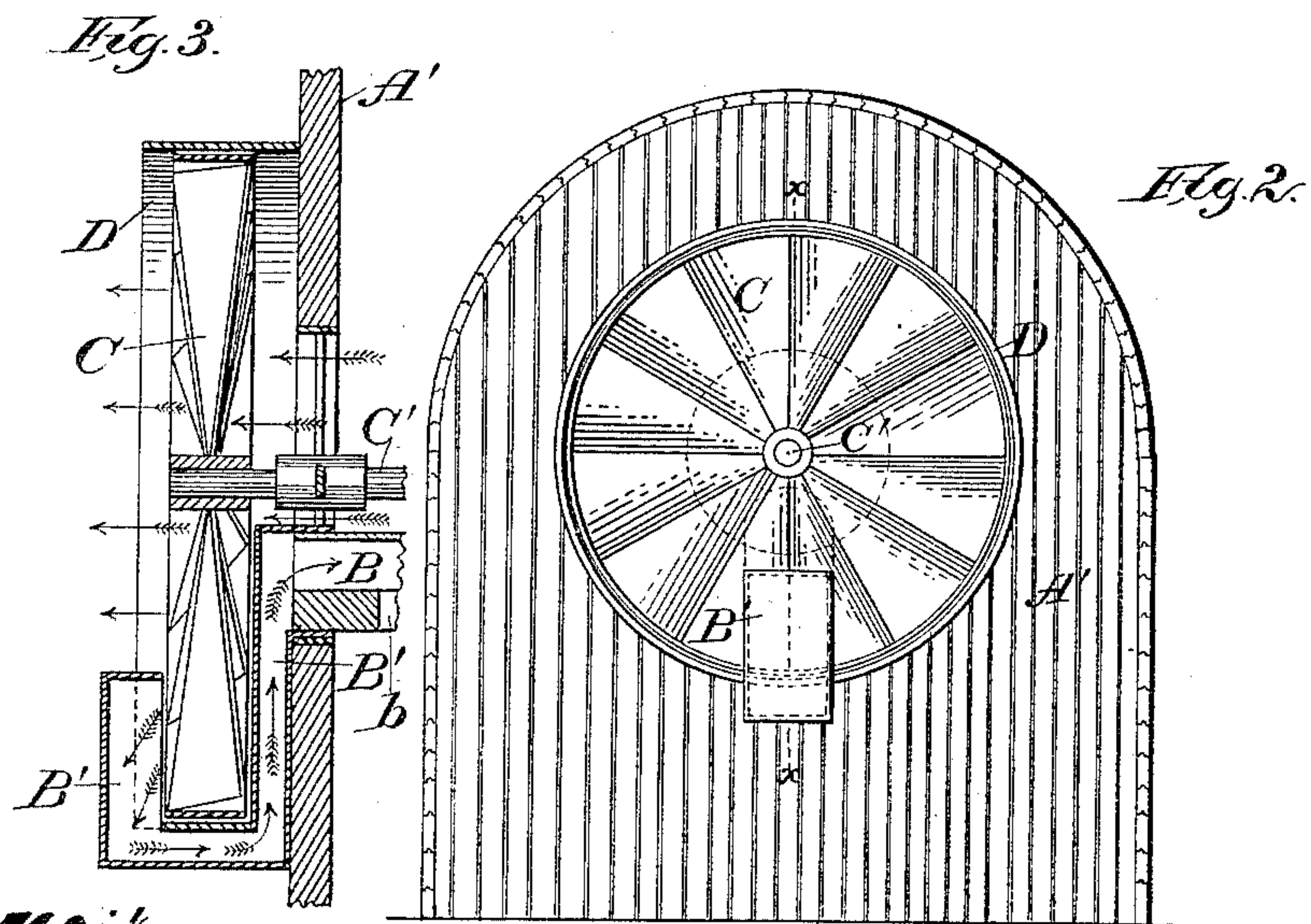
