

(No Model.)

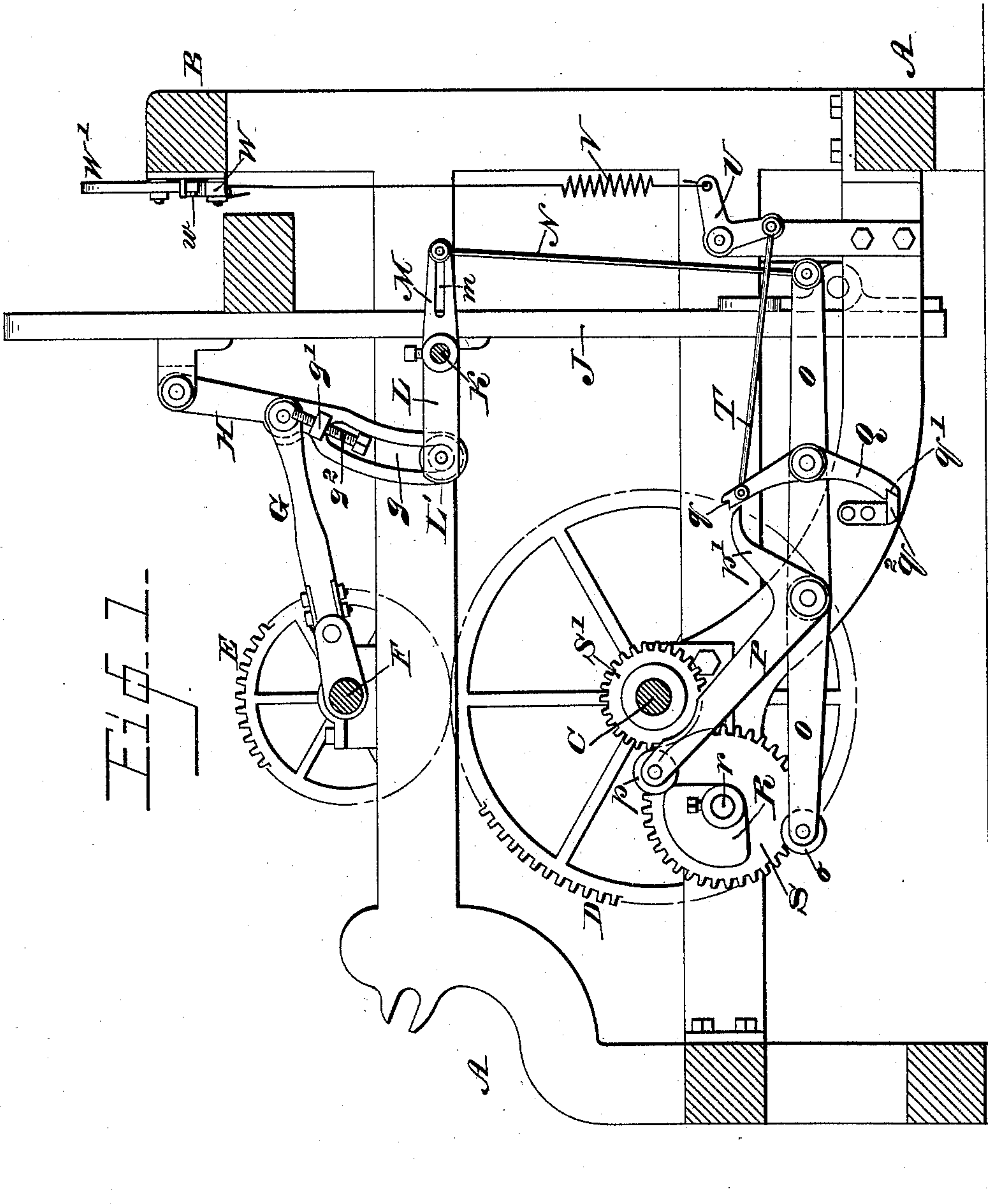
2 Sheets—Sheet 1.

C. STROBEL.

LOOM FOR WEAVING TERRY FABRICS.

No. 396,964.

