P. Miggett.

Shuttle Guard.

No. 11,505. Patented Aug. 8, 1854.

Fig: 1.

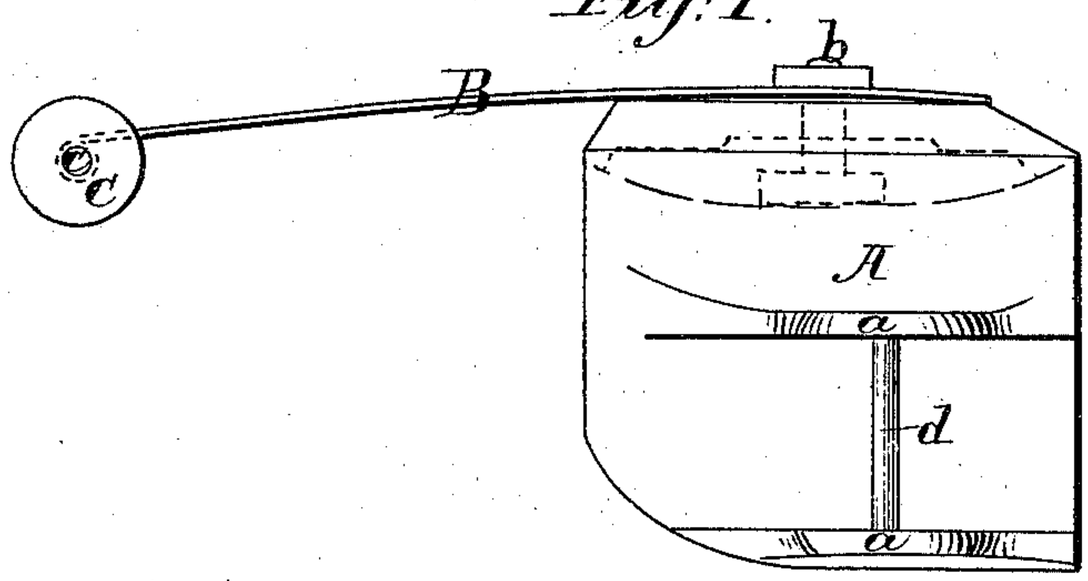


Fig: 2.