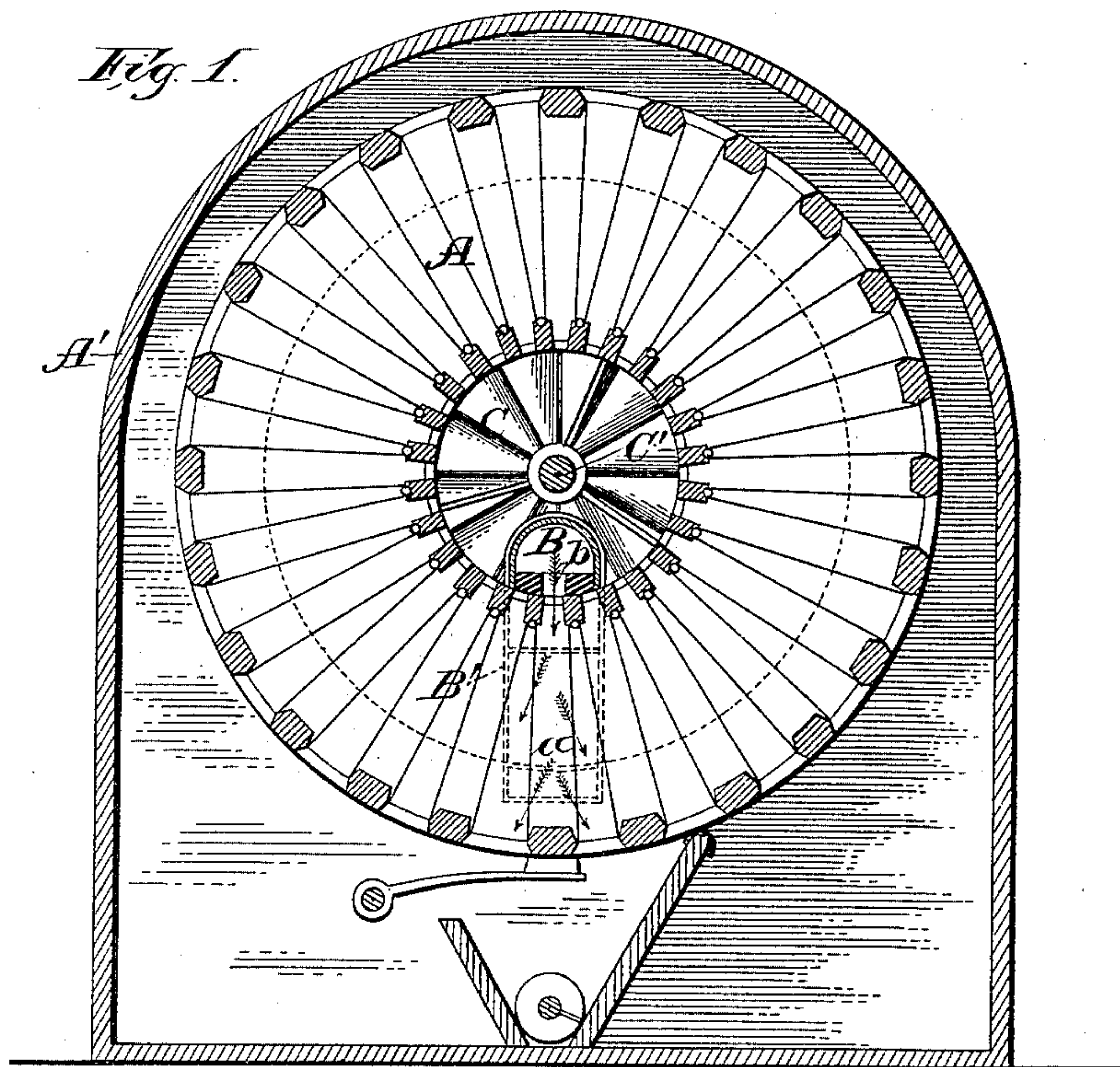