Patented Jan. 29, 1889.



WITNESSES:

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L. Douville
Wm. J. Moore

INVENTOR

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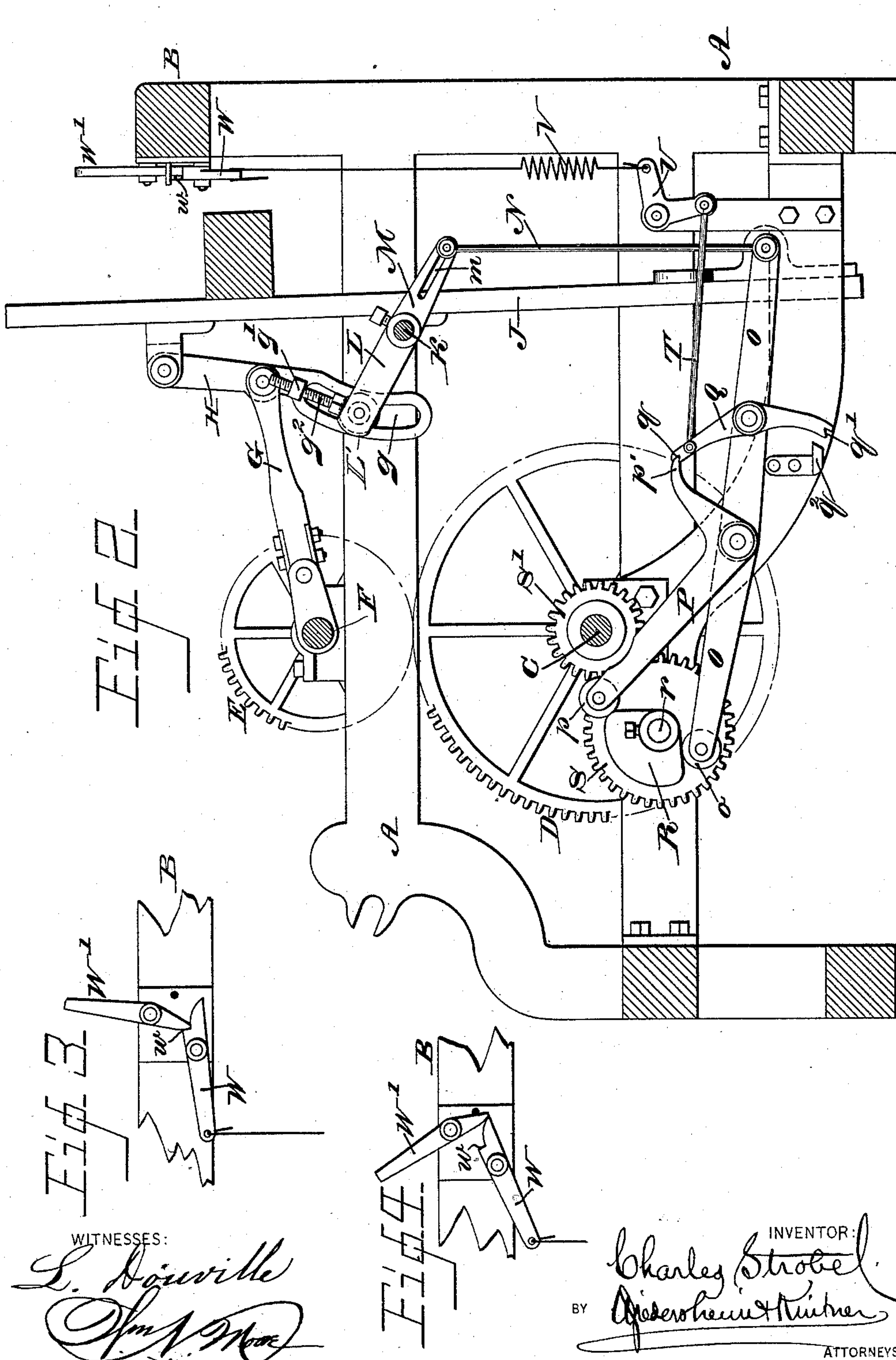
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UNITED STATES PATENT OFFICE.

