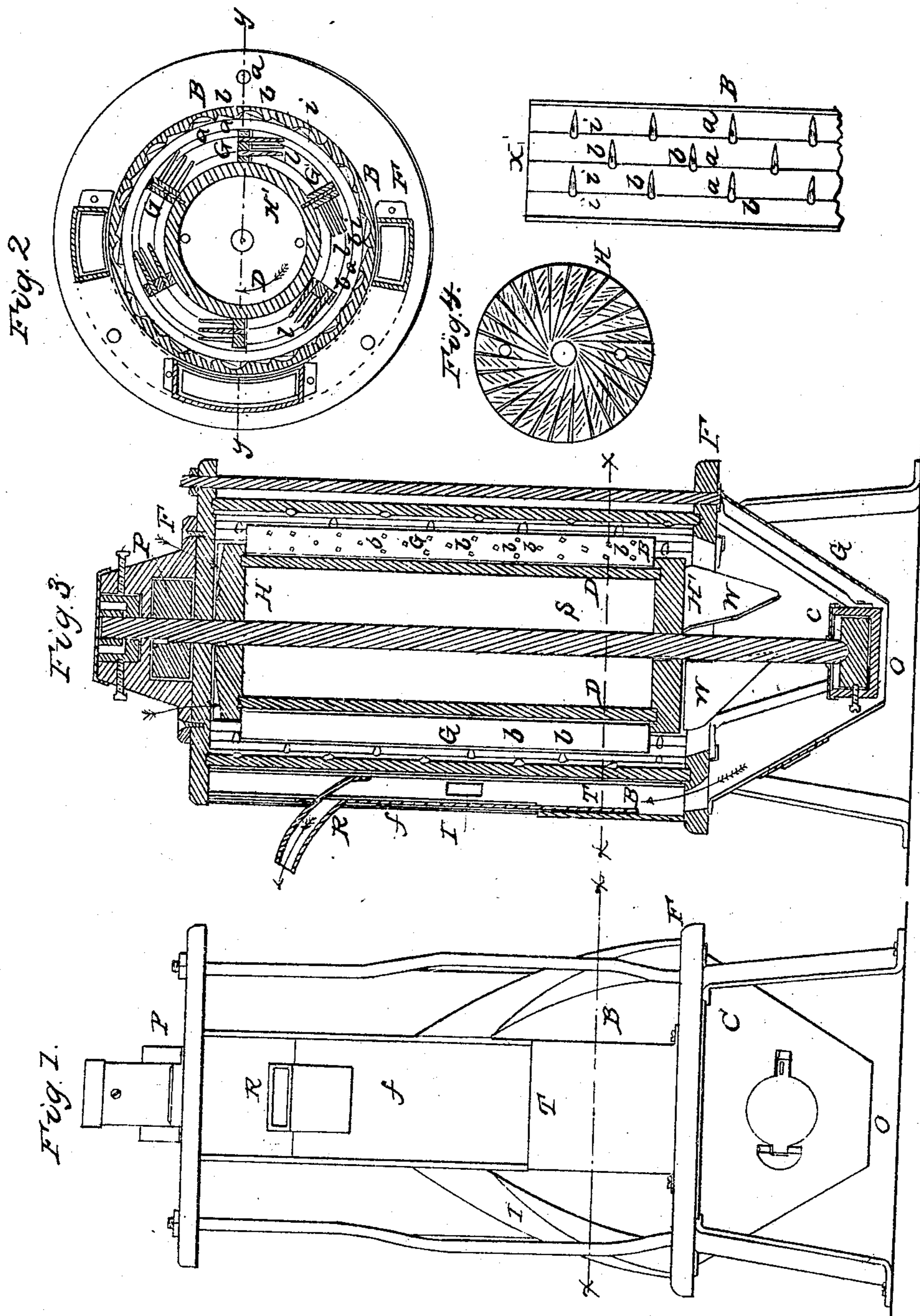


W. PARTRIDGE, JR. & G. W. SHAW.  
MACHINE FOR CLEANING GRAIN.

No. 20,581.

