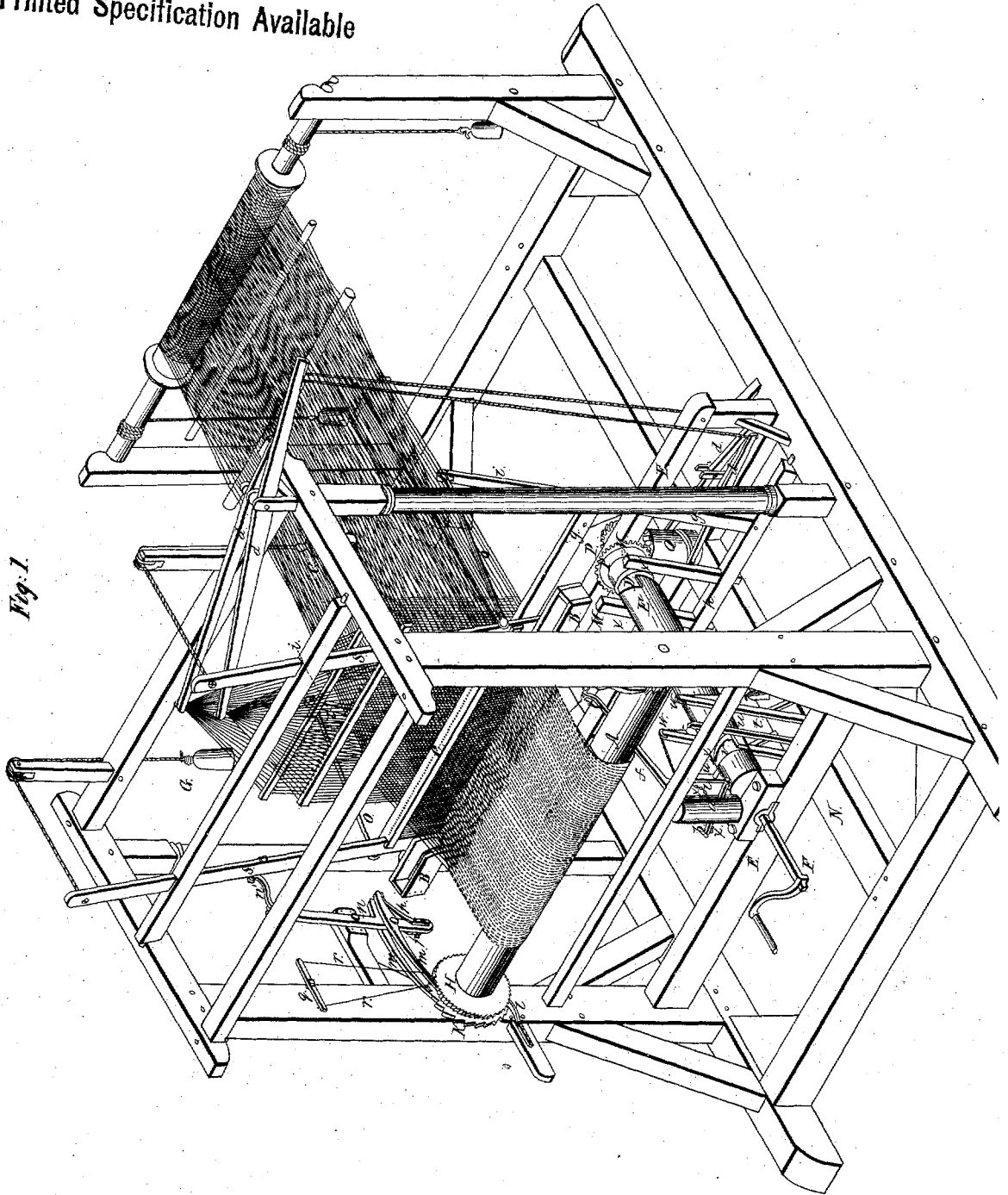


1391X

P. C. Curtis.
Loom.

Patented Nov. 17, 1810.