CHARLES STROBEL, OF PHILADELPHIA, PENNSYLVANIA.

LOOM FOR WEAVING TERRY FABRICS.

SPECIFICATION forming part of Letters Patent No. 396,964, dated January 29, 1889.

Application filed April 17, 1888. Serial No. 271,000. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STROBEL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Looms for Weaving Terry Fabrics, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in looms for weaving terry fabrics, and has especial reference to a terry motion for looms.

The invention is designed as an improvement upon the loom for weaving terry fabrics for which Letters Patent were granted to me July 20, 1886, bearing No. 346,073, although I would have it understood that my improvements may be applied to any loom of such construction as will permit of their application.

The primary object of my invention is to dispense with the large springs usually employed in this class of looms and produce a loom of very simple, strong, and durable construction which shall be thoroughly efficient in operation and inexpensive of production.

A further object is to provide a loom which will weave both plain and terry fabrics without stopping the loom.

With these objects in view the invention consists in mechanism for bringing the lay close to the breast-beam to cause the weaving to be plain; further, mechanism for adjusting the travel of the lay for weaving terry fabric; and, finally, the invention consists in the novel details of construction, combination, and adaptation of parts for service, all as hereinafter described and claimed.

Figure 1 represents a longitudinal vertical sectional view of a loom embodying my invention, the parts being in the position they occupy when the loom is weaving plain fabric. Fig. 2 represents a similar view thereof with the parts in the position they occupy when weaving terry fabric. Fig. 3 represents a detail view of the levers on the breast-beam for operating the elbow-lever, said levers being in the position they occupy when the loom is weaving plain fabric. Fig. 4 represents a similar view of the levers in the position they occupy when the loom is weaving terry fabric.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates the frame-work of the loom, and B the breast-beam thereof.

C designates the driving-shaft, having the driving gear-wheel D mounted thereon, which meshes with the gear-wheel E on the crank-shaft F.

G designates the crank-arms or pitmen, which are pivotally connected with the links H, which are also pivoted at their upper ends to the lay arms or swords J, and at their lower ends are provided with curved slots *g* and lugs or projections *g'*, through which stop-screws *g²* pass.

K designates a rocking shaft mounted on the lay-sword J, and carrying the arms L, having the rollers L', which work or move in the curved slots *g*, and the working-arm M, provided with a slot, *m*.

N designates a bar or rod pivoted at its upper end to the working-arm M in the slot, which slot permits the adjustment of the connection of said bar N with the arm M relatively to the rock-shaft, and at its lower end pivoted to one end of the terry-lever O, the opposite end of said terry-lever being provided with a roller, *o*.

P designates a lever pivoted to the same stud as the terry-lever, having a roller, *p*, at one end and a nose or hook, *p'*, at the other end.

Q designates a lever pivoted to the terry-lever, having its ends cut out or notched at *q* and *q'*, for engaging the nose or hook *p'* on the lever P or the lug or projection *q²* on the frame, the purpose of which will presently appear.

R designates a cam mounted on the shaft *r*, and S designates a gear-wheel, also mounted on the shaft *r* and meshing with the gear S', mounted on the driving-shaft.

T designates a rod or bar connected at one end to the upper portion of the lever Q and at its other end pivoted to the elbow-lever U, pivoted to the frame. To said elbow-lever U is also connected the lower end of the spring V, the upper end of which is connected to one end of the lever W, fulcrumed on the breast-beam, and the other end of said lever W is

provided with a shoulder, *w*, adapted to be engaged by the hand-lever *W'*, also pivoted on the breast-beam, said levers *W W'* operating conjointly to raise and lower the elbow-lever.

