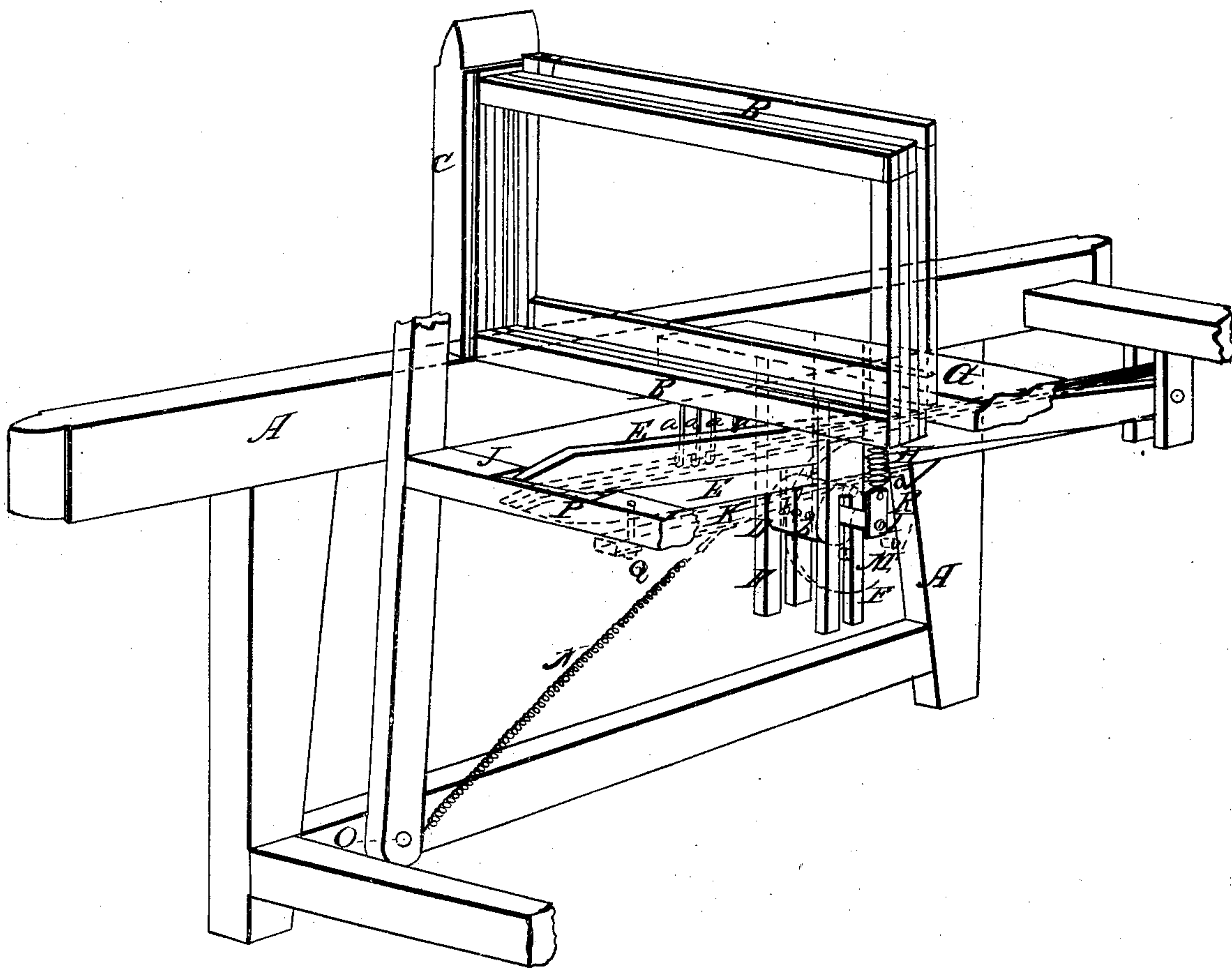


S. C. Merdenthall.

Loom.

N^o 11,790.

Patented Oct. 10, 1854.



UNITED STATES PATENT OFFICE.

STEPHEN C. MENDENHALL, OF RICHMOND, INDIANA.

