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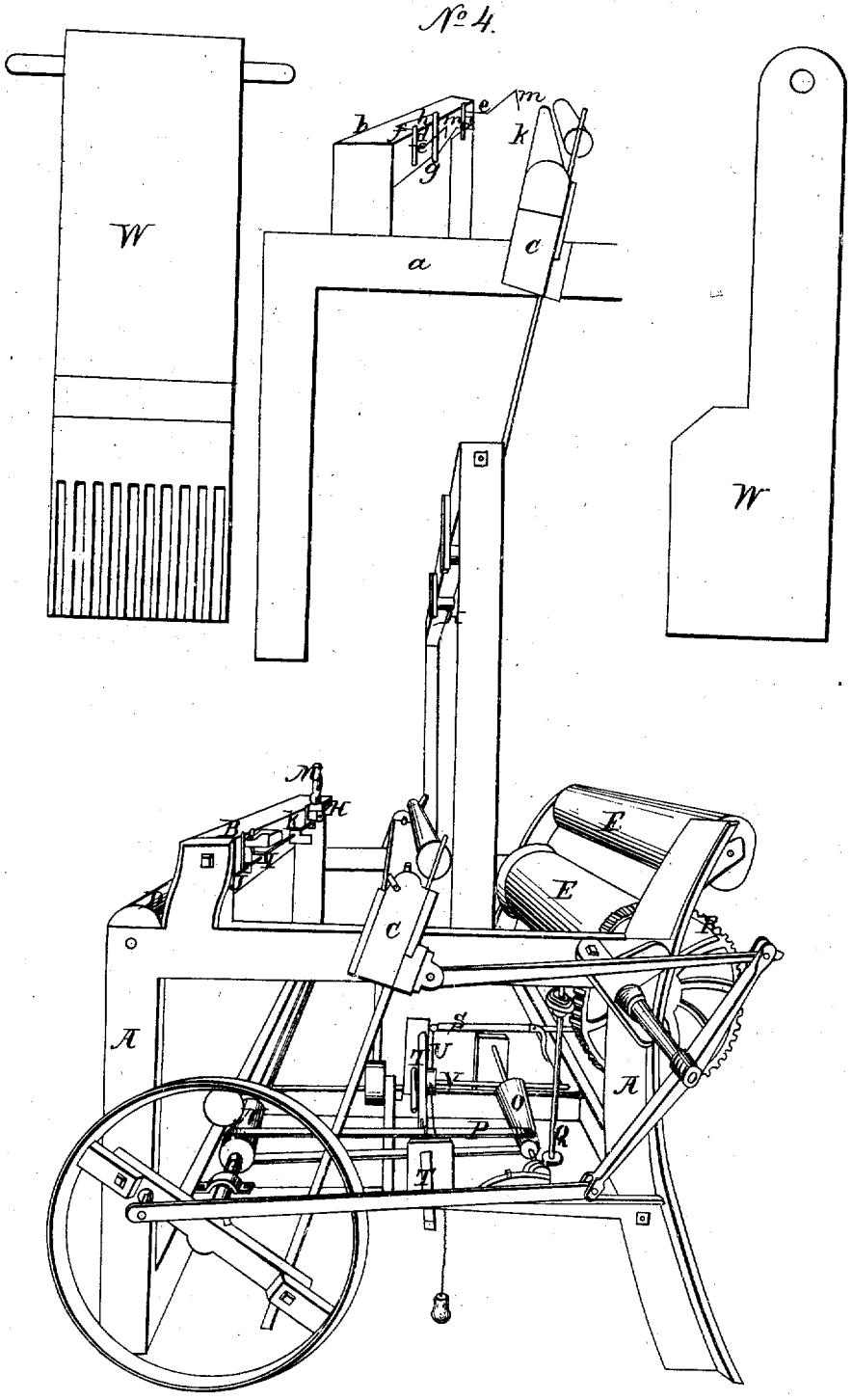
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J. Goulding.

Loom.

Patented Jul. 7, 1830.

№ 4.



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

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John Goulding
Letters Patent. Dated July 7. 1830.

(The Schedule referred to in these Letters Patent and making part of the same, containing a description in the words of the said John Goulding himself of his Improvement in the mode of making and using Looms.

