

F. H. Brown.
Braiding Mach.

No 79,100.

Patented Oct. 29, 1867.

Fig. 2.

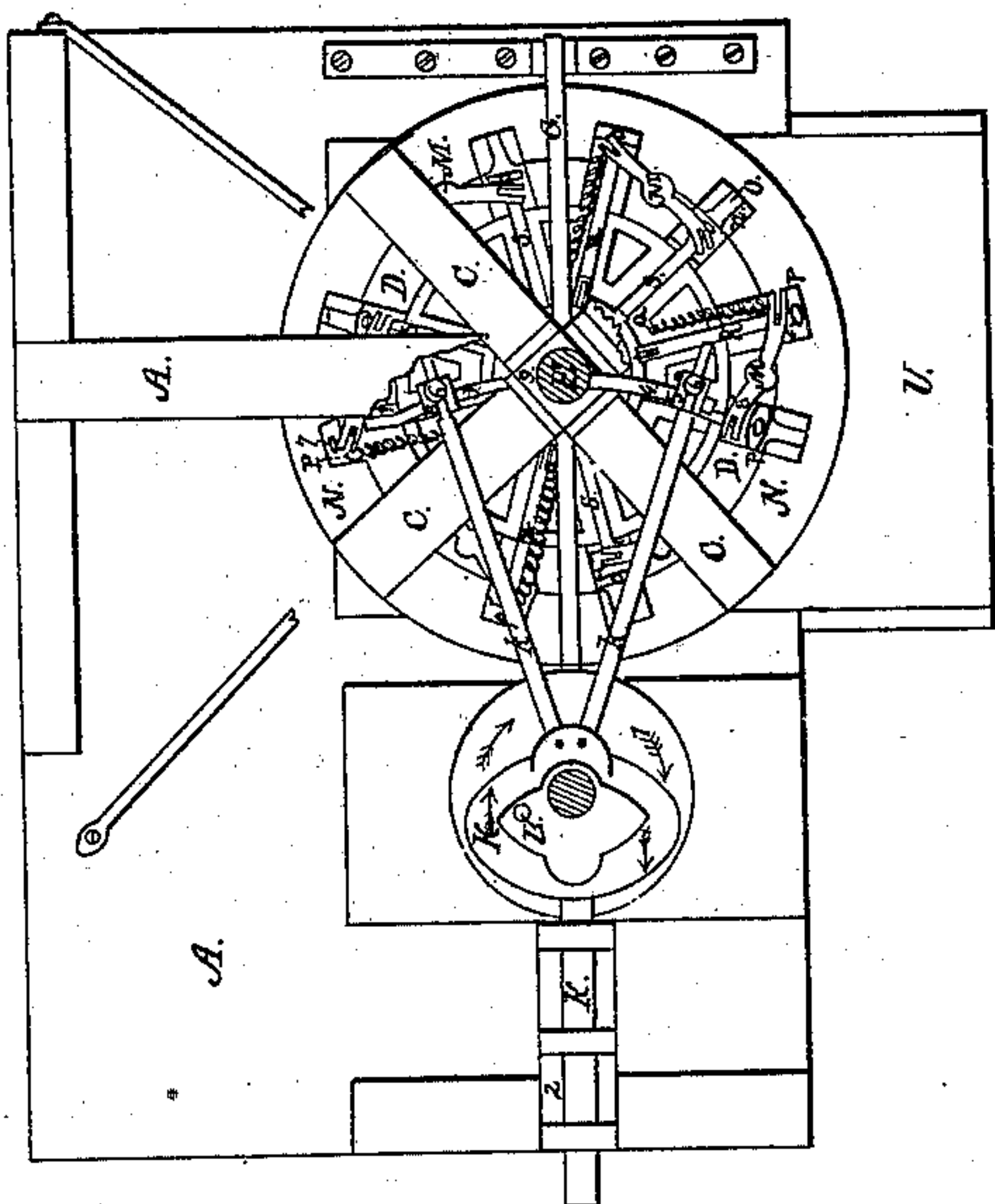


Fig. 3.

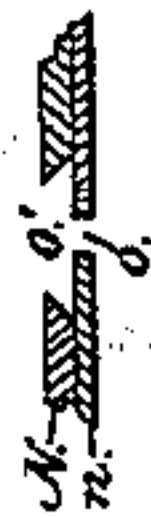


Fig. 4.

