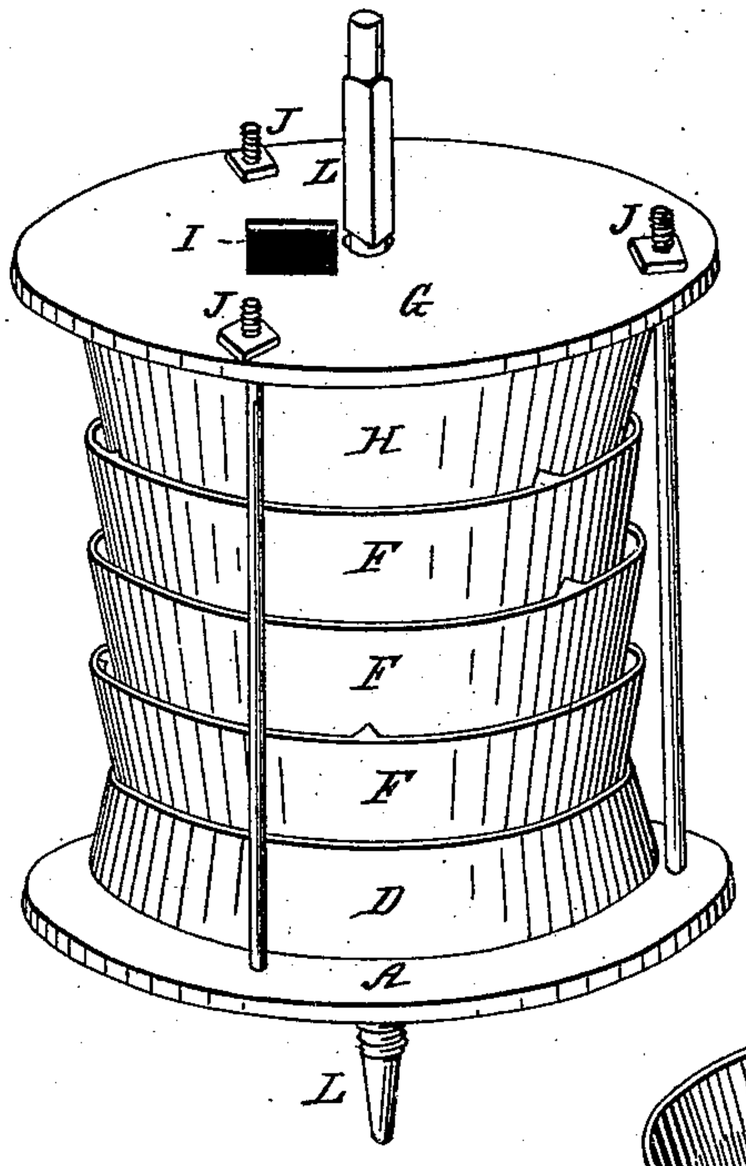
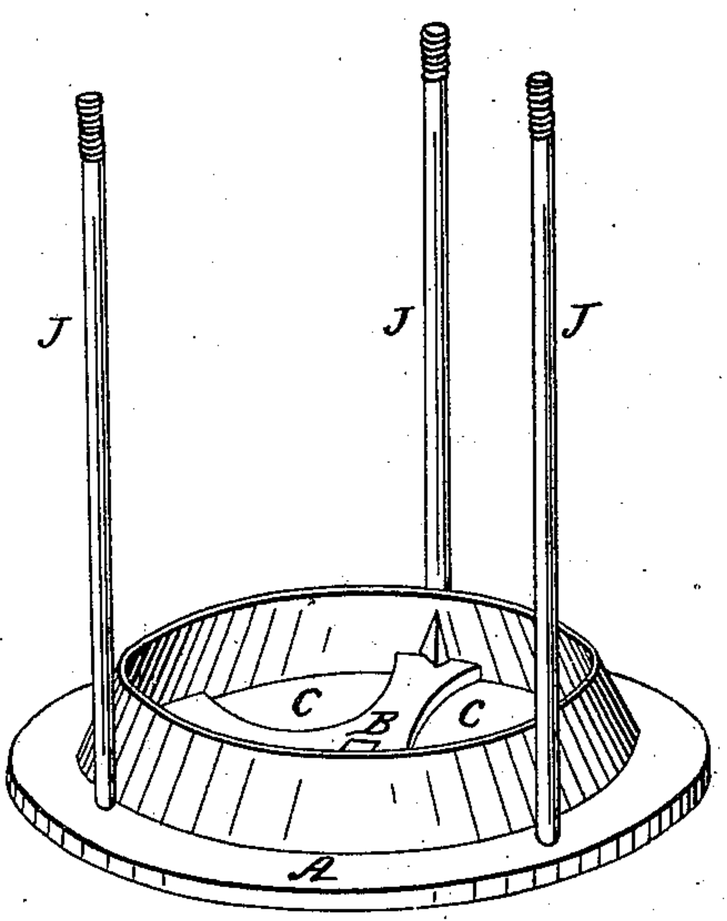
C. D. CHILDS.

