

G. F. HUTCHINS.
 LOOM SHUTTLE CHECK.
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Patented Jan. 21, 1913.

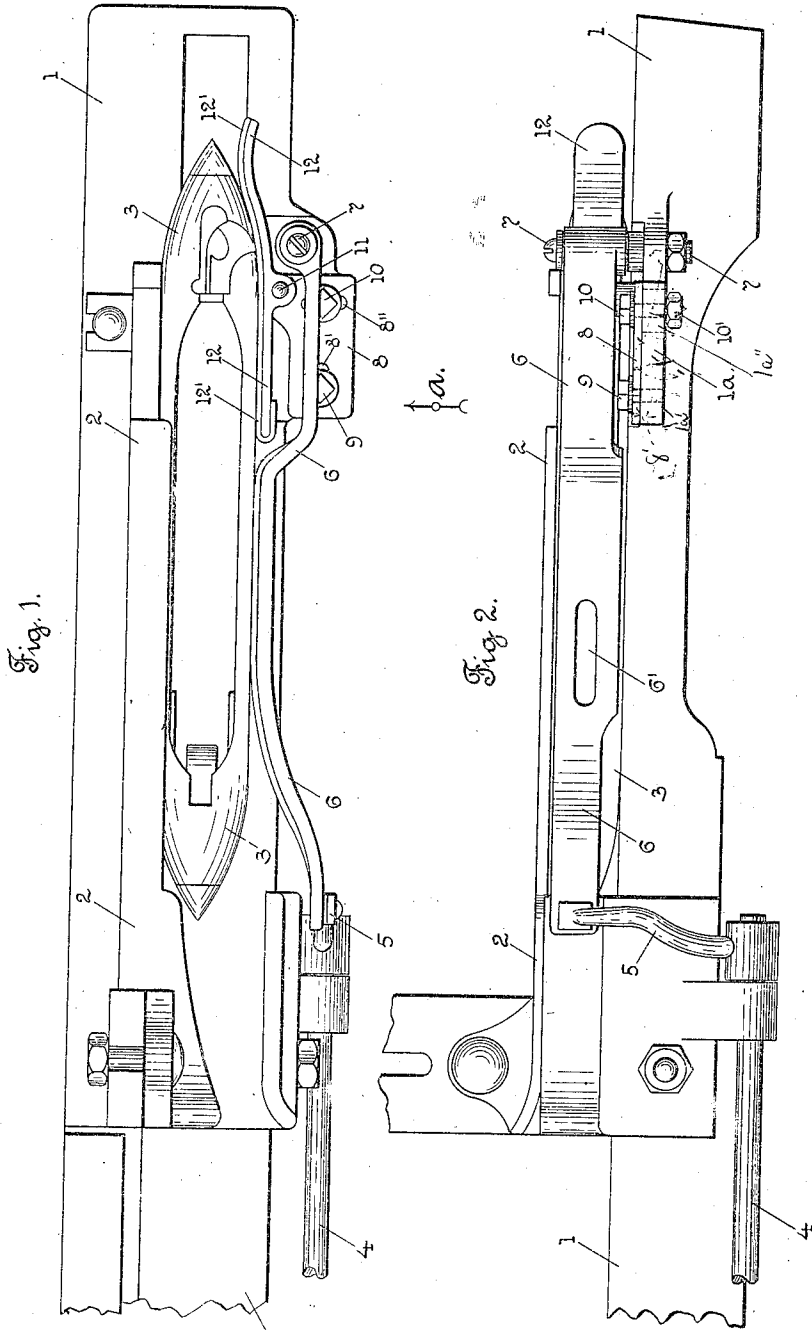


Fig. 1.

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

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LOOM SHUTTLE-CHECK.

1,051,112

Specification of Letters Patent.

Patented Jan. 21, 1913.

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To all whom it may concern:

Be it known that I, GEORGE F. HUTCHINS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Loom Shuttle-Checks, of which the following is a specification.

My invention relates to a loom shuttle check.

The object of my invention is to provide a loom shuttle check of simple construction, and one which is entirely independent of the shuttle binder.

My invention consists in certain novel features of construction of my improved loom shuttle check, as will be hereafter fully described.

My shuttle check consists preferably of a lever, adjustably mounted, and pivotally supported between its ends on the front side of the stationary shuttle box, and on the inner side of the shuttle binder, near the pivot point of said binder. The lever preferably has a yielding portion to bear against the shuttle.

My shuttle check acts to check the shuttle independently of the shuttle binder, and presses the shuttle against the back of the shuttle box, to hold the shuttle in place.

I have shown in the drawings a stationary shuttle box at one end of the lay, with my improvements in shuttle check combined therewith.

Referring to the drawing:—Figure 1 is a plan view of the right hand end of the lay of a loom, with a stationary shuttle box thereon, and my improvements in shuttle check applied thereto, and, Fig. 2 is a front view of the parts shown in Fig. 1, looking in the direction of arrow *a*, same figure.

In the accompanying drawing, 1 is the right hand end of the lay of a loom, carrying a stationary shuttle box or cell 2, with a shuttle 3, in the usual way.

4 is a rock shaft at the front of the lay, carrying a protector finger 5, which is adapted to bear at its upper end against the inner free end of the shuttle binder 6. The shuttle binder 6 is pivotally mounted at its outer end on a stud 7, on the front side of the shuttle box, and in this instance has an elongated opening 6' therethrough, for the entrance of a filling feeler or detector, not shown.

All of the above mentioned parts may be of the usual and well known construction. I will now describe my improvements.

