

A. Spencer. Felting Machine.

No. 14,521.

Patented Mar 25, 1856.

Fig. 3.

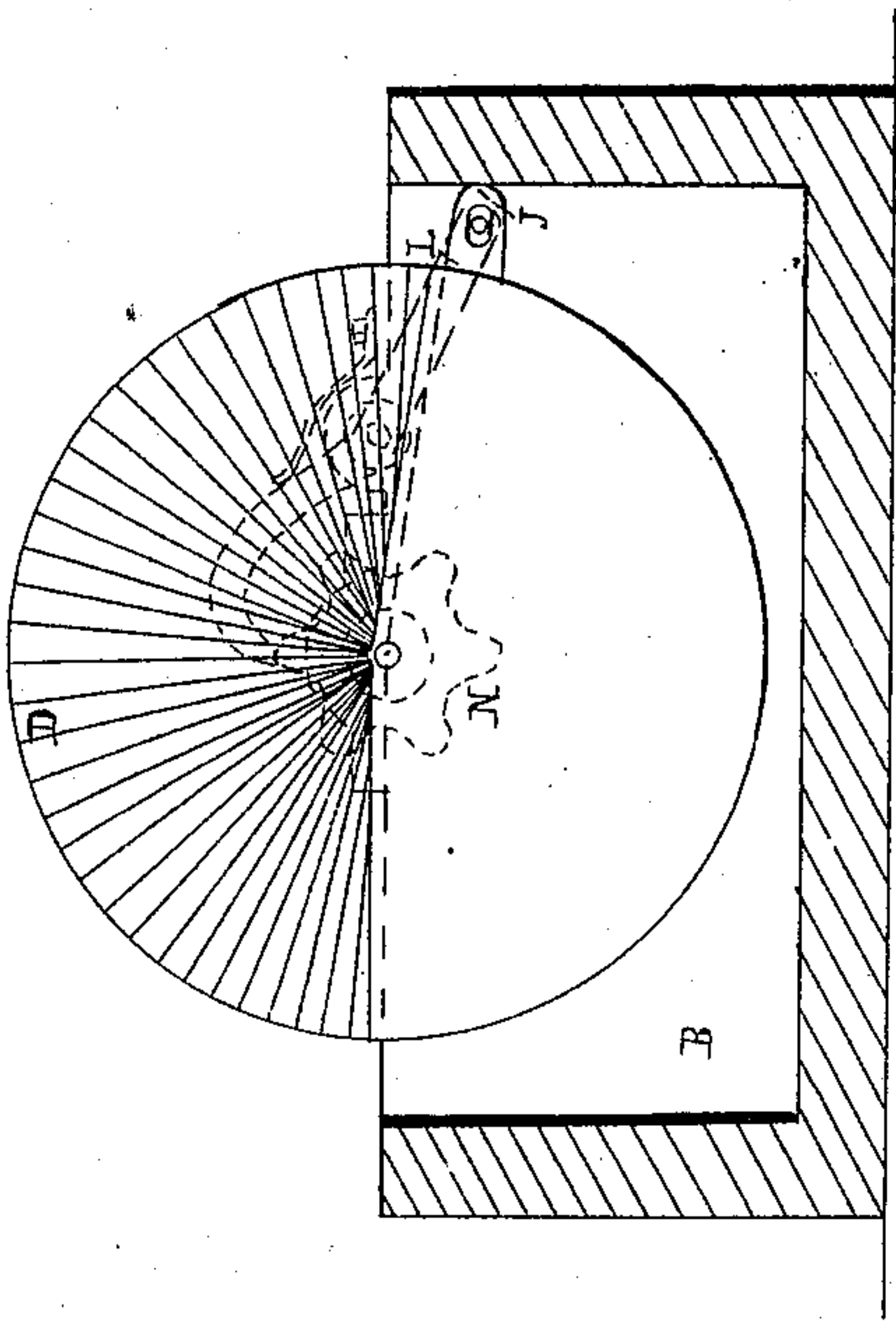


Fig. 4.

