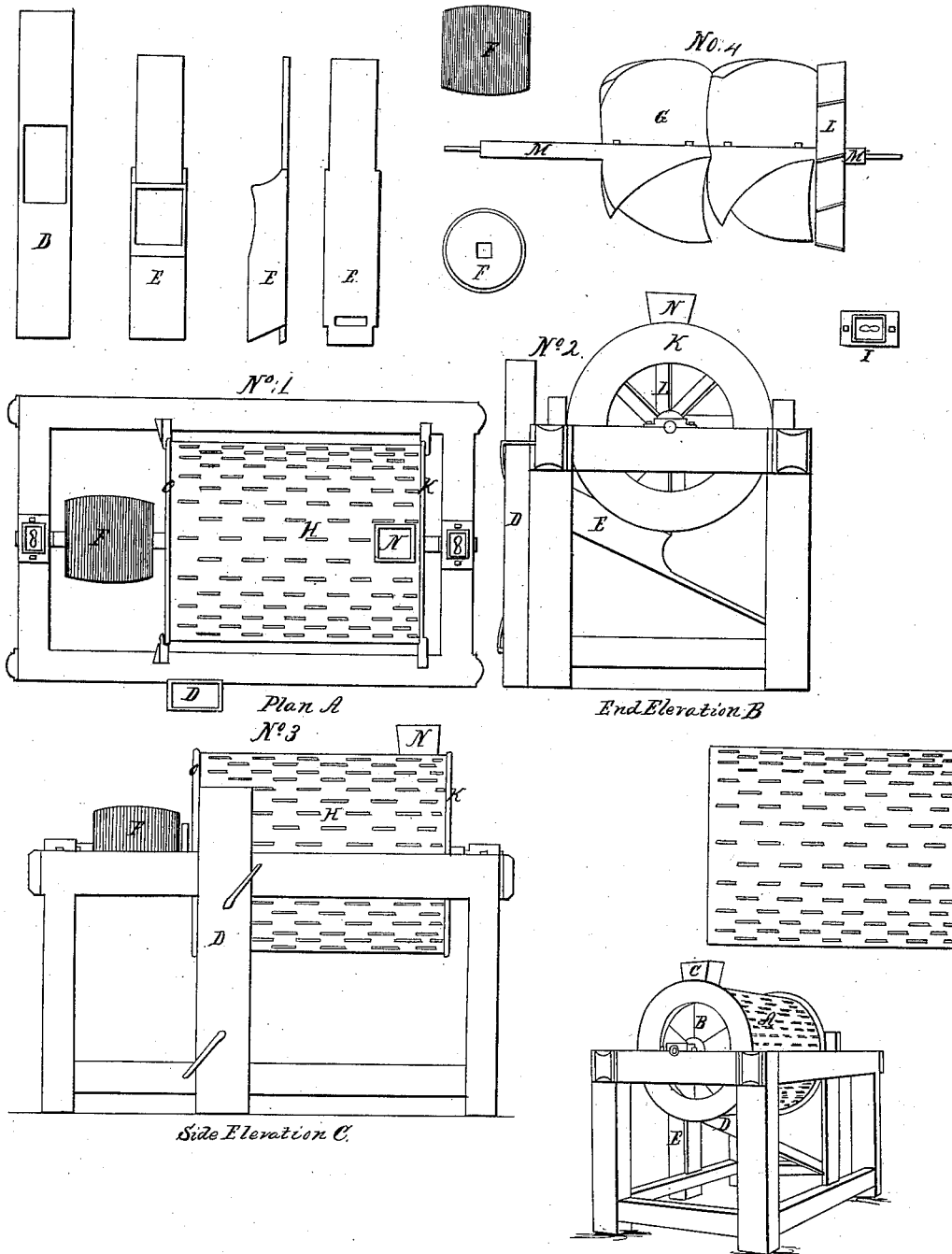


L. B. Walker.

Smut Mach.

N^o 1,375.

Patented Oct. 18, 1839.



UNITED STATES PATENT OFFICE.

LUTHER B. WALKER, OF ORANGEVILLE, NEW YORK.

SMUT-MACHINE.

Specification of Letters Patent No. 1,375, dated October 18, 1839.

To all whom it may concern:

Be it known that I, LUTHER B. WALKER, of Orangeville, in the county of Genesee and State of New York, have invented two new and useful Improvements in Smut-Machines as Used for the Purpose of Cleansing Wheat and other Grain from Smut and other Impurities; and I do hereby declare that the following are full and exact descriptions thereof.

