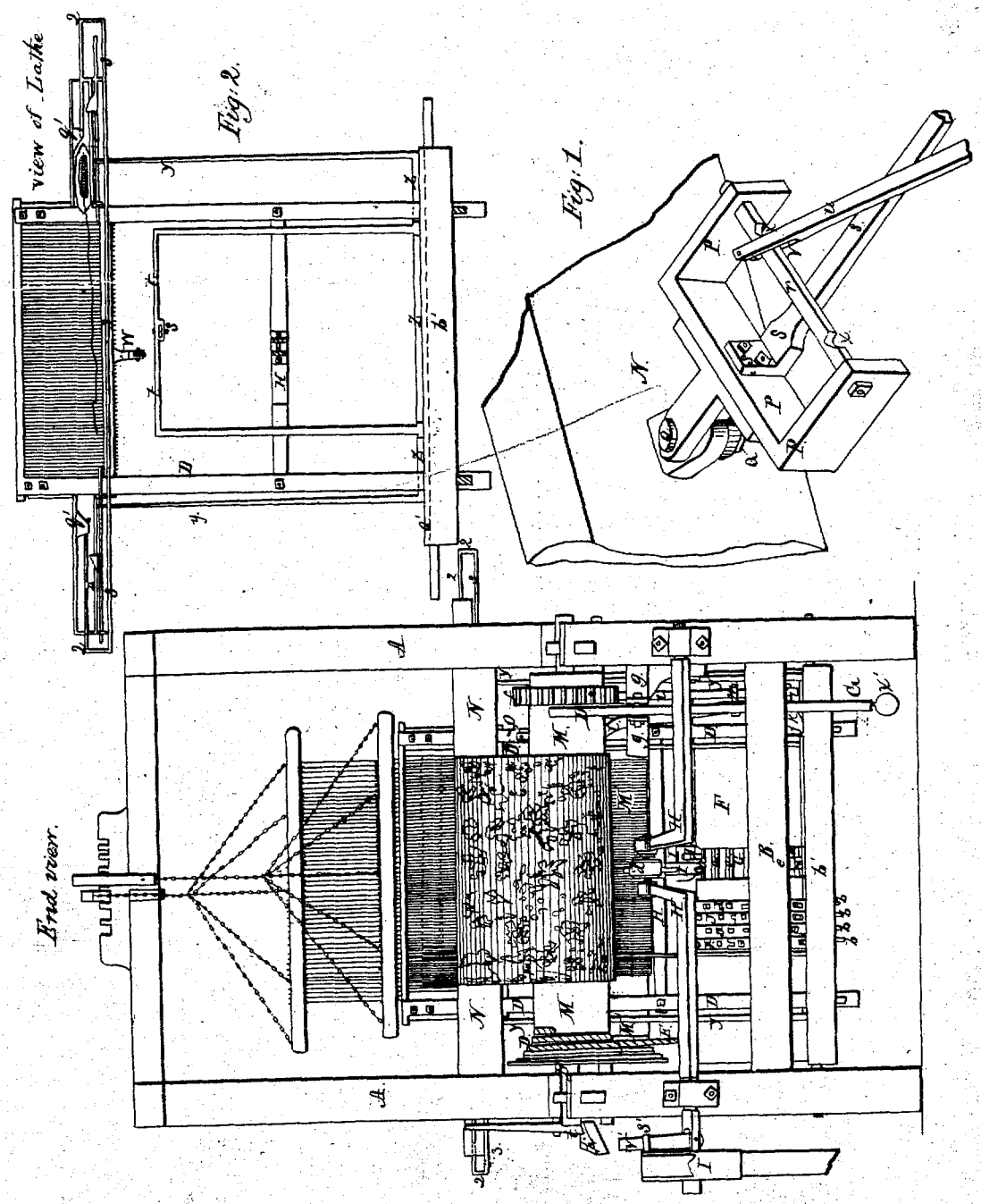
Draftsman

Sheet 1-3 Sheets.

J. Thorn.

No. 1693 X Loom.

Patented Mar. 28, 1812.



RAFTSMAN.