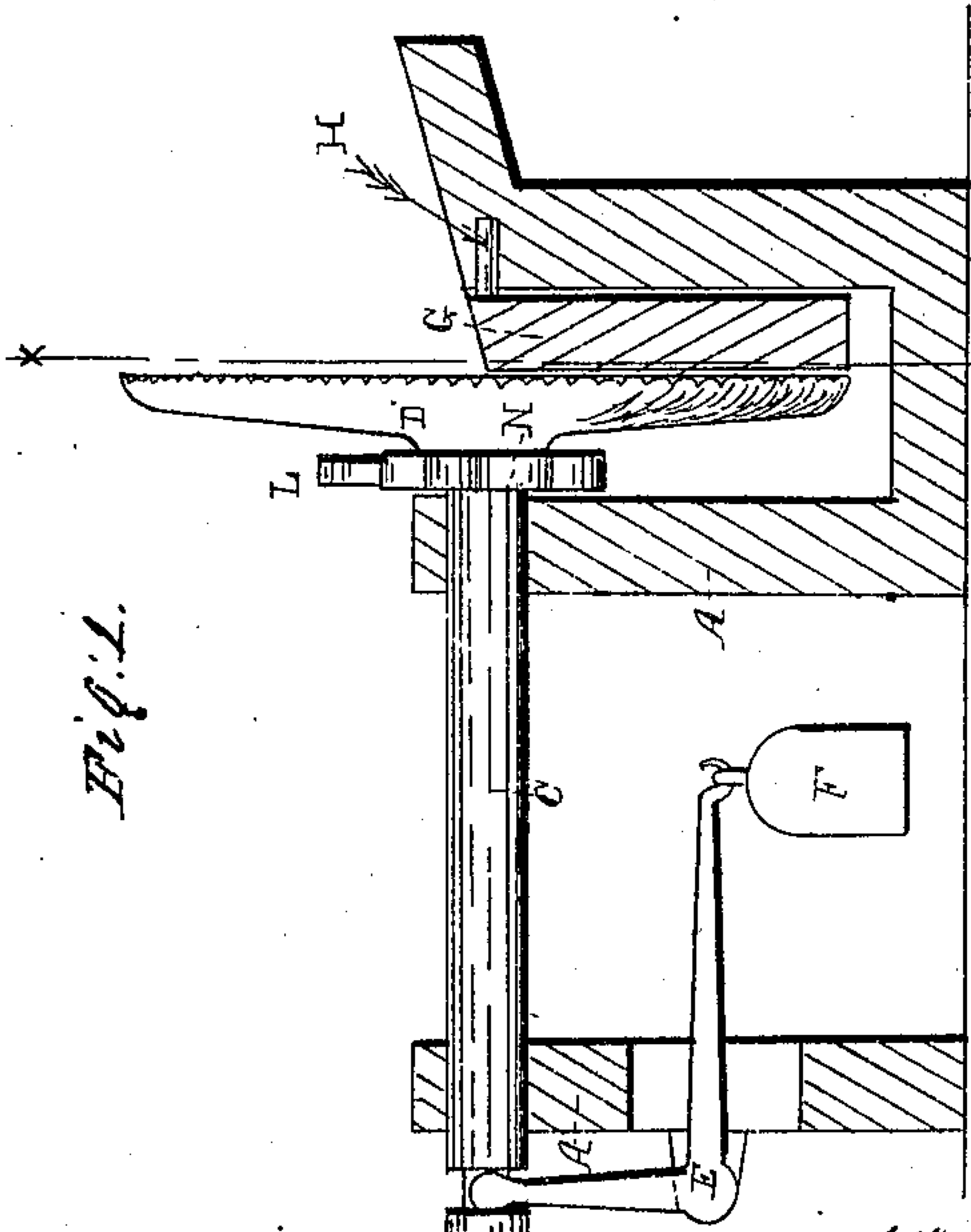
