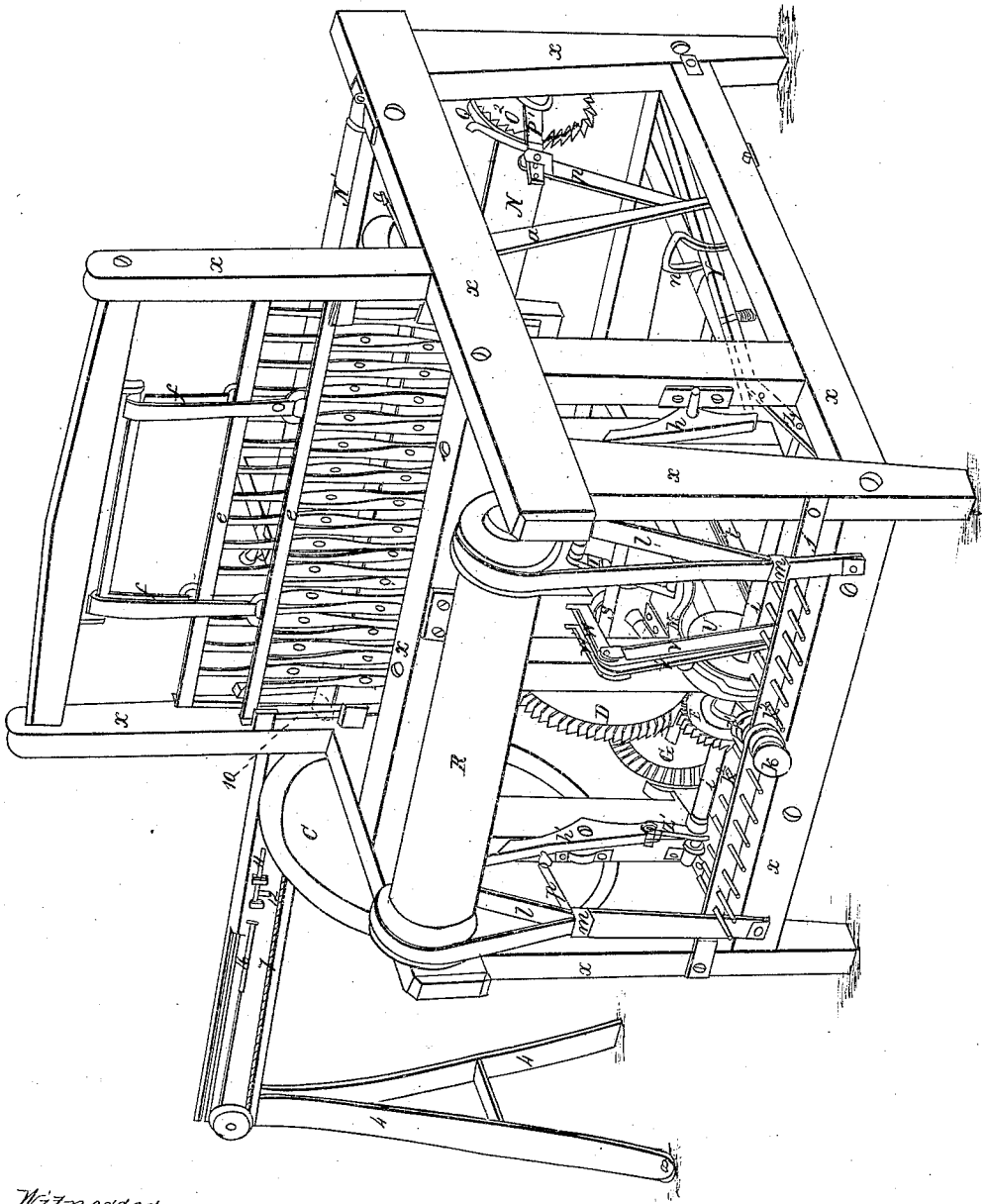
Sheet 1, 2 Sheets.

G. Hasecoster.

Weaving Slats, Cane & Straw

No. 57,898. Patented Sept. 11, 1866.



