

I. N. HARSHBARGER.

Grain Cleaner.

No. 107,486.

Patented Sept. 20, 1870.

Fig. 1,

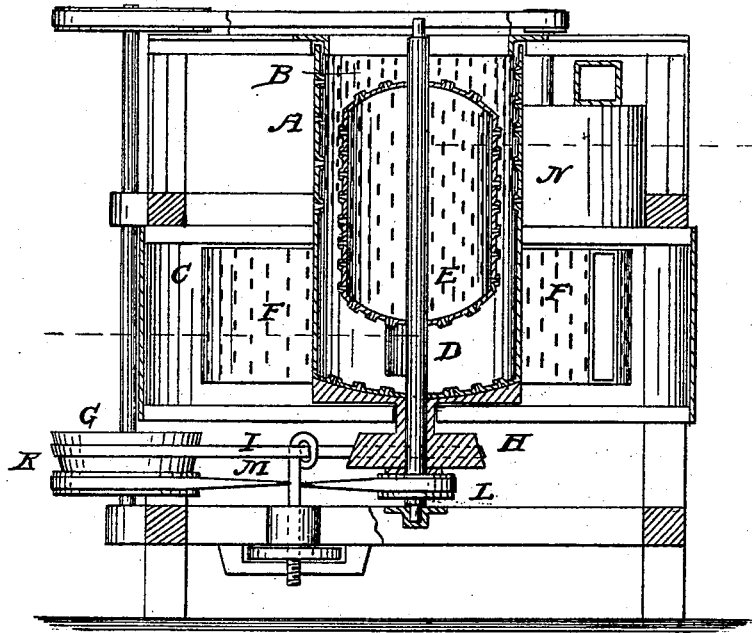
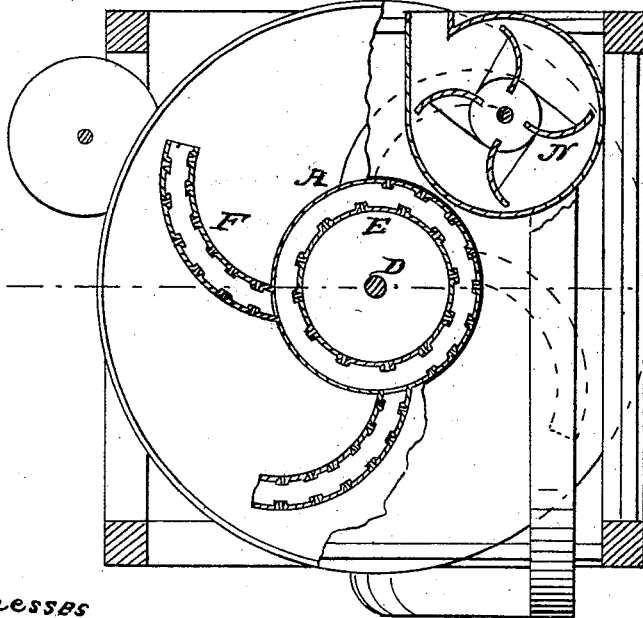


Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

ISAAC N. HARSHBARGER, OF BLOOMINGTON, WISCONSIN.

## IMPROVEMENT IN GRAIN-SCOURERS.

Specification forming part of Letters Patent No. **107,486**, dated September 20, 1870.

*To all whom it may concern:*

Beit known that I, ISAAC N. HARSHBARGER, of Bloomington, in the county of Grant and State of Wisconsin, have invented a new and useful Improvement in Machines for Scouring Grain; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to improvements in machines for scouring grain; and consists in a hollow cylinder, of sheet metal or other substance, mounted vertically in a suitable frame, and provided with a roughened inner surface, and with curved hollow arms in the lower portion, which are also roughened on the inner surfaces, in which cylinder is another, with a roughened exterior, but of considerable lesser size, which cylinders are revolved in opposite directions, and the grain is passed through the outer one, and subjected to the action of both, after which it is discharged through the aforesaid arms into an air-tight space, from which the dust and other light matters detached by the scouring-surfaces are taken out by a fan mounted on the said air-tight case, all as hereinafter described.

Figure 1 is a sectional elevation of my improved machine, and Fig. 2 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts.

A is a vertical hollow cylinder of sheet metal, having a roughened internal surface, B, in the upper part. The lower part extends through the air-tight case C, and the lower axial bearing is hollow, and admits a shaft, D, to rise up through it, for the support, within the cylinder A, of another smaller one, E, which is roughened on the exterior. The lower part of the cylinder A is provided with the hollow curved arms F, also made of sheet metal, and roughened on the inner surface. These arms are for discharging the grain, by centrifugal force, into the case C.

The cylinder A is operated by the cone-pulleys G H and the shifting belt I, arranged for varying the motion, as may be required.

The cylinder E is to have a constant motion imparted to it by the pulleys K L and the crossed belt M, the said motion being in the direction opposite to that of cylinder A, and much faster. N is a fan-blower arranged on the case C, for taking the dust and other light matter which is deposited with the grain out of it, and conveying it away.

The cylinder A is opened at the top, and is designed to have a supply-pipe leading to it, the full size of said opening, so that the grain will be supplied in such quantity as will keep the said cylinder full at all times, thereby causing the scouring-surfaces of both cylinders to be in close contact with the grain, which settles down as fast as it is discharged from below, and the discharge is regulated by the speed of the cylinder A, which may be varied, as above stated, for the said purpose. The grain is drawn from the case C to the hopper of the stones, or it may be conducted to any other receiver, as preferred.

The machine is intended to be mounted at any suitable place above the millstone, so as to feed directly to it, and so as to be in convenient reach of the attendant while attending to the stone; but it may be arranged in any preferred place.

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

The combination of the hollow cylinders A E, hollow arms F, case C, and fan N, said cylinders and arms being roughened, as described, and the several parts named arranged for operation substantially as and for the purpose specified.

ISAAC N. HARSHBARGER.

Witnesses:

J. C. TRUNER,  
ROBERT HICKS.