

# H. Parsons. Weaving Heddles.

N<sup>o</sup> 36,166.

Patented Aug. 12, 1862.

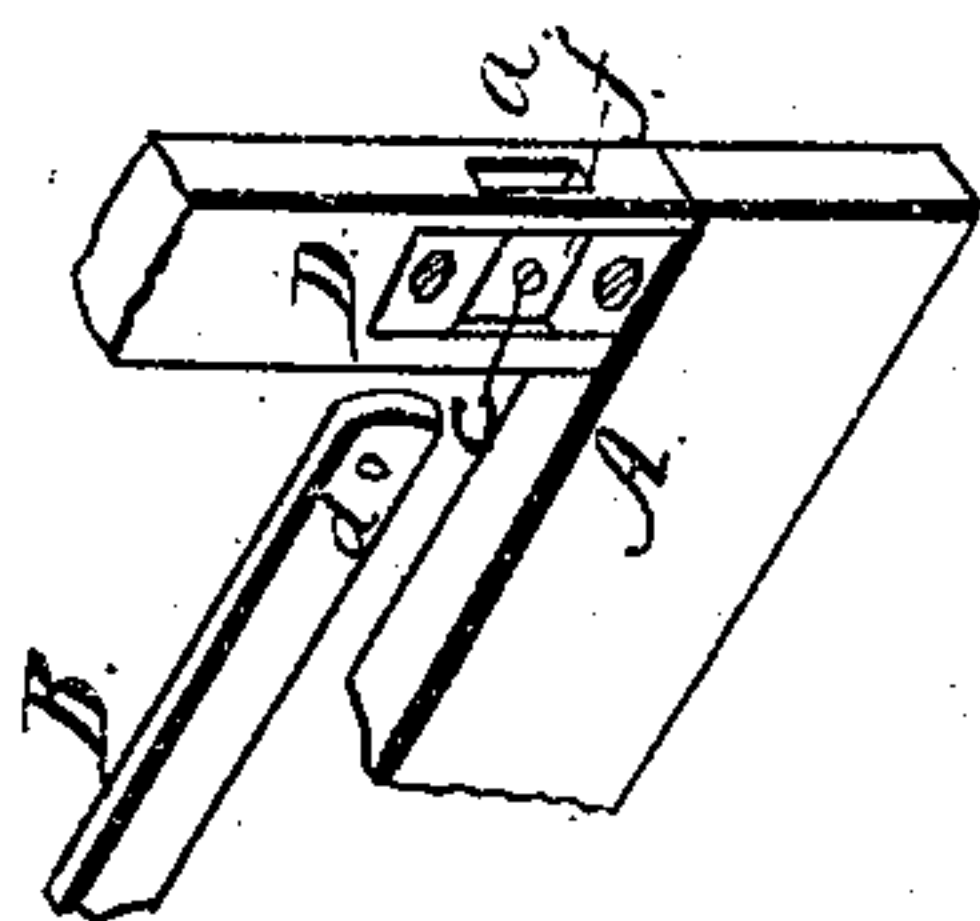


Fig. 3.



Fig. 2.

