafter and claimed.

Figure 1 is a vertical sectional view of part of a drop box loom, looking at the back of the lay and showing the same provided with my improved picker stick check, with the positions the check would assume with the picker stick in its outward position in full lines and with the picker stick at the end of its throw in broken lines, and Fig. 2 is a plan view looking at the top of the lay, shuttle boxes and picker stick check mechanism, with the picker in its position to throw the shuttle, shown in broken lines.

In the drawings, *a* indicates the side frame, *b* the lay, *c* the lay sword, *d* the shuttle boxes, *e* the shuttle box frame, *f* the picker rod, *g* the picker rod supports, *h* the picker and *i* the

picker stick of a loom provided with my improved picker stick check *k*. The picker *h* and picker stick *i* are operated in the usual way by the picking cones and picker straps (not shown) to throw a shuttle from the shuttle boxes.

My improved picker stick check *k* comprises a buffer slide 3 made of rawhide or other suitable material and adapted to slide on the picker rod *f* intermediate the picker *h* and the inner picker rod support *g*, a flexible strap 4 constructed preferably of leather and secured at one end to the buffer slide 3 by rivets or other means, an arm 5 rigidly secured at its lower end to the back of the lay *b* by a bolt 6 and held at an angle over the picker rod *f* by a stud 7 on the back of the lay, a grooved pulley 8 rotatably secured to the upper end of the arm 5 by a bolt stud 9, a larger grooved pulley 10 rotatably secured to the arm 5 adjacent its lower end by a bolt stud 11, the strap 4 passing upward over the upper pulley 8 and then downward over the lower pulley 10 and a coiled spring 12 secured to the lower end of the strap 4 at one end and at its opposite end to a pin 13 on the lay sword *c*, as shown in Fig. 1.

In the operation of my improved picker stick check a shuttle is thrown from a shuttle box by the picker *h* and picker stick *i* in the usual way. The picker *h* is thus brought violently into engagement with the buffer slide 3 of the picker stick check and moves the slide toward the center of the loom against the tension of the coiled spring 12. As the slide 3 moves out of its normal position the tension of the spring on the slide, through the strap 4, gradually increases, which increasing spring tension on the slide gradually brings the picker and picker stick to a stop in approximately the position as shown in broken lines in Fig. 1, thus preventing the picker from coming to a sudden stop against the inner picker rod support *g*, or the end of the picker slot in the back of the shuttle box frame *e*, which sudden stopping of the picker is liable to and does at times break the picker stick. In the outward throw of the picker stick the buffer slide 3 is released and assumes its normal position, as shown in full lines in Fig. 1, through the tension of the spring 12 and the strap 4.

I do not wish to confine myself to the exact construction shown as the construction

could be varied for different makes of looms or for different conditions, without materially affecting the spirit of my invention.

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

1. In a loom, a picker stick check comprising a picker rod a buffer slide 3 adapted to slide on the picker rod, a flexible strap 4 secured at one end to the buffer slide 3, an arm 5 rigidly secured at its lower end by a bolt 6 at an angle over the picker rod, a grooved pulley 8 rotatably secured to the upper end of the arm 5, a grooved pulley 10 rotatably secured to the arm 5 adjacent its lower end, the pin 13 on the lay sword, the strap 4 passing upward over the pulley 8 and then downward over the pulley 10, and a coiled spring 12 secured to the lower end of the strap and to the pin 13 on the lay sword, whereby the buffer slide 3 receives the blow of the picker and gradually brings the picker and picker stick to a stop through the gradually increasing tension of the coiled spring 12, as described.

2. The combination with the lay *b*, the lay sword *c*, the picker rod *f*, the picker *h* and the picker stick *i* of a loom, of a picker stick

check *k* consisting of a buffer slide 3 of rawhide or similar material adapted to slide on the picker rod *f* intermediate the picker *h* and the inner end of the picker rod, a flexible strap 4 secured at one end to the buffer slide 3, an arm 5 rigidly secured to the back of the lay by a bolt 6 at an angle over the picker rod, a grooved pulley 8 rotatably secured to the upper end of the arm 5 by a bolt stud 9, a larger grooved pulley 10 rotatably secured to the arm 5 adjacent its lower end by a bolt stud 11, the pin 13, the strap 4 passing upward over the pulley 8 and then downward over the pulley 10, and a coiled spring 12 secured to the lower end of the strap 4 and to the pin 13 on the lay sword *c*, whereby the buffer slide 3 receives the blow of the picker *h* and gradually brings the picker *h* and the picker stick *i* to a stop through the gradually increasing tension of the coiled spring 12, as described.

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

JOHN B. BERNIER.

Witnesses:

ADA E. HAGERTY,
J. A. MILLER.