

W: DELANEY.
Smut Machine.

No. 3,293.

Patented Oct. 6, 1843.

Fig. 1
A.

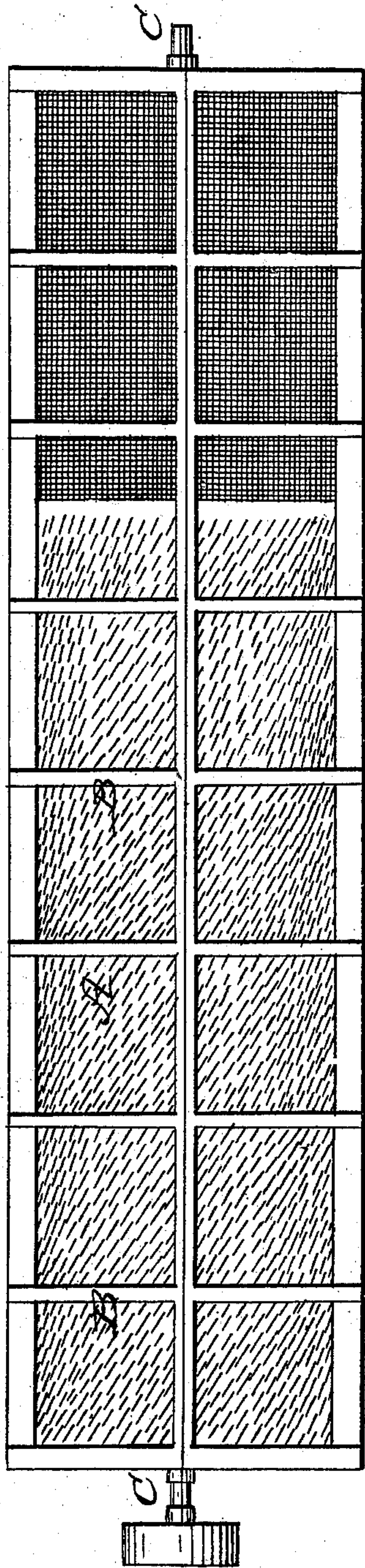
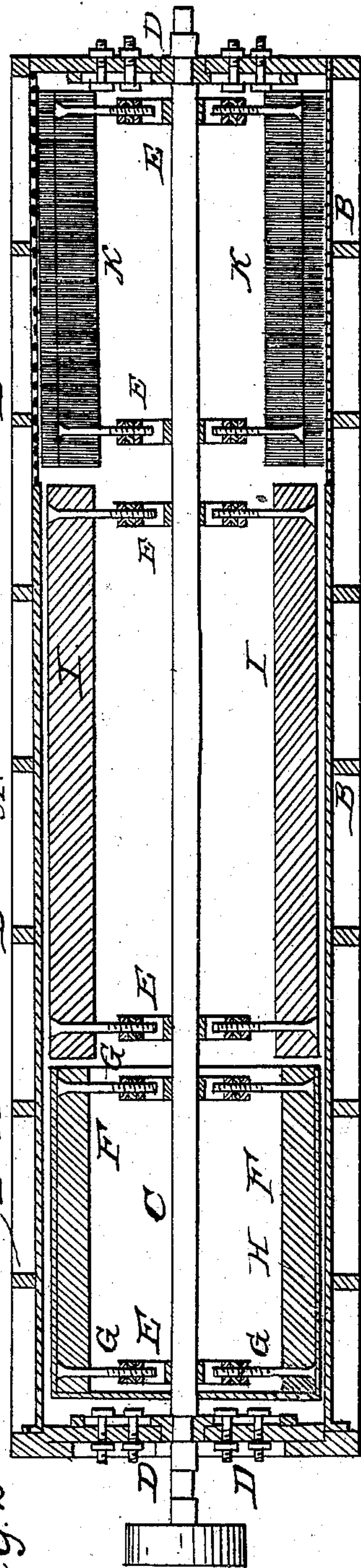


Fig. 2



UNITED STATES PATENT OFFICE.

WILLIAM DELANEY, OF CORNWALL, NEW YORK.

SMUT AND GARLIC MACHINE.

Specification of Letters Patent No. 3,293, dated October 6, 1843.

To all whom it may concern:

Be it known that I, WILLIAM DELANEY, of Cornwall, in the county of Orange and State of New York, have invented a new and useful Machine for Cleaning Grain, called "Delaney's Improved Smut-Machine," which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a side elevation of the machine. Fig. 2 is a vertical longitudinal section.

Similar letters refer to corresponding parts.

This machine consists of an inclined revolving cylindrical case A, made in two parts, and composed of Russia sheet iron and wire gauze, braced and held firmly together by circular ribs of metal B. The sheet iron extends from the upper end to a little more than two thirds the length of the case and is perforated with rows of oblique openings, punched from the outside so as to form protuberances. Inside this circular case and in the center thereof is placed an inclined shaft C extending from the lower end of said case to a short distance beyond the upper end thereof, supported and revolving on two bearings D near the extremity of the shaft.

Six cast iron rings E are secured to the shaft by means of arms and countersunk keys, to the upper two of which, and at equal distances apart, six or more longitudinal timbers F, are secured by means of screw bolts G. These screw bolts are fastened firmly to each end of said timbers, and extended through the circular ring toward the center of the shaft, having threads formed on their inner ends with which two nuts engage, one on the inner and the other on the outer periphery of said rings. A cylindrical sheet iron case H, a little less than one third the length of the case A surrounds these timbers and is secured to the same. This case is perforated with rows of oblique openings punched from the inside so as to form protuberances on the outer periphery of said case, and in a contrary direction to those on the outer case A. By means of the bolts

and nuts the longitudinal timbers may be drawn nearer to or farther from the center, and the cylindrical case increased or diminished in diameter at pleasure. To the next two rings six or more longitudinal metallic beaters I are secured in the same manner as the timbers F. These beaters are roughened on their outer edges and on the side which strikes the grain for more freely disengaging the smut, dirt, &c., therefrom.

Six or more brushes, K the same in length as the wire gauze, are secured to the remaining two rings, in the same manner as the beaters. These brushes are composed of two boards or plates of iron fastened together by screws, between which boards or plates the cane brushes are placed.

Operation: The shaft C with its appurtenances being in motion, at the rate of 250 revolutions per minute, and the outer case A also in motion in the same direction at the rate of 1 revolution per minute. The grain is admitted at the upper end of the case A, and descending toward the other end is spread, and rubbed, between the cylindrical case H, and the outer case A, and the garlic being softer than the wheat, is mashed. The grain next comes in contact with the roughened beaters I which separate the smut and other impurities from it and drive them through the oblique openings in the outer case—and next it comes in contact with the brushes K which acting as a brush and a fan, clears it of the dust dirt and smut. The grain is then conducted through a blast from a fan which separates it from the lighter impurities. The garlic being rendered lighter by the loss of juice, will in this operation also be separated from the wheat.

What I claim as my invention and which I desire to secure by Letters Patent is—

The arrangement of the perforated iron case H, metallic beaters I, and brushes K, in combination with the inclined revolving case A, as described.

WM. DELANEY.

Witnesses:

JESSE DAVENPORT,
WM. T. TILTY.