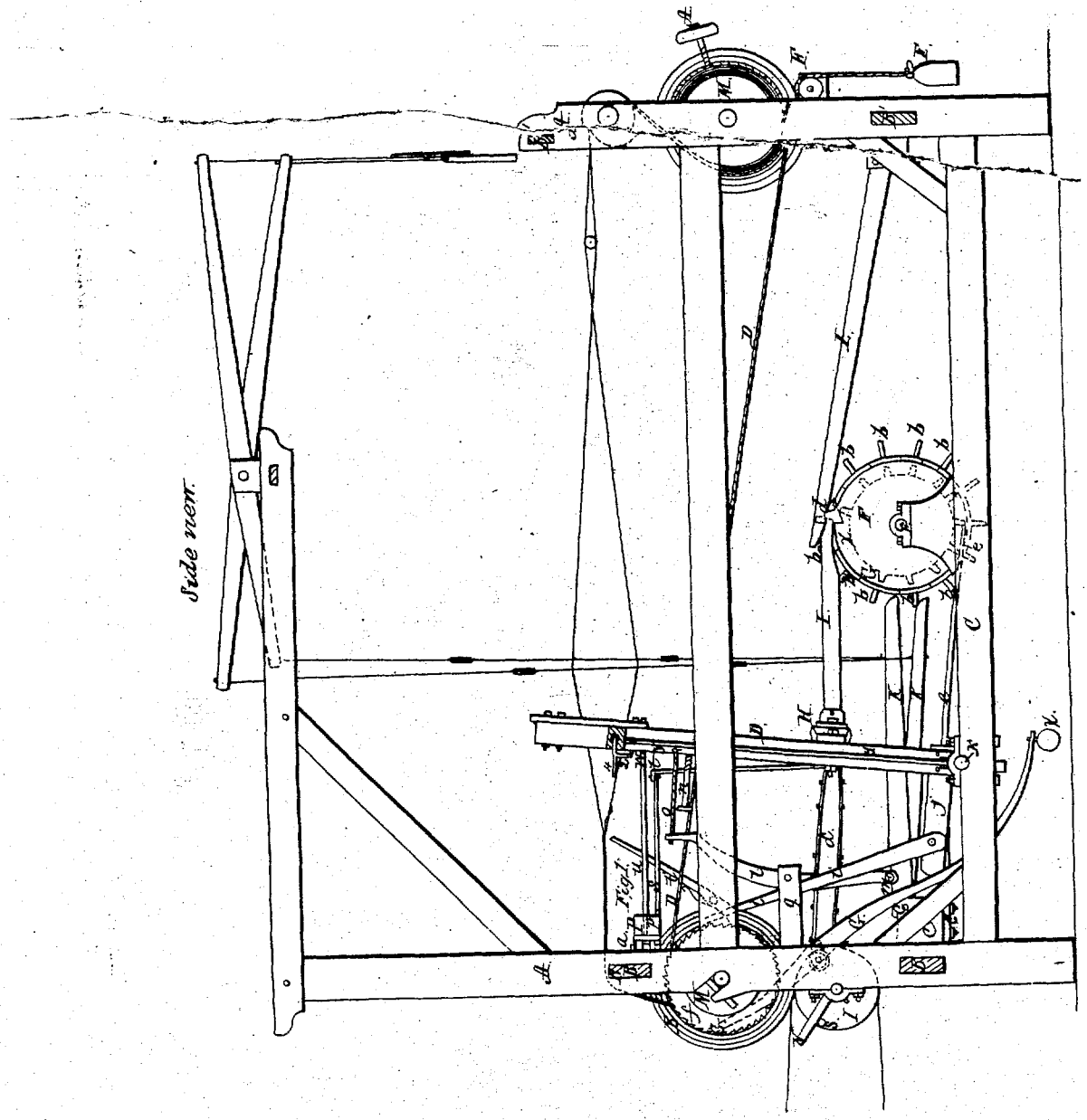
Sheet 2-3 Sheets.

No. 1693 X

J. Thorp.

Loom.

Patented Mar. 28, 1812.



AFTSMAN.

