

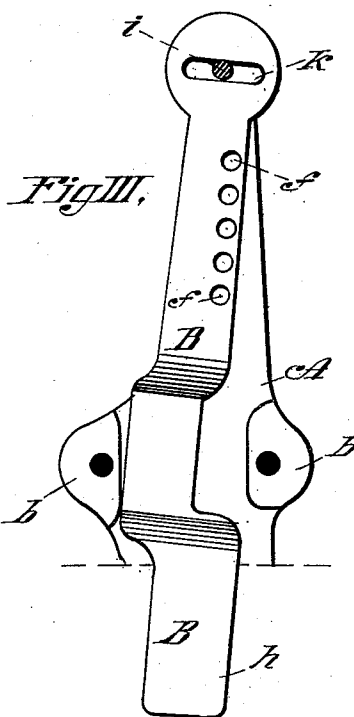
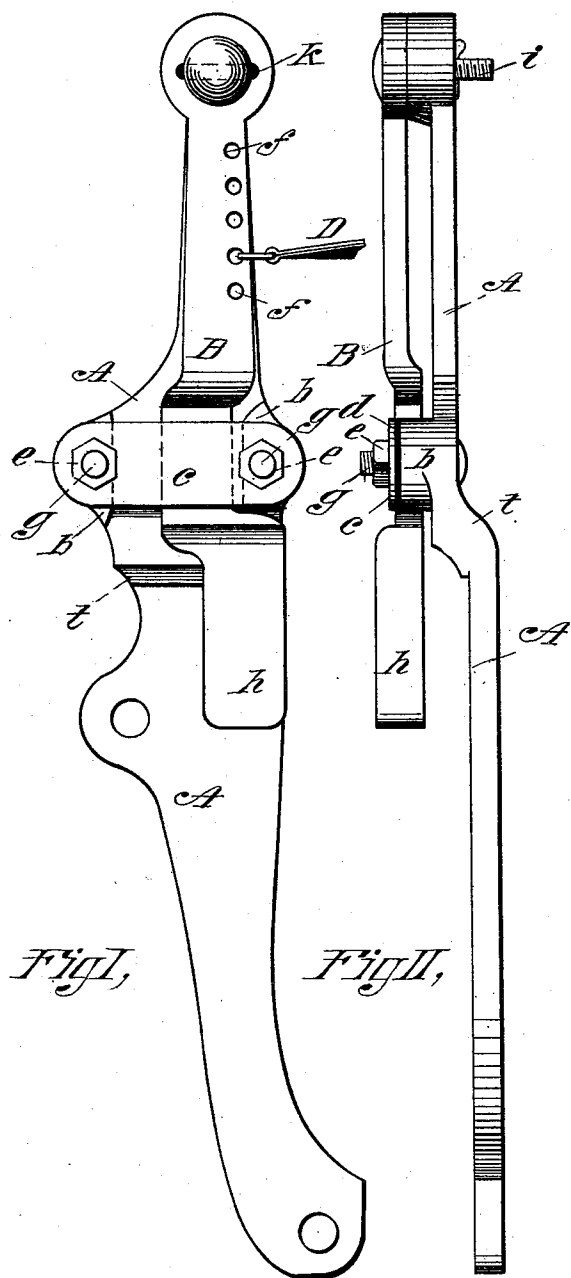
(No Model.)

2 Sheets—Sheet 1.

R. W. ANDREWS.
PICKER CHECK FOR LOOMS.

No. 469,671.

Patented Mar. 1, 1892.



WITNESSES:

Peru Tyler
Jason Perkins

INVENTOR

R. W. Andrews
BY *R. F. Hyde*

ATTORNEY.

(No Model.)

