No. 33,141. PATENTED AUG. 27, 1861.

G. HALL, Jr.

THREAD DRESSING MACHINE.

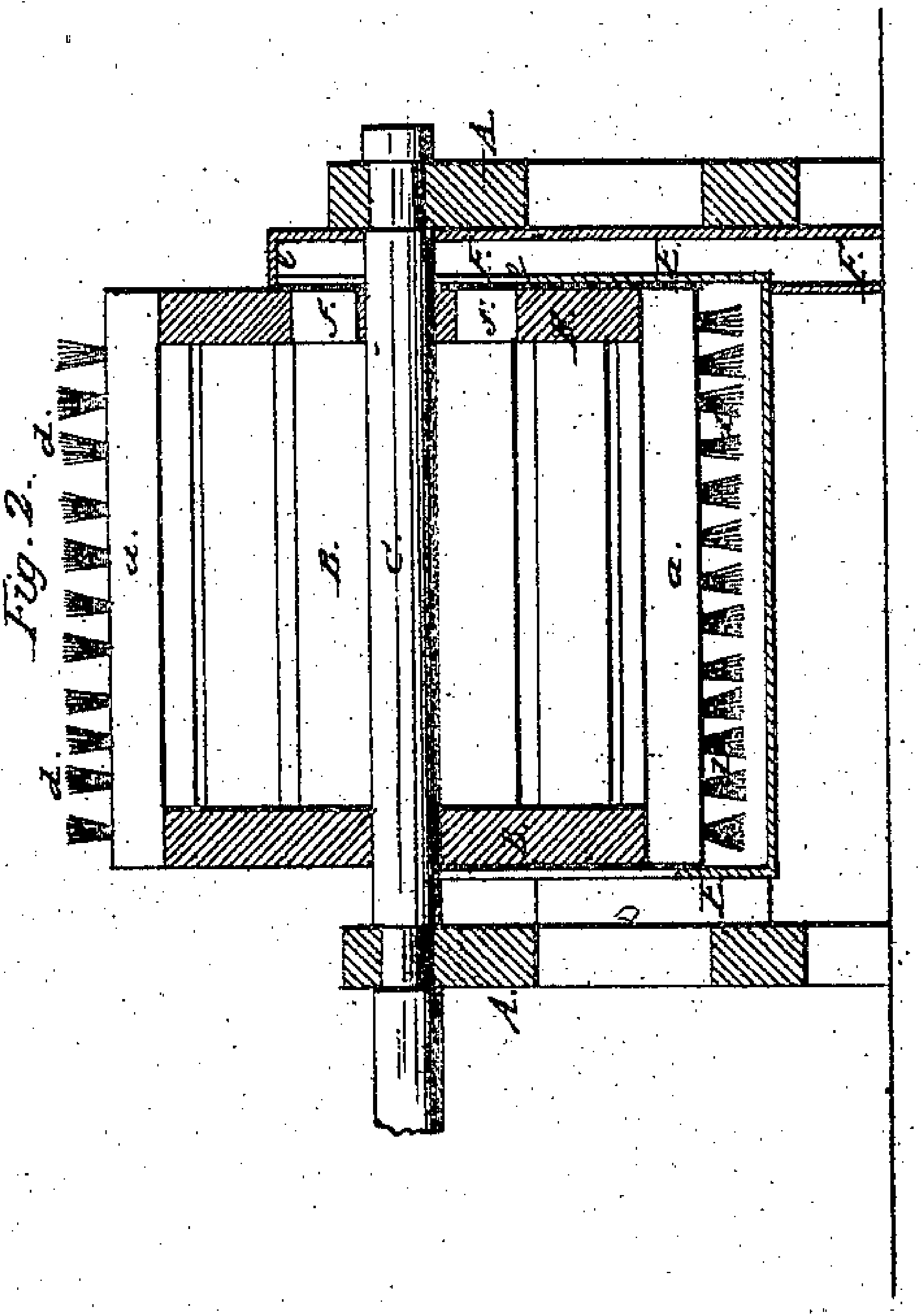
Fig. 2.