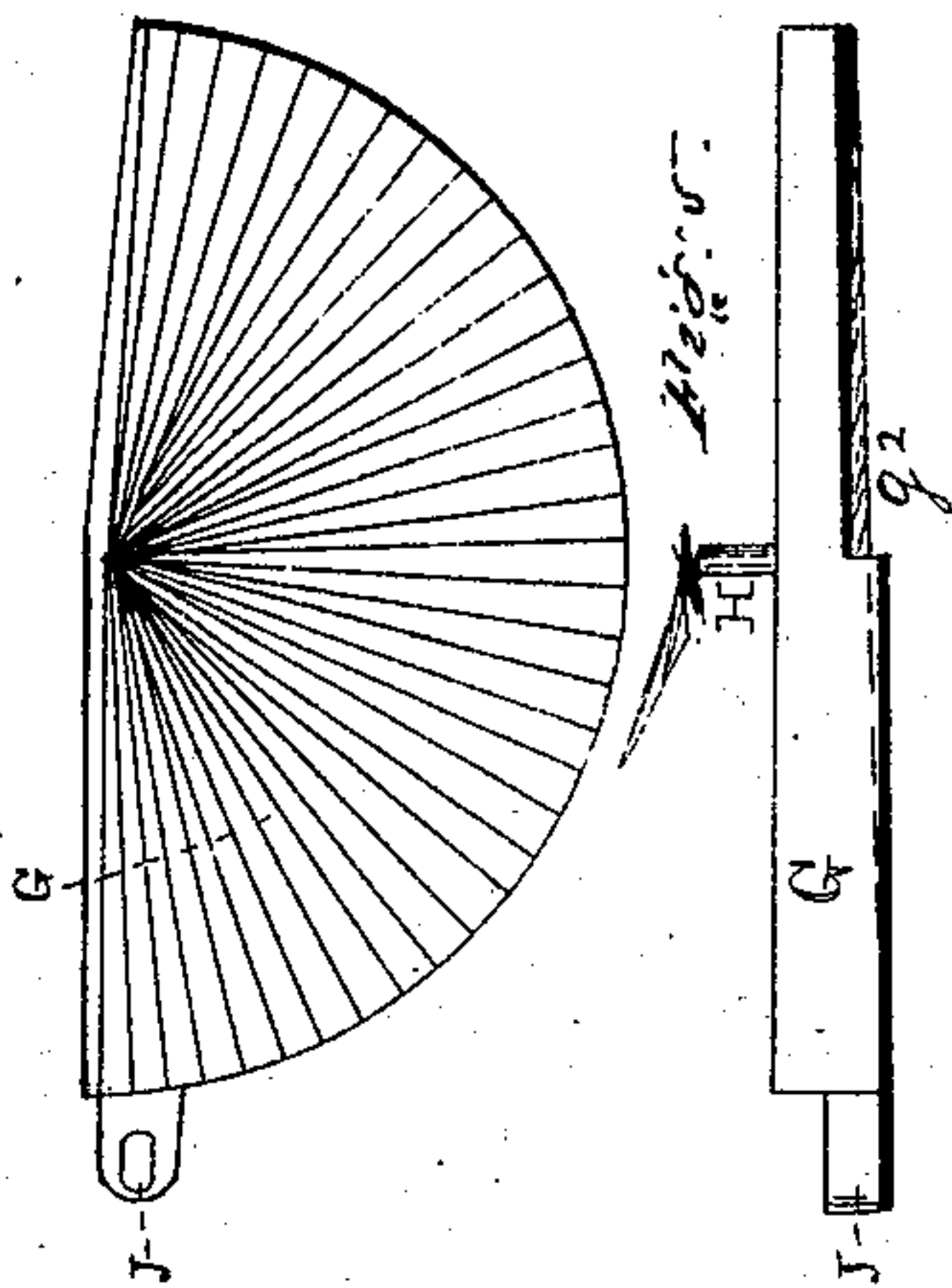