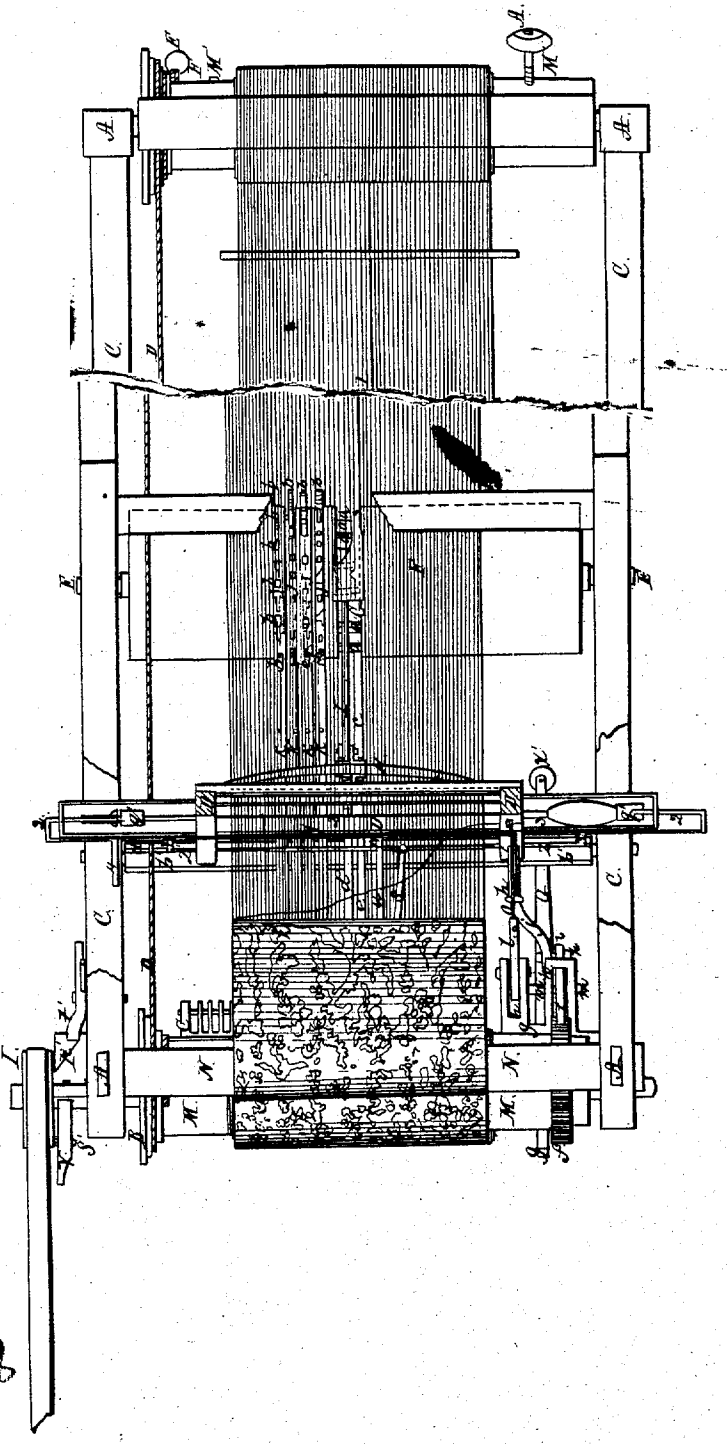
Sheet 3-3 Sheets.

J. Thorp.

Loom.

No. 1,693 X.

Patented Mar. 28, 1812.



Top view.

John Thorp Letters Patent Dated March 28th 1812.

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said John Thorp himself of his Improved Hand and Water Loom —

This Machine consists of four upright posts two front and two back girts and two girts on each side framed and posts as in other looms.

The Lathe is a frame where construction is some what like unto the lathe, of a common fly shuttle loom, it turning or hung upon pivots or gudgeons which are situated in the bottom side girts of the frame under the webb so that the slay at the top will nearly coincide with the under side of the webb when sprung. The bottom side girt of the frame towards the back of the shaft of a wheel which I shall call the Treadle wheel, the said wheel has in it a loose or a channel in which pins or coggs are fixed. There is a plain and elastic piece that extends from one side piece of the lathe to the other in which one end of a hook is confined that spreads the Treadle wheel on the circumference of said wheel chains are placed for the purpose of shifting the treadle the said chains are drawn whose length may be increased or decreased at pleasure to spring the webb a greater or less distance, and can be shifted upon the wheel that various figures may be woven, or almost any number of treddles operated. The Treadles are hung in a bed which is confined to the lower front girt of the frame, with their pivots extending to the wheel. The above mentioned hook catches upon the pins or coggs which are fixed in the wheel and are decreasing in number as the chains, there is another hook or catch that prevents the reaction of the wheel while the web is springing, one end of which is confined to the back girt of the frame the other end has in it a notch and extends to the pins or coggs in the wheel, and is liberated by the first named hook as the lower hook to gain another hold. There is another arm or prop which extends from the lower front girt of the frame fixed under the

