

M.C. Bryant,

2 Sheets, Sheet 1.

Weaving Mach.

No. 98,738.

Patented Jan. 11, 1870.

Fig. 1.

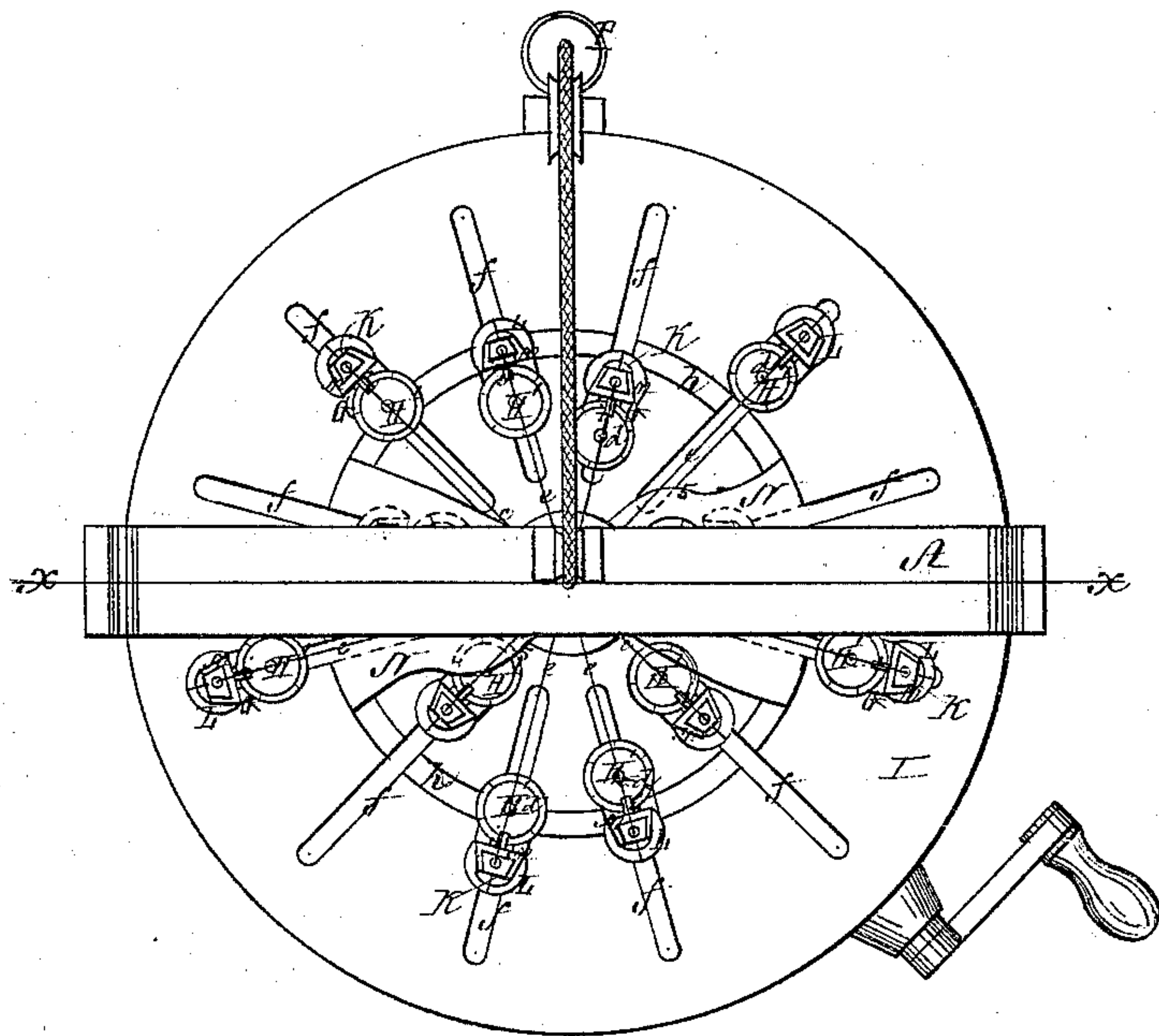
