

(No Model.)

2 Sheets—Sheet 1.

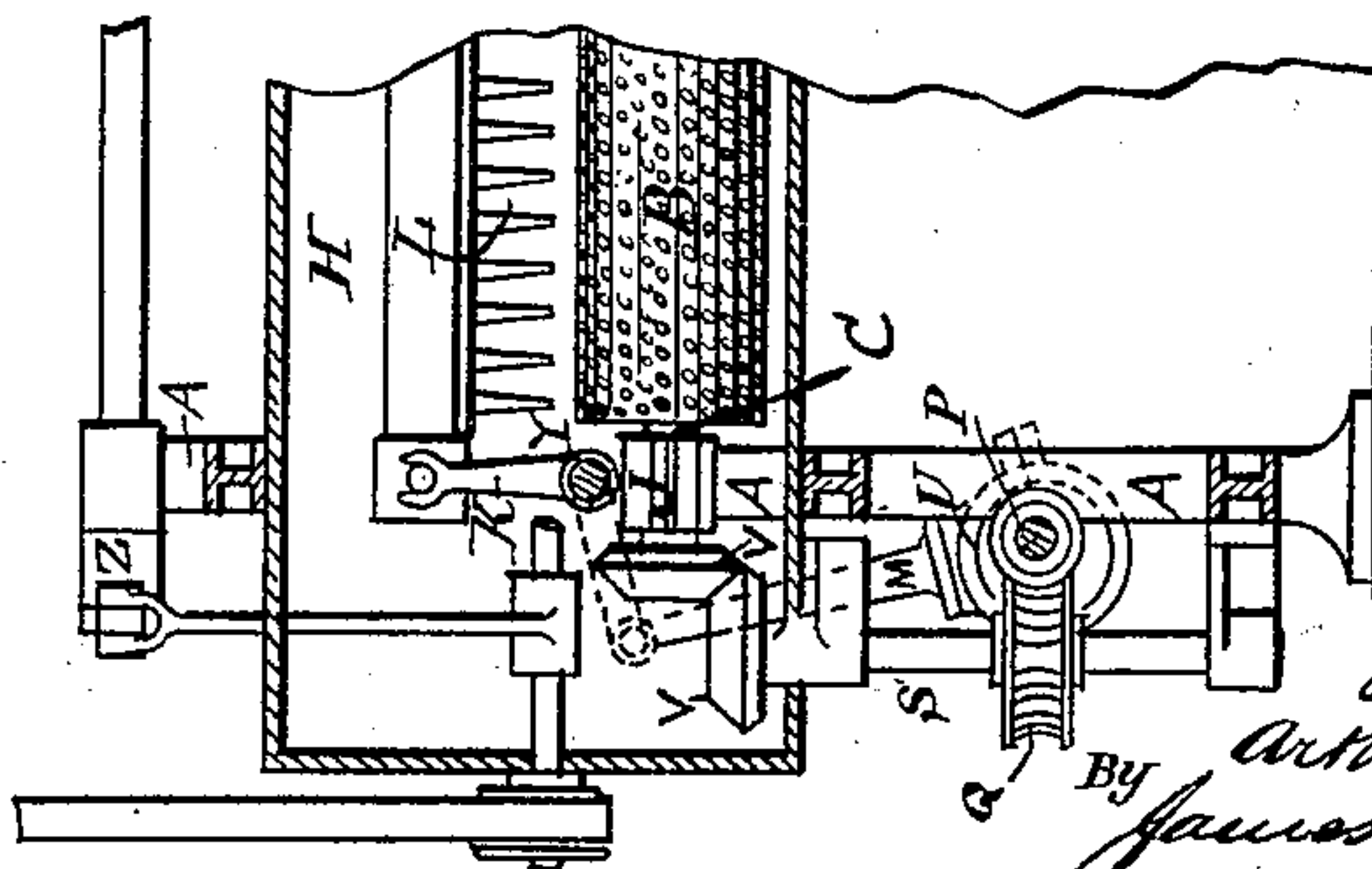
