2 Sheets—Sheet 1.

C. SCHASCHUE.

GRAIN-HULLERS.

No. 194,002. Patented Aug. 7, 1877.

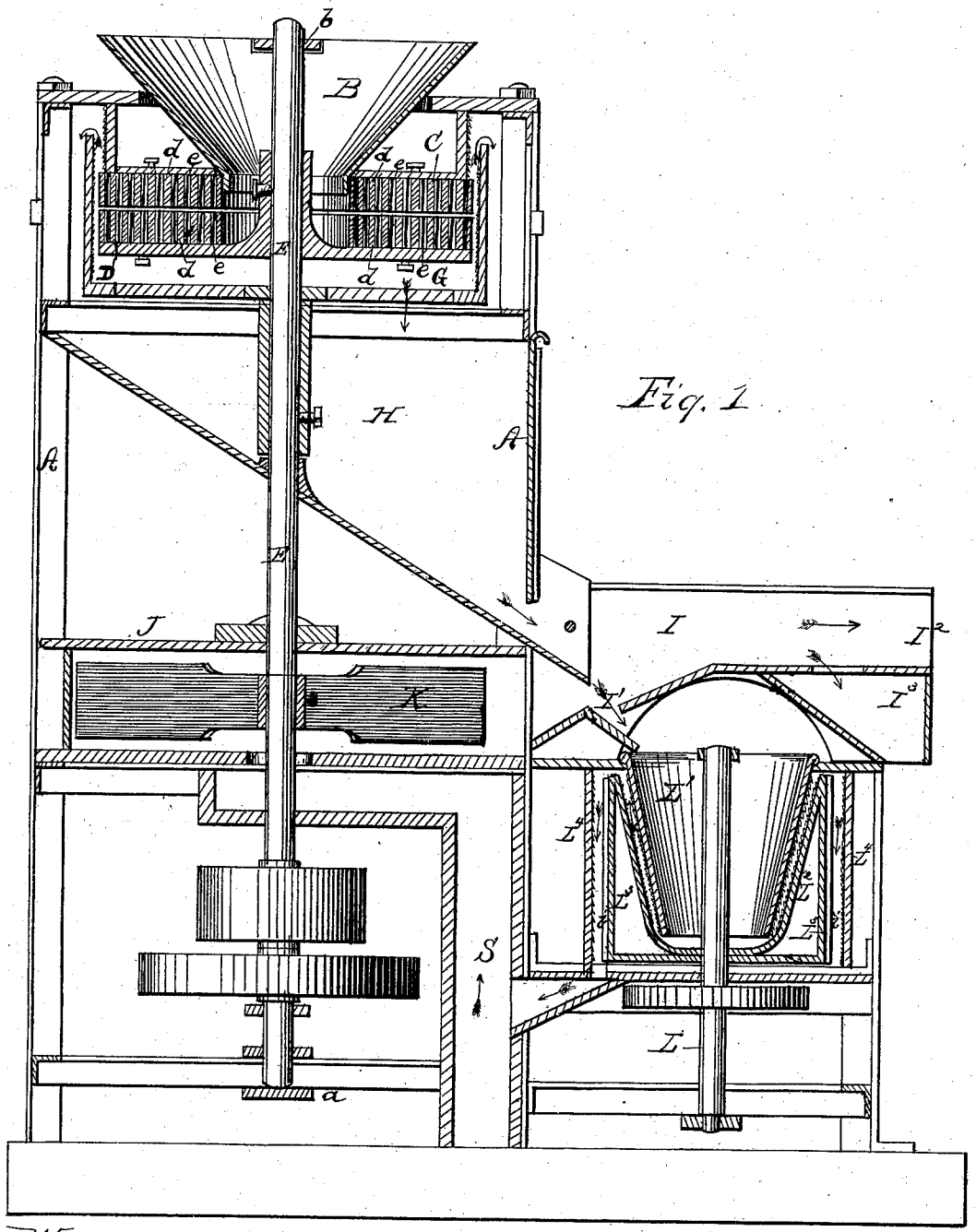

Fig. 1

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2 Sheets—Sheet 2.

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Fig. 2.

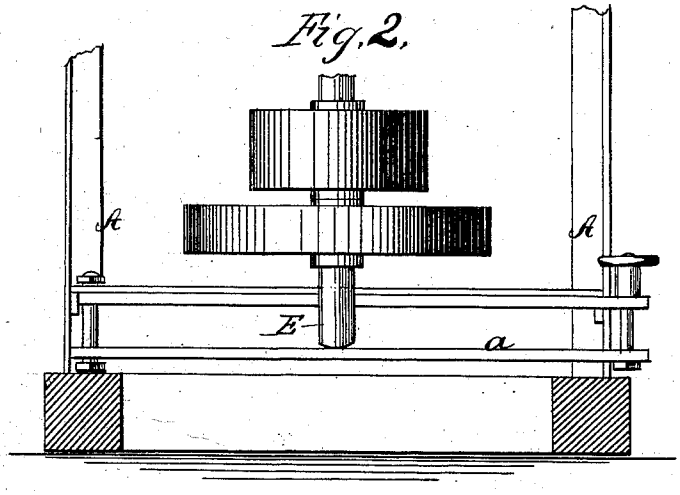


Fig. 3.

