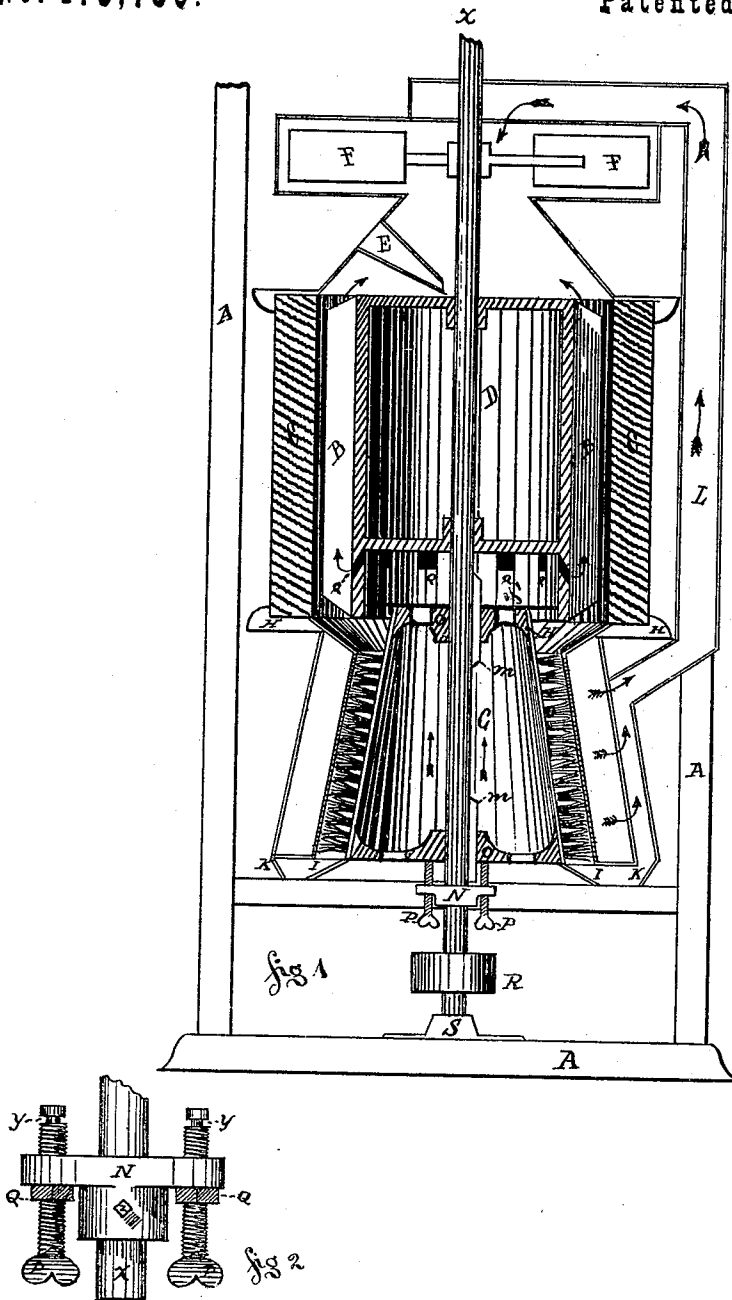


G. E. PALMER.
GRAIN-CLEANER.

No. 175,739.

Patented April 4, 1876.



Witnesses.
W. A. Leggat,
Subscribed

Inventor.
G. E. Palmer

UNITED STATES PATENT OFFICE.

GEORGE E. PALMER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN GRAIN-CLEANERS.

Specification forming part of Letters Patent No. **175,739**, dated April 4, 1876; application filed March 30, 1875.

To all whom it may concern:

Be it known that I, GEORGE E. PALMER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Machinery for Cleaning Grain, of which the following is a specification:

My invention relates to that class of machines known as brush-machines, when used in connection with and attached to a decorticator or hulling apparatus; and the improvements I have made therein consist in the construction and arrangement of the air ports and passages and the introduction of a diaphragm between the upper and lower portions of the machine for the purpose of dividing the draft; and to the combination of set-screws with the cone brush and shaft for the purpose of adjustment.

In the accompanying drawings, Figure 1 is a vertical cross-section of a machine embodying my invention. Fig. 2 is a view of the device for adjusting the brush.

Upon the shaft X of a decorticating-machine I fit the spider-heads of a conical brush, G. The shaft X is fitted with the keys *m*, the spiders O being fitted with seats, work up and down upon these keys by means of the set-screws P passing through the piece N, which is made fast to the shaft X by the screw Z or other suitable device. The screws P are fitted into the spider O by the collar Y, and for farther security are supplied with the lock-nuts Q.

The inner perforated case I is supplied at its upper extremity with a hopper, H, extending outwardly to the base of the hulling-machine, and forming a support therefor.

The outer case of any approved material is provided with openings for the admission of air to and around the perforated case, and its exit with the dust through the passage L to the fan F.

The adjustment of the cone G carries it up within the lower portion of the cylinder D, and, to properly divide the air-current passing up through the cone G, I provide this end of the cone with an annular diaphragm, Y', closing the space between the outer surface of the cone G and the inner surface of the cylinder D, and forcing the air to seek its exits by the air-ports Q.

Having described my invention, I claim—

1. The combination of the keys *m* on the shaft X, with the spiders O, piece N, and set-screws P, the whole operating in the manner and for the purpose set forth.

2. The combination of the diaphragm Y', with the air-openings Q and passage through cone G, as shown, and to obtain the result set forth.

G. E. PALMER.

Witnesses:

W. A. LEGGAT,
LEVI BIRD DUFF.