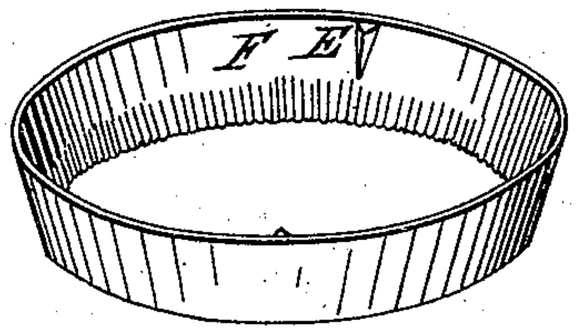
Smut Mill.

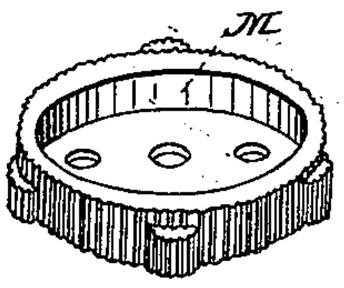
No. 354.

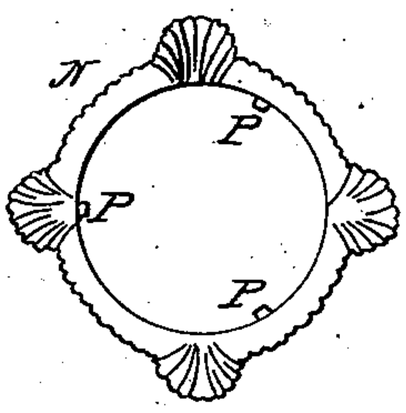
Patented Aug. 15, 1837.

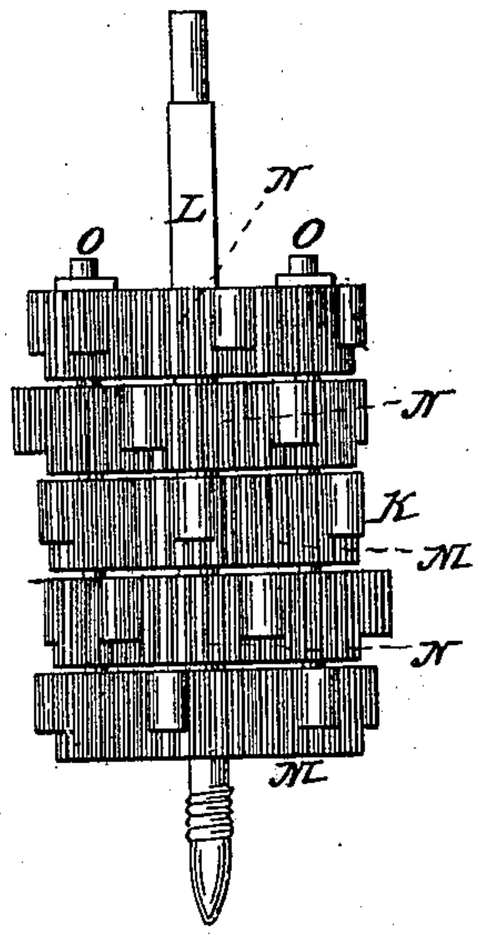












UNITED STATES PATENT OFFICE.

