T. S. PARKER.

MECHANISM FOR THREADING LOOM SHUTTLES.

No. 181,798. Patented Sept. 5, 1876.

Fig. 1.

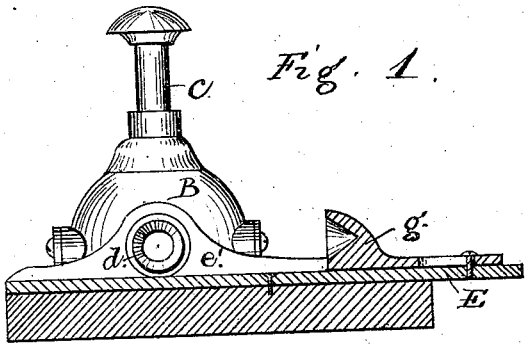


Fig. 2.

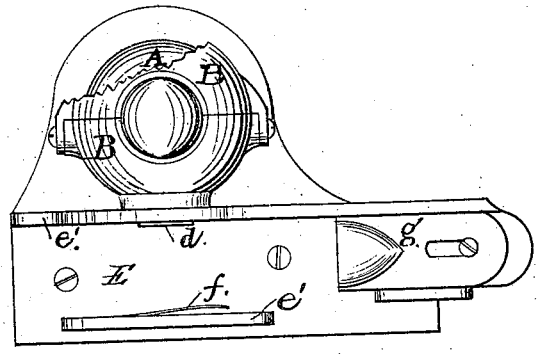


Fig. 3.

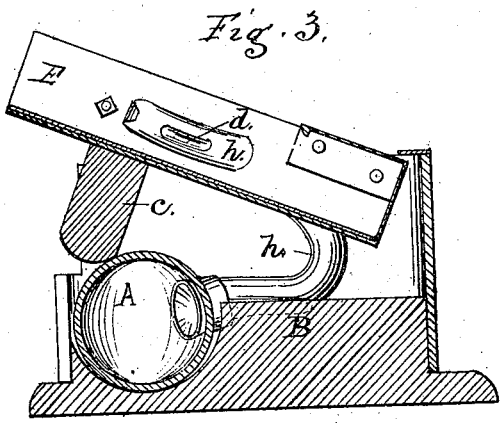
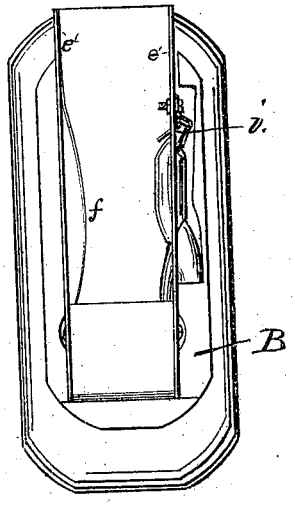


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS S. PARKER, OF COHOES, NEW YORK.

IMPROVEMENT IN MECHANISMS FOR THREADING LOOM-SHUTTLES.

Specification forming part of Letters Patent No. **181,798**, dated September 5, 1876; application filed January 24, 1876.

To all whom it may concern:

Be it known that I, THOMAS S. PARKER, of Cohoes, in the county of Albany and State of New York, have invented certain Improvements in Mechanism for Threading Loom-Shuttles; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention has for its object the ready mechanical threading of the eye of loom-shuttles, and thus avoiding the serious damage to the lungs and health of weavers, due to their frequent sucking of the end of the thread through the eye; and it consists in the novel construction hereinafter stated.

Figure 1 is a side elevation, partly in section, and Fig. 2 a plan view, and Figs. 3 and 4 show a modification, of an apparatus embodying my invention.

I employ an india-rubber bulb, or equivalent, A, which, upon being compressed, will, by its own action, expand and suck in the air. This bulb I place, for its better protection, in any appropriate frame or case, B, which I provide with a bulb-compressor, *c*, Figs. 1 and 3, and this, upon being pressed down, compresses the bulb and expels air from it; and upon releasing the pressure the bulb instantly expands and sucks in the air at its mouth *d*. This mouth opens out at the side of a shuttle-holder, E, which is provided with side bearings or guides *e' e'*, on the inner face of one of which is a spring, *f*, which serves as an elastic bearing to press the shuttle laterally against the mouth-piece or suction-inlet *d* of the bulb, so that the shuttle-eye may be in close contact with it. The shuttle-holder in Figs. 1 and 2 has also an adjustable end piece, *g*, to receive the tip of the shuttle, this adjustment permitting the shifting of the piece *g* to adapt it to different-sized shuttles, to bring their eye to coincide with the suction-mouth. The suction-mouth in Figs. 3 and 4 is arranged for the same purpose.

All that is necessary to do when the shuttle is to be threaded is to place it in the holder, with its eye to the mouth *d*, letting the loose end of the thread lie anywhere near the eye; then easily press down the bulb-compressor *c* to gently expel the air from the bulb, and suddenly let it free, the result being that instantly the air from without rushes in, with all the pressure of the atmosphere, through the shuttle-eye and through the mouth, to fill the vacuum, and carries the yarn through with it.

The apparatus being properly made, the threading is certain.

It will be observed that the sucking in of the yarn takes place, not when the compressor is pressed down, but only after it is released.

The mouth *d* may be covered with wire-gauze to prevent motes or fluff from entering the bulb.

The apparatus is small, light, and portable, and can be carried conveniently from loom to loom, if desired.

Figs. 3 and 4 show a modification, in which the shuttle-holder, instead of being fixed or stationary, is a lever, and it carries the compressor *c*, which acts upon the elastic bulb, and the mouth is accordingly prolonged into a tube, *h*, in the side of which is the suction-inlet or mouth *d*.

The adjustment for different-sized shuttles may be as hereinbefore described; or the tube may be shifted by loosening the clamp *i*, so as to move the inlet to the shuttle-eye, instead of adjusting the eye to the inlet.

I claim—

1. A table or bed for supporting the shuttle, provided a non-yielding socket to receive the shuttle-tip, in combination with a compressible elastic bulb having an inlet-mouth adapted to suck in air through it, and through the eye of the shuttle.

2. In combination, the shuttle-supporting bed, the side supports, and means for relatively adjusting to each other the eye of the shuttle and the inlet of the suction device.

3. The combination of the elastic bulb and its mouth-piece, a shuttle-supporter having a spring to hold the same against the bulb-inlet, and an adjusting device to adapt the holder for different sizes of shuttles.

4. A shuttle-holder having a mouth-piece in

communication with a suction device, and adapted to the eye of a shuttle in the holder, and provided with a spring or elastic bearing for pressing the shuttle against the mouth-piece.

5. A shuttle-holder having a suction mouth-piece, an end bearing, and side bearings, arranged and adapted to receive the eye and point of the shuttle.

6. A shuttle-holder having a suction mouth-piece, side bearings *e e'*, and an adjustable end bearing, to receive shuttles of different lengths between the eye and end of the nose or point of the shuttle.

7. In combination, the shuttle holder or bed, having a socket to receive the shuttle-tip, an elastic bulb or air-chamber opening into such bed, and a case or receptacle to contain the bulb.

8. In combination, the shuttle-holder, the elastic bulb, and a bulb-compressor, substantially as shown and described.

9. In combination, the shuttle-holder, the elastic bulb, a case or holder for the bulb, and a bulb-compressor.

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