The operation is as follows, it being understood that the shedding, picking, and take-up motions are substantially the same as ordinarily used in looms: When weaving plain fabric, the parts of the loom are in the position shown in Fig. 1, whereby the lay is caused to travel close to the breast-beam, and when desired to weave terry fabric the levers on the breast-beam are operated, causing the elbow-lever on the frame, through the medium of the rod or bar, to move the lever *Q* and cause the notch *q* thereof to engage the hook or nose on the lever *P*, the parts then assuming the position illustrated in Fig. 2. The driving gear-wheel, revolving, imparts motion to the cam *R*, which operates upon the rollers of the lever *P* and terry-lever *O*, causing the said terry-lever to be depressed as the lay approaches the breast-beam, moving the roller-supporting arms upwardly in the curved slot of the links *H*, and consequently shortening the distance of travel of the lay, as is evident. The screws *g*² serve to limit the play or movement of the rollers in the slots, and consequently the travel of the lay. When desired to adjust the loom for plain weaving, it is merely necessary to operate the levers on the breast-beam and the loom is ready for plain weaving, the notch *q* being engaged by the stop *q*²; or, should it be desired to weave both plain and terry fabric, the said levers could be shifted first in one direction and then in the other, as will be readily understood.

The many advantages of my improvement will be readily understood and appreciated by all skilled in the art, and need no further comment here.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a frame, a driving-shaft journaled therein and having the gear-wheels *D* and *S'* thereon, a crank-shaft with a gear-wheel meshing with said gear-wheel *D*, a pitman connected to the said crank-shaft, a lay with a pivoted link having a slotted lower end, the said pitman being pivotally connected to said link, a rock-shaft on the lay having an arm with a roller at one end working in the slot of said link, a second arm secured to the said rock-shaft, a terry-lever pivoted to the frame, a rod connecting said second arm and said terry-lever, the lever *P*, pivoted to the same stud as the terry-lever, the lever *Q*, pivoted to the terry-lever and adapted to engage the lever *P*, and a rotary

shaft with a cam adapted to operate the said levers *O* and *P*, substantially as described.

2. The pivoted terry-lever *O*, the lever *Q*, pivoted to said lever *O* and having a notched end, the lever *P*, pivoted on the same stud with the terry-lever and having the nose *p'*, the cam *R*, adapted to operate the said lever *P*, the frame *A*, with the breast-beam *B*, the levers *W W'*, pivoted to the said beam, the spring *V*, the elbow-lever *U*, and rod *T*, connected to said lever *W* and to the lever *Q*, said parts being combined substantially as described.

3. A loom having a breast-beam and a lay, the lever *W*, with recessed end, and lever *W'*, with nose or hook end, said levers being pivoted to said beam, a slotted link pivotally connected to said lay, a crank-shaft with pitman connected to said link, a rock-shaft with an arm having a roller working in said slotted link, a terry-lever pivotally secured to the frame of the loom, a rod and arm connecting said terry-lever with the said rock-shaft, a lever pivoted on said terry-lever having a notched lower end, a rod, elbow-lever, and spring connecting said lever *W* with said arm on the terry-lever, a rotary shaft with cam thereon, and a lug secured to the frame adapted to engage the notched lower end of said arm on terry-lever, said parts being combined substantially as and for the purpose described.

4. A loom with a driving-shaft and having the terry-lever *O* pivotally attached to the frame thereof, the lever *P*, having the same pivotal stud as the said terry-lever, the lever *Q*, pivoted to the terry-lever and having an end adapted to engage the end of the lever *P*, a rotary shaft having the cam *R*, a lay having the pivoted slotted link *H*, a crank-shaft with pitman connected with said link, a rock-shaft with an arm having a roller working in said slot, and an arm connected by a rod to said terry-lever.

5. A loom having a driving-shaft, a lay with the slotted pivoted link *H*, a crank-shaft with pitman connected to said link, the pivoted terry-lever *O*, a rock-shaft having an arm with a roller working in the slot of said link, and an arm connected by a rod to the said terry-lever, the lever *P*, with nose *p'*, the shaft *r*, with cam *R* thereon, the lever *Q*, with notched end *q*, the breast-beam *B*, with coacting levers *W W'*, and a spring, elbow-lever, and rod connecting said lever *W* with the upper part of arm *Q*, said parts being combined substantially as and for the purpose described.

CHARLES STROBEL.

Witnesses:

WM. N. MOORE,

JOHN A. WEIDERSHEIM.