The nature of the first improvement consists in providing the shaft or axle passing through the machine with two or more beaters, consisting of four or more plates or wings curved in a direction opposite to that of their motion and the curvature gradually increasing toward the closed end of the cylinder and also providing the said shaft or axle at the open end of the cylinder with a small wheel to which are fixed straight plates or wings placed or inserted diagonally across the wheel in the direction of the curvature of the beaters.

The nature of the second improvement consists in applying to the orifice of the cylinder where the wheat or the grain is discharged a tube or spout consisting of two pieces, the one receiving the grain from the cylinder being stationary and closed at its lower end, ascending at a small angle from the orifice of the cylinder to the side of the frame of the machine, the other open at both ends, having on one of its sides a mouth or orifice much larger vertically than that of the first piece, playing vertically over the mouth of the first piece or tube and resting upon the wood work of the machine and fastened by keys or springs so that this upright piece may be elevated or depressed at pleasure, its mouth always receiving that of the first piece or tube and elsewhere closed by the wood work or frame of the machine.

The advantages of the first improvement above described are the following: The machine being put in motion, the outer wheel with straight plates or wings prevents the wheat from escaping and creates a strong draft through the machine, and the peculiar form of the inner beaters keeps the wheat or other grain almost constantly in contact with the side of the external cylinder and passes it gradually and constantly toward the back part of the machine, where it is discharged.

The advantages of the second improvement as connected with the first are that as

the wheat enters the first part or piece of the spout the strong draft created by the first improvement it is propelled into the second or open tube and drops through that tube into suitable repositories clean from any smut that may have accompanied it, which is expelled through the upper part of the second tube, and the mouth of the second tube may be elevated or depressed so that the draft will expel upward only the smut or smut and chaff or smut and chaff and oats and shrunk wheat, as may be deemed advisable.

To enable others who understand the art to make and use my inventions I will proceed to describe their construction and operation.

The drawings accompanying this application, marked A, are merely intended to present a view of the whole machine.

A is the external cylinder, through which the axle passes on which axle the beaters are fixed. The cylinder consists of the body and the ends, one of which is closed and the other open, as represented in the drawings.

Both ends are of cast iron and are grooved on their circumference so as to receive and lodge the body. The body is of sheet iron and is penetrated by lines of apertures one inch or two in length running the whole length. Those apertures are made not by removing any part of the iron but by cutting through and depressing it, so as to present a sharp edge to the wheat when driven against the side of the cylinder by the beaters. Through these apertures which are too small for the passage of a grain of wheat the smut in part escapes.

B is the open end of the cylinder, C the box or feeder through which the wheat passes into the cylinder, D a part of the first piece of the spout, and E the second or upright piece of the spout.

In the drawings marked B accompanying this application are included drawings of the separate parts of the machine including my inventions. In those drawings three different views of the cylinder are given all marked H.

The appearance and position of the whirl or wheel which through a strap is connected with the motive power is given in four places and marked F.

No. 4 exhibits the shape and position of the inner and outer beaters. The axle M, runs in a cast iron box at each end and

those boxes are fastened to the wood work of the machine. The axle at the outer or open part or end of the cylinder is enlarged into a small wheel, which wheel, with four
5 or more metallic plates or wings, constitute the outer beaters. Those plates or wings are plane and run diagonally across the wheel in the direction of the curvature of the inner beater. The outer beater is marked
10 L and the inner beater G. The outer beater is also exhibited in No. 2. The inner beaters each consist of four or more curved plates or wings fastened with bolts upon the shaft or axle. The wings are curved in a
15 direction opposite to that of their motion and their curvature increasing toward the closed end of the cylinder. D D D D exhibit different views of the upright piece of the discharging spout, and E E E E views
20 of the first or receiving part of the spout, which is more particularly described above.

In this drawing there is a plane projec-

tion of the machine from above or end view and a side view marked Nos. 1, 2, 3, respectively. The grain to be cleansed from the 25 smut or chess is fed into the cylinder in the ordinary way while the axle is in motion in a direction opposite to the curvature of the beaters. The grain after passing through the cylinder is discharged below into the 30 spout or discharging tube as before mentioned.

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

1. The constructing of smut machines with 35 internal beaters having curved plates or wings as described.

2. And I further claim in combination with the above the discharging tubes or spouts as also described.

LUTHER B. WALKER.

Witnesses:

COLLESTER M. BALLARD,
WILLIAM HUYCK.