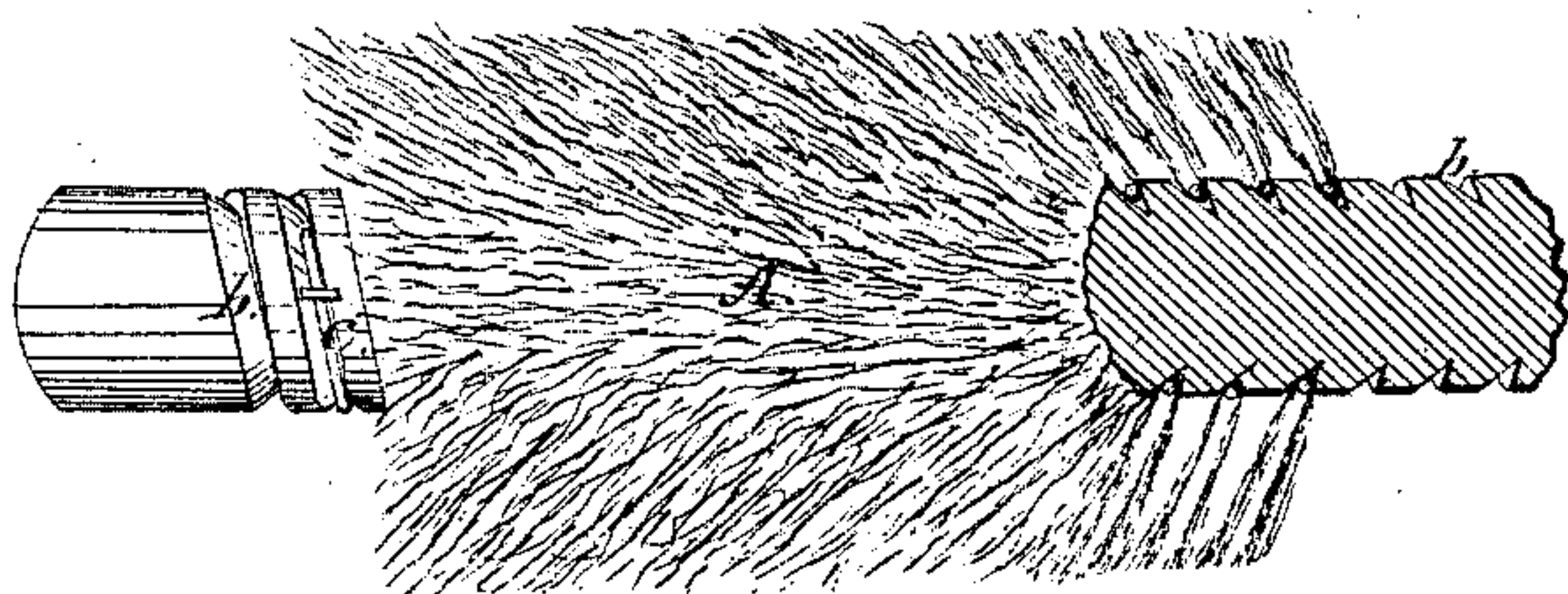
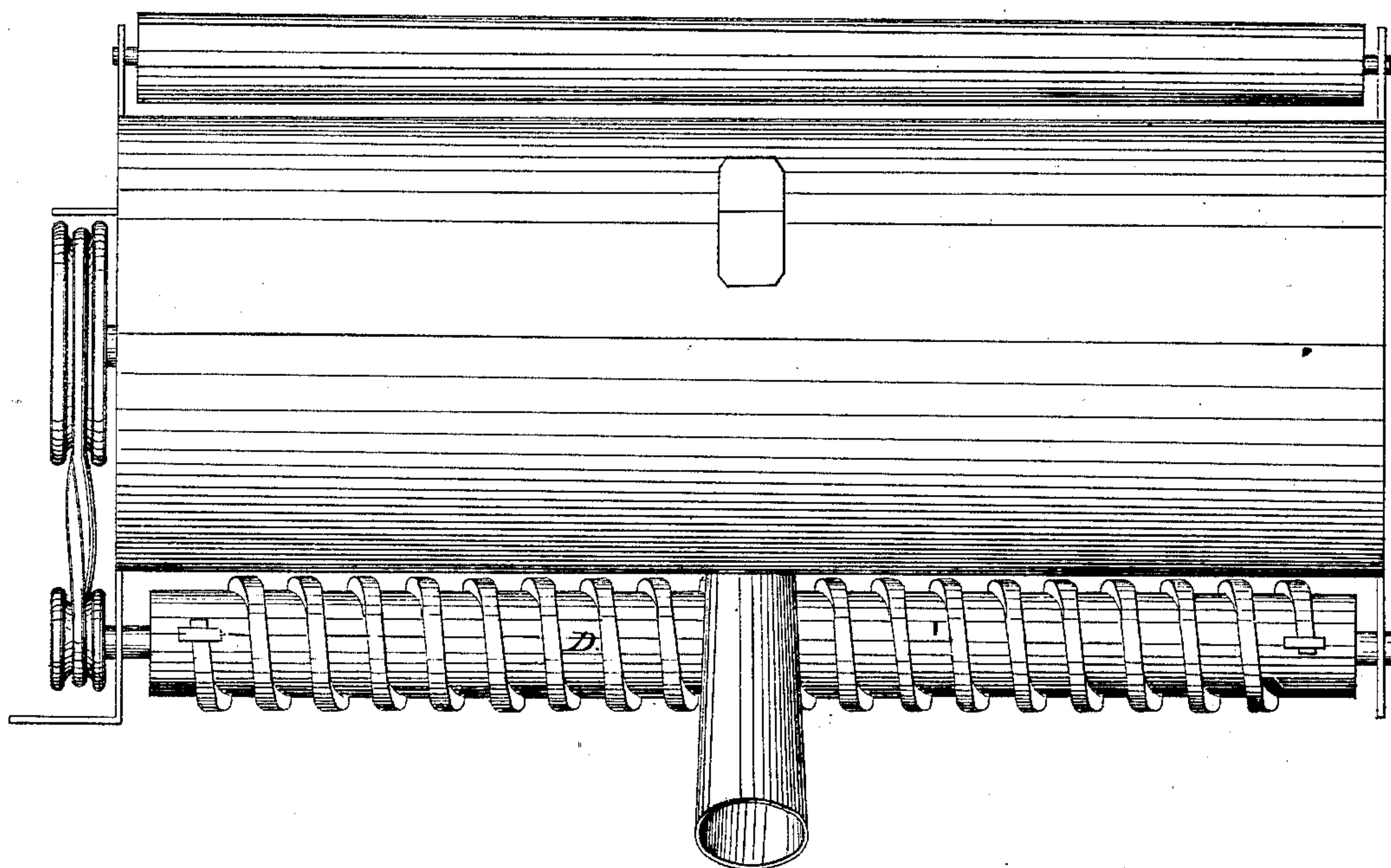