(No Model.)

W. RICHARDSON.
DUST COLLECTOR.

No. 327,825.

Patented Oct. 6, 1885.



Witnesses:
E. G. Jones
R. Platz

Inventor:
Wm. Richardson
By *Stout & Underwood*
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM RICHARDSON, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO THE
MILWAUKEE DUST COLLECTOR MANUFACTURING COMPANY, OF
SAME PLACE.

DUST-COLLECTOR.

SPECIFICATION forming part of Letters Patent No. 327,825, dated October 6, 1885.

Application filed February 25, 1885. Serial No. 156,975. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RICHARDSON, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented
5 certain new and useful Improvements in Dust-Collectors; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to dust-collectors, and
10 is an improvement in dust-collectors substantially such as that shown in Letters Patent granted to Faustin Prinz on the 20th day of February, 1883, Nos. 272,473 and 272,474. In the machine described in said Letters
15 Patent the dust-collector consists of radially-arranged sections forming a drum or balloon, the radial walls of which are of cloth adapted to permit the passage of air, which in its passage is strained or freed from its
20 dust. The center of the balloon is open, and the purified air is discharged therefrom. The balloon revolves with a step-by-step motion, each step being equal to the inner peripheral width of the section. Thus the sections are
25 brought in succession under a chamber or tube extending through the center of the balloon, said chamber having a slotted bottom and an air-tight top, with suitable packing, so that as each section is arrested under the
30 chamber it is isolated from the other sections of the balloon. This chamber being in communication with the atmosphere permits the outside air to be drawn through the tube and each isolated section, and thence back
35 through the sections not isolated and out through the open center of the balloon to the open air through the suction-fan. By this construction a reverse current is induced through each section as it is isolated, which
40 current dislodges the dust adhering to the cloth.

The object of my present invention is to obtain a stronger current than has heretofore been obtainable in the devices covered by
45 the patents above referred to; and to this end my invention consists in devices for forcing a positive reverse current through the slotted air-chamber and the cloth of the section or

sections of the balloon isolated therewith without interfering with the main current 50 through the other sections, as will be fully described hereinafter.

In the drawings, Figure 1 is a vertical transverse section through a Prinz dust-collector, with my device shown in dotted lines 55 thereon. Fig. 2 is an elevation of one end of a Prinz dust-collector with my device attached. Fig. 3 is a section on line X X, Fig. 2.

A is the balloon, which is inclosed in a 60 suitable housing, A'. B is the chamber for the reverse current. C is a suction-fan, which is carried by a shaft, C'. B' is a tube that leads from one end of the chamber B down beneath the fan and up again on the outside 65 of it, that portion lying parallel and adjacent to the outer face of the fan being open, so that as the fan revolves in its casing D a portion of the air drawn through the balloon will be driven through the tube B' into the 70 chamber B, and thence through slot *b* in the bottom of chamber B into and through the cloth of the isolated section *a* of the balloon and out into the housing, from whence to be withdrawn by the fan through the cloth of the 75 sections not isolated. Thus I am enabled, without any greater expenditure of power than formerly, to produce a reverse current sufficiently strong to free the cloth of each isolated section of all adhering matter, how- 80 ever tenacious.

I do not limit myself to the precise construction of any of the features of my attachment, as they may be varied in many ways without departing from the spirit of my in- 85 vention.

I propose, ordinarily, to use a fan on each end of the machine; but in case I find it expedient to take the reverse current from only one fan I may shut off the other by means of 90 a valve or damper.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, in a suitable casing, of a 95 dust-collecting balloon provided with a slotted

tube or chamber, a fan connecting with the
balloon-center for exhausting therefrom, and
a fan connected to said slotted chamber, iso-
lating the sections and adapted to force air
5 through said isolated sections, as and for the
purpose set forth.

In testimony that I claim the foregoing I

have hereunto set my hand, at Milwaukee, in
the county of Milwaukee and State of Wis-
consin, in the presence of two witnesses.

WILLIAM RICHARDSON.

Witnesses:

S. S. STOUT,

H. G. UNDERWOOD.