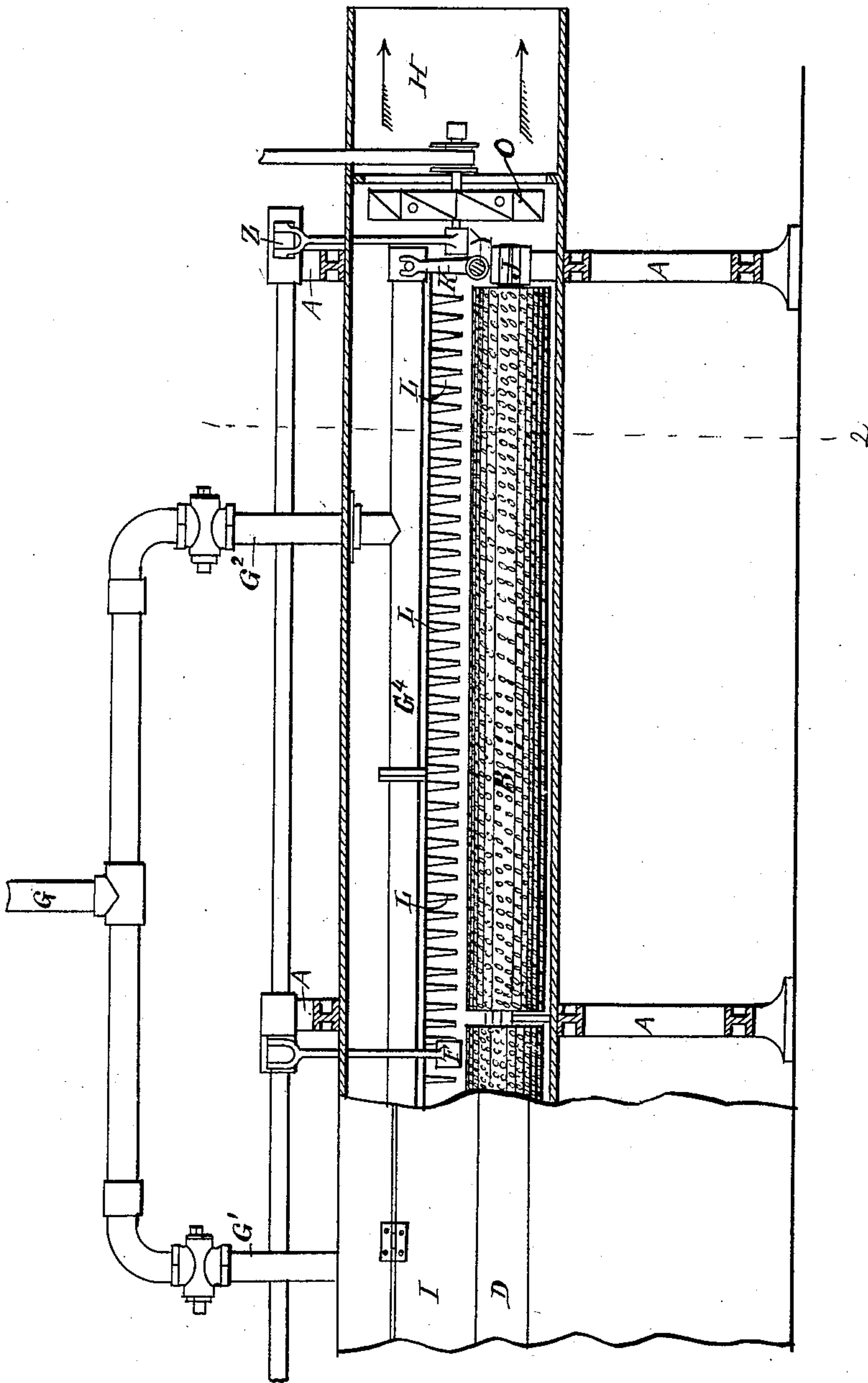
T. & A. S. WARSOP.

