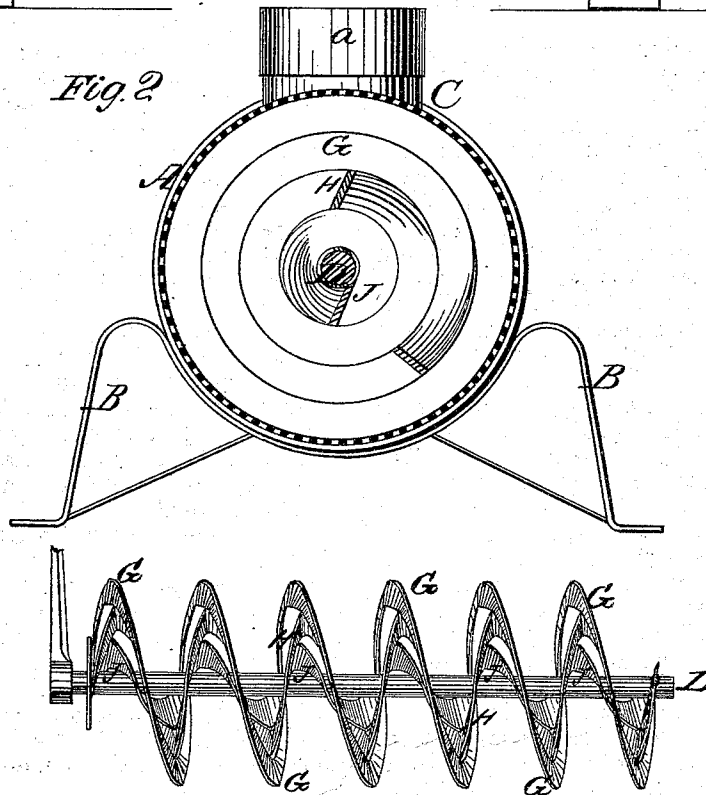
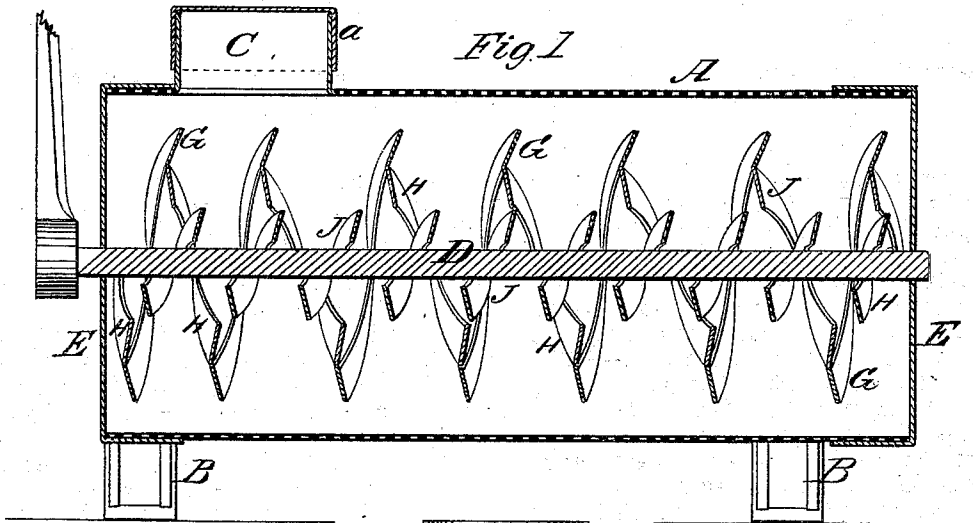


**R. CRAIG.**  
**Grain-Cleaners and Scourers.**

No. 152,609.

Patented June 30, 1874.



WITNESSES  
*Geo. E. Upham*  
*Robert Everett*

BY

INVENTOR,  
*Richard Craig*  
*Chipman & Son*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

RICHARD CRAIG, OF SHEBOYGAN FALLS, WISCONSIN.

## IMPROVEMENT IN GRAIN CLEANERS AND SCOURERS.

Specification forming part of Letters Patent No. **152,609**, dated June 30, 1874; application filed April 11, 1874.

*To all whom it may concern :*

Be it known that I, RICHARD CRAIG, of Sheboygan Falls, in the county of Sheboygan and State of Wisconsin, have invented a new and valuable Improvement in Grain-Scourers; 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 drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a sectional view of my grain-scourer, and Fig. 2 is an end view of the same. Fig. 3 is a detail view.

This invention relates to that class of machines in which the grain is scoured by friction, and dust, smut, fuzz, and other light impurities are separated from it, leaving it in a proper condition of cleanliness for the millstones. The improvement which I have made on these machines consists in the combination of screw-blades, arranged one within the other, and applied on a revolving shaft inside of a suitable cylinder, whereby the grain will be moved back and forth between the ends of said cylinder, and at the same time it will be thoroughly stirred and agitated, as will be more fully explained hereafter.

In the drawings annexed, A designates a right cylinder, which is preferably perforated, and which is closed at both ends E E. This cylinder is mounted on legs, and it may be inclined, as shown in Fig. 1. Near the highest end of cylinder, and on top thereof, is a feed-opening, C, surrounded by a collar, and to which a cap or cover, a, is applied after the machine is charged with grain. At or near the end of the cylinder I shall, in practice, have an opening, provided with a suitable cover, through which opening the cleaned grain is removed. D designates a shaft, which passes centrally through the ends E E of the cylinder A, and is supported by journal-boxes therein. This shaft may be rotated either by hand or by any convenient motive-power. G designates a screw-shaped blade extending from one end to the other of the cylinder A, and wound about the axis of the shaft D, so

that when this shaft is rotated in one direction the blade G will move the grain from the highest end of the cylinder A to the lower end thereof. Inside of this blade G, and wound in an opposite direction thereto, is a screw-blade, H, of smaller radius, and inside of this latter blade, and wound in an opposite direction, is another blade, J, of still smaller diameter, which is rigidly secured to the shaft D. The three screw-blades G, H, and J are all rigidly secured together, so that they rotate with the shaft D. These blades are respectively continuous, and they are made of narrow and thin sheet-metal strips, wound and secured together as described.

In practice, I contemplate using a cylinder which is wholly or in part perforated; also, fixing into the cylinder small rivets about one inch apart, so that they will stand up one-sixteenth of an inch or more, which will greatly facilitate the cleaning of the grain. I shall also, in some instances, have the internal worms or screw-blades detached from the external blades and constructed to revolve independently of each other and in opposite directions.

It will be seen from the above description that when shaft D is rotated the grain will be moved from one end to the other of the cylinder, and at the same time dashed about and thoroughly agitated, thereby freeing it of dust and other foreign substances, which may be drawn off by suction or removed by a blast suitably applied.

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

In a machine for scouring and cleaning grain, the cylinder A, partly or fully perforated, and containing within it two or more blades wound helically around a revolving shaft, D, in opposite directions, and connected to this shaft, substantially as described.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

RICHARD CRAIG.

Witnesses:

JNO. E. THOMAS,  
ROSSITER LINES.