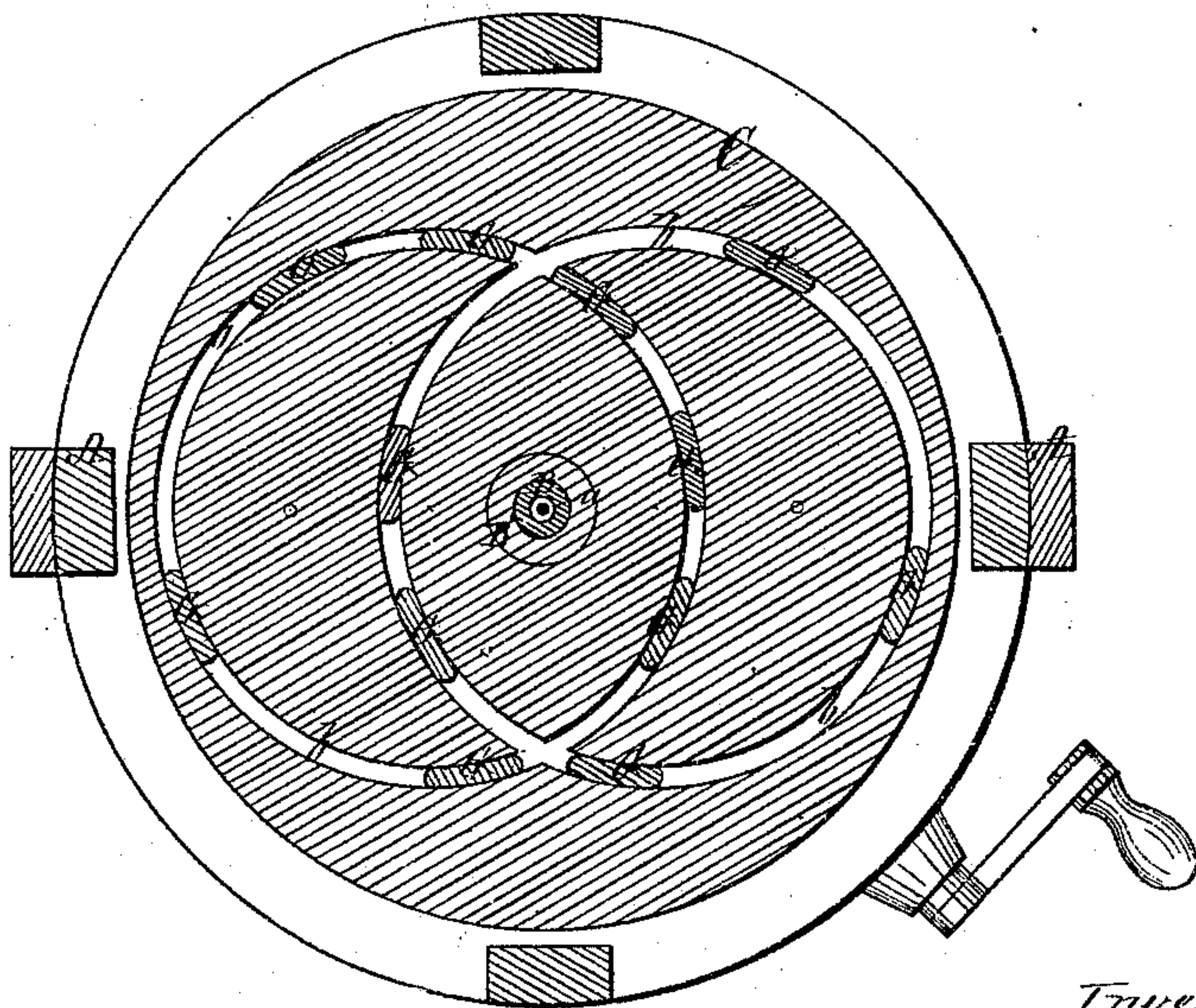


Fig. 3.



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M. C. Bryant,

2 Sheets, Sheet 2.

Weaving Mach.

No. 98738.