MACHINE FOR CLEANING OR PURIFYING CARPETS OR OTHER FABRICS.

No. 407,309.

Patented July 16, 1889.

Fig. 1.



Witnesses:

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2 Sheets—Sheet 2.

MACHINE FOR CLEANING OR PURIFYING CARPETS OR OTHER FABRICS.

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Fig. 3.

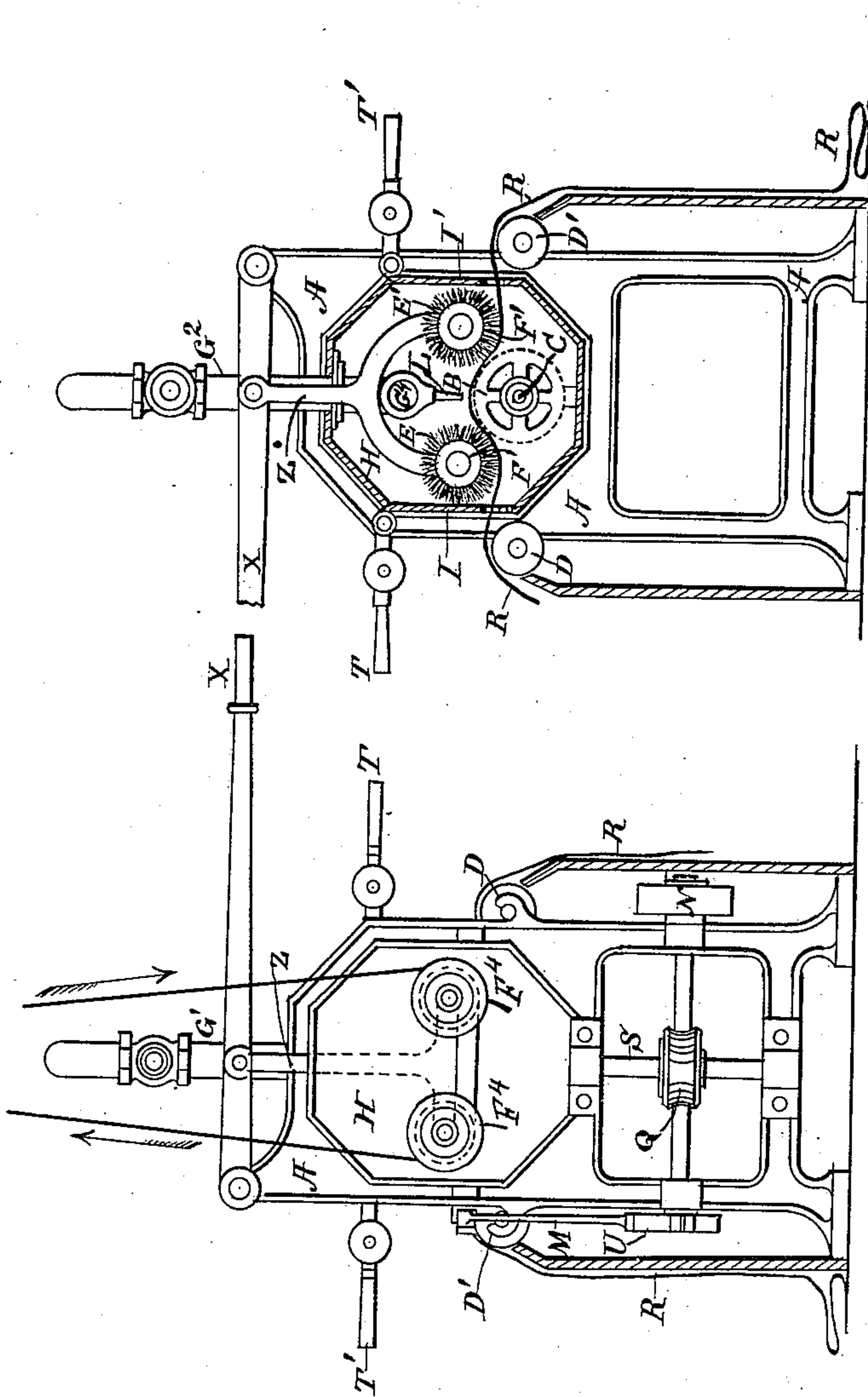


Fig. 2.

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UNITED STATES PATENT OFFICE.

THOMAS WARSOP AND ARTHUR SAMUEL WARSOP, OF NOTTINGHAM, COUNTY OF NOTTINGHAM, ENGLAND, ASSIGNORS TO GEORGE WIGLEY, OF SAME PLACE.

MACHINE FOR CLEANING AND PURIFYING CARPETS OR OTHER FABRICS.

SPECIFICATION forming part of Letters Patent No. 407,309, dated July 16, 1889.

Application filed February 11, 1888. Serial No. 263,736. (No model.) Patented in England June 8, 1886, No. 7,662.

To all whom it may concern:

Be it known that we, THOMAS WARSOP and ARTHUR SAMUEL WARSOP, both subjects of the Queen of Great Britain, and residents of Nottingham, in the county of Nottingham, England, have invented certain new and useful Improvements in Machines for Cleaning and Purifying Carpets or other Fabrics, (for which we have obtained a patent in Great Britain, No. 7,662, dated June 8, 1886,) of which the following is a full, clear, and exact specification.

