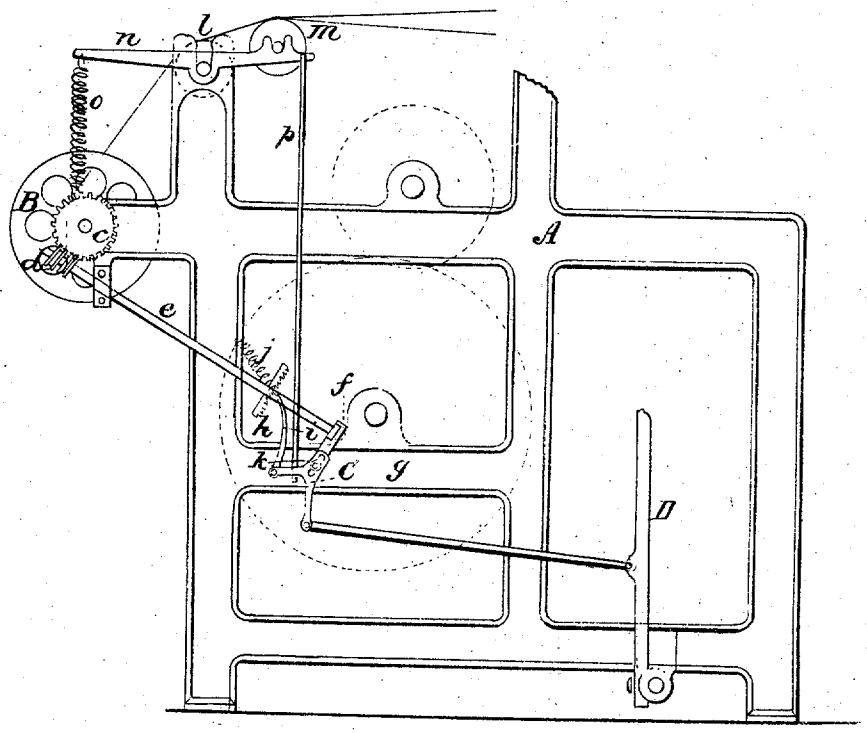
9791X

B. Lanham.

Take-Up.

Patented Jun. 28, 1836.



9791X June 28, 1836

Benjamin Lapham, Waterford & N. Y.

Letters Patent.

The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said Benjamin Lapham, himself of his "improvement in the Power Loom,

To all persons to whom these presents shall come; Be it known that I Benjamin Lapham, of Waterford in the County of Saratoga and State of New York, have invented a new and useful improvement in the common power Loom, a full and accurate description of which is as follows. The object of this improvement is to unwind or let off the warp from the warp roll in the exact ratio in which the cloth is made by the operation of weaving thereby avoiding those imperfections which are caused by rendering off the warp under tension. Whereby I cause the web to be much more even and uniform in its texture than that heretofore generally woven by the power loom or the hand loom. On the end of the warp roll or yarn beam is a wheel about half the diameter of the said warp roll, more or less, on which wheel are short teeth corresponding with the thread of a worm or endless screw, which worm is on the back end of a small upright shaft descending forward in an angle of perhaps twenty five or thirty degrees with the horizon and passing thro forward and downward to a stud on the middle side rail of the loom which stud or stand is at right angles with the arbor of the worm screw, and is a little back of the main or driving shaft of the loom. At the forward end of this arbor is a ratchet wheel, which is fed by a hand standing nearly in a vertical position, and operating as it rises, on the ratchet which is about the middle of its horizontal diameter. This hand is kept on the teeth of the ratchet by a spiral spring, extending backwards and fastened to the frame of the loom at a position so much elevated as to keep the hand from descending except when forced down as will be hereinafter described. The hand is poised to produce its action on the ratchet, by an elbow in the angle of which it turns on the same pin which secures the arbor on

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above mentioned stick to the side rail of the loom; and is attached by the forward end to the sword of the batten, and by the back end to the lower branch of this elbow, which the outer end of the upper branch of said elbow is attached by a moveable joint, to the lower end of the said hand. It follows of course that as often as the batten goes back, the hand of the ratchet will be raised by the backward motion of the sword, which if it have descended low enough to take one or more new notches in the ratchet, the ratchet will be turned one or so many notches forward, and the worm screw will turn with it and render off the warp accordingly. But if this ratchet should progress one or more notches at every motion of the Batten, it would probably render off the warp too fast; and make the cloth too thin, but the other hand if it should not operate all, as the cloth progressed back against the reed, the action of the loom would cease. This operation I adjust & regulate in the following manner, in front of the back rollers I place another a little above the other, which forward rollers rests at the ends, on the forward ends of these levers, the back ends of which are held down by spiral springs attached to the frame below. From the forward end of one of these levers I project a small rod downward to that branch of the above described elbow, to which the ratchet hand is attached which rod passes through a hole in said branch and having a shoulder against the upper surface, pushes it down as often as the back end of the lever to which it is attached are forced down by the increased diameter of the warp, and the different connections of the said apparatus for operating the hand are so constructed as to give the proper and necessary play. By these means as the warp grows light by the accumulation of the cloth, its tension causes the rollers to descend, and the ratchet takes one or more new notches in the warp is rendered off accordingly; and if no cloth is made by the action of the loom the warp remains loose and the hand not descending, the warp remains stationary. I claim

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to the use of the wheel and worm screw, nor to the hand and ratchet in unreeling the warp from the warp beam, but to the principle of feeding the ratchet by means of the increased tension of the warp, and this I claim in whatever way applied. And I also claim the entire combination, as which is herein described when taken collectively but not separately except as above stated.

In witness that the foregoing is a true and accurate description of my said improvement, I have hereunto set my hand in Watertford aforesaid on the twelfth day of July in the year one thousand eight hundred and thirty six.

Witnesses
Josiah Sawyer
Edgar B. Sherwood

Benjamin Lapham

949 words

(Patented 28 June 1836)