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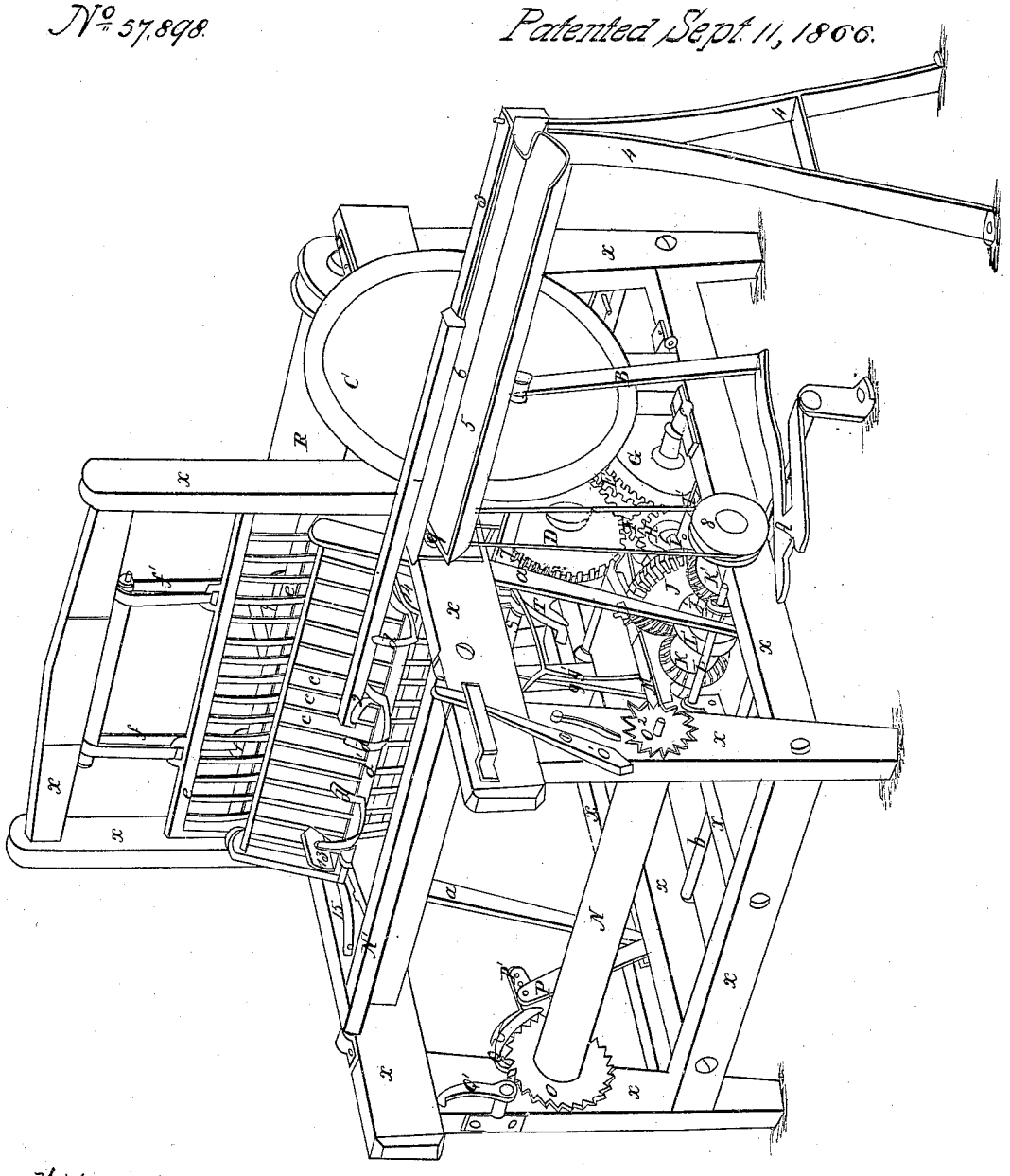
N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

Sheet 2, 2 Sheets.