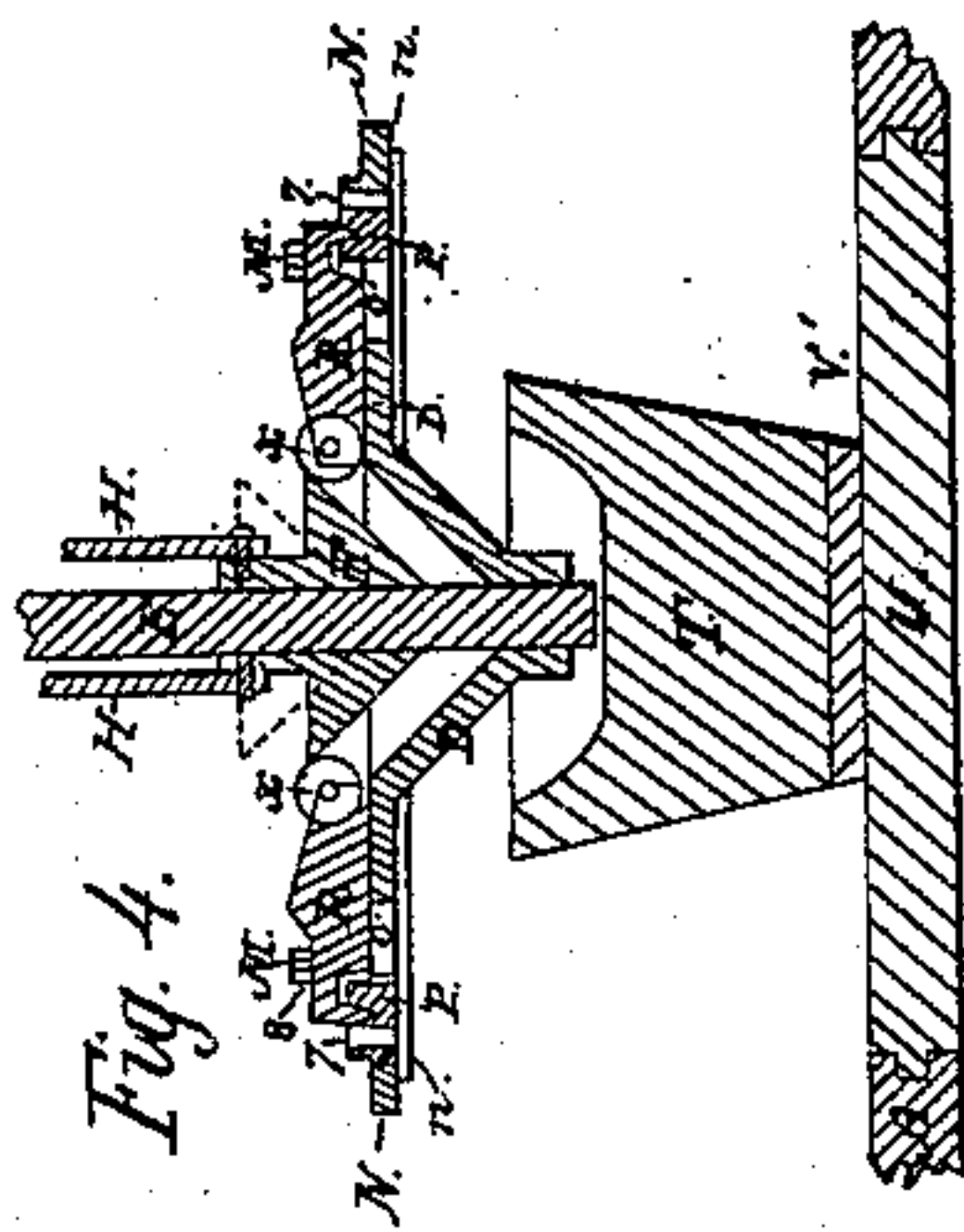


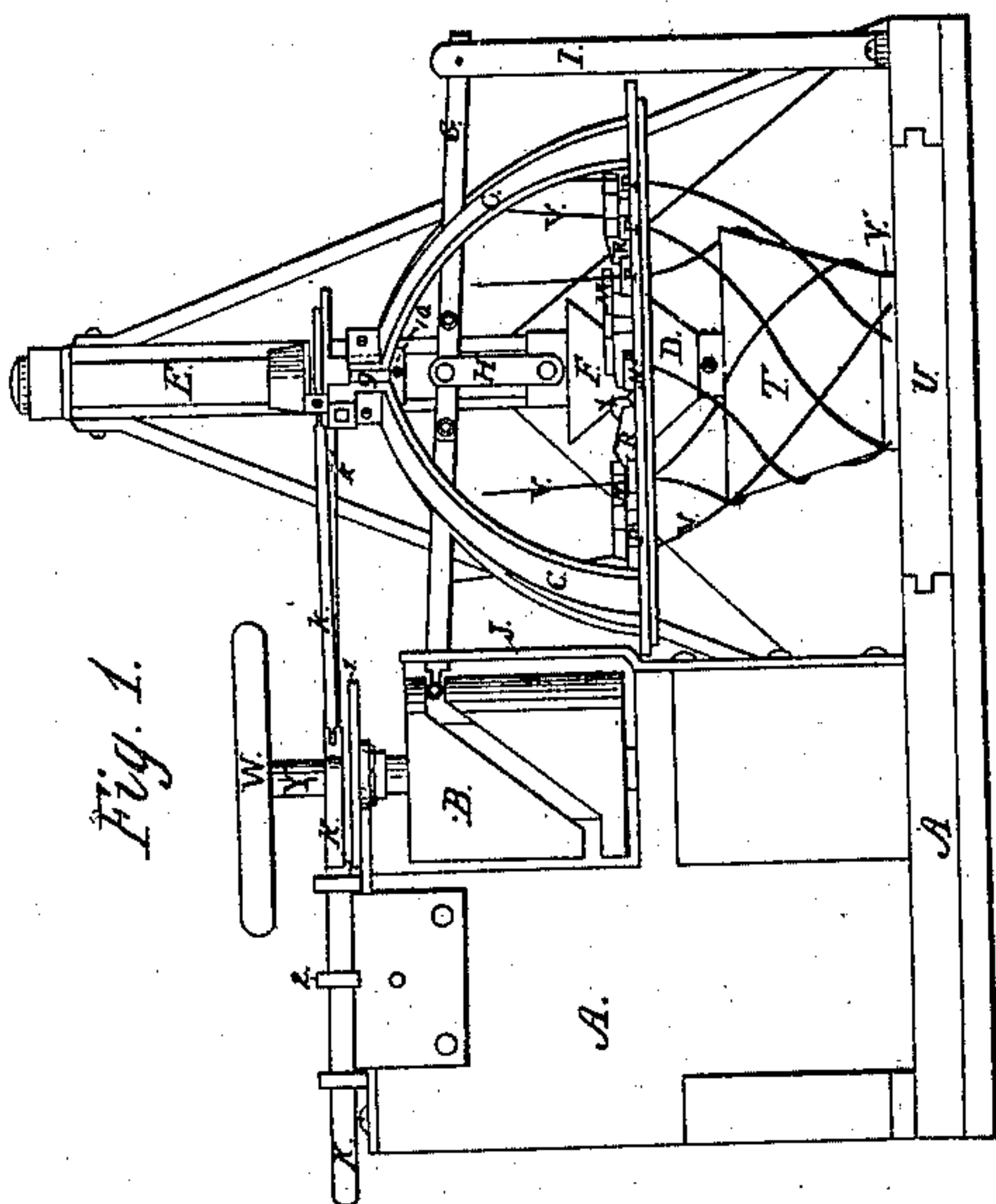
Fig. 5.



Fig. 6.



Fig. 1.



Witnesses,
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Leon H. Flushing

Inventor,
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United States Patent Office.

FRANKLIN H. BROWN, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF, EDWARD F. PEUGEOT, AND LEMUEL H. FLERSHEIM, OF THE SAME PLACE.

Letters Patent No. 70,160, dated October 29. 1867.

IMPROVEMENT IN MACHINE FOR BRAIDING OPEN-WORK BASKETS.

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

TO WHOM THIS MAY CONCERN:

Be it known that I, FRANKLIN H. BROWN, of the city of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Machine for Braiding Baskets of various forms, and similar work; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a side view of my invention.

Figure 2 is a top view of my invention with part of the frame and one bracket, C, removed.

Figure 3 is a section of the plate N, showing recesses in which slides P are moved.

Figure 4 is a central vertical section of a part of the invention.

Figure 5 is a top view of one of the slides P.

Figure 6 is a front view of the slotted standard J.

My invention consists of a certain combination of parts for the purpose of braiding automatically, and is especially adapted to the braiding of open-work baskets and similar kinds of work.

Construction.