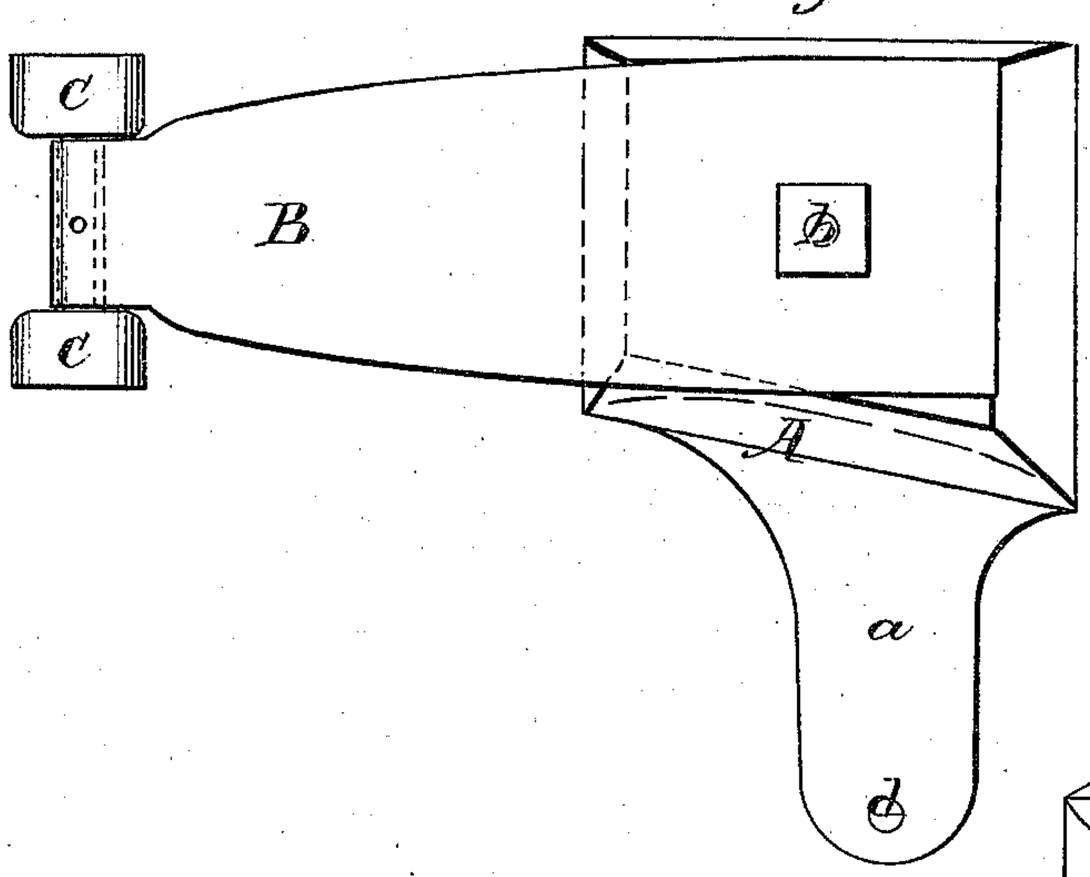


Fig: 3.

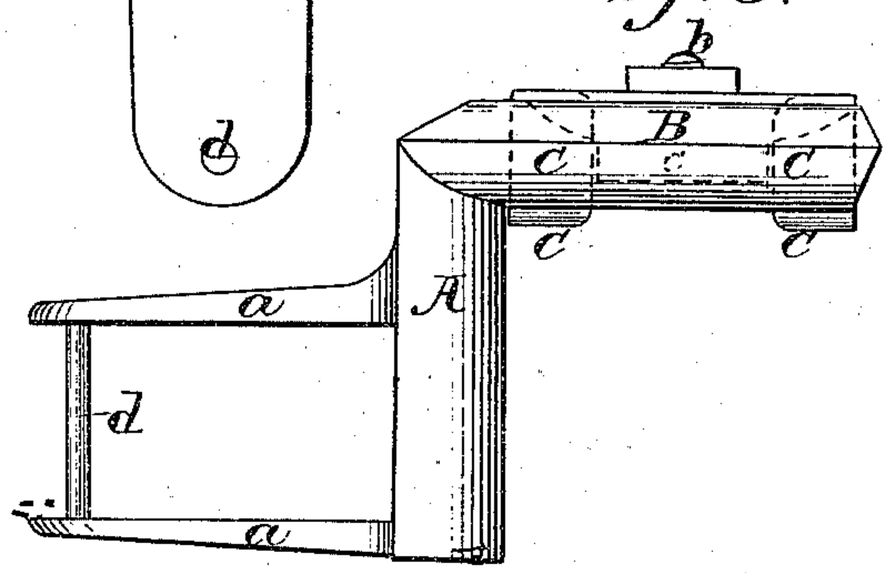
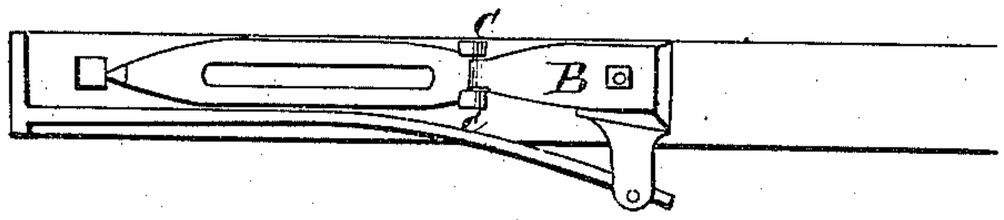


Fig: 4.



UNITED STATES PATENT OFFICE.

PETER MIGGETT, OF HOOSICK FALLS, NEW YORK.

SHUTTLE-GUARD FOR POWER-LOOMS.

Specification of Letters Patent No. 11,505, dated August 8, 1854.

