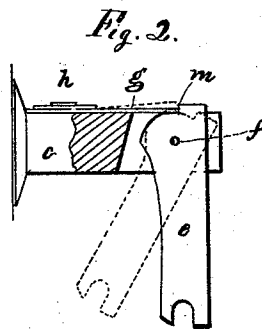
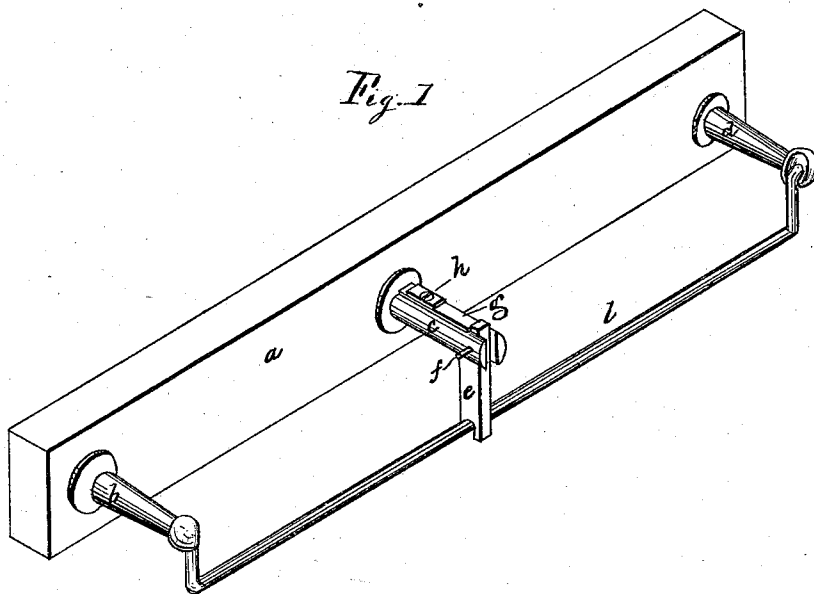


W. M. PARKER.
LOOM-SHUTTLE GUARD.

No. 171,416.

Patented Dec. 21, 1875.



WITNESSES.
J. S. Davis
Geo. L. Fernald.

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UNITED STATES PATENT OFFICE.

WILLIAM M. PARKER, OF MEDFORD, MASSACHUSETTS.

IMPROVEMENT IN LOOM SHUTTLE-GUARDS.

Specification forming part of Letters Patent No. **171,416**, dated December 21, 1875; application filed May 6, 1875.

To all whom it may concern:

Be it known that I, WILLIAM M. PARKER, of Medford, county of Middlesex and State of Massachusetts, have invented certain Improvements in Shuttle-Guards, of which the following is a specification:

My invention relates to the mechanism by which the guard-rod is held in the different positions required in use, and by which its movements are governed in changing from one position to another.

Figure 1 shows my improved shuttle-guard in perspective, attached to the reed-cap or top bar of the lay. Fig. 2 is a central longitudinal section of the middle stationary arm, and the mechanism connected with it.

a is the reed-cap or top bar of the lay, to which the shuttle-guard is attached by the stationary arms *b c d*. These arms extend about an inch and a half from the face or front part of the top bar over the shuttle-race. A hole is drilled in the end of each arm, which holes range with each other, and with the face of the top bar longitudinally. In the end of arm *c* a vertical slot is formed to receive the upper end of catch-arm *e*, which is loosely fitted to the slot, and held in it by pin *f*, on which it freely turns. *g* is a flat spring placed upon the upper side of arm *c*, and held in position by screw *h*, or other suitable means. *l* is the guard-rod, which, being formed substantially as shown, is suspended from the supporting-arms *b d*, the ends of the rod being fitted to the holes in the said arms, so as to revolve freely as the rod swings back and forward under arm *c*. The lower end of catch-arm *e* is attached to guard-rod *l* at the point of intersection. The inner part of the upper end of catch-arm *e* is cut down below the outer part, forming shoulder *m*, on which rests the operating end of spring *g*. The in-

ner corner of shoulder *m* is so rounded off that the tension of spring *g* remains nearly the same after leaving the level part of shoulder *m* when guard-rod *l* is swung back. The slot in the end of arm *c* is so carried back on the under side of the arm that the back end of it, on the under side, constitutes a stop for catch-arm *e*, and determines the point to which said arm and rod *l* can be swung back. The position to which catch-arm *e* and rod *l* can be swung forward is determined by the junction of the forward end of spring *g* and that part of the upper end of catch-arm *e* which rises above shoulder *m*. The office of guard-rod *l* is to prevent the escape of the shuttle from the shuttle-race, and shooting up through the warp, as it is at any time liable to do. It is made of iron or steel wire, of sufficient size to withstand the blows from the shuttle. When for any reason it is required, the guard-rod *l* is swung back to near the lower edge of the reed-cap, and is held in that position by spring *g*, resting upon the rounded part of shoulder *m* until the loom is started, when it is automatically thrown forward into working position by the momentum given to it by the motion of the lay jointly with the action of spring *g*, and is held in that position by the pressure of spring *g* on the level part of shoulder *m*.

I claim—

The combination of the reed-cap *a*, stationary arms *b c d*, catch-arm *e*, spring *g*, and guard-rod *l*, when the several parts are formed, arranged, and connected substantially as shown and described.

WM. M. PARKER.

Witnesses:

H. S. ROBINSON,
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