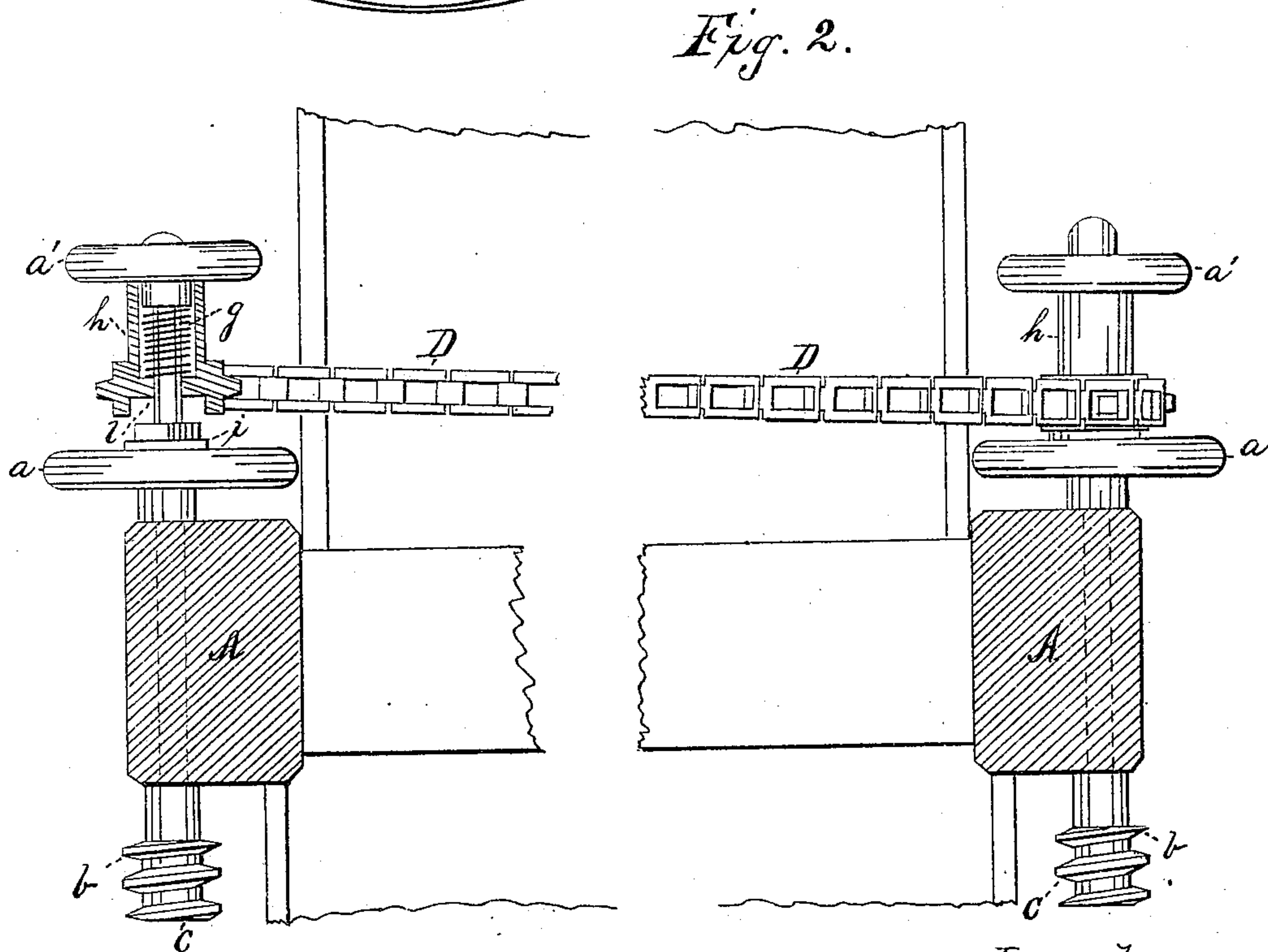
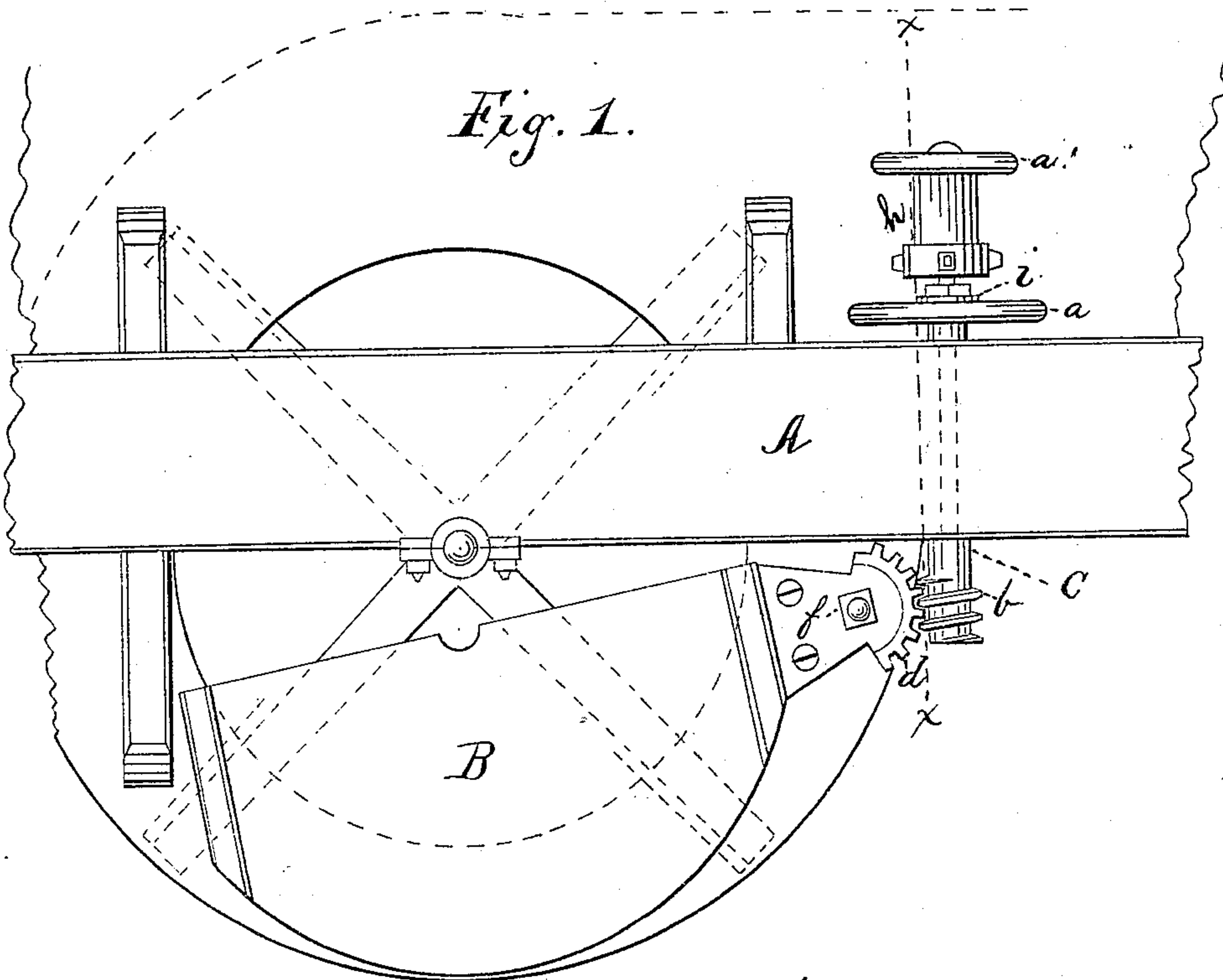


