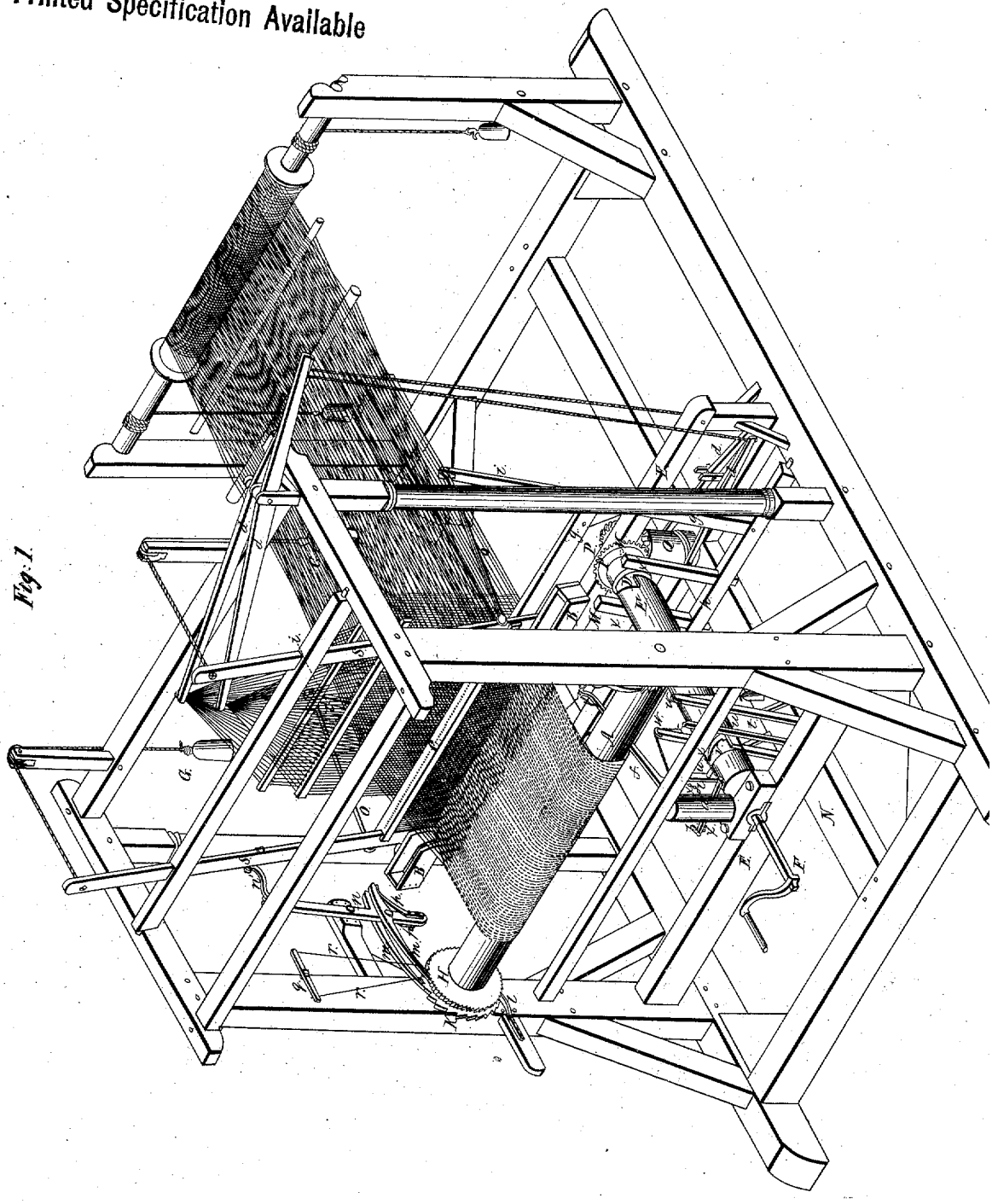
1391X

P. C. Curtis.
Loom.

Patented Nov. 17, 1840.

No Printed Specification Available

Fig. 1



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

Nov 17 [illegible] 415

Niles Clinton Curtis
Letters Patent 1391 X

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Niles Clinton Curtis himself of an improved Web 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 Lathe or Batten and the treadles by a revolving grooved cylinder turned by a crank 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 takes the taking up roller. the other, which is near the former, runs round the beam, being prevented however from changing its position thereon unless operated on by the hand or pall, by a spring which presses upon it from a fixed beam or bar below. The palls 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 pall or hand; so that when one of the hands is depressed by the spring or weight into the notch of its ratchet wheel, the pall or hand shall be raised out of the notch of its wheel. one only of the palls or hands acting on its wheel at one time. The upper end of the beam which holds the palls is moved backwards and forwards by a horizontal pitman connected also with the [illegible]

vertical bar which forms that side of the Lathe or Batten.

The mode in which these ratchet-wheel and hands or falls act is this. The ratchet wheel which moves round the beam for its perpendicular is divided into teeth that the full swing of the Batten just moves the fall or hand so far back as to remove it one notch and suffer the hand to fall therein, and so as to keep the other fall or hand which acts upon the taking-up wheel out of the teeth thereof by means of the cord above mentioned, when however so much is wound on the web that the Lathe or Batten cannot have its full swing then the fall does not enter the notch in moving the 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 batten will propell 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 Batten 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, there lies horizontally lengthwise of the loom to another bar under the batten a grooved cylinder which is turned by a band 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 weaving the shuttle, there are two upright or verticle 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 card wire chain or fustian cylinder extending from the head of each of these levers 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 levers 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 top of the lathe or batton 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 stroke 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 arises at each extremity a bar which may have its upper end 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 carried backwards so as to move the lathe. The lathe is moved forwards and makes its stroke by means of weights acting on upright bars 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 ground 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 frame which act in two grooves of the cylinders of fou
necessary. The other parts of the Loom are of the usual
construction, and made to suit the nature of the busin
to be performed, and the force employed may be either
manuel as that of Horses, water, wind or Steam, a
may best suit in the Manufactories where this Loom
introduced

Witnesses Present:
Alex.r Rogers
Nich.s King

Felix C. Curtis

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