



# UNITED STATES PATENT OFFICE.

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## MACHINE FOR CLEANING GRAIN.

Specification of Letters Patent No. 20,422, dated June 1, 1858.

*To all whom it may concern:*

Be it known that we, J. G. GOSHON, of Mercersburg, in the county of Franklin and State of Pennsylvania, and W. BOWERS, of Chambersburg, in the county of Franklin and State of Pennsylvania, have invented a new and useful Improvement in Grain-Cleaning Machinery; and we 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 drawing, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of the machine. Fig. 2 is an end elevation of same. Fig. 3 is a top view of scourer.

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

The nature of our invention consists in a peculiar construction of scourer hereinafter to be set forth.

In the drawing A is the screen which receives the grain in the condition in which it comes from the sinks, and which leads to the scourer as shown by black arrows 1 and 2. The scourer consists of a disk B, studded with upright spikes or teeth *a a*, and mounted upon a vertical shaft C, driven by pulley D. Around the edge of this disk, and secured to it, is a concave, roughened rim E, and above the teeth and rim, is a cap piece F, concave on its under side, and roughened, as shown in Fig. 1, there being an opening through the middle of this cap for the passage of the grain to the disk. The construction of this scourer is shown fully in Fig. 1; the rim and cap nearing each other at their edges and leaving a narrow outlet for the grain.

Under the disk, are four arms *b*, terminated by brushes H, reaching to the casing G, which is of wire gauze and opens into a chamber I, concentric with the beater chamber. The casing of this latter chamber, above the brushes, has a roughened lining *c*, against which the grain is dashed as it passes from between rim E and cap F.

The chamber I communicates by a channel J, with the trunk K, through which a blast is forced from the fan chamber L, as indicated by red arrows. A current is thus

created through channel J, as indicated by red arrow *x*, by suction from the trunk.

Chamber I is open at bottom, and communicates with channel P, leading to the blast trunk K. The bottom of this channel consists of a screen S, by which a separation is effected before the grain enters the blast trunk.

The grain falls upon the disk B, and receives the usual scouring due to upright beaters *a*. It is then concentrated between the concave surfaces of rim E and cap F, and receives a smart scouring from their roughened interiors while passing to the narrow exit passage at their edges. As the grain leaves this portion of the machine it is dashed against the roughened lining *c*, and then falls into position to be rubbed by the brushes against the wire gauze casing G. This thoroughly removes the impurities loosened by the previous operation. The dust being carried off through passage J, while the grain and larger impurities fall upon screen S. A further separation takes place as the grain is passing to the blast trunk K, by the falling of small and heavy impurities through this screen. As the grain passes into the trunk, the light impurities are carried off by the blast as shown by red arrows, and the cleaned grain falls from spout R, as shown by black arrow 3.

We make no claim to the employment of a disk scourer with upright beaters separately considered, as such is not new. But

What we do claim and desire to secure by Letters Patent, is—

The scourer, composed of the spike studded disk B, concave rim E, and concave cap piece F as described, in combination with the brushes H and the casing inclosing the said parts, arranged and operating substantially as, and for the purposes set forth.

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

J. G. GOSHON.  
W. BOWERS.

Witnesses:

G. PATTEN,  
JOHN S. HOLLINGSHEAD.