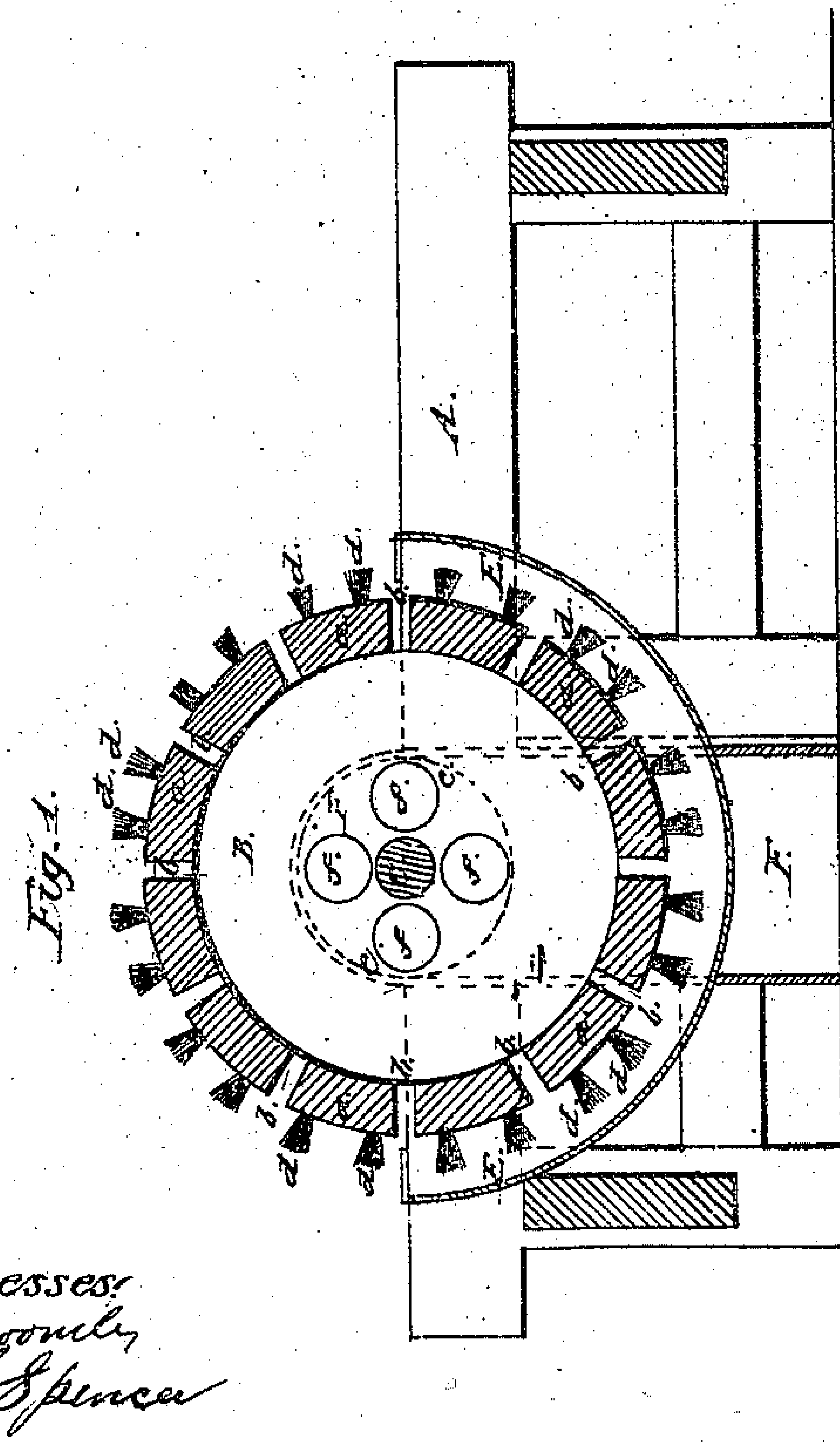
Fig. 1.