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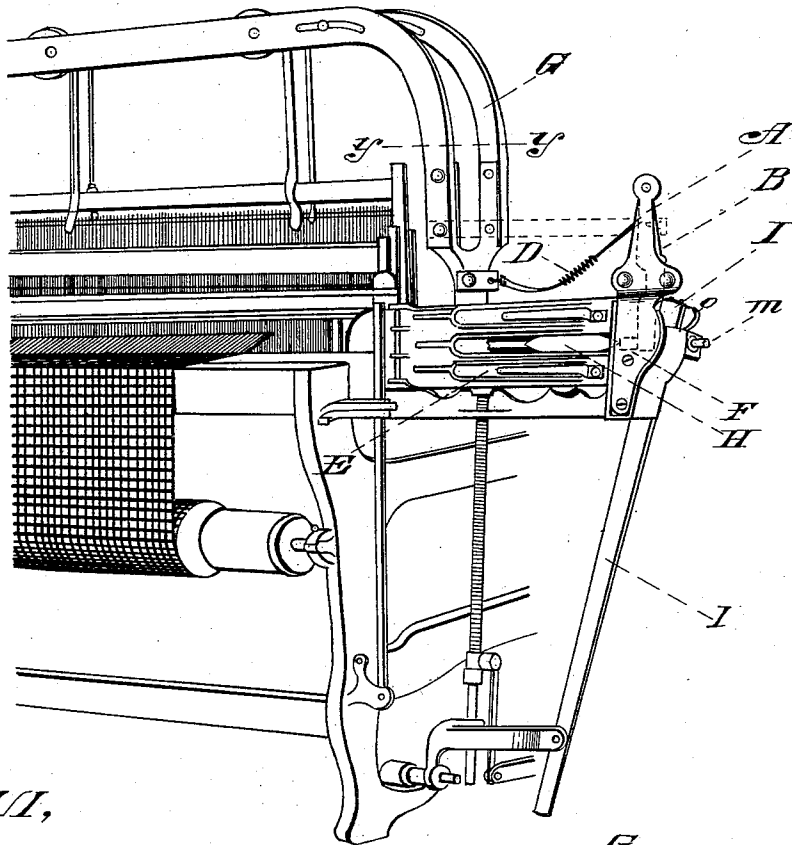


Fig VI,

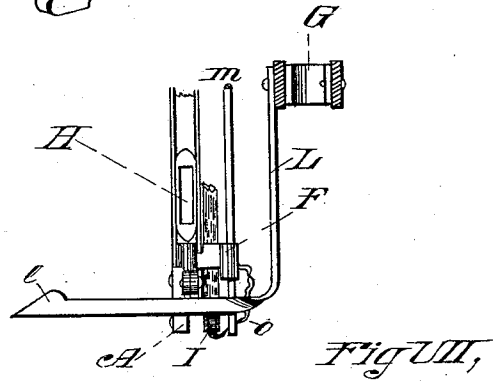


Fig VII,

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UNITED STATES PATENT OFFICE.

ROBERT W. ANDREWS, OF STAFFORDVILLE, CONNECTICUT.

PICKER-CHECK FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 469,671, dated March 1, 1892.

Application filed June 5, 1891. Serial No. 395,281. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. ANDREWS, a citizen of the United States, residing at Staffordville, in the county of Tolland and State of Connecticut, have invented a new and useful Picker-Check for Looms, of which the following is a specification.

My improvements relate more particularly to that class of loom in which a drop-box is used containing several shuttles and in which a shuttle at the commencement and end of its throw is in immediate contact with a picker, in place of being struck by or striking a picker-staff, the objects of my invention being, while relieving the staff, to check the shuttle through the picker alone in a manner insuring the more perfect working of the shuttle in this class of loom; and my invention consists in the combination and construction as hereinafter described, and more particularly pointed out in the claims.

My invention is fully illustrated in the accompanying drawings, in which—

Figures I and II show a front and a side elevation of the complete device. Fig. III is a partial section of the device, as shown in Fig. I. Figs. IV and V are details of construction. Fig. VI shows the device combined with a loom, and Fig. VII is a partial plan view on the dotted line *y y* of Fig. VI.

Referring to the drawings, A is a metal standard having a shank adapted to be screwed or otherwise made fast to the "lay" of a loom upon a side thereof and at or near its end. Above the shank the standard A is prolonged to afford a hinge at one end for a lever B. The lever B, hinged at one end to the end of the standard A, extends down parallel to the standard between two lugs *b b* on the standard. From the tops of the lugs *b b* and extending across the outer surface of the lever B and bearing upon it is a friction-strap *c*, preferably of thin metal. Between the ends of the strap and the lugs are interposed washers *d*, composed of a compressible material, such as felt, leather, or rubber, which will admit of the nuts *e e'* upon the ends of screws *g g*, passing from the lugs through the washers and strap, being employed to graduate the pressure brought to bear upon the lever B by the strap *c*, either at one or both ends of said strap. The distance between the inner faces