PATENTED JUNE 15, 1



# UNITED STATES PATENT OFFICE.

W. PARTRIDGE, JR., AND G. W. SHAW, OF ELLICOTTS MILLS, MARYLAND.

## MACHINE FOR CLEANING GRAIN.

Specification of Letters Patent No. 20,581, dated June 15, 1858.

*To all whom it may concern:*

Be it known that we, WILLIAM PARTRIDGE, Jr., and GEORGE W. SHAW, of Ellicotts Mills, State of Maryland, have invented a new and  
5 useful Improvement in Grain-Cleaning Machinery; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed  
10 drawing, forming part of this specification, in which—

Figure 1 is an elevation of the machine. Fig. 2 is a horizontal section on line  $x\ x$ . Fig. 3 is a vertical section through axis of  
15 shaft on line  $y\ y$ . Fig. 4 is a plan of horizontal runner for the distribution of the grain.

Similar characters of reference in the several figures denote the same part.

20 The object of our invention is the removal of impurities and the separation thereof from grain, the invention consisting in a peculiar combination of devices hereinafter to be described.

25 In the drawing F is the frame supporting the machine.

B is the casing or drum, grooved vertically as shown at  $a$  Fig 2 and in detached view X. Across the grooves  $a$ , are notches  
30  $b$ , seen in Figs. 2, 3, and X.

Through the center of the drum runs a shaft S, stepped at C, and driven by pulley P. Upon this shaft are secured the heads H H' of an interior drum D, the upper head  
35 H dressed as shown in Fig. 4, so as to throw from it in a divergent manner the grain dropping upon it.

The drum D carries a series of vertical beaters G, each armed with a system of horizontal spikes  $l$ , projecting as shown in Fig.  
40 2. The object of these spikes is to arrest the grain in its downward passage, and retain it under the action of the machine for a longer time.

45 The lower head H' has attached to its under surface a series of wings W, incased in a conical chamber C, open at bottom, and communicating by channels I with the adjustable blast trunk T.

50 The trunk is adjustable vertically by reason of the spout R being attached to the slid-

ing breast piece  $f$ ; so that, as the breast piece is moved up or down the action of the trunk is varied.

The grain on entering the machine falls 55 upon the head H, and is thrown therefrom against the outer casing and within the range of the vertical beaters. In its transit to the bottom of the machine, the grain has to pass through the spike beaters, being thereby de- 60 tained much longer than with the plain beaters, so as to be thrown back and forth between the beaters and the casing.

When the grain enters the chamber C, it encounters a blast of air, which passing 65 through it carries the impurities up the blast trunk T and discharges them from spout R. A proper graduation of the blast in the trunk being effected by the adjustment of the spout R, as above described. The cleaned grain 70 falls through the opening O in the bottom of chamber C.

The notches  $b$  in the outer casing, act upon the surface of the grain as it is thrown against the inclined surfaces  $i$  of the grooves 75  $a$ . This inclination of surface against which the grain is thrown does not break it in the manner of more abrupt surfaces.

Having described the nature of our invention and the operation thereof, what we 80 claim and desire to secure by Letters Patent, is—

1. The combination of the spike studded beaters G upon drum D with the notched and grooved dress of the outer casing, constructed as described; the whole arranged 85 and operating together substantially as, and for the purposes set forth.

2. We also claim the combination of the fan W, chamber C, channels I, and blast 90 trunk T adjustable by means of the vertically moving spout R attached to sliding breast piece  $f$  arranged and operating substantially as set forth.

In testimony whereof, we have hereunto 95 signed our names before two subscribing witnesses.

WM. PARTRIDGE, JR.  
GEO. W. SHAW.

Witnesses:

GEO. PATTEN,  
JOHN S. HOLLINGSHEAD.