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UNITED STATES PATENT OFFICE.

GEORGE HASECOSTER, OF RICHMOND, INDIANA.

IMPROVEMENT IN LOOMS FOR WEAVING SLATTED WINDOW-SHADES.

Specification forming part of Letters Patent No. **57,898**, dated September 11, 1866.

To all whom it may concern:

Be it known that I, GEORGE HASECOSTER, of Richmond, Indiana, have invented a new and Improved Loom for Weaving Window-Shades; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in suitable devices for delivering the slat to be woven into a window-shade in its proper position within the shed of the warp, the same to be operated with the other mechanism of the loom.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawings, Plate 1 is a perspective view of the front of the loom, and Plate 2 is a perspective view, showing the back of my said loom.

In Plate 1, A is a foot-board, vibrating upon a suitable shaft, to the end of which is attached the pitman B, which revolves the driving-wheel C. On the opposite end of the shaft which supports the driving-wheel is a pinion which operates the spur-wheel D, which in its turn operates the wheels E and F. The wheel F is placed upon a suitable shaft, upon the opposite end of which is the bevel-wheel G, said shaft having its bearings upon the framing *x x*. The smaller bevel-wheel H and the bevel-wheel J are attached to opposite ends of the shaft I, which is placed at right angles to the shaft carrying the wheels G and F, having its bearing upon a cross-framing, I′. The bevel-wheels K K′ are at the ends of the shaft J′, and are operated by the bevel-wheel J. The slide-rod L is attached to a sliding clutch, L′, which is thrown in gear with either of the wheels K K′ as it is actuated by the lever M, to which it is attached. The shaft J′ is provided with a pulley, S, outside of the bearing of said shaft upon the framing *x x*. The shaft *i* extends across the lower part of the rear end of the frame, and is provided with a pinion-wheel, E, which receives its motion from the spur-wheel D. The drum U, situated upon the shaft *i*, has a spiral groove cut in its circumferential surface, in which a pin at the rear end of the lever M works, giving a vibrating motion laterally to said lever, and serving to alternate the action of the sliding clutch L′. At either end of the shaft *i* is attached arms Z Z′, each provided with a pin, which operates the rocker-shafts *h h′*, said shafts being provided with springs to bring them back into position. The arm Z′ is attached at one end to the shaft *o*; but the arm Z is made twice as long as Z′, and is attached at its center to the shaft, so that the arm extending back of the shaft, which arm is provided with a pin, will raise the lever Y at each revolution, thereby operating the levers P P′, through the means of which the pawl Q turns the wheel O on the take-up or curtain beam N, by means of a weight on said lever Y, which may be graduated to exert any desired amount of power.

To the tops of the rocker-arms *h h′* are attached short arms, which are hinged to connecting-bars, the opposite ends of which are pivoted to the batten-posts *a a′*. These constitute the means for producing the vibratory movement of the batten and its attachments.

Surmounting the batten-posts and extending across the loom is the reed, composed of strips of any suitable material of a width equal to the space required between the threads of warp in the curtain or window-shade to be woven.

At the lower edge of the reed and parallel with it is the shaft *d′*, having its bearings in the batten-posts *a a′*. This shaft is provided with curved bearings *d d d*, which are designed to catch and hold the slats to be woven as they are delivered by the carrier. The shaft is kept in position by a spring attached to the shaft near its center, secured to the back side of the reed, and also by small cords at either end, which are secured to the batten-beam. As the batten inclines forward in the process of beating up the slat, the operation of the spring inclines the curved bearings downward, so that the slat is delivered in the shed of the warp horizontally or flatwise in a proper manner.

Upon the shaft S, and near its center, is fixed a star-wheel, T, having four arms, upon each of which is a projecting pin, at right angles to the face of the arm, two of which project to

the right and the other two to the left. These projecting pins operate in their revolutions the lever-bars W W′, which are pivoted to the upright connecting-bars V V′, which in turn operate the treadles.

