

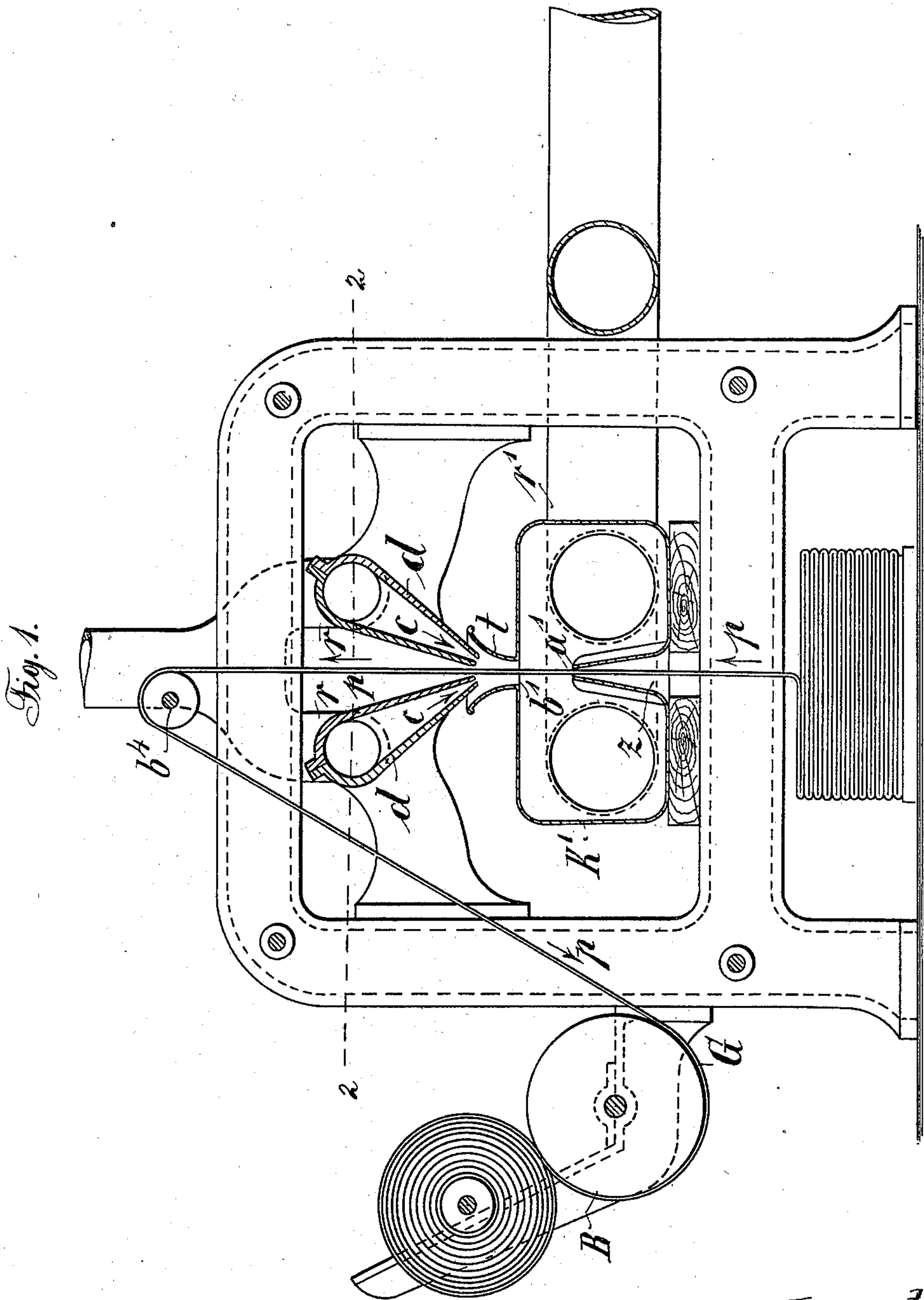
(No Model.)

2 Sheets—Sheet 1.

C. SCHARRER.
CARPET CLEANER.

No. 559,498.

Patented May 5, 1896.



Witnesses
B. S. Ober,
[Signature]

Inventor
Carl Scharrer
By [Signature] Atty.

(No Model.)