(No Model.)

Z. MACOMBER.

MECHANISM FOR OPERATING FAN DOORS OF THRASHING MACHINES.
No. 249,065.

Patented Nov. 1, 1881.



Witnesses,
Edwin L. Yerrell,
H. Aubrey Toutmin.

Inventor
Ozbedee Macomber.
By C. M. Alexander
his Atty.

UNITED STATES PATENT OFFICE.

ZEBEDEE MACOMBER, OF BEDFORD, MICHIGAN.

MECHANISM FOR OPERATING FAN-DOORS OF THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 249,065, dated November 1, 1881.

Application filed July 6, 1881. (No model.)

To all whom it may concern:

Be it known that I, ZEBEDEE MACOMBER, of Bedford, in the county of Calhoun, and in the State of Michigan, have invented certain
5 new and useful Improvements in Mechanism for Operating Fan-Doors of Thrashing-Machines, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompany-
10 ing drawings, and to the letters of reference marked thereon, making a part of this specification.

The object of this invention is to provide suitable mechanism whereby either or both of
15 the blower-doors of a grain-separator may be opened or closed and regulated at will from either side of the separator by the operator without necessitating passing around or under the machine to reach said doors, as at present
20 required. These objects I attain by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a separator-blower, and Fig. 2 represents a trans-
25 verse vertical section on the line *x x* of Fig. 1, showing but one of the loose sleeves in section.

The letter A indicates the frame of that part of the separator carrying the blower, and B one of the blower-doors or blinds, represented
30 in the present instance as partly open and pivoted to the blower at *f*.

The letter C indicates two vertical shafts, journaled at opposite sides of the machine in suitable bearings in the frame A. The upper
35 ends of these shafts have fitted to them loose sleeves *h*, provided with spiral springs *g*, which operate to hold the sleeves down upon the square shoulders *i* of the shaft, the sleeves being provided with properly-squared recesses *l*,
40 for the purpose of engaging the shoulders. Both the shaft and the sleeves are provided with hand-wheels *a* and *a'*, by which they may be operated. The lower ends of the shafts C
45 are provided with screws *b*, which engage pinions or toothed segments *d* on the respective doors of the machine, whereby the door or blind

may be opened or closed by turning its shaft. Extending across and engaging suitable pulleys on the sleeves is an endless chain or belt, D.

The operation of my invention is as follows: 50
When it is desired to open or close both of the doors or blinds of the blower simultaneously, the operator turns either set of the four hand-wheels *a a' a' a'*, according to the side of the machine at which he is located. When it is
55 desired to open either one of the doors or blinds without disturbing the other, the sleeve *h* is elevated on one of the shafts, so as to turn loosely thereon, when, by turning said sleeve, the door on the opposite side from the operator
60 is operated. To operate the door on the same side the operator turns the shaft while the sleeve is elevated thereon.

The blower-doors in the present instance are represented as turning on pivots; but it is evi- 65
dent that with a modification of the gearing sliding doors might be substituted without departing from the spirit of my invention.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, 70
is—

1. In combination with the movable doors of a separator-blower, the shafts journaled at opposite sides of said blower, and the gearing for operating the doors, the loose sleeves mount- 75
ed on said shafts and adapted to engage and disengage the same, and the connecting chain or belt, substantially as and for the purposes specified.

2. In combination with the shafts, a chain 80
or belt and loose pulleys, as described, the worm-gear at their lower ends, and the pivoted doors, having pinions or toothed segments thereon, substantially as and for the purposes
85 specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 25th day of June, 1881.

ZEBEDEE MACOMBER.

Witnesses:

G. MACARD,
A. C. DRAKE.