From the forward end of the treadles extend the cords or wires *g g′*, the upper portions of each of which are made forked, and are secured to the lower edges of the heddle-frames *e e*, which frames are provided with perforated bars, corresponding in number and space to the openings between the slats *c c* of the reed.

The spool-rack *j* is provided with pins, in number equal to the number of threads in the warp to be woven, the warp to be drawn from the warp-spools *k k′*, each turning upon a suitable shaft, k^2, at right angles to the bar of the rack *j*. The warp-cylinder R is provided with friction-straps *l l′*, working in recesses at either end, said straps being attached to the sill *x* of the framing, and the force of the pressure exerted upon the cylinder is increased or diminished by sliding the bands *m m* up or down.

The springs *p p′* are attached to the upper part of the rocker-shafts *h h′*, and produce the return motion of the batten. The pulley 8 on the outer end of the shaft L is recessed to receive the cords 7, which are coiled right and left around the same, extending thence vertically to pulley 9 on Plate 1 and to pulley 10 on Plate 2, and, running horizontally on each side of the center bar, 3, are attached to the slat-carrier 1. The spring or catch 2 is pivoted across the forward end of the slat-carrier at right angles, and on the opposite end receives a wire, which connects it with the slide 11, having a stop, 12. The slat is taken from the slat-trough 5, and one end of the slat is inserted in the catch or spring 2, the slat lying edgewise upon the slat-rest 6. The carrier is now moved forward until the stop 12 strikes against a projecting pin upon the framing *x*. Then the catch or spring 2 is opened, and the slat deposited in the curved bearings *d d d*. At this point the lever M shifts the sliding clutch L′, the pulley 8 is turned the opposite way, and the slat-carrier is carried back to its original position, where it rests until the batten has made its forward motion and returned.

The ratchet-wheel O^2, Plate 1, is attached to the shaft of the curtain-cylinder N, and upon the outside of the framing *x* is pivoted a stop lever, O′, which may be used to stop the action of the take-up at any desired point in case of any derangement in the operations of the loom.

Upon the shaft *d′* is a wing, 13, supported by a spring, and movable upon the shaft, intended to check the motion of the slat-carrier at the proper point, and capable of being placed at the proper point for weaving curtains or blinds of different widths. The wing 14, at the opposite end of the shaft *d′*, is intended to serve a like purpose.

The spring 15, attached to the inner side of the framing *x* at the end of the reed, is intended to hold the reed and batten in place, and prevent any shaking or tremulous motion by which the shed or warp might be disturbed. The spring 16, interposed between the cord 7 and the slat-carrier 1, at its connection with the same, serves to compensate for any sudden strain upon the cord 7 and prevent precipitate action in its motion.

The friction-roller N′ is placed nearly above the curtain-cylinder N, and serves to lessen friction on the curtain as it passes to the curtain-cylinder N.

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

1. The slat-trough 5 and slat-rest 6, in combination with the slat-carrier 1, all arranged and operating as and for the purposes set forth and described.

2. The cord 7, spring 16, slide 11, and stop 12, when so arranged and operating as to carry and deliver the slats within the shed, in combination with slat-carrier 1, substantially as set forth.

3. The combination of the pulley 8, cord 7, and sliding clutch L′, when operated as and for the purposes set forth.

4. The shaft *i*, pinion E, drum U, and arms Z and Z′, arranged as and for the purposes set forth.

5. The combination of the star-wheel T, levers W W′, connections V V′, and treadles *t t*, as set forth and described.

6. The shaft *d′* and its curved bearings *d d d*, constructed and operating as herein set forth and described.

7. The combination of the batten *a a*, reed *c*, and shaft *d′*, with its curved bearings *d d d*, when arranged and operating as and for the purposes set forth.

8. The friction-straps *l l* and slides *m m*, in combination with the warp-cylinder R, as set forth and described.

9. The combination of the arm Z, lever Y, levers P and P′, and ratchet-wheel O, all arranged and operating as and for the purposes set forth.

GEORGE HASECOSTER.

Witnesses:

WM. T. DENNIS,

GEO. W. ROSS.