To all whom it may concern:

Be it known that I, PETER MIGGETT, of Hoosick Falls, in the county of Rensselaer and State of New York, have invented a new and useful Shuttle-Guard for Preventing Shuttles Being Thrown Out of Power-Looms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a front elevation, full size, of the shuttle guard for the left hand shuttle box. Fig. 2, is a top view of the same, and Fig. 3, a view looking from the center of the loom toward the shuttle box. Fig. 4, is a diagram on a small scale, showing the position of the guard over the shuttle box.

Similar letters of reference indicate corresponding parts in the several figures.

In power loom weaving, frequent interruptions are caused by the shuttles accidentally flying from the loom. These accidents cause much loss of time, injury to the fabric, and in many cases, injury to the mechanism of the loom. In the most improved looms, which run at the highest speeds, the shuttle is driven with such force that, if it flies from the loom, it is capable of inflicting very serious, and even very fatal, injury, on the attendants, whose duty it is to superintend their operation.

The object of this invention is to prevent the liability to the occurrence of these accidents.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, is a casting of iron, or other metal, which is intended to be bolted to the back of the shuttle box. It is of such shape as to form the top and front side of the entrance to the shuttle box and present a flaring opening for the shuttle to enter. Its inside shape is represented in red lines in Figs. 1, and 2. On its front side, are two lugs, *a*, *a*, which with a pin, *d*, inserted through them, form guides for the shuttle binder.

B, is a spring, made of steel plate, and secured to the casting, A, by a bolt, *b*, which serves at the same time to attach the casting to the shuttle box. This spring is slightly arched, and extends over the shuttle box toward the end of the lay. It is curled at the end to form a tubular bearing to receive the small axle, *c*, of two rollers, C, C, which may be of metal, wood, or leather. This axle turns freely, and the rollers are tightly secured to it. The rollers occupy such a position that when the shuttle is in the box, they stand just over that end of it which is nearest the warp, as shown in Fig. 4, and at such a height, that the shuttle is capable of passing under them without touching.

The principal cause of the shuttle flying from the loom, is the end next the warp rising as it leaves the box. This is effectually prevented by employing the guard described, for if the end rises, it comes in contact with the rollers, and consequently is pressed down to its place, and guided straight out of the box. Looms to which this shuttle guard has been applied have turned off one tenth more work than other looms of precisely similar construction without it, having given much less trouble to the weaver, and to the machinist, whose duty it has been to repair them.

It will be obvious that, as compared with the ordinary cleat in the internal back edge of the race, plate cover over the top whether rigid or elastic, or bar at the back end of the race sustaining the picker guide rod which rod in part ordinarily serves to guide the shuttle, my construction and arrangement of guard serves more certainly and effectively to guide the shuttle straight and restrain it from "flying out" by preventing its end next the warp rising on leaving the box, as the small surface exposed to friction on the shuttle touching the rollers, the easy yield or turning of the rollers and the manner in which they are hung on a spring bar running lengthwise with the travel of the shuttle, all combined, serve to admit of the guard—that is the rollers—being adjusted in closer proximity to the shuttle without detriment to the shuttle in striking, or serious wear of the shuttle, than would be safe or practicable with a fixed cleat or plate cover guide, and insures by the arrangement of the rollers—one on either side of the center line of the shuttle—the shuttle from turning and entering the opposite box edgewise, and thus it is that my box guard enables me to run the loom quicker and the shuttle with greater precision, safety and less wear or friction.

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

The shuttle box-guard constructed sub-

stantially as specified of rollers (C C) on either side of the center longitudinal line of the shuttle and projecting from a spring bar or holder (B) down into the box as shown and described, whereby the shuttle is more effectually restrained from rising at the end next the warp on leaving the box, thus preventing the shuttle from flying out of the loom or more truly inclosing it to run in its course, friction is diminished, the shuttle less exposed to injury or wear and kept from turning or entering the opposite box edgewise, as herein set forth.

PETER MIGGETT.

Witnesses:
BRIGGS KEACH,
ANDREW ARTHUR.