Fig. 1.

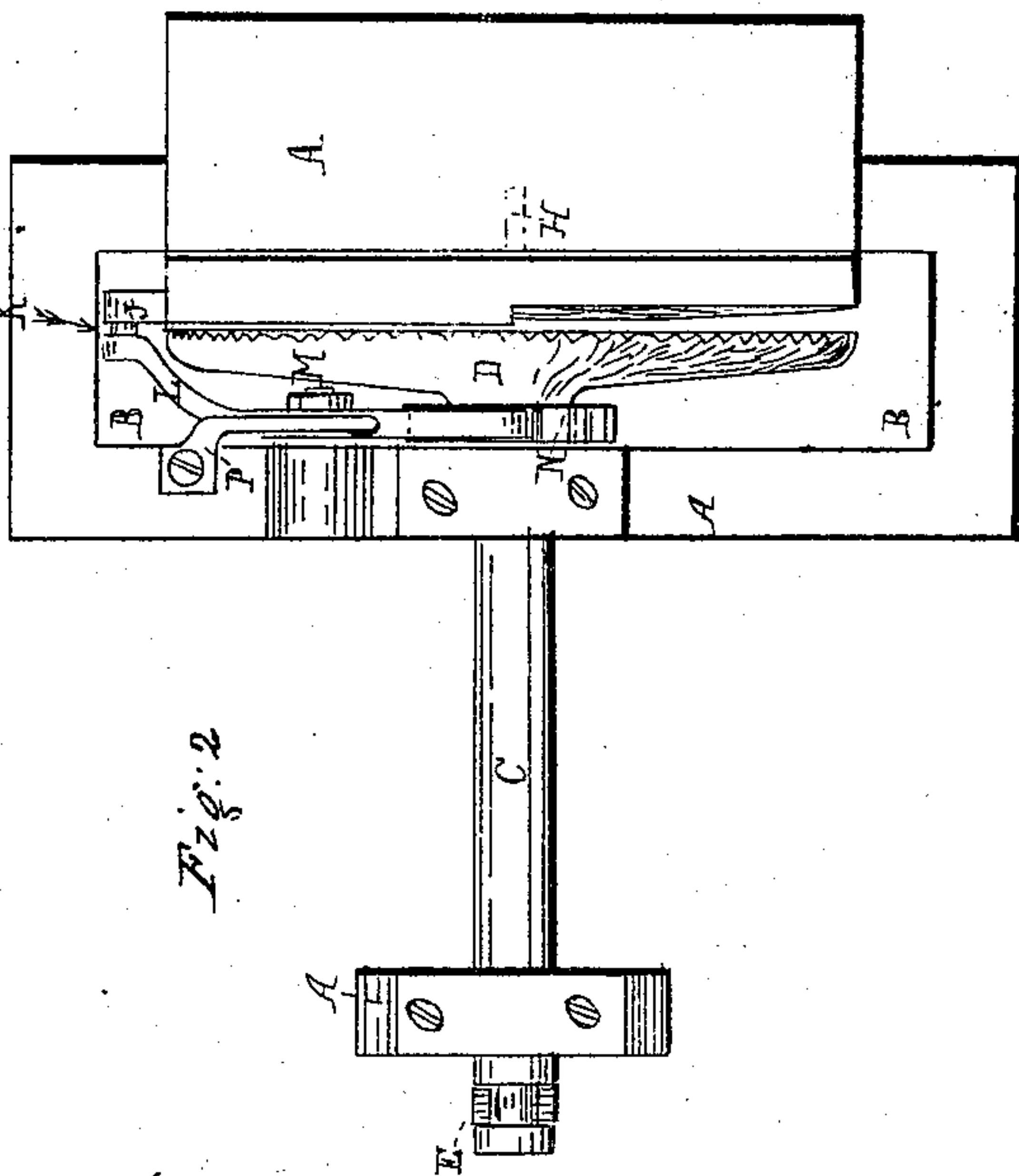


Fig. 2.

