

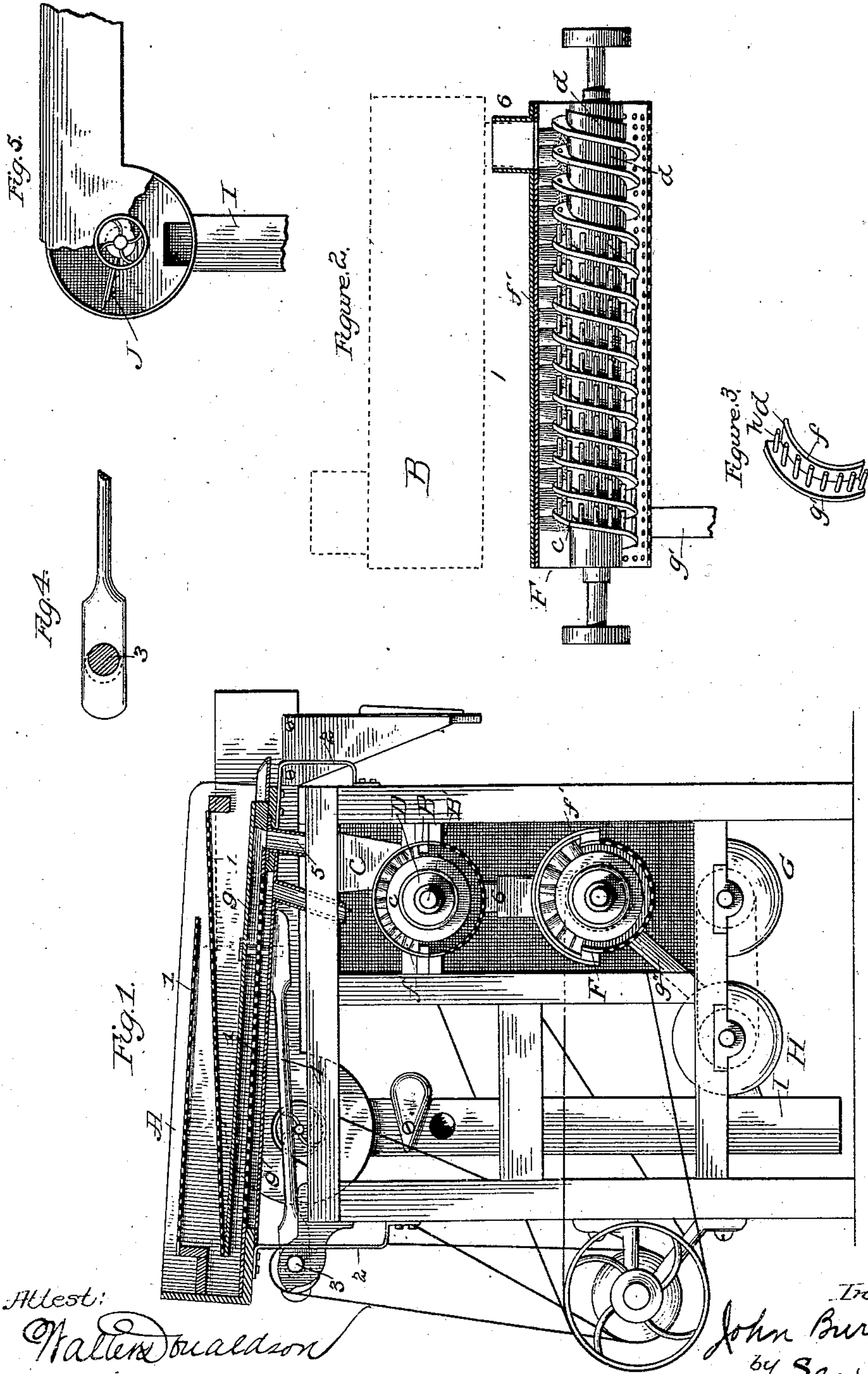
(No Model.)

J. BURKHOLDER.

GRAIN CLEANER.

No. 272,205.

Patented Feb. 13, 1883.



Attest:

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UNITED STATES PATENT OFFICE.

JOHN BURKHOLDER, OF CENTREBURG, OHIO.

GRAIN-CLEANER.

SPECIFICATION forming part of Letters Patent No. 272,205, dated February 13, 1883.

