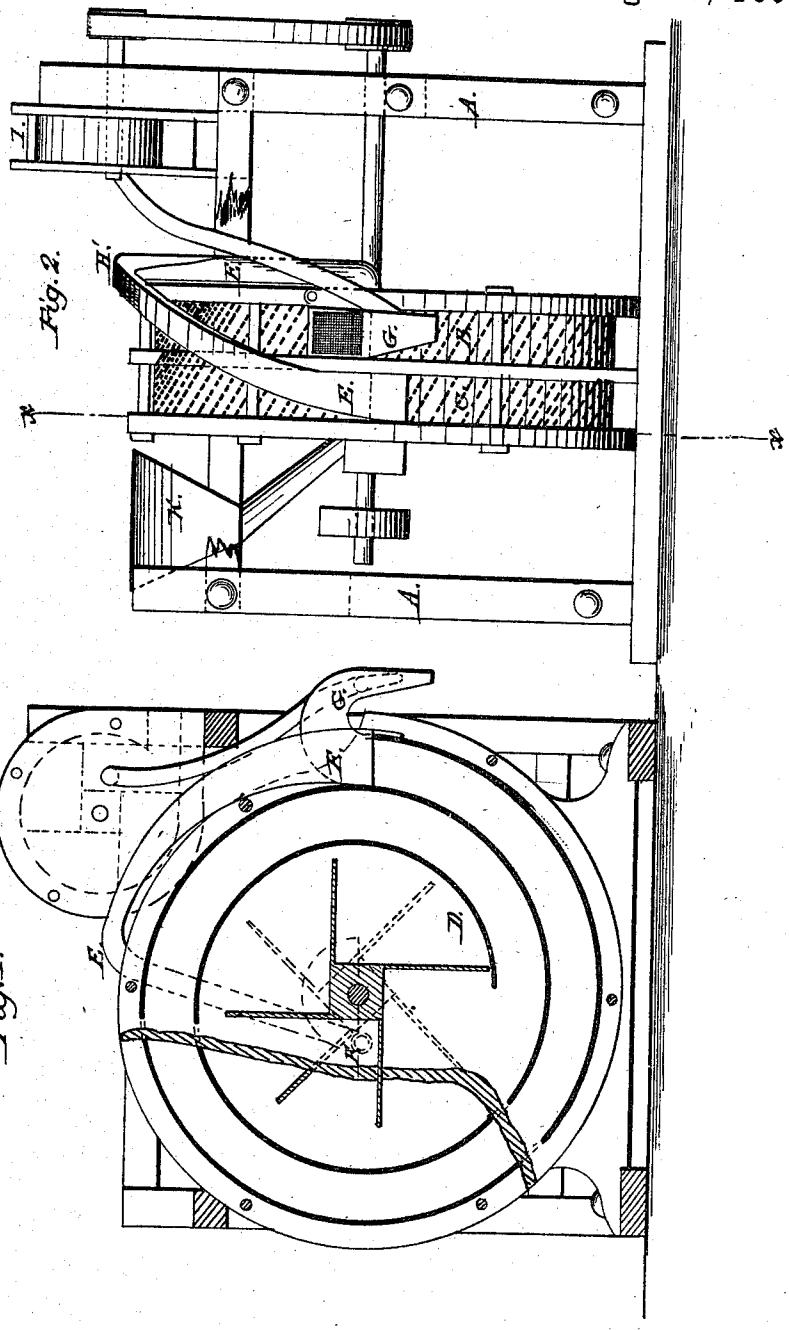
H. STANLEY.

SMUT MACHINE.

No. 81,428. Patented Aug. 25, 1868.



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HENRY STANLEY, OF ST. JOHNSBURY, VERMONT.

Letters Patent No. 81,428, *dated August* 25, 1868.

IMPROVED SMUT-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY STANLEY, of St. Johnsbury, in the county of Caledonia, and State of Vermont, have invented a new and useful Improvement in Smut-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The nature of this invention relates to improvements in smut-machines, the object of which is to provide a more effective machine than those now in use.

It consists of an arrangement of fan-blowers within cases, which are curved around the fans in the form of scrolls, into one of which the grain to be cleaned is admitted through the air-passage of the fans, and from which it is forced by the blast of air around the scroll, the sides of which are perforated, to the mouth, into a spout communicating with the next fan-chamber, and in like manner forced from there to the mouth of the scroll, when it encounters another blast of air from another fan, which is designed to separate the chaff, as will be more fully described on reference to the accompanying drawings, wherein—

Figure 1 represents a sectional elevation of my improved machine, with a part broken away, and

Figure 2 represents a front elevation of the same.

Similar letters of reference indicate corresponding parts.

A represents the frame, whereon the fan-cases, B and C, are arranged in a vertical plane, the sides of which, and the partition between them, being preferably made of sheet iron.

The circumferential casing, D, is made of perforated sheet metal or screen-wire, and may be continued around the fan-chamber two or more times, forming a scroll-passage, through which the grain is carried by the blast to the mouth.

E represents a spout, communicating from the scroll of the case C to the fan-chamber of the case B, as shown at E, in fig. 1.

G represents a curved spout, connected to the mouth of the scroll of the case B, provided with the wire-screen covering, H, at the point of the curve, where the blast will have the greatest effect for separating the dust from the grain.

The spout E is also provided with a similar screen-covering, H′, arranged in a similar position with reference to the curve in that spout.

I represents a detached fan-blower, with a pipe communicating with the delivering-spout G, for separating the chaff from the grain, and for assisting the delivery of the grain from the scroll B by suction.

Two or any other number of fan-chambers and scrolls may be arranged together, as described.

K represents a hopper, into which the grain is fed to be delivered to the fan-chamber of the scroll A, where it encounters the action of the fan of that chamber, and is forced around the scroll to the passage E, by which it is effectually scoured, the dust separated from it thereby being forced through the perforations of the case.

From the mouth of the passage E it is forced into the fan-chamber of the case B, encountering on its way the screen H′ at the abrupt curve of the spout, where the separation of dust is facilitated.

From the said fan-chamber it is again forced around, in a similar manner, the scroll of the case B into the delivering-spout G, and against the screen H in the abrupt curve of the same.

From the spout G to the receiver of the grain there may be a broken communication, whereby the blast brought to bear on the grain at this point by the fan I may separate the chaff and other similar matter from it, while at the same time facilitating the discharge of the grain from the scroll B by the suction produced therein.

All the fans of a series may be set upon one shaft, or they may be, if preferred, set upon separate shafts.

An outer casing of sheet metal may, if preferred, be provided around the perforated scroll, for the reception of the dust, which may be removed therefrom by a fan suitably arranged.

I claim as new, and desire to secure by Letters Patent—

The grain-cleaning machine, composed of one or a series of perforated scroll-cases, surrounding one or more fans, the spouts E G, and the fan I, arranged substantially as and for the purpose described.

HENRY STANLEY.

Witnesses:

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