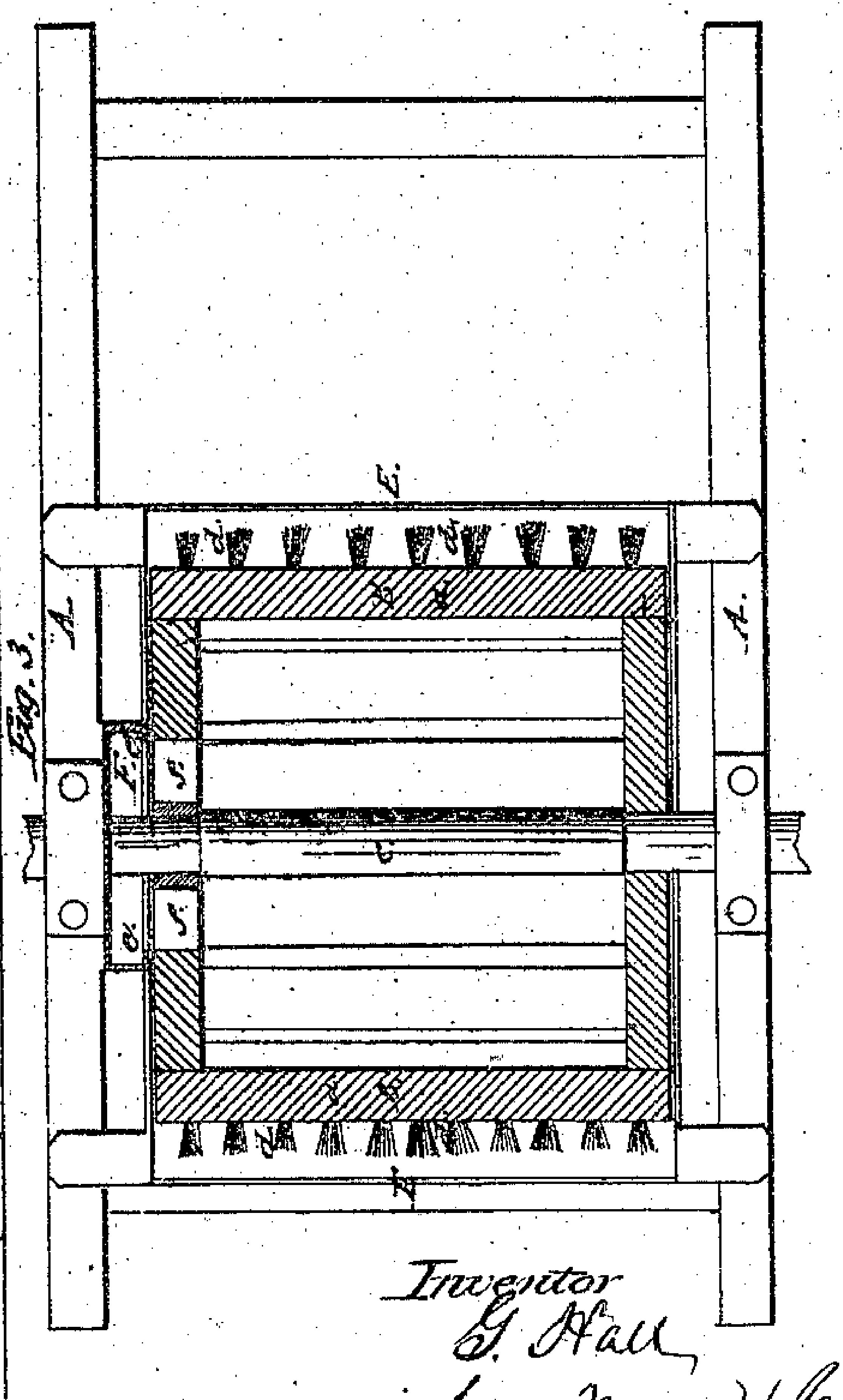
Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

GARDINER HALL, JR., OF WEST WILLINGTON, CONNECTICUT.

THREAD-DRESSING MACHINE.

Specification of Letters Patent No. 33,141, dated August 27, 1861.

To all whom it may concern:

Be it known that I, Gardiner Hall, Jr., of West Willington, in the county of Tolland and State of Connecticut, have invented a new and useful Improvement in Dressing Sewing-Thread; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 2 are vertical sections at right angles to each other, of such parts of a dressing machine as are necessary to illustrate my improvement. Fig. 3 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to apply my invention to use I will proceed to describe it with reference to the drawings.

A is the framing of the dressing machine.

B is the rotating brush cylinder, having its shaft C, in suitable bearings and having its periphery composed of a series of lags *a*, *a*, in which the brushes *d*, *d*, are inserted, with openings *b*, *b*, between the lags.

E is a stationary semi-cylindrical box arranged under the lower half of the cylinder A, its length being just sufficient to prevent the ends of the cylinder from touching it in their revolution as shown in Fig. 2 and its width and depth being such that some room is left within it outside of the tips of the brushes, as shown in Figs. 1 and 3.

F is a stationary air trunk arranged on one side of the cylinder surrounding the shaft C, and having an opening *e*, *e*, around the shaft for the admission of air to the cylinder through one or more openings *f*, *f*, provided in the adjacent end thereof. This trunk connects with an air-heating chamber in which air is heated by a furnace, by steam pipes, or by any other suitable means.

The brush cylinder, in its revolution, acts like a blower drawing the dry heated air through its openings *f*, *f*, from the trunk F, and discharging it through the spaces *b*, *b*, between the brush lags *a*, *a*. The heated air which is discharged from the lower part of the cylinder into the box E, circulates through among and between the brushes and escapes at the sides of the said box to the atmosphere, and that which is discharged from the upper part of the cylinder escapes between the brushes directly to the atmosphere, and such escaping air by reason of its heated and dry state greedily takes up the moisture from the sizing of the thread and carries it off while the brushes act upon the thread to dress it.

I do not claim the heating of air to dry the sizing in the dressing process by means of steam or hot air pipes or radiators arranged within the brush cylinder, but

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

The combination of the following devices in the construction of brush cylinders of thread dressing machines, to wit: the hollow cylinder, the brushes *d*, *d*, upon its periphery, the openings *b*, *b*, between the rows of brushes, the end passages *f*, *f*, and the hot-air trunk F. communicating with the interior of the cylinder by means of the passages *f*, the several parts being constructed and arranged substantially as described.

GARDINER HALL, Jr.

Witnesses:

De Witt C. Hall,
Charles F. Morrison.