Be it known that I the said John Goulding, have invented constructed, made and applied to use, a new and useful improvement in the mode of making and using looms for weaving.
The particular improvement is set forth in the Schedule and drawings annexed, that is to say,
A A, is the Frame, B is a breast Beam, C. Layer boards. D. Cloth Beam. E. Yarn Beam. F. Back beam or roller for Cloth to pass over. G. Main Harness to Loom H H two teeth blocks of wood or metal, those blocks are shown in full size at W W. Those blocks are hung by means of two upright pieces by male and female centres as shewn. Those upright pieces are fastened to the rod I. that passes across the Loom to hold the other blocks, the other side of the Loom between the breast beam and Lay. There is a Reed with twelve or more dents, placed the same distance apart, as those teeth in blocks H H. Those reeds are placed in the Lay at the outer side of the cloth on each side and the blocks placed directly in front, so as to pass freely between the cloth in the reed, where the Lay or batten comes up where the cloth is made, those teeth are made to pass in through the Reed

Drawing

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nearly one inch if there is no obstruction. The obstruction if any will be the filling or weft as the shuttle passes through the web into the box, in that case the filling will come between the Blocks and Reeds and will carry the Blocks forward with the Lay; in so doing it carries forward the upright piece I I they being attached to the Rod J. it turns that and there being a lever attached to it at K, a small lever L goes through the end of K. lifts it up so as to prevent it hitting an iron placed in the Lay for that purpose, provided there is no filling passed from the shuttle, the blocks pass freely into those Reeds, they not being carried back prevents the lever being lifted up over the Iron on the Lay, likewise the end of the lever hits and the Lay carries it forward, in so doing it strikes at the other end a piece or lever, that is connected with the handle M, so it throws the Loom out of gear and it stops it by the Lays not carrying up those blocks.

Those blocks are placed so as to clear the top of Race board, they are held up at one end by I I, and at a little distance rest on a piece of Iron made fast to the Breast Beam so as to keep them in a horizontal position but yet hangs so as to work backward and forward horizontally freely by the motion of the Lay, if the filling is at either side supplied by the shuttle should the filling be found to drop below those blocks, there may be a small plate of Iron or wire pass from the underside of the blocks over the top of the Lay or Race board through one of those partings in the Reed, so that when the Lay comes up, it will raise the weft up between the blocks and Reed, this piece must pass into the

Race board of the Lay so that the shuttle may pass over it freely. If the Lay should not come up accurately, there must be a support at each side of the Lay to bring it into the proper place; when it arrives at the place where those blocks enter the Reed.

In figure No 4. a Loom frame, b is a breast beam c Lay or or beater dd, upright pieces of Iron fastened to the breast beam, at each end with a pivot so as to turn freely. ee is a small wire fastened to d d, so as the ends on, on, can rise and fall freely, these ends m, m, that turn downwards is for the purpose of the weft or filling to wind around when the shuttle passes across the web, by the yarns winding round it draws the wire up to the selvage or edge of the cloth; in so doing it turns on its centre, turns f f, draws b. connecting wire, b. being attached to f draws or turns g. so as to prevent K from hitting g. when the Lay comes up to where the cloth is made, now providing there is no filling or weft in the shuttle it will prevent m, from being drawn up to the selvage; likewise prevents f from being moved. f not being moved g, does not move, so when the lay comes up to where the cloth is made or nearly up, K will strike g. (at the Connagrend end wire) forward and hit a knee that is connected with the handle of the loom, that stops and starts, the loom; in so doing the loom will be stopped. g. hangs on a pin in the centre so that it can vibrate fore and aft, and backwards and forwards d, must have a spring attached to it, so as to incline it from the edge of the cloth, when the weft is wound round the wire at m, the lay or beater coming up, the Race board strikes the wire e two inches

from m, and raises it up and liberates the end m, from the weft, when the Lay returns back again the pallet puts it proper place again. the ends m, must fall about half an inch forward to where the cloth makes, likewise an inch or more from the selvedge or list of the cloth.

N is a small cone drum, on the main arbor that has a band P which passes round it and round another cone drum on the arbor O. arbor O, has a worm on the outer end and gears into the shaft Q, shaft Q has a worm that takes into wheel R, on the yarn beam. these cone drums are for the purpose of regulating the yarn coming off the beam, the band is shifted in the same ratio that the yarn leaves the size of the beam. to increase the motion of the beam it is done by a Lever S that has a bearing at one end against the beam, and the other end is a chain attached to it, and from thence down to a pulley on the arbor V. a chain is attached to another pulley on the arbor V and thence to slide T, slide T has two guide pins that guide the band P, slide T has a weight X. that brings up the Lever S against the yarn beam. This Lever S has a bearing in the middle or nearly as the proportion of the parts may require, there may be a shift gear on shaft Q at bottom that plays into the worm of shaft Q, so as to give any number of pieces of weft in an inch required.

What I claim as my invention and for which I desire Claim Letters Patent, is the method herein described by which it may be ascertained if the picking is not right while running off from the beginning or the bobbins deliver all off, and by

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which ever case of it is breaking or running off, the boom will be stopped by the apparatus above specified.

In testimony that the above is a true specification of my said improvement as above described, I have hereunto set my hand and seal this fifth day of May in the year of our Lord One thousand eight hundred and thirty

Witnesses
Geo Alden
James Richardson

John Goulding

(Received and Recorded a new February 14, 1844.)