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

E is a vertical shaft supported by frame A. D and N together constitute a disk. D is rigidly attached to shaft E. N is supported by brackets C which are fastened to sleeve 9 upon shaft E, said sleeve 9 being supported by collar 10. N and D are provided with an equal number of recesses, *o'*, of uniform size, and evenly spaced, there being also openings at O through *n*, to allow the uprights V free passage. *n* forms a support to slides P, as shown in figs. 2 and 3. D is also provided with pieces S and R that run in grooves which radiate from the centre to the recesses. The pieces R are made, as shown in fig. 4, with their front ends bending down, reaching into the groove 11 of slides P. The rear end of pieces R are provided with rollers X for the simple purpose of overcoming friction. The pieces S are the same as R, with exception that they are shorter and have no rollers X. Levers M are pivoted in their centres to disk D, and are connected to pieces R and S by means of pins 8; the object of this connection being to communicate motion in opposite directions from pieces R to S. Springs Q are attached, at one end, to disk D, the other ends being fastened to levers M, as shown in fig. 2, for the purpose of returning pieces R and S, at the proper time, to their original position. Slides P are made as shown in figs. 4 and 5, being provided with groove 11 for the purpose of receiving the outer ends of pieces R and S. They also have an opening, 7, through which uprights V are passed. F is a conical circular plunger, loosely fitted to shaft E, and jointed to lever G by pieces H. B is a cam rigidly attached to shaft Y, and is grooved, as shown in fig. 1. The horizontal parts of this groove are on opposite sides, and each occupies about one-quarter of the circumference of the cam, and is thus made to avoid communicating motion to lever G; the diagonal parts of the cam, on the contrary, being for the express purpose of communicating motion to lever G. L is a crank-pin attached to the revolving disk 1. Piece K is made substantially as shown in fig. 2, its stem part resting in bearings 2. Rod 3 is attached to sleeve 9, and rod 4 is attached to shaft E; the said rods 3 and 4 being attached to K by means of rods *k* and *k'* and connecting pieces 5, 6, 5', and 6'. J is an upright standard, having a vertical slot, *a*, as shown in fig. 6, through which slot the lever G is passed, its object being to prevent lateral motion in lever G. T is the form confined between the movable platform U and the bottom of shaft E. The object of confining the form T is to prevent the uprights V from drawing up the bottom V', as they have a tendency to do while being braided around the form T. V' represents the bottom of the basket, to which are attached the uprights V, these constituting the material of which the basket is made.

Operation.

The form T is placed on V', surrounded by uprights V. The movable platform then being opened, the whole is passed up until the form T reaches the lower end of shaft E, during which operation care should be taken that the ends of each of the uprights V pass through the separate holes 7 in slides P. The material

being placed, the movable platform U is now closed and power is applied to driving-wheel W, which causes crank-pin L upon disk 1 to revolve against pieces K, forcing forward rods *k* and *k'*. This communicates motion to rods 3 and 4, and they, in turn, give motion to disks D and N, (but in opposite directions, by virtue of their peculiar manner of attachments to sleeve 9, shaft E, and piece K, as shown in fig. 2,) until slides P, having passed each other, are brought exactly opposite recesses *n*. The end of lever G, resting in the horizontal part of cam B, now commences to move down the diagonal groove, while the crank-pin L ceases to act against the piece K. The lever G thus, by its movement in cam B, forces the plunger F down against the rollers X, causing the pieces R to move outward, and the pieces S, by means of the lever M, to move inward, each carrying a slide, P, with them. Thus R takes each alternate slide P from recesses *o'* in disk D to recesses *o'* in disk N, while S takes the remaining alternate slides P from recesses *o'* in disk N to recesses *o'* in disk D. These slides P of course carry with them the uprights V, which, by means of these changes, are being braided around the form T. At this point crank-pin L has revolved around, and is now again pressing against K, directly opposite from where it started, which moves K back to its original position and reverses the motion of disks D and N. The lever G, resting upon the lower horizontal part of the groove in cam B, now commences to move up the diagonal groove in cam B, which raises the plunger F. Then, as the plunger F is raised, the springs Q draw back the pieces R, which, by the connecting-lever M, push forward the pieces S, thus again transposing the slides P or forcing them into the vacant recesses *o'* opposite, as before. Thus it may be seen that one-half of the slides P, numbered alternately, are being passed around from recess to recess in one continuous direction, while the other half are passing in an opposite direction, and cross each other at each change of the plunger F, carrying the uprights V with them, which, by means of these various changes, are being braided, as shown in fig. 1, around the form T, which is confined between shaft E and movable platform U. When the basket is completed the movable platform is drawn open and the basket removed and replaced by another bottom, V', with its uprights V attached, ready to be braided into another basket.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. Pieces R and S, in combination with lever M, as and for the purposes set forth.
2. Slides P, having an opening or hole, 7, and a groove, 11, as and for the purposes set forth.
3. The combination of the shaft E, disk D, and disk N, as and for the purposes specified.
4. Plunger F, in combination with pieces R and S and lever G, as and for the purposes set forth.
5. Crank-pin L, piece K, and rods *k k'*, in combination with rods 3 and 4, shaft E, and sleeve 9, as and for the purposes specified.
6. In a braiding machine, the movable platform U, as and for the purposes set forth.
7. Cam B, in combination with lever G and standard J, as and for the purposes set forth.
8. Spring Q, in combination with lever M, as set forth and for the purposes specified.
9. The general construction and arrangement of mechanism, substantially as shown and for the purposes specified.

FRANKLIN H. BROWN.

Witnesses:

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