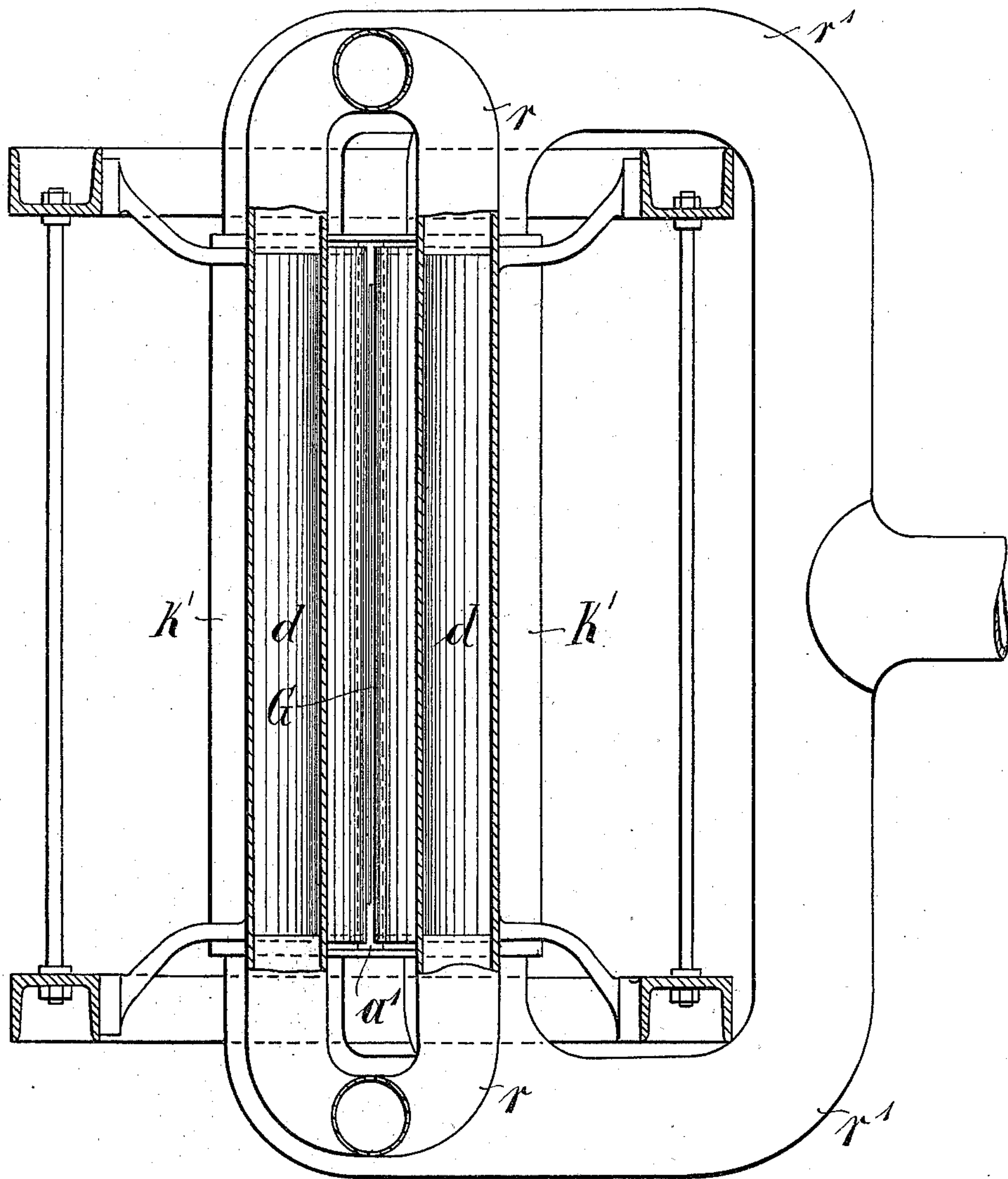
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Fig. 2.



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UNITED STATES PATENT OFFICE.

CARL SCHARRER, OF HEIDENHEIM-ON-THE-BRENTZ, GERMANY.

CARPET-CLEANER.

SPECIFICATION forming part of Letters Patent No. 559,498, dated May 5, 1896.

Application filed February 28, 1895. Serial No. 540,012. (No model.) Patented in France July 13, 1893, No. 231,524; in Germany July 13, 1893, No. 75,007, and in England July 14, 1893, No. 13,718.

To all whom it may concern:

Be it known that I, CARL SCHARRER, a subject of the German Emperor, and a resident of Heidenheim-on-the-Brenz, Germany, have
5 invented certain new and useful Improvements in Carpet-Cleaning Machines, (for which I have obtained Letters Patent in Germany, No. 75,007, dated July 13, 1893; in France, No. 231,524, dated July 13, 1893, and
10 in Great Britain, No. 13,718, dated July 14, 1893;) and I do hereby declare the following to be a clear and exact description of the invention.