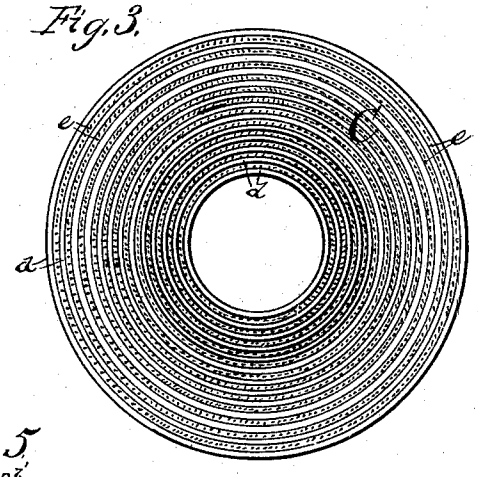


Fig. 4.

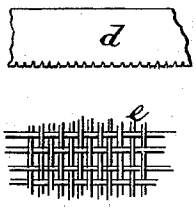
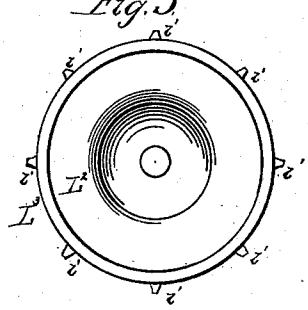


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES SCHASCHUE, OF RONDOUT, NEW YORK.

IMPROVEMENT IN GRAIN-HULLERS.

Specification forming part of Letters Patent No. **194,002**, dated August 7, 1877; application filed May 3, 1877.

To all whom it may concern:

Be it known that I, CHARLES SCHASCHUE, of Rondout, in the county of Ulster and State of New York, have invented certain new and useful Improvements in Machines for Hulling Grain; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for peeling or hulling grain, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a central vertical section, and Figs. 2, 3, 4 and 5 are detail views of my invention.

A represents the frame of my machine, constructed in any suitable manner to contain the various working parts. In the top of the frame is the hopper B, to hold the grain of whatever kind that is to be passed through the machine. The hopper is inserted in the eye of the upper stone C, which is attached to and supported by the frame in any suitable manner. The lower stone D is fastened on a vertical shaft, E, the lower end of which rests on an adjustable step, *a*, and the upper end passes through the eye of the stone C, and through the hopper, and has its bearing in a cross-bar, *b*, at the top of the frame.

In Letters Patent No. 159,461, granted to me February 2, 1875, the contiguous faces of these two stones were described as being formed of wire-cloth; but this construction was found objectionable for many reasons.

In the present case I form these stones of alternate layers or rows of steel bands *d* and coarse woven wire *e*, the edges of the steel bands being slitted or notched to form teeth. These alternate rows of steel bands and wire are rolled tightly together until the mass is as large as the stone required when it is cast fast to the cast-iron band or frame, thereby completing the stone, as shown. This forms a firm and durable surface for the purposes for which the machine is intended.

Below the lower stone D to the shaft E is secured a curb, G, which extends beyond the outer edges thereof, and then upward above the top of the support for the upper or stationary stone C.

The grain is run from the top and hulled by friction on the bottom and sides; and the grain then, by the pressure of additional grain in the hopper, and by centrifugal force of the revolving curb, is thrown outward and upward and forced over the curb G into the trough or catcher H underneath, and from thence through a box or passage, I, into the finisher through an aperture, I^1. While passing through this box it is acted upon by a current of air from a fan, K, secured on the shaft E and operating within a fan-case, J, the lighter particles of the hulls being blown straight out through a passage, I^2, and the heavier particles falling through a passage, I^3.

The finisher is composed of four shells, L^1, L^2, L^3, and L^4. The inner shell L^1 is stationary in the frame, and so is the outside shell L^4, while the two intermediate shells L^2 L^3 are secured on a vertical rotating shaft, L. The inner shell L^1 is in the form of a funnel, and acts as a hopper for the grain. Its inner side is smooth, while the outer surface is roughened. The next shell L^2 is also in the form of a funnel, roughened on its inside and closed at the bottom, said bottom being concave or bowl-shaped. The third shell L^3 is perpendicular and attached to the top edge of the shell L^2, and on its outer side is a series of vertical ribs, *i i*, as shown. The interior surface of the last shell L^4 is also roughened. When the grain falls through the shell L^1 to the bottom of the shell L^2, it is driven by friction and centrifugal force upward between the shells L^1 and L^2 into the outside curb or shell L^4, and the two intermediate shells being rotating and the adjoining surfaces roughened, the grain is thoroughly cleansed of all fuzz and remaining particles of hull.

From the curb L^4 the grain passes into the suction-spout S, from whence it passes out ready for grinding, while the fuzz, &c., is drawn up said spout by the action of the fan K and blown out.

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

1. In a grain-huller, the stones C D, formed of alternate rows or layers of steel bands *d*, having their edges slitted or notched, and woven wire *e*, rolled together and united, substantially as and for the purposes herein set forth.

2. The improved grain-huller herein described, consisting, essentially, of the hopper B, the shaft E, stones C D, the curb G attached below the stones to the shaft, and revolving therewith, the trough H, box I, finisher and fan, all constructed and arranged to operate substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHARLES SCHASCHUE.

Witnesses:

GEORGE DRESSELL,

EDWARD WHILING KNAPP.