LOOM.

Specification of Letters Patent No. 11,790, dated October 10, 1854.

To all whom it may concern:

Be it known that I, STEPHEN C. MENDENHALL, of Richmond, in the county of Wayne and State of Indiana, have invented certain
5 new and useful Improvements in Looms which are applicable to power looms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying
10 drawing, making a part of this specification, which represents a perspective view of the loom with portions of the frame removed to show the operating parts.

The nature of my invention consists in the
15 method of operating the treadles or springing the shed for weaving any kind of fabrics, applicable to all kinds of looms.

It consists in the arrangement and combination of a pattern wheel, an inclined
20 plane wedge shaped or inclined cam bar on the lay frame, and wedged shaped or inclined end treadles, whereby, the warp is sprung by the combined action of the pattern wheel and wedged-shaped bar and treadle ends—
25 the pattern wheel acting directly upon the treadles on the forward action of the lay, adjusting the treadles, and preparing them for the direct action of the lay, which having attached to it the wedge-shaped or inclined plane bar, acts upon the wedge-shaped
30 ends of the treadles, springing them to their full extent at each backward movement of the lay. By this arrangement any number of treadles can be operated, and that accomplished at pleasure, seamless bags or any
35 kind of fabric, produced by it; and the necessary change to produce variegated fabrics can be made instantly and without taking the warp from the loom, by simply and
40 merely adjusting the movable pins of the pattern wheel as circumstances may require; and the machinery is so simple that none of the parts are liable to get out of order, and the whole can be constructed by an ordinary
45 carpenter.

The construction and operation is fully described as follows: I construct the frame (A) of my loom in the ordinary manner, and use heddle frames (B) which slide up
50 and down in vertical grooves in the stanchions (C) and connect them with the treadles by the jointed rods (*a a a a*) which may be made adjustable by screws and nuts, so as to regulate the height and depth of the shed.

The drawing represents a loom for weaving plain four leaved fabric. The pins in the pattern wheel D and the number of treadles E are limited for that purpose, but it is obvious that these can be adapted for weaving any description of fabric. The lay
60 beam is represented to its full extent on its backward motion, showing the warp sprung or shed. The said pattern wheel D is suspended in vertical bearings by projecting beam F F, attached to the underside of the
65 cross-tie G, having helical or spiral springs H H supporting their outer bearings I I, so that it will rise and fall with the treadles and so that it (said wheel) will be kept in position at each backward movement of the
70 lay, to cause the pins (*b*) (for regulating the order of the sheds) to raise the treadles in their order sufficient to be acted upon by the wedged shaped or inclined plane beam J of the lay. The wheel D is operated by the
75 direct action of the lay on its forward movement by the hook K, which is attached to the wedge-shaped beam by a bolt or pin, and a helical spring N keeps it down to its work, causing it to act upon pins R arranged on
80 the wheel or disk D, which pins must correspond in number with the treadles. The lay beam moves on centers at *o o* in the usual manner and is arranged as in my patent dated Nov. 1852, with the exception of the
85 wedge shaped or inclined beam.

The wedge shaped or inclined plane beam J, extends across and is firmly attached to and moves with the lay frame, and is placed in said frame at such a height, and the
90 wedge part of it P is inclined or beveled both at top and bottom and so are the ends of the treadles so as to cause a double action by the wedge P on the beam J, which wedge acts upon both sides, the top and bottom of
95 the wedge shaped ends of the treadles, separating the treadles on the backward motion of the lay, they having been elevated by the pins R at each forward movement of the lay.
100

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

Opening the shed by a pattern wheel so arranged with its parts as that while its rotary motion commences the opening of the
105 shed, it shall have a vertically yielding motion to, and with the treadles, when combined with a wedge-shaped bar, on the lay,

arranged to separate the treadles, and thus complete the opening of the shed, both the pattern wheel and wedge-shaped bar being moved by the lay, substantially in the manner and for the purpose set forth and represented.

In testimony whereof I have hereunto

signed my name before two subscribing witnesses.

STEPHEN C. MENDENHALL.

Witnesses:

SAML. GRUBB,

J. BECKWITH WEST.