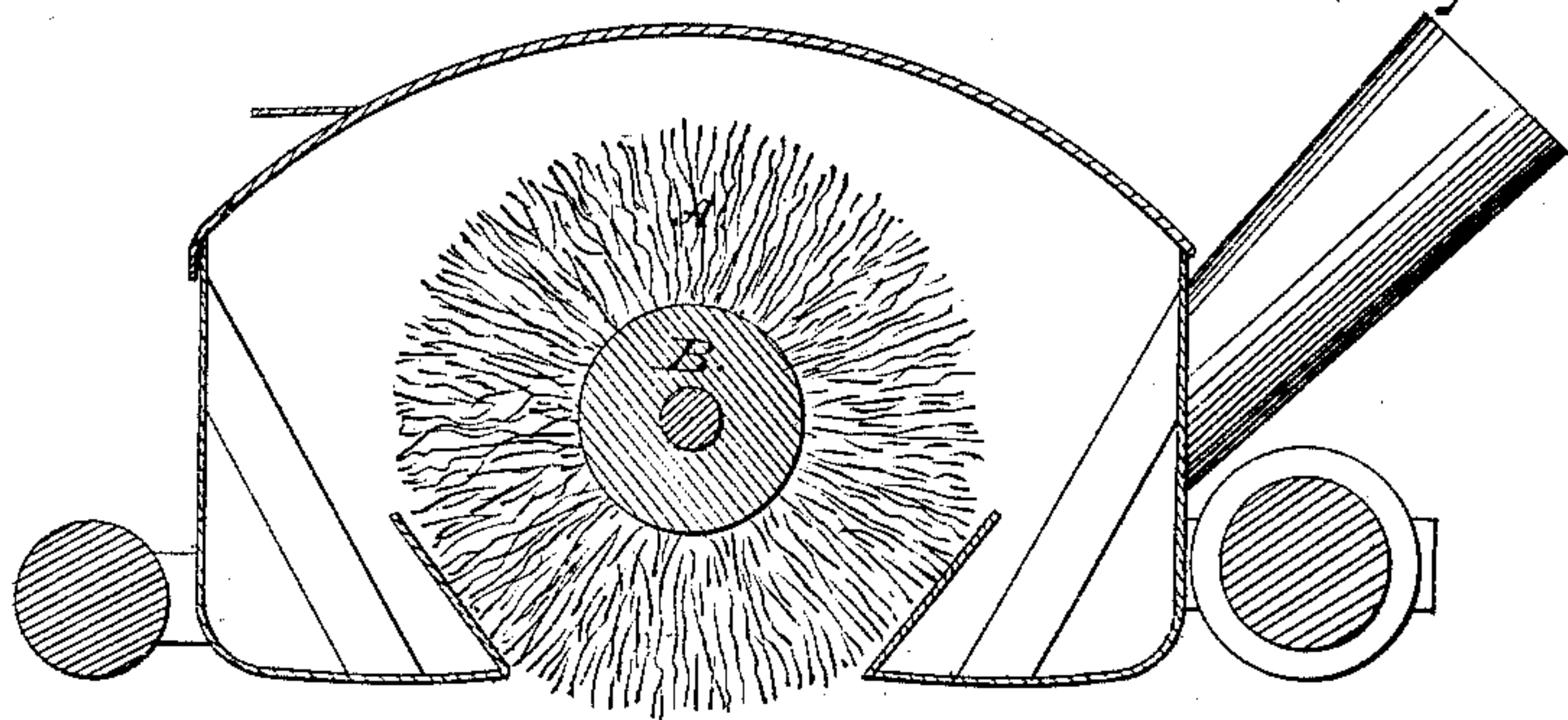


