J. S. HILLYER.

GRAIN-SCOURER.

No. 191,854. Patented June 12, 1877.

Fig. 1.

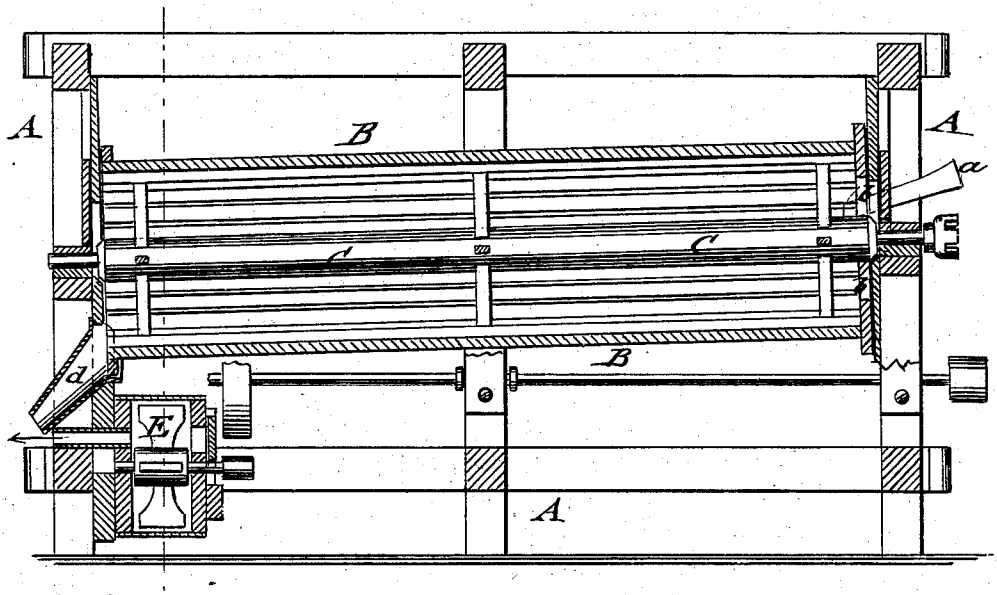
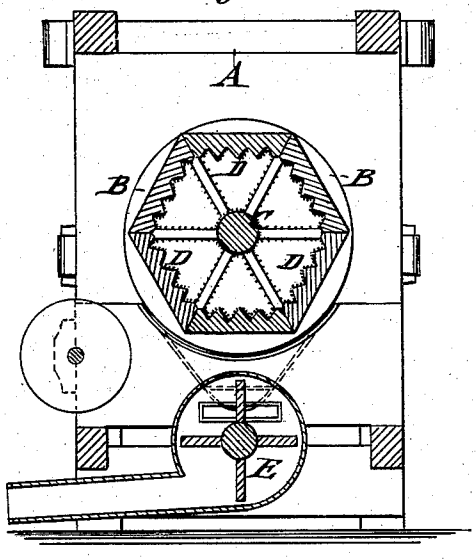


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES S. HILLYER, OF ROCKFORD, MINNESOTA.

IMPROVEMENT IN GRAIN-SCOURERS.

Specification forming part of Letters Patent No. **191,854**, dated June 12, 1877; application filed March 19, 1877.

To all whom it may concern:

Be it known that I, JAMES S. HILLYER, of Rockford, in the county of Wright and State of Minnesota, have invented a new and Improved Grain-Scourer, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section, and Fig. 2 a vertical transverse section on line *x x*, Fig. 1, of my improved grain-scouring machine.

Similar letters of reference indicate corresponding parts.

In the drawing, A represents the supporting-frame of my improved grain-scourer, and B the scouring-cylinder that is revolved in somewhat inclined position by suitable power, the shaft C turning in bearings of frame A. The cylinder B is formed of a suitable number of corrugated sections, D, that are screwed together at the corners, and supported on radial arms or spider-frames extending from shaft C to the corners of the sections. The inner corrugated faces of the sections D, as well as the arms, are covered with a coating of emery or other scouring material, over which the grain is slowly passed, as it is screwed through the cylinder. It enters through a hopper, *a*, and circular opening *b*, around shaft at the higher end of the cylinder, and is gradually scoured by the contact with the emery surface of the sides. The scoured grain passes through a spout, *d*, to the outside at the lower end of the cylinder, and is exposed there to the blast of a revolving fan, E, so as to be cleaned of all adhering bran and other light particles.

The cylinder may be recoated when worn out, and made as good as new, at very small expense, while other scouring-machines do very indifferent work when worn. The beaters that do the scouring in the present machines cause the traveling of the grain at such velocity that a great deal of the wheat is broken up and lost, which loss is entirely avoided in my machine, as the scouring takes place in a gradual and almost imperceptible manner during the passage of the grain through the cylinder. The machine is run at comparatively slow speed, requiring only from thirty-five to forty-five revolutions per minute, according to the dryness of the wheat. This exposes the grain to a less powerful motion, and accomplishes the scouring in slower but more perfect manner, and at a considerable saving of wheat.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A grain-scourer consisting of an inclined revolving cylinder, the inner face of which is longitudinally corrugated and covered with a coating of emery, as shown and described.

JAMES STEPHEN HILLYER.

Witnesses:
J. H. SMART,
J. H. AKER.