This invention relates to an improved apparatus for cleaning and purifying carpets or other fabrics. For this purpose we cause a powerful current of compressed air, divided either into a number of small jets or one or more extended jets or sheets of air, to be thrown onto the carpet or other fabric to be cleansed and purified in such a manner that the air is forced completely through the interstices of the carpet or other fabric, and thereby carries with it the dust or other impurities that may be in the carpet into a receptacle made to receive them, and from which they are drawn away by a flue, fan, or other means. The carpet or fabric during the operation is drawn by hand or other suitable means slowly over a revolving perforated roller, the curved surface of the roller opening temporarily the interstices of the carpet, and more freely allowing the dust and impurities to be forced out by a powerful current or currents of compressed air from the supply-pipe and nozzles or slots placed immediately over this roller, and to which pipe and nozzles we give a longitudinal reciprocating motion, so as to more uniformly distribute the air-currents over the fabrics, and thus insure that the full width of the carpet passing over the roller is exposed to the air-currents. We also cause the carpet to pass in some cases under revolving brushes, both before and after being exposed to the air-currents, to further loosen and remove the dust and impurities, which are drawn away from the machine by a fan or other suitable means, the brushes, roller, and air-nozzles being all inclosed in a suitable casing with swing flap-

doors for the insertion and withdrawal of the carpets.

In order that our invention may be fully understood and readily carried out and into effect, we will proceed to describe the accompanying sheets of drawings, reference being had to the letters marked thereon.

Figure 1 is a front elevation of the carpet-cleaning machine, partly in section, with the brushes removed. Fig. 2 is an end elevation of the same machine. Fig. 3 is an end transverse sectional view through the line 1 2, Fig. 1.

Similar letters refer to similar parts throughout the several views.

In the views, A is the frame of the machine, carrying the roller, brushes, &c., in suitable bearings; also the casing H, in which revolves the wire-gauze roller or perforated drum B, supported by shaft C in bearings J J.

G is the main supply-pipe, conveying compressed air to the several branch pipes G' and G², and thence to the small nozzles L L, which are so formed as each to emit a minute jet of compressed air at their lower extremities.

Each of the pipes G' and G² is fitted with a stop-cock and arranged preferably as shown, so that one or more of the section-pipes carrying the nozzles may be shut off, as desired, to suit the width of the carpets to be cleaned. These pipes are connected to the horizontal pipe G⁴, supported at the ends within the casing by means of the levers or arms K K, and capable of a horizontal reciprocating motion on the levers K K and axles Y Y, by means of the rod M and eccentric U, driven by the driving-pulley N, which also revolves the perforated drum or roller B by the worm P, worm-wheel Q, shaft S, and bevel-wheels V V, as shown.

D D' are guide-rollers, over which the carpets pass to and from the machine.

E and E' are circular revolving brushes covering the whole length of the machine, and under which the carpets pass to and from the drum B, their height from which is regulated by the handle X and levers Z Z, the lower extremities of which form bearings F F' and in which the shafts carrying the brushes revolve.

These brushes are driven by an elastic band or other suitable means by the pulleys F⁴.

R represents the carpet or other fabric to be operated upon.

5 H is the casing or flue into which the dust and other impurities are forced from the carpets, and from whence they are drawn away by the air-propeller or exhausting-fan O, or by other suitable means.

10 I and I' are swing or flap doors hinged to the casing, and opened and closed by the handles and balance-weights T T', to keep the dust from flying outside the machine.

The operation of the machine is simple and
15 as follows: The carpet or other fabric is to be passed over the guide-roller D', under the brush E' to loosen the dust, and over the revolving perforated drum B, where it is thoroughly cleansed and purified by the com-
20 pressed air passing transversely through it from the nozzles L L, then under the brush E, and out of the machine over the guide-roller D. When putting in and drawing the carpet from the machine, the doors I I' are
25 opened by the handles T T', and closed again as soon as the machine is set in motion. The pressure of the revolving brushes E and E' on the carpet is regulated by the attendant by means of the handle X. After the car-
30 pet has been cleaned once it may be again run through the machine if not sufficiently cleaned. The reciprocating action of the nozzles L L in pipes G' and G² causes the air-jets

to be more evenly distributed over the carpet passing under them.

Having now particularly described the nature of our said invention and in what manner the same is to be operated, we declare that what we claim is—

1. The combination, with the frame, the shaft journaled therein, the casing, and the perforated drum in said casing and carried by said shaft, of the supply-pipes, the nozzles thereon, the fan at one end of the casing, the brushes, and means, substantially as described, for revolving said drum and brushes, substantially as and for the purpose specified.

2. The combination, with the frame, the shaft journaled therein, the casing, and the perforated drum in said casing and carried by said shaft, of the supply-pipes, the nozzles carried thereby, the fan at one end of the casing, the brushes, the levers K K, the axles Y Y, rod M, eccentric U, worm P, driving-pulley N, worm-wheel Q, shaft S, and bevel-wheels V V, all arranged and operating substantially as and for the purpose specified.

In testimony that we claim the foregoing we have hereunto set our hands this 30th day of August, 1887.

THOMAS WARSOP.

ARTHUR SAMUEL WARSOP.

Witnesses:

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