Patented Jan. 11. 1870.

Fig. 2.

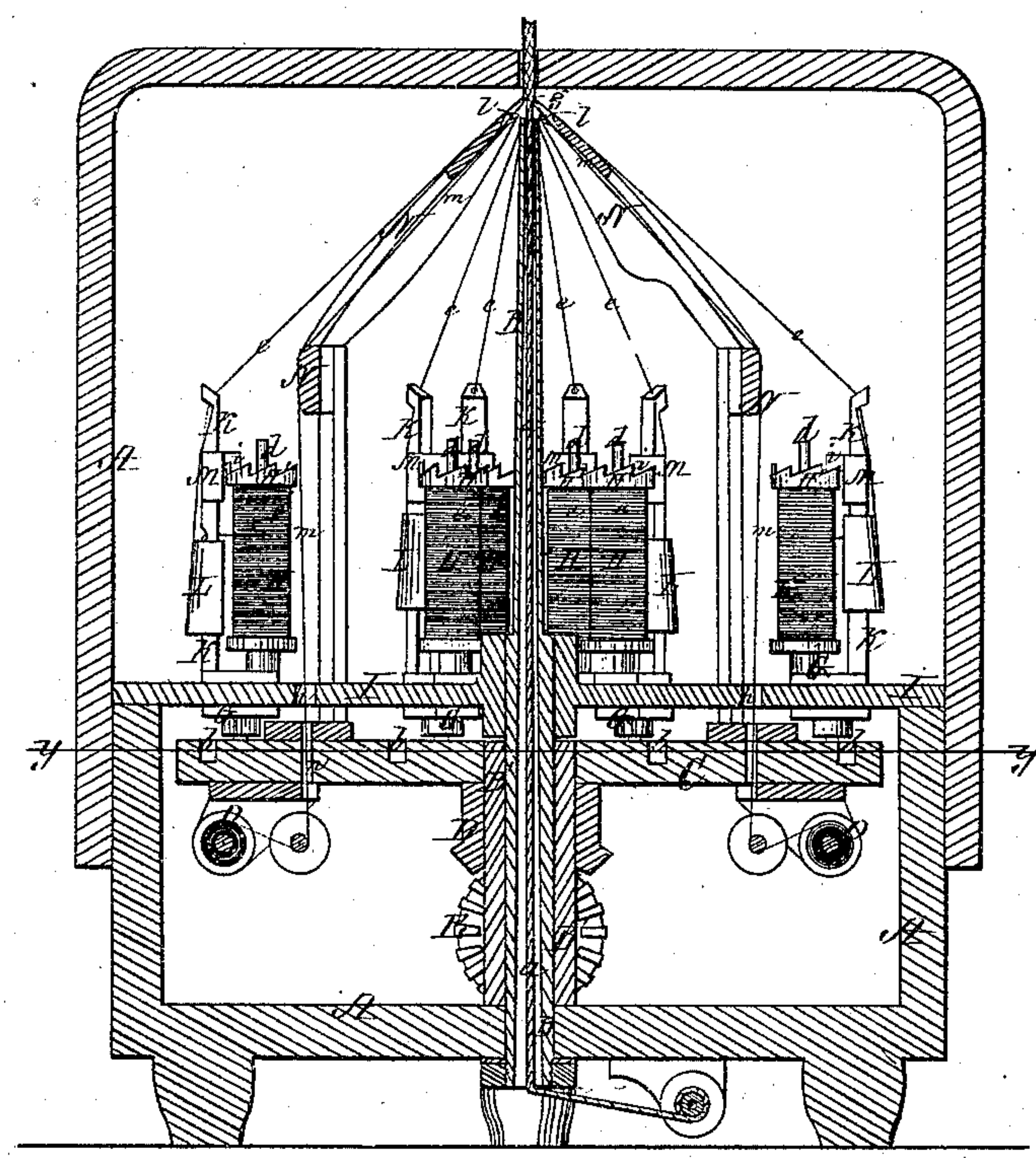