Application filed October 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN BURKHOLDER, of Centreburg, in the county of Knox and State of Ohio, have invented a new and useful Improvement in Grain-Cleaners; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to improvements in machines for cleaning and scouring grain and preparing it for milling; and the invention consists in the peculiar construction of apparatus for scouring and cleaning the grain after it has passed through the separator, which devices can be used in connection with any desired kind of separator, although preferably with that shown and described in this application.

In the accompanying drawings, Figure 1 is a section through the riddles with the plates of the scouring-cylinders removed. Fig. 2 is a longitudinal section through the scouring-cylinder. Fig. 3 is a detached perspective of one of the segments of the scouring-cylinder. Figs. 4 and 5 represent details.

The machine is supported upon a square frame-work composed of suitable bed and corner pieces and braces, it being necessary to give firmness and solidity in order to properly maintain and support the shafting and movable parts.

Supported on top of the main frame-work is a box or casing, A, of rectangular oblong form, and within this box are arranged riddles 1 1, made preferably of zinc, and having perforations placed closely together throughout their extent. The riddles may be so placed that they are inclined or at an angle to each other, and beneath the inclined riddle a solid plate, g, may be placed, to carry off the dust falling through the perforations. The casing A is suspended upon spring-arms 2 2, which yield sufficiently to permit the casing and riddles to be vibrated by the movement of a cam on a shaft, 3, which operates a pitman, 4, secured to the lower side of the casing A. A chute, 5, connects the casing A with the cylinder B of the scouring mechanism, which is adapted to be secured rigidly in a suitable frame-work, and is preferably composed of two half-round sections of boiler-iron or other suitable material, bolted together at the joints and firmly secured in the frame.

B' is a shaft passing through the cylinder B, having on its outer end a pulley by which motion is transmitted from any suitable power, preferably the driving-shaft of the separator. The bottom of the cylinder B is perforated with numerous fine holes throughout its whole extent. Secured to the top of this cylinder, at or near one end thereof, is a suitable opening for the admission of the grain. I have shown in the drawings an inclined chute, C, adapted to communicate with the interior of the separator below the grain-riddle.

D represents the inner cylinder, which is of considerably less diameter than the cylinder B, and is fixed rigidly upon the shaft B'.

Secured upon the cylinder D are spiral ribs c c, extending throughout its extent, the pitch or inclination being exceedingly slight, as shown. This spiral is formed from a series of cast segments, d d, separately illustrated in Fig. 3.

Each segment consists of a rim, f, and flange g', extending at right angles thereto, and integral pins h, projecting at right angles from the flange g' and arranged close together upon its face. When complete the surface of the cylinder consists of a spiral groove extending from end to end and broken by means of the pins h.

In the upper interior side of the stationary cylinder, and extending preferably throughout its length, is secured a brush, f', which may be composed of stiff bristles, and the parts are so arranged that the outside of the flanges of the inner cylinder run nearly in contact with the said brush. At the opposite end of the cleaning-cylinder from the chute 5 is a discharge chute or spout, 6, communicating with a second cleaning-cylinder, F, constructed like that just described, but having the spiral ribs of an opposite pitch, so that the grain is carried through it in a reverse direction and subjected to the action of the cleaning-brush, the dust dropping through the perforations in the bottom into a trough, G, supported in the frame directly below the cylinder last mentioned. This trough has an outlet at one end, and may be slightly inclined to that end, and provided with a suitable screw or equivalent device for discharging the dust. The grain, after passing to the end of the cylinder F, passes by a spout, g'', into a cylinder, H, having a spiral

conveyer. This cylinder communicates with the flue I, leading to the exhaust-fan J. Here any dust that may remain is carried up by the exhaust and discharged, while the cleaned grain falls through the flue, and is preferably carried directly to the burrs.

Having thus fully described my invention, what I claim is—

In a grain-scouring machine, the combination of the fixed case or shell having numerous perforations in its bottom, and provided at the top with a stationary brush, and a ro-

tating inner cylinder having spiral ribs, and pins secured to such ribs, projecting horizontally across the path between them, the said outer cylinder being provided with proper inlet and outlet devices, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN BURKHOLDER.

Witnesses:

J. B. WRIGHT,
D. C. LEWIS.