CHAS. D. CHILDS, OF MOUNT MORRIS, NEW YORK.

SMUT-MILL.

Specification of Letters Patent No. 354, dated August 15, 1837.

To all whom it may concern:

Be it known that I, CHARLES D. CHILDS, of Mount Morris, in the county of Livingston and State of New York, have invented a new and Improved Smut-Mill; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in making the smut mill mostly of cast iron and in such a manner as to prevent the escape of broken wheat and yet allow the air and dust to escape so as to leave the wheat perfectly clean without the use of a fanning mill, and also insure great strength and durability to the mill.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

I construct the cylinder or outside of the smut mill by making first a bottom A, of cast iron one half inch in thickness, two feet in diameter with a circular hole B through the center two inches in diameter. Then at three points equally distant from each other and three inches from the center I make three openings C through the bottom extending from the aforesaid points to within three inches of the outside of the bottom in such manner as to leave three straight arms from the center to the circumference. Two inches from the outer edge or periphery of the bottom rises a ring D one half inch in thickness and two inches high with perpendicular small flutes upon the inside and beveled from one half the height on the inside to the outer top corner making an edge upon the top at the outside. This ring has three small projections E upon the beveled part which keep the ring above it so far distant as to admit the free passage of air and dust. This first ring is cast together with the bottom making but one piece. I then make another ring F of the same thickness, height and diameter and form excepting the bottom edge which is beveled from the outside to the inner edge so as to make it fit into the top part of the lower ring which is beveled outward. Thus I proceed adding rings F to the height of three feet. Then I make a top G of the same thickness and diameter of the bottom with a ring H projecting downward to set into the ring below it having the same form and dimensions as the lower edge of the rings above described. I make a hole through the center of the top two inches in diameter for the admission of the shaft and another hole I five inches square for the admission of the wheat. Then I pass three screw bolts J with a head on the lower end through the bottom passing on the outside of the rings through the top, upon which I put a nut fastening the whole together and completing the outside of the machine.

The following is the manner in which I make the core K or revolving part of the mill. I make a shaft of cast iron L to run through the center of the outside cylinder perpendicularly—reaching eight inches below the bottom, with a steel point or step and sixteen inches above the top for the purpose of attaching to it a gear wheel or pulley, having a bearing or journal turned upon the extreme upper end. Upon this shaft four inches less in diameter and length than the inside of the outside cylinder I make another cylinder as follows: I make a bottom ring M one foot three inches in diameter one half inch thick and 4 inches breadth or perpendicular height, fluted perpendicularly on the outside with arms and an eye on the inside to encircle and fasten to the shaft so that the lower edge of the ring shall be two inches above the bottom of the outside cylinder. Upon the outside of this line I have 20 rasps cast three fourths inch thick projecting outward one and three fourths inch with perpendicular and horizontal flutes. Then I make another ring N leaving out the arms but in other respects like the first—place it upon the upper edge of the first ring and prevent its slipping sidewise by three small ears P projecting down into the inside of the first ring. Thus I proceed putting in rings without arms until I reach the middle ring or the one half way up the core which is made like the first or lower ring. Then I proceed again as before until I reach the top ring which is made with a thin plate of cast iron upon its upper surface which prevents the wheat falling into the core. And bolt the whole together with two bolts O passing through the arms of the bottom and middle rings and plate of the top ring and fastened with nuts. Another way and manner which I make the outside cylinder is

to set the rings one above the other sufficiently apart to admit the dust, air and smut to escape freely.

What I claim as my invention and desire to secure by Letters Patent is—

The within described manner of forming and combining the cast iron rings; leaving the annular openings for the escape of air, dust and smut and the manner of constructing and using the revolving fluted rasps, formed and operating as herein shown.

CHARLES D. CHILDS.

Witnesses:
ORRIN D. LAKE,
SARAH K. LAKE.