On the front of the stationary shuttle box 2, and on the inside of the pivot stud 7 of the binder 6, is in this instance an extension or projection 1^a. The projection 1^a has a circular screw threaded hole therethrough, as indicated by broken lines 1^{a'} in Fig. 2. The plate 1^a also has an elongated opening or slot therethrough, in the direction of its length, as indicated by broken lines 1^{a''} in Fig. 2. A plate 8 is supported upon the upper side of the projection 1^a. The plate 8 has an opening or slot 8' therethrough, see Fig. 1, extending in the direction of the length of the plate 8 and in alinement with the opening 1^{a'} through the projection 1^a, as indicated by broken lines in Fig. 2. The plate 8 also has an elongated slot or opening 8'' therethrough, see Fig. 1, in the direction of its width, and at right angles to the elongated slot or opening 1^{a''} through the plate 1^a. The plate 8 is adjustably secured upon the projection 1^a, in this instance by a screw 9 passing loosely through the elongated slot or opening 8' in the plate 8, and screwed into the threaded hole 1^{a'} in the projection 1^a, and also by a bolt 10, which extends loosely through the elongated slot or opening 8'' in the plate 8, and through the elongated slot or opening 1^{a''} in the projection 1^a. The bolt 10 has a nut 10' on its lower screw threaded end. When it is desired to adjust the plate 8 on the projection 1^a, in the direction of the length of the shuttle, the screw 9 is turned out of the screw threaded hole 1^{a'} in the projection 1^a, so that the head thereof will not bear on the plate 8. The nut 10' is screwed off of the bolt 10, so that it will not bear and bind on the lower side of the projection 1^a. By means of the slot 8' in one end of the plate 8, and by means of the elongated slot 1'' in the projection 1^a, the plate 8 may be moved in the direction of the length of the shuttle, through the movement of the plate 8 on the screw 9, by means of the slot 8', and the movement of the bolt 10 in the elongated slot or opening 1^{a''} in the projection 1^a. After the plate 8 has been adjusted as desired in the direction of its length, it is secured to the projection 1^a by screwing in the screw 9, and by screwing on the nut 10' on the bolt 10. To adjust the plate 8 toward

and away from the shuttle, in the direction of its width, it is only necessary to adjust one end of the plate 8 carrying the shuttle check, and to do this the nut 10' on the bolt 10 is turned off or loosened, and the screw 9 is turned out or loosened, and acts as a pivot for the plate 8, and the elongated slot or opening 8'' in the plate 8 allows that end of the plate to be moved outwardly or inwardly, the bolt 10 passing loosely through said slot or opening 8''. The required adjustment of the plate 8, in the direction of the length of the shuttle, or outwardly or inwardly, in the direction of the width of the shuttle is very little.

The plate 8 carries a stud 11, and on said stud is pivotally mounted a lever 12, in this instance of resilient sheet metal. The lever 12 is preferably pivotally mounted between its ends on the stud 11, and preferably has its outer end of curved shape, to correspond with the curved shape of the end of the shuttle 3. Leather or other yielding material 12' in this instance extends upon the inner side or face of the lever 12 to be engaged by the shuttle. The lever 12 preferably extends within the shuttle binder, with its outer end extending beyond the pivot of the shuttle binder, and in the path of the shuttle after it enters the shuttle box.

By means of the adjustable plate 8, the fulcrum or pivot point of the shuttle check lever 12 may be moved toward, or away from the shuttle, and also toward the outer, or inner end of the shuttle box to adjust the position of the lever 12 and its engaging surface relative to the shuttle and vary as desired the pressure on the shuttle.

After the shuttle 3 has entered the shuttle box, the outer end of the shuttle engages the inner face of the shuttle check 12, at its outer end, and moves inwardly the inner end of said shuttle check and causes the face thereof to press against the shuttle, and press the shuttle against the back of the shuttle box, and hold it in position. The action of the shuttle check 12 on the shuttle is entirely independent of the action of the shuttle binder 6 on the shuttle.

The shuttle binder 6 acts as a guide for the shuttle, at the outer side of the stationary shuttle box, and also acts, on the entrance of the shuttle into the box, to move outwardly the protector finger 5 on the rock shaft 4, to throw off the protection in the usual way. The shuttle binder spring ordi-

narily employed is done away with, as it is not required, for the reason that the shuttle binder 6 is not intended to act to check and hold the shuttle, this operation being performed entirely by my shuttle check, independently of the shuttle binder, so that the shuttle binder may be removed entirely without interfering in any way with the operation of my shuttle check, for checking and holding the shuttle in the box.

It will be understood that the details of construction of my improvements in shuttle check may be varied if desired.

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

1. A loom shuttle check, comprising a pivotally mounted lever, located adjacent to, but independent of the shuttle binder, and having its fulcrum between its ends, and said fulcrum, adjustable toward and away from the shuttle, and having a yielding engaging face or surface to bear against the bevel end of the shuttle, and against the side of the shuttle to hold the shuttle in position.

2. In a shuttle check mechanism, a shuttle binder pivotally mounted at its outer end on the front side of the shuttle box, and yieldingly moved inwardly to engage with the side of the shuttle, a lever located adjacent to, but independent of said shuttle binder, and pivotally mounted intermediate its ends on a stud located on the lay adjacent the shuttle binder, said lever having a yielding engaging face or surface to bear against the bevel end of the shuttle and against the side of the shuttle, to hold the shuttle in position.

3. In a shuttle check mechanism, a shuttle binder pivotally mounted and yieldingly moved inwardly to engage with the side of the shuttle, a lever located adjacent to, but independent of said shuttle binder, and having its fulcrum between its ends, and located adjacent said binder on the same side of the shuttle, said fulcrum adjustable toward and away from the shuttle, and also adjustable in the direction of the length of the shuttle, and said lever having a yielding engaging face or surface to bear against the bevel end of the shuttle, and against the side of the shuttle, to hold the shuttle in position.

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