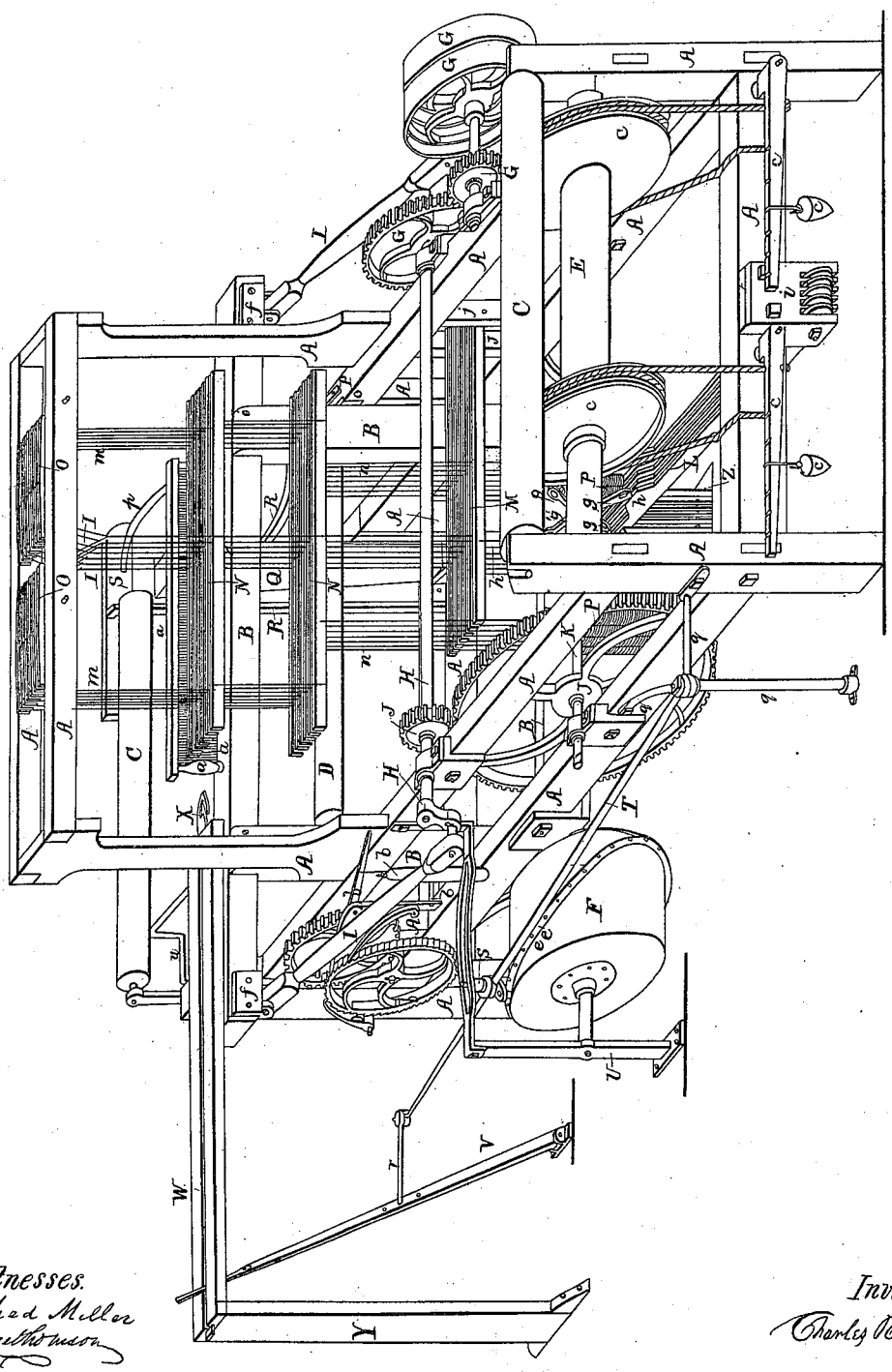
C. R. Harvey.

Weaving Hair Cloth.

No. 490. Patented Nov. 25, 1837.



Witnesses.
Alfred Miller
George Thomson

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UNITED STATES PATENT OFFICE.

CHARLES R. HARVEY, OF POUGHKEEPSIE, NEW YORK.

IMPROVEMENT IN THE MODE OF WEAVING HAIR SEATING.

Specification forming part of Letters Patent No. **490**, dated November 25, 1837.