of lugs *b b* is such as to form a space in which the lever B can vibrate, and the free end *h* of the lever, extending below the strap *c*, is enlarged and faced to adapt it to correspond to one end of a picker. The standard is bent at *t*, so as to enable the lever to extend in the path of the shuttle when the shank is secured to the outside of the lay, and the lever at its hinge is set off from the standard, so that the friction applied to the lever by being concentrated at one point can be the more accurately governed. The hinge-pin *i* passes from the standard through a horizontally-elongated slot *k* in the end of the lever, by means of which the angle of face *h* of the lever may be changed to compensate for unequal wear upon the corresponding end of the picker. The inner edge of the lever above the friction-strap is provided with holes *f*, adapted to receive a strap D, or else the outer edge is adapted, as shown in Fig. III, to project at one end of the lever-swing beyond the edge of the standard to enable it to be acted upon by a cam, as more particularly hereinafter described. By loosening one nut *e* and tightening the other the lever B may be caused upon the blow of the picker to start against a gradually-increasing friction, or the reverse, and by the employment of both nuts the friction, uniform throughout the swing of the lever, may be regulated to any required degree.

In Fig. VI the device is shown combined with the drop-box E, of which a binder and part of the side wall is removed to show the shuttle H at the time that it has finished its throw, and has by contact with the picker F (shown in dotted lines) caused the lever B to be swung back. The strap D, having one end secured to the lever B, as seen in Fig. I, has its other end made fast to a fixed part of the loom. (In the drawing shown to be the post of the head-beam G. It will be seen that the strap D from its slack condition shown in the drawings will be tightened upon the swing of the lay and restore the lever to the position, placing it in readiness for the next blow of the shuttle, and that the motion given to the free end of lever B in being so restored is a positive motion to place the shuttle and picker in the most favorable position for the blow of the staff I. The staff I, as shown, is, at the time the lever B is doing its work of arresting the blow of the

shuttle and restoring it for the next blow of the staff, resting at the end of the race and is relieved from the wear incident to sticks having themselves to check the shuttle, while at the same time the constantly wearing and changing cushions, together with nicely-adjusted binding-springs, do not have to be depended upon to check the picker and shuttle.

In the drop-box loom in general use it is necessary to adjust the binders to the shuttle in each box, and this adjustment has to be made to the weight and size of various shuttles when it becomes necessary to change them in the boxes; but by means of this device all of the binders may be loosened and shuttles differing in weight and dimensions be used indiscriminately in any compartment of the drop-box.

In Fig. VII an arm L is shown extending from the fixed frame G to the rear of lever B and is provided with a cam l, projecting in the path of lever B to come in contact with its rear edge upon the swing of the lay and restore the lever to its first position, as does the strap D, for which this cam may be considered a mechanical equivalent. In the same view the picker F is shown in plan view, having one part of it resting in the shuttle-box, another part sleeved upon the guide-rod m, and its intermediate portion adapted for the blow of the staff I, to which it is looped by a strap o in the usual manner.

Although the friction upon the lever B may be adjusted to be a gradually-decreasing one from its start upon impact of the picker, or to a uniform resistance from the start, in practice I have adjusted it to start perfectly freely to be gradually and increasingly restrained, and as the lever may be made so light as to practically eliminate inertia in starting any elasticity that might cause a rebound of the shuttle is completely obviated, with the result that the filling is never broken or thrown off.

The friction-lever B (shown pendent in the drawings) may be reversed without a departure from the spirit of my invention.

Now, having described my invention, what I claim is—

1. The within-described picker-check for drop-box looms, consisting of a lay, a lever hinged at one end to a projection from the lay and adapted to swing in the path of the shuttle and picker and adapted to receive the blow of the picker to the relief of the staff, provided with a friction-band bearing on one of its sides between its hinge and free end, and means, substantially as shown and described, for returning the lever to an operative position by the swing of the lay, as and for the purpose set forth.

2. In picker-checks for drop-box looms, a lay, a standard secured to the end of the lay, a lever hinged at one end to the standard and adapted to have its free end swing in the path of the shuttle and picker and faced to receive the blow of the picker, the standard having two lugs projecting upon opposite sides of the lever, a strap bearing from the lugs upon the face of the inclosed lever, compressible washers interposed between the ends of the strap and the lugs, and screws uniting the lugs, washers, and straps, with nuts bearing upon the strap forming an adjusting device whereby the friction of the strap upon the lever may be graduated, and a connection, as shown and described, from the lever to the fixed frame to cause the vibration of the lay to swing the lever, combined and operating as set forth.

3. The combination and arrangement, substantially as shown and described, of the lay, the standard A, provided with the friction-strap c and with a hinge-pin i, the lever B, provided with an elongated hinge-slot k, adapted to receive the hinge-pin i and form therewith an adjustable hinge to the lever, for the purpose set forth, and a connection D from the lever to the fixed frame.

R. W. ANDREWS.

Witnesses:

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PENN TYLER.