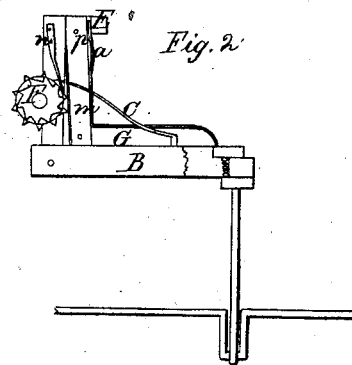
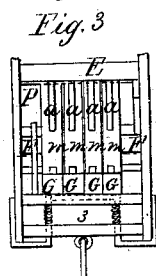
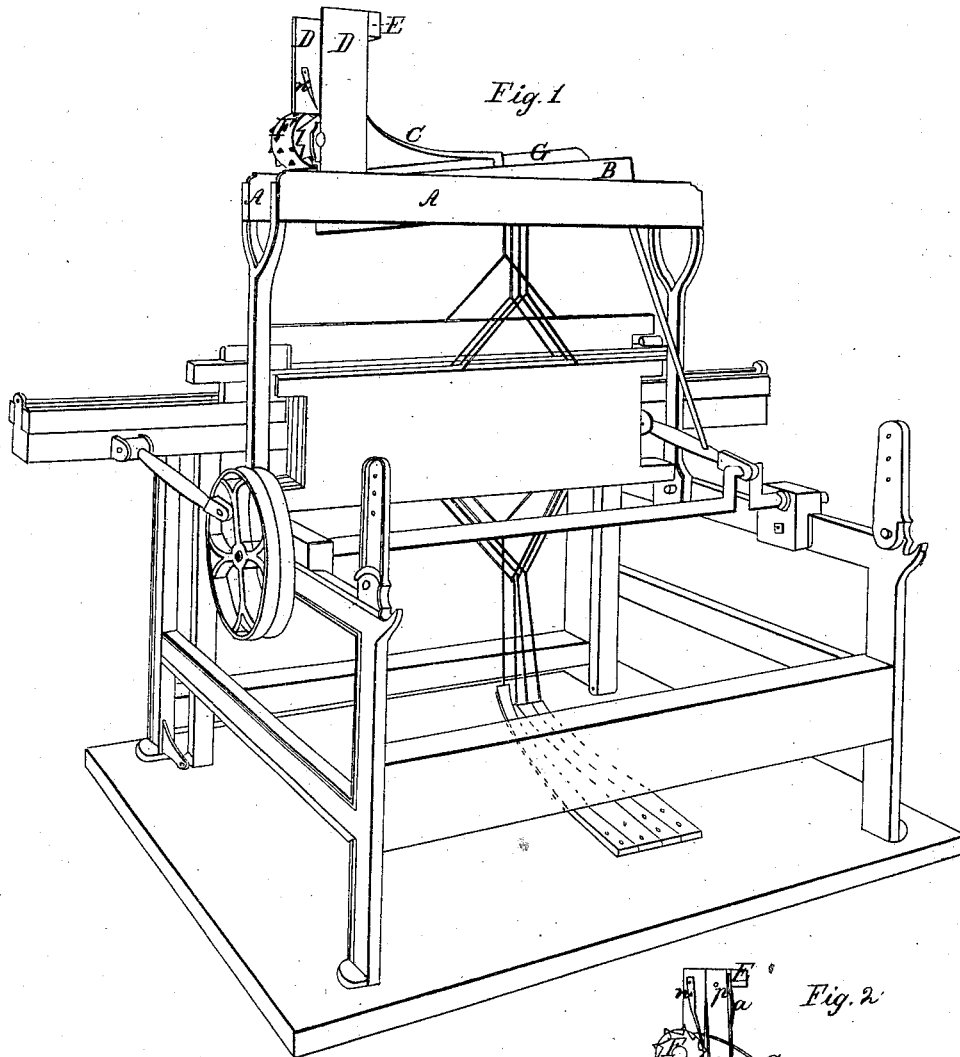


Pender & Horn. Loom Shedding.

N^o 884.

Patented Aug. 15, 1838.



UNITED STATES PATENT OFFICE.

WILLIAM B. PENDER AND NATHL. C. HORN, OF WOLFEBOROUGH, NEW HAMPSHIRE.

POWER-LOOM.

Specification of Letters Patent No. 884, dated August 15, 1838.

To all whom it may concern:

Be it known that we, WILLIAM B. PENDER and NATHANIEL C. HORN, of Wolfeborough, in the county of Stratford and State of New Hampshire, have invented a new and useful Improvement in Power-Looms; and we do hereby declare that the following is a full and exact description thereof, reference being had to the drawings accompanying and making part of this specification.

This improvement consists in a new method of raising the harness of the loom, which is more simple and easier of being varied to suit the different figures or fabrics to be woven than those heretofore known and used.

In the accompanying drawings Figure 1, represents a perspective view of a loom to which this improvement is attached exhibiting the cylinder, working frame, one of the levers, and a method by which it is operated. Fig. 2, a vertical projection of the levers, frame &c., Fig. 3 a longitudinal section showing the interior of the working frame.

A, A, represents two horizontal girts supported at each end by vertical stands attached to the frame of the machine. On these girts connected at the back end by a pivot, rests an oblong working frame B. on the opposite end of which is placed a transverse piece or bed resting on springs attached to this end of the frame, and thus made susceptible of a reciprocating motion so as to adjust itself to the motion of the levers as represented at 3, Fig. 3; C, a spring catch extending from near the front of one of the side pieces of the working frame, and connecting with a ratchet wheel on one end of the cylinder, and by the movement of the frame revolves the same; D, D, two upright standards attached to the horizontal girts near the back end upon which the cylinder revolves; E, a transverse piece attached to the upright standards to which the springs *a*, are attached which act upon the vertical levers; F, a cylinder revolving in suitable boxes connected to the upright standards. To the periphery of this cylinder and in a line with the levers are attached cams, which can be removed when necessary for shifting the levers for weaving

different figures on the cloth. On one end of this cylinder rests a spring *n*, for the purpose of retaining it steadily in its place. G, horizontal levers connected by a movable joint to the lower end of a vertical arm *m*. These vertical arms are supported at their upper ends by a rod *p*, passing from one of the upright standards to the one opposite, their outer edges resting against the periphery of the cylinder, and held against it by means of the springs, above mentioned on their inner edges.

In the revolution of the cylinder the cams press the vertical arms, and with them the horizontal levers forward alternately so that the opposite ends are carried over the top of the bed on the end of the working frame, and when relieved from the cams are brought to their former position by the actions of the above mentioned springs, and springs *q*, attached at any convenient place below the harness.

The working frame is put in motion by either crank, cam, or eccentric (represented in the drawings by crank), situated in any convenient part of the loom, and in the revolution of the cylinder, as the horizontal levers are brought forward and rest on the spring bed, are raised alternately, and with them the harness by this action of the crank, cam, or eccentric.

When necessary to weave different figures or fabrics the cams on the cylinder are shifted to suit the required figure.

What we claim as new and desire to secure by Letters Patent is:—

The working frame with the spring bed in combination with the horizontal levers and vertical arms and in combination thereof with the cylinder and cams for moving the arms and levers and causing an alternating motion of the levers for raising the harness all as above described, which said improvement may be varied in construction while the principle remains substantially the same.

WILLIAM B. PENDER.
NATHL. C. HORN.

Witnesses:

SAML. AVERY,
JOSEPH L. AVERY.