To all whom it may concern:

Be it known that I, CHARLES R. HARVEY, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and Improved Mode of Weaving Hair-Cloth, commonly called "hair seating;" and I do hereby declare that the following is a full and exact description, reference being had to the drawings annexed.

The nature of my improvement consists in applying power to the weaving said cloth, especially by operating the "hook" (a thin wooden rod having a hook at one end by which the hair is drawn into the web) by power instead of working it by hand, as is common in the ordinary hair-seating loom.

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

A A A A A A A A A A A A A A A A A are the several parts of the frame-work or superstructure of the said loom, which may be either wood or iron.

B B B B represent the lathe, to which is affixed a reed in the ordinary way, as at *a a a*.

C C represent the rollers over which the web is suspended.

D is the cloth-beam, the shaft of which passes by the frame-work A, on the end of which is affixed a cog-wheel turned by a ratchet-wheel and pinion from a motion derived from the lathe B by the use of a lever, weight, and catch, made in the usual way, as at *b b b b b b b*.

E is the yarn-beam, to which is affixed beam-heads, cords, levers, and weights in the usual mode of power-looms, as at *c c c c c c c c*.

F is the transverse cam and motive cam to the hook hereinafter described. The cam may be made as shown in the drawings, or by an iron casting having arms and using the rim or periphery to produce the transverse movement, as at *e*. The circumference of said cam is forty inches—eleven inches in a direct line on the outward end, thence transversal, deviating nine inches from the first line and embracing twelve inches of the circumference, thence five inches in a direct line, thence twelve inches transversely back to the place of beginning.

G G G G are the driving-gears and pulleys, and may be made in any ordinary and convenient way common to any power-loom.

H H are the crank and crank-shaft.

I I are the crank-arms connecting crank H with lathe B, as at *f f*.

J J are the cog-wheel and pinion, the wheel being five to one larger than the pinion. *Note:* There is also a pinion affixed to the transverse cam-shaft on the inside of frame (and not seen in the drawings) of the same size as the above pinion and driven by the above wheel, giving motion to the said shaft.

K is the treadle-shaft, upon which is affixed the treadle-cams *g g g g*.

L represents the treadles, five in number, and made in the usual way, having cast-iron shoes at *h*, and attached to the frame-work at *i*.

M represents the lamms or cross-treadles, seven in number, fastened to frame at *j j*, and are connected with the treadles by small cords *k k*, and also to jacks O O by small cords or wires at *l l*.

N N are the harness bars or shafts. Five of the harness are made in the usual way. The other two are made with metal eyelets or nails to form tabby edges to a satin web. They are connected with jack O O by cords *m m*, and and also to springs P P by cords *n n*.

O O are the jacks or small levers hung with a pin in the center, and are connected with lamms M and harness-bars N N by cords *l l* and *m m*.

P P are the spiral springs connecting harness-shafts N N by cords *n n*, and serve to draw them down to their place after having been raised by the treadles L.

Q is the churn (so called) or a long tin dish, in which the "server" (the person who supplies the hook) holds the hair in water when weaving.

R R represent the stand or brace to support the roller C, and is fastened to frame at *o o*.

S is the breast-board, against which the server leans when weaving. It is sometimes supported by a brace, as at *p p*.

T is the transverse lever or arm working on the transverse cam held at one end by pivot-stud and braces *q q q*. At the other end is affixed the pitman *r*, connecting it with the wag-staff V at the point where it crosses the center of transverse cam F. A forked pivot of iron S drops on the cam and connects with the lever.

U is the stand for the outside end of the

transverse cam-shaft to which the slot-guide *t* is fastened. The said guide keeps the lever down on the cam.

V is the wag-staff made of wood, excepting a short piece at the top, which is iron, and passes through the hook X and serves to throw it through the web.

W is the hook-slide formed by grooving the edges of two pieces of timber and placing the edges parallel to each other one-fourth of an inch apart.

X is the hook made in the usual way, except a small mortise near the outward end, through which the top of the wag-staff passes. It is raised or let down by the brace *u* to fit the web.

Y is the slide-stand fastened to the floor and supports one end of the hook-slide.

Z represents the treadle-combs, made in the usual way.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The particular manner of operating and working the hook by the transverse cam and its connecting fixtures.

2. The general arrangement of the loom, most of the parts being old and common methods, but in this loom combined to produce a new result—to wit, the weaving of hair seating by a power loom.

CHARLES R. HARVEY.

Witnesses:
ALFRED MILLER,
GEORGE THOMSON.