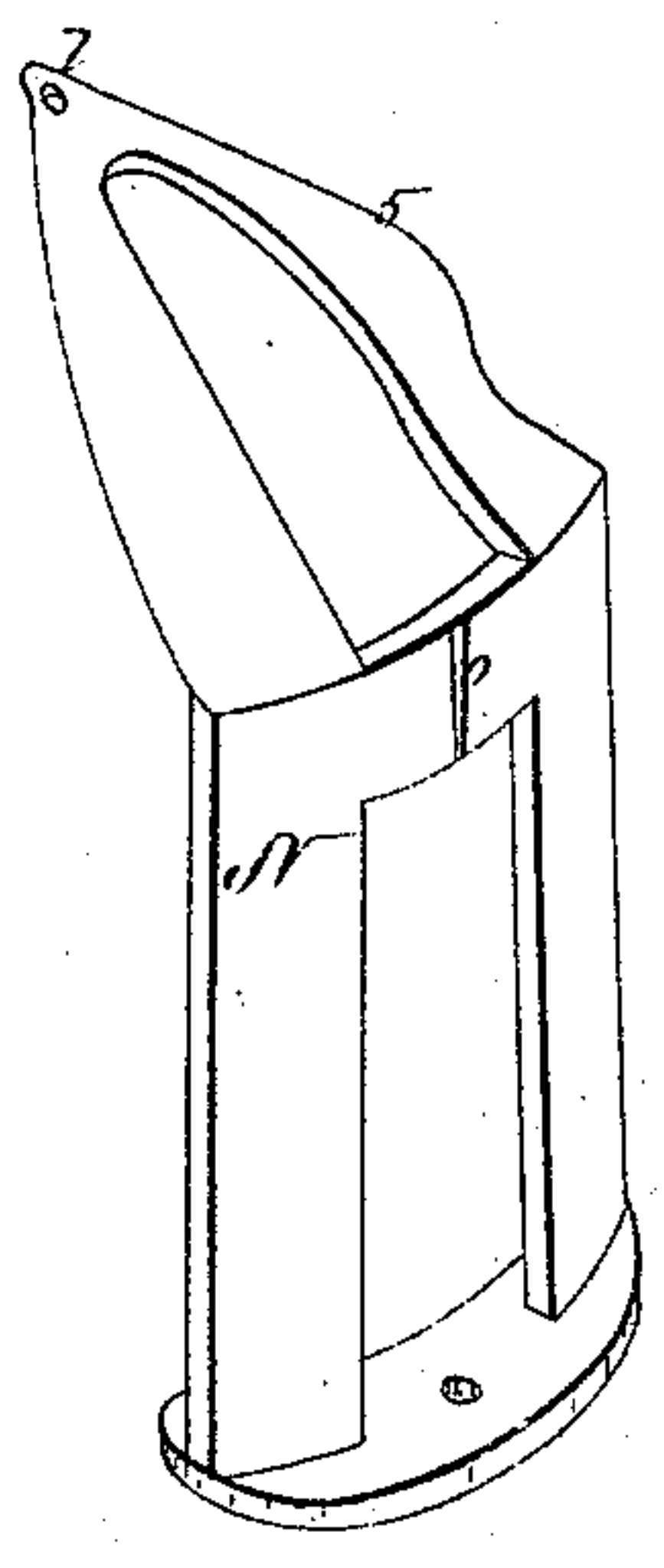