Attest Spencer's Invention
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UNITED STATES PATENT OFFICE.

ALBERT SPENCER, OF NEW YORK, N. Y.

MACHINE FOR SIZING HAT-BODIES.

Specification of Letters Patent No. 14,521, dated March 25, 1856.

To all whom it may concern:

Be it known that I, ALBERT SPENCER, of the city, county, and State of New York, have invented certain new and useful Improvements in Machinery for Sizing Hat-Bodies; and I do hereby declare the following to be a full description of the same.

My invention consists in giving to the rubber board (in the hat-felting machine patented to Phineas Emmons on the 24th day of July 1855, a slight vibratory motion when used in combination with the disk wheel in the Emmons machine, and constituting an improvement thereon. But to describe my invention more particularly I will refer to the accompanying drawing forming a part of this specification, the same letters of reference wherever they occur referring to like parts.

Figure 1, is a vertical side view of the machine. Fig. 2 is a plan view of the same. Fig. 3 is a transverse cut section of the machine through the line x, x Fig. 1. Figs. 4 and 5, are representations of a face and plan view of the rubber board.

Letter A, is the frame of the machine having a trough B, in one end of it. In this trough is arranged in a vertical position, (on an axis C) a disk or wheel D, having its face channeled with ribs radiating from the center outward. The object of this is to roll and carry the hat body forward through the machine. This wheel is arranged so as to be adjustable and apply an elastic pressure on the hat body, by means of the axis C, on which it is secured working in loose or sliding boxes, and operated by a weighted bell crank lever E. This lever is secured to the frame of the machine, and by its forked upper arm connecting with the end of the axis C, so that the weight F, according to its position on the long arm of the lever E, will always cause the wheel to press upon the hat with an elastic pressure.

Letter G, is the rubber board. This is made with a gradually increasing throat or pitch of face (as seen at g^2 , Fig. 5.) The object of this is to form a throatway, at one side of the wheel for the introduction of the roll of felt between the opposing faces of the wheel and rubber board. The face of this rubber board is also ribbed like the face

of the wheel, at the center point of the rubber board is an axis H, having one end secured into the frame of the machine, and upon which the rubber board vibrates. To one edge of the rubber board is an ear piece J, into which the pin K, of the vibratory lever L, is secured. This vibratory lever is secured by a center pin M, to the frame of the machine, having one end secured to the rubber board, and the other resting or working upon a tapis wheel N, secured upon the axis C, so that as the axis C, rotates, it causes a constant vibratory motion of the rubber board, and thereby causes the hat body to "size" or felt up, by a species of working operation analogous to hand sizing or felting up hat bodies. To the back of the lever L, is a spring P, the object of which is to hold the tail of the lever L, upon the tapis wheel to keep it in position while rotating. It will be obvious that this precise mode of arranging the tapis and lever for vibrating the rubber board may be varied by substituting a crank or cam motion, but as these would be but mere changes of the application of one well known equivalent device for that of another I do not deem it essential that I should undertake to describe them, as I claim that my invention would cover any such substitution of devices in combination with the wheel, for giving a vibratory motion to the rubber board.

Having now described my invention and its operation I will proceed to state what I claim and desire to secure by Letters Patent of the United States:—

The disk wheel having been patented, I disclaim the use of it irrespective of my combination, and therefore limit myself to the combination as hereinbefore set forth.

What I claim therefore is—

The application and use of the combination of the disk wheel and the rubber bed, when the bed receives a vibratory motion substantially in the manner and for the purposes hereinbefore described.

ALBERT SPENCER.

Witnesses:

C. L. BARRITT,
WM. BARRITT.