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treadles to the pins or cogs in the wheel to prevent the reaction of it. The cloth beam is hung in the two front posts of the frame a little below the breast beam, and has upon one end of it a ratchet. There is a block which extends from the front post directly under the ratchet, in whose under end is two mortices, through one of which passes a hand or feeder, whose upper end extends to the teeth of the ratchet, and its lower end hung by a pivot in a piece that projects from the side piece of the Lathe, and nearly on a level with the pivot on which the lathe swings and a proper distance from it to give a motion sufficient to take up the cloth. There is in the other mortice a lever which I shall call a regulating Lever hung on its middle for the purpose of regulating the taking up of the cloth, the feeder being fixed to take up the cloth too fast is liberated by a pin in the lower arm of the Lever in consequence of its upper arm being moved by a screw in the side piece of the Lathe when the cloth is beat beyond its limited position the upper arm of this Lever is made fast to the Lathe by a string by which it is returned to the lathe passes back and letting the feeder fall on the ratchet after it has been liberated.

That which throws the Shuttle I shall call the Shuttle vibrator it is affixed under the cloth in or near the middle of the breast beam swinging or turning upon the pivot or gudgeons and is constructed with a plate of metal in whose middle is a slit or mortice extending from one end past its pivot or gudgeons and is constructed with a plate of mettle in whose middle is a slit or a mortice extending from one end past its pivot or gudgeons to the other, or its ends bent in which a rod or staple is confined. There is confined to the said plate one end of an arm, the other end of which extends under the bottom of the Lathe to its centre of motion and is there fastened to the Shuttle drivers, or a rod on which they are confined. There is another rod or a piece of Metal which I shall call the Slider at one end of which is a mortice or hook calculated to slide or traverse on the aforesaid rod or staple, at or near each end of the said rod or staple is a notch in which the Slider catches to throw the Shuttle, the other end of the said Slider is confined to a piece under the

bottom of the Lathe. The said piece to which the said Slider is confined is springy and elastic so as to render the first impulse not too abrupt on the Shuttle. The conductors of the Shuttle driver are Rods whose upper surface just clear the under side of the shuttle the said drivers are connected by a rod which slides in a channell that is cut in the bottom of the Lathe.

There is inserted into the cylinder or cylinders that suspends the harness one or more arms, the said arms are screws on whose end or ends are weights to assist in springing the webb. For to strain the webb there is a line that passes round one end of the yarn Beam and from that round one end of the cloth beam, which has upon it a long whirl, whose grooves or channells begin at the bigness of the beam and increase in circumference until they arrive at the bigness of the intended roll of cloth, the lower loop of the said line sustains a weight which hangs upon a pulley sufficient to strain the webb, the said line is shifted from one of the said channels to the other as the cloth fills up the beam.

To support against the blow of the Lathe there is a lever which I shall call the friction Lever, hung by a pivot to the side gate of the frame whose short arm presses against the yarn Beam, the other arm of which suspends a weight and extends beyond the pivot of the Lathe and directly under the piece in which the treader is hung, the said piece is done for the purpose of pressing down the long arm of the Lever causing a greater friction upon the beam when the lathe beats the cloth beyond its limited position. When impelled by water the Lathe is vibrated by a crank which is situated in the two front posts of the frame, and is connected to the piece in which the said hook is confined that sprocks the treadle wheel, there is a pulley which plays loosely upon one end of the shaft of said crank and has in one side of it a pin or cog which strikes the end of an arm or Lever which is confined to the shaft of said crank by a Pivot. There is to the front post in range of the said pulley an arm or a lever hung by its middle for the purpose of stopping the loom the lower arm of the last mentioned Lever has upon it

a three square piece on its end bent, the bevel of which is sufficient when ever it is moved to the point of the arm to cast it of off the pin or cogs and stop the loom. There is in each shuttle box a knee for the purpose of stopping the loom whenever the shuttle lodges in the webb or misses the box one arm of each knee extends into the shuttle boxes, and is nearly parallel with them.

There is in each shuttle box a knee for the purpose of stopping the loom whenever the shuttle lodges in the webb or misses the box, one arm of each knee extends into the shuttle boxes, and is nearly parallel with them —

The other arm of the said knees are connected by a rod, so that when one is moved by the shuttle the other will have the same operation.

An arm of one of the said knees is kept in range of the upper arm of the lever which stops the loom by a light spring and would unavoidably strike and move it, which would liberate the arm from the pin or cogs, if it was not moved in consequence of the shuttle striking the other arm of them, as it passes into the boxes. The friction of the said knees against the shuttle also prevents its recoiling.

Witnesses
N Dana jun^r
Christopher Burr

John Thorp

(Drawing Made – N.Y.P. 1846)

Ex. 1196.

(Recorded a new Jan^y 28^th 1843) (1532 vols)