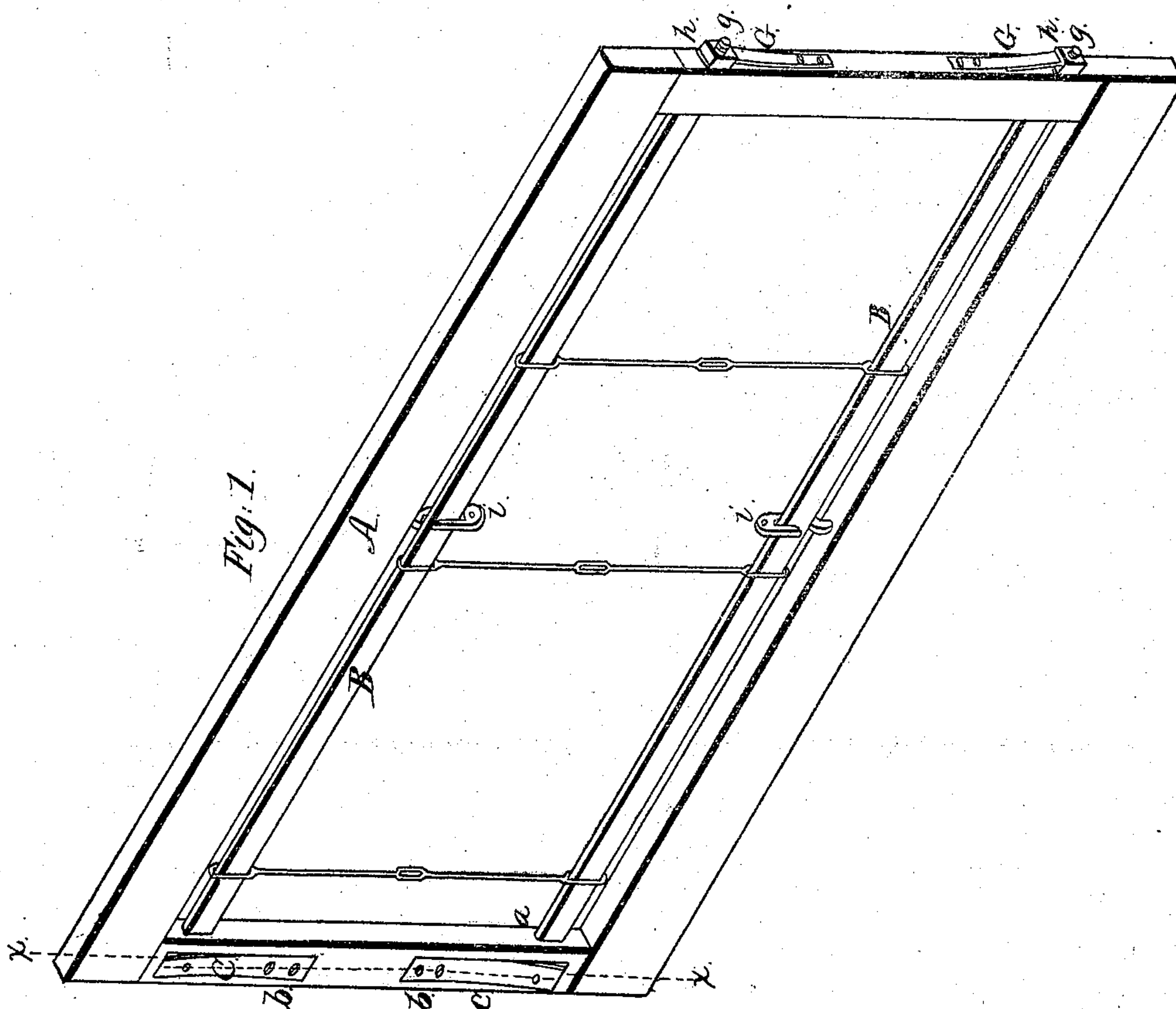


Fig. 1.

Witnesses:

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# UNITED STATES PATENT OFFICE.

HENRY PARSONS, OF WATERLOO, NEW YORK.

## IMPROVEMENT IN HARNESS FOR LOOMS.

Specification forming part of Letters Patent No. 36,166, dated August 12, 1862.

*To all whom it may concern:*

Be it known that I, HENRY PARSONS, of Waterloo, in the county of Seneca and State of New York, have invented certain new and useful Improvements in Harnesses for Looms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of my improved harness, looking on the rear side; Fig. 2, a vertical section of one end thereof in the plane indicated by the line *x x*, Fig. 1; Fig. 3, a perspective view of one corner of the same, looking on the front side, and showing the end of the heddle-bar removed from its mortise.

Like letters designate corresponding parts in all the figures.

It is the object of my improvements to secure the heddle-bars in their frame in such a manner as to be easily removable, but at the same time to be firmly retained in place when in use.

The ordinary rectangular frame, *A*, is used, in which are mounted the heddle-bars *B B*, as usual, having strung on them the heddles, as indicated by red lines in Fig. 1. The ends of the heddle-bars rest in mortises *a a* made in the side or end pieces of the frame, and are secured in place as follows: On one of the side or end pieces of the frame are situated two plain flat springs, *C C*, usually made of steel and sunk flush with the wood, and secured at one end by screws *b b*, while the other or elastic end rests over the extremity of the heddle-bar, fitting in its socket or mortise. In this end of each spring is made a pin, *c*, Figs. 2 and 3, projecting inward at right angles to the spring a sufficient distance to reach through the side of the frame, flush, or about so, with its opposite surface, but not beyond it. The pin passes through a hole, *d*, in the extremity of the heddle-bar and through a corresponding hole in the wood-work. At the point where the pin *c* passes through, on the opposite side from the spring *C*, is made a depression, *f*, either in the wood or in a metallic piece, *D*, inserted therein of sufficient size to admit the finger of the operator, and of such depth as will allow the end of the pin to be pressed back so

far that the spring *C* is forced out of its bed sufficiently to be taken hold of to operate, in which position it is shown in Figs. 1 and 2. This arrangement for holding the ends of the heddle-bars is very simple and efficient. The ordinary way of holding them in place is by iron pins driven in or inserted flush with the surface of the frame. These pins become loose from wear and motion and frequently drop out or project so as to interfere with the vertical movement of the harnesses, and are thus the source of much difficulty. By being driven in closely they are also troublesome to remove when the heddle-bars are to be taken from the frame. By the use of my arrangement above described these difficulties are avoided. The force of the springs always keeps the bars in place in the most violent motion of the harness. The parts all being flush with the frame, allow the harnesses of a loom to work in contact with each other without interference, and the heddle-bars are expeditiously removed by merely pressing on the end of the pin *c* and bending back the spring.

The opposite ends of the heddle-bars rest likewise in the opposite side or end piece of the frame and have cut on their extremities, outside the frame, screw-threads *g g*, on which screw square nuts *h h*, as represented in Fig. 1. By means of these nuts the heddle-bars are straightened or tightened in place, so that there shall be no rattling or springing to them. In the violent action of the harness these nuts are liable to work loose and be lost, and thereby disarrange the work, if there is nothing to hold them in place. To securely retain them, I attach springs *G G*, with square ends and substantially of the form represented, to the end piece of the frame, the springs springing outward sufficiently to bring the square ends, respectively, against one side of the nuts and thereby prevent their turning. When the nuts are to be turned, the springs are sprung outward or pressed in away from contact.

The heddle-bars may be stiffened or braced centrally by hooks or supports *i i*, or in any desirable manner.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Securing the heddle-bars to and detaching them from the frame by means of the springs



C C, pins *c c*, and depressions *f f*, the whole arranged, combined, and operating substantially as and for the purposes herein described.

2. In combination with the nut *h*, the spring *G*, when the same are respectively connected with the heddle-bars and frame, substantially as herein described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY PARSONS.

Witnesses:

WM. KNOX,

FREDERIC S. MANNING.