Fig. 4.



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United States Patent Office.

CAROLINE BRYANT, (ADMINISTRATRIX OF THE ESTATE OF MERTOUN C. BRYANT, DECEASED,) OF LOWELL, ASSIGNOR TO WILLIAM J. TOWNE, OF NEWTONVILLE, MASSACHUSETTS.

Letters Patent No. 98,738, dated January 11, 1870.

IMPROVEMENT IN CIRCULAR-LOOMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that MERTOUN C. BRYANT, (deceased,) formerly of Lowell, in the county of Middlesex, and State of Massachusetts, did invent certain Improvements in Circular-Weaving Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of a circular-weaving machine, with the said improvements applied thereto.

Figure 2 is a central vertical section, on the line *xx* of fig. 1.

Figure 3 is a horizontal section, on the line *yy* of fig. 2.

Figure 4 is a perspective view of one of the improved shuttles.

The quality of cord now manufactured by the ordinary circular-weaving machine is more or less imperfect, owing to the fact of the meshes of the covering of the central cord, or "core," being laid on in an irregular manner, on account of the filling-threads not being guided and supported up to the weaving-point, some of the meshes being fine and compact, while others are coarse and open, or separated from each other.

To remedy this defect is the object of this invention, which consists in a shuttle or carrier, the upper extremity of which is provided with an eye, situated close up to the weaving-point of the covering, by which means the filling-thread is guided and supported in the eye up to this point, before coming in contact with the warp-threads, whereby all unnecessary friction, heretofore occasioned by the filling dragging upon the warp, is avoided, and a smoothly-laid covering, of uniform and even texture, is produced. The shuttle is also of otherwise peculiar construction, as will be explained hereinafter.

To enable others skilled in the art to understand and use this invention, the manner in which it is carried out will now be described.

In the said drawings—

A is the frame-work of a circular-weaving machine, from the centre of which rises a vertical tube, B, through which passes the core or central cord *a*.

Surrounding the tube is a short shaft, B', to the top of which is secured a horizontal cam-plate, C, provided with circular grooves, *b*, and revolved by bevel-gears, D E.

Within the grooves *b* rest the lower ends of a series of frames or carriers, G, provided with spools or bobbins H, which are free to turn upon their central pins *d*, when the thread is to be unwound therefrom.

Each spool carries a warp-thread, *e*, and its spool-carrier G is moved, by the revolution of the cam-plate C, to and from the centre, in one of a series of radial slots, *f*, made in a horizontal plate, I.

Each warp-thread is conducted behind a standard, K, on its carrier, and thence under a weight, L, fitted

to slide thereon, from which it is led through the top of the standard to the weaving-point *g*.

Above the weight L, and sliding on the standard K, is another weight, M, which is provided with a projection, *i*, at its top, which rests in one of a series of notches in a horizontal ratchet-wheel, H', on the top of the spool.

As the warp-thread is drawn up in the formation of the cord, the weight L is raised, so as to elevate the weight M sufficiently to lift the projection *i* out of the notch in the wheel H', when the spool will revolve, and let out the warp-thread until the projection falls into the next notch in the wheel H'.

The plate I, besides being provided with a series of radial slots, *f*, is also provided with a circular slot, *h*, through which project and in which revolve two carriers or shuttles N, the bases of which are secured to the revolving cam-plate C.

These shuttles N are placed diametrically opposite each other, and are of the form shown in fig. 4, rising vertically from the cam-plate C to a horizontal plane, a little above the top of the standard K.

From this plane they incline upward to the weaving-point *g*, the upper extremity of each shuttle terminating in a point, (slightly rounded,) which is provided with an eye, *l*, through which the filling-thread *m* is conducted from its spool O, (under the cam-plate C,) up through an opening, *n*, in the cam-plate, and through the circular slot *h*, and a notch, *o*, in the outside of the shuttle, the thread being thus guided and supported up to the weaving-point.

As the cam-plate C is revolved by the connections described, the carriers, with their spools, are moved back and forth within the radial slots *f* of the plate I, while the shuttles revolve in the circular slot *h* in said plate, causing the filling to pass alternately over and under the warp-threads, as desired.

The front portion, 5, of the shuttle is rounded off, to facilitate its passage under the warps, and prevent the latter from dragging on and creating unnecessary friction with the filling before their union at the weaving-point, by which arrangement, the meshes of the covering of the "core" or central cord are laid compactly thereon, with uniformity and regularity, thereby producing a smooth and evenly-finished article, which passes over pulleys, and is taken up by a weight, P, or other suitable device.

What is claimed as the invention of MERTOUN C. BRYANT, deceased, and desired to be secured by Letters Patent, is—

The shuttle N, constructed with the eye *l* and rounded portion 5, substantially as and for the purposes set forth.

CAROLINE BRYANT,
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Witnesses:

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