No Printed Specification Available



Nov 17

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Philip Clinton Curtis
Letters Patent 1391X

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Philip Clinton Curtis himself of an improved Water Loom. The improvements which I claim as my invention in the Loom, are, the taking up of the cloth on the cloth-roller or beam as the process of weaving is performed, and the mode of communicating motion to the shuttle, the Guide or Batten and the bobbles by a revolving grooved cylinder turned by a ratchet or otherwise. On one end of the Cloth roller or beam, I place two ratchet wheels one of which is permanently attached to the roller, and which I term the taking up wheel, the other, which is near the former, moves round the beam, being prevented however from changing its position thereon unless operated on by the hand or fall, by a spring which presses upon it from a fixed beam or bar below. The fall or hands which act upon these ratchet wheels are fixed near the lower end of a vertical beam, turning on pivots near the centre, they are kept down upon the wheels by weights or springs and have a cord or communication rising from one of them to the end of a balance lever above the beam, and descending from the opposite end of the said balance lever to the other fall or hands; so that when one of the hands is depressed by the spring or weight into the notch of its ratchet wheel, the fall or hand shall be raised out of the notch of its wheel, one only of the falls or hands acting on its wheel at one time. The upper end of the beam which holds the falls is moved backward and forward by a horizontal pitman connected also with the

pitman

vertical bar which forms that side of the Lath or Baton.

The mode in which these ratchet wheels and hands or falls act is this, the ratchet wheel which moves round the beam has its periphery so divided into teeth that the full swing of the Baton just moves the fall or hand so far back as to remove it out of the notch and suffer the hand to fall therein, and so as to keep the other fall or hand which would act upon the taking-up wheel out of the teeth thereof, by means of the case above mentioned, when however so much is worn on the web that the Lath or Baton cannot have its full swing, then the fall does not enter the notch in moving ratchet wheel but will rest on its edge between the notches, and the other fall or hand which acts upon the taking up wheel will fall into the notches thereof, and the moving backward of the Baton will propel the ratchet wheel and roller by means of the hand or fall, and so much of the web will be wound upon the roller as will allow the Baton again to have its full swing, and the fall on the moveable ratchet wheel to have its operation.

From near the middle of the transverse bar which extends across the frame in front of the loom, the bar lies horizontally lengthwise of the loom to another bar under the Baton, a grooved cylinder which is turned by a hand or in any other manner, and communicates all the motion necessary to the process of weaving. This cylinder may be of any convenient diameter, and acts in the following manner. For throwing the shuttle, there are two upright or vertical levers having their lower extremities attached by pins to an horizontal beam at the bottom of the frame. From each of these levers, near the top, projects a pin which enters a groove in the cylinder which has one side cut spirally round the frame so as to move the upper end of the levers alternately forward towards the front.

front of the loom, they being drawn back to their position suddenly by a weight which acts on them by a cord and pulley at each revolution of the cylinder. There is another cord wire, chain or fetter, extending from the head of each of these looms, to an upright cylinder to which they are fastened or to arms projecting from an upright roller on the transverse bar above mentioned, so that as the looms advance towards or are by the weights drawn from, the front of the loom, they will give this cylinder or roller a motion from side to side. An arm extending from this cylinder or roller horizontally either above or below the box of the lathe or batten throws the shuttle in the same manner as it is now thrown in weaving with the fly shuttle. For moving the Batten backwards, preparatory to the strike, there is a frame, moved by the cylinder above described. This frame has a horizontal sill or bar extending from side to side of the loom, and turning on pivots in the lower side sills thereof. From this sill at each extremity a bar which may have its upper ends connected with the batten. There are two other upright bars extending from the lower bar of this frame one on each side of the cylinder, and which have projecting pins that enter a groove therein, and are by it raised backward so as to move the lathe. The lathe is moved forwards and makes its stroke by means of weights acting on uprights extending above its hanging pins, or by springs as may be deemed best in practice. The end of the cylinder nearest the centre of the loom has upon it placed a wheel with bevel geared teeth, which acts on a similar wheel on the top of one or more vertical cylinders, which by grooves and pins move any number of treadles extending from the back part of the frame. There may be friction rollers introduced on the

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the pins which act in two grooves of the cylinders if for
necessity. The other parts of the Loom are of the usual
construction, and made to suit the nature of the weaving
to be performed, and the force employed may be either
manual or that of Steam, water, wind or Steam, as
may best suit in the manufactory where this Loom is
introduced.

Witnesses Present
Wm. Rogers
Nich. King

Thilo C. Curtis

Drawn by
J. H. ...

Ed
Myl.