My invention has relation to machines for
15 finishing or cleansing textile fabrics, felt, paper, and similar material in web or sheet form; and it has for its object the provision of means whereby the efficiency of these machines is materially increased and the labor
20 involved considerably reduced, as will now be fully described, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a finishing or cleaning machine embodying my
25 invention, and Fig. 2 is a horizontal section of said machine.

Similar letters of reference indicate like parts wherever such may occur in the figures of drawings just described.

30 The essential elements which constitute my invention consist of an air-blast arranged to subject both surfaces of the fabric to a blast of air, a dust-collector combined with such air-blast and connected with a suitable exhaust apparatus, and a winding beam or roller
35 for the finished and cleansed fabric.

The air-blast apparatus is composed of two supply-pipes *r*, having suitable branches connected with the opposite ends of two blast-
40 pipes *d*, which in cross-section have the form of twyers or jet-nozzles, as shown in Fig. 1, said nozzles being arranged so as to converge and direct the blasts of air issuing from the nozzle orifices or slits *c* downwardly upon op-
45 posite sides of the web of material *G* along coincident lines, (the web traveling in the direction of arrow *p*, Fig. 1,) for the purpose of preventing all undulating or flapping movement of said web, the jets of air acting in op-
50 position to each other, thereby maintaining the web of material in a normally straight

line. Below the orifices or slits *c* of the nozzles *d* I arrange a dust-collecting chamber *K'*, through which the web of material is guided, the inlet-slot *a'* of said chamber being formed
55 by two converging inwardly-projecting and more or less elastic plates *a*, that hug the web of material from opposite sides, not only for the purpose of preventing escape of lint or other fiber, dust, &c., from the chamber *K'*,
60 but also to act as deflectors for the jets of air issuing from the blast or jet nozzles *d*, said chamber having an outlet-port on each side of the inlet-slot *a'*, said ports being connected through pipes with any suitable exhausting
65 device.

The outlet *t* for the web of material has the form of a funnel or inverted cone in cross-section, forming a comparatively narrow slit or slot *b'*, through which the web of material
70 passes, and thence between the blast-nozzles *c* to a guide-roll *b*⁴, and finally to a winding-roll *B*. As shown in Fig. 1, the nozzles *c* project into the funnel-shaped outlet *t* and lie very close to the sides thereof, the parts op-
75 erating on the principle of the injector, so that the blast of air cannot be diverted from the dust chamber or collector *K'*.

It will readily be seen that by means of the construction and arrangement of devices but
80 an insignificant amount of lint or fiber or dust will escape into the room in which the apparatus is installed, so that the health of the attendants is not injuriously affected. Furthermore, but little labor is involved in
85 attending to the machine.

The revoluble elements to draw the material through the machine may be driven in any suitable manner, as by belt-pulleys or chain or other gearing, from any desired
90 motor.

It will of course be understood that the blast-nozzles are of such a length as to act upon the whole width of the web of material.

For thoroughly cleaning woven fabric, such
95 as carpets and the like, the same before passing the apparatus above described may be subjected to an energetic beating action, preferably to an alternate brushing and beating, which may be effected by hand or in any
100 other desired manner.

Having thus described my invention, what

I claim as new therein, and desire to secure by Letters Patent, is—

1. In a machine of the class described, a dust-box having a slot in its top and bottom diametrically opposite each other, upwardly-
5 converging flaps or plates one on each side of the bottom slot forming a partition within the box, a dust-guide funnel-shaped in cross-section projecting from the upper slot, a suction-port in one of the vertical walls of the
10 dust-box on opposite sides of the partition, and means for passing a web of material upwardly through the slots, in combination with two downwardly-coverging blast-nozzles arranged above the dust-box with their orifices
15 within the dust-guide and in the same plane and forming between them a passage for the aforesaid web, substantially as and for the purpose set forth.
2. In a machine of the class described, a
20 dust-box having a slot in its top and bottom diametrically opposite each other, upwardly-

converging resilient or yielding flaps or plates one on each side of the bottom slot forming a partition within the box having inclined
25 outer faces, a suction-port in one of the walls of the box on each side of the partition, a dust-guide, funnel-shaped in cross-section projecting from the upper slot, and means for passing a web of material upwardly through the
30 slots; in combination with two downwardly-converging blast-nozzles arranged above the dust-box with their orifices in the same horizontal plane within the dust-guide and forming between them a passage for the aforesaid
35 web, substantially as and for the purpose set forth.

In testimony whereof I have hereto signed my name in the presence of two witnesses.

CARL SCHARRER.

Witnesses:

CARL B. HOLZMANN,
KARL WIERTMEIER.