R. Shaler,

Carpet Sweeper,

Nº 21,451,

Patented Sept. 7, 1858



UNITED STATES PATENT OFFICE.

REUBEN SHALER, OF MADISON, CONNECTICUT.

CARPET-SWEEPER.

Specification of Letters Patent No. 21,451, dated September 7, 1858.

To all whom it may concern:

Be it known that I, REUBEN SHALER, of Madison, in the county of New Haven and State of Connecticut, have invented certain
5 Improvements in Machines for Sweeping Carpets, the construction and operation of which I have described in the following specification and illustrated in the accompanying drawings with sufficient clearness
10 to enable competent and skilful workmen in the arts to which it pertains or is most nearly allied to make and use my invention.

My said invention consists in, first, the combination of a cylindrical brush the bristles of which are inclined at an angle of about forty five degrees from a radial line passing directly outward from the center of the axis of the brush, with a traction roller in the construction of a machine for
20 sweeping carpets, as hereinafter more fully set forth. Second, in the construction hereinafter described for the traction roller by which a certain and efficient traction and adhesion combined with a smoothness of
25 action is secured at a trifling expense.

In the accompanying drawings Figure 1 is a vertical transverse section of my machine, showing the manner in which the parts are arranged. Fig. 2 is a plan of it.
30 Fig. 3 is a view of part of the brush, showing it partly in section, and partly in elevation, the object of this figure being to show the construction of the brush.

A is the brush. It is formed by attaching
35 ing bristles around a roller B in a spiral form as shown, by first turning a helical groove *b* in the roller and doubling the bristles upon a wire *c* or its equivalent and by it drawing them into the groove around
40 the roller, the wire being fastened at its ends to secure the bristles A in place. The groove *b* is made in such a manner as to give the bristles an inclination between a line drawn parallel to the axis of the shaft
45 and a radial line passing upward from said axis. The object of this arrangement is to allow them to yield more readily to the pressure of the carpet; the construction of the parts being such that the inclination of the
50 bristles and the spirality of the rows upon

the cylinder B both combine to produce such a result.

The brush is revolved in the direction indicated by the arrow and the lead of the spiral is such as to cause this direction
55 of rotation to draw the bristles of which the brush is composed along the carpet instead of thrusting them into it. The traction roller D is made by winding a strip of india rubber spirally around a roller of wood or
60 other suitable material, which construction gives a greater adhesion by means of the continually inclined edges of the spiral strip of rubber acting upon the carpet, which gives a very much greater adhesion than
65 would be realized if the roller was made by using a sheet or strips of rubber passing directly around the roller. It is not admissible in this place to use a large roller, and unless a strong traction can be secured
70 the brush will not be operated and the rest of the machine however good in itself would be worthless.

The particular improvements which constitute my said invention and which I claim
75 as having been originally and first invented by me are—

1. The combination in a machine for sweeping carpets of a brush the bristles of which are set at an angle of about forty
80 five degrees from a radial line passing directly outward from axis, constructed substantially as described with a traction roller, substantially as, and for the purposes set forth.
85

2. The construction of the traction roller of a sweeping machine in the manner described; that is to say, by winding a spiral flange of india rubber or other flexible and adhesive substance around a cylinder as set
90 forth, by which a very powerful adhesive traction of said roller is insured, and the roller is much more cheaply manufactured than an equally efficient one could otherwise be.

REUBEN SHALER.

Witnesses:

THOS. P. HOW,
JAMES H. GRIDLEY.