

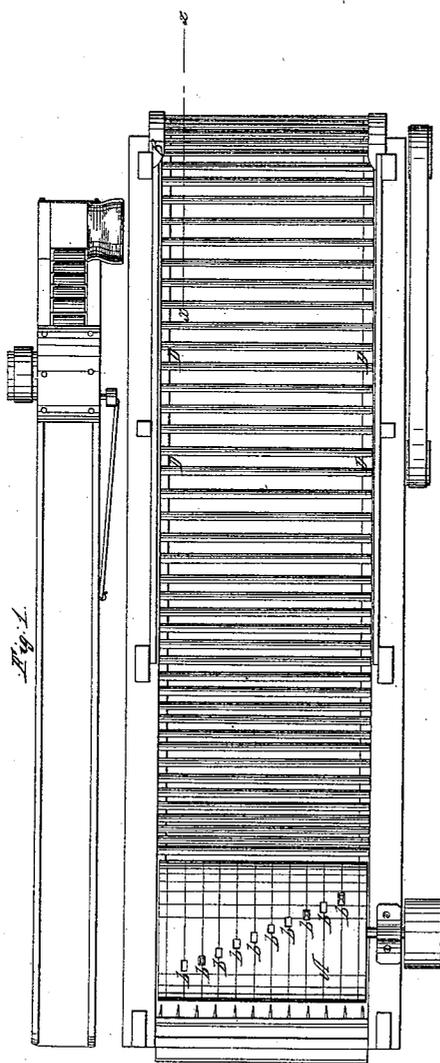
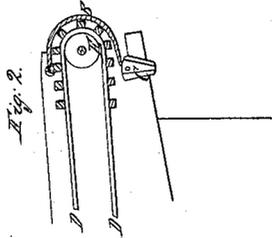
2 Sheets, Sheet 1.

E. & L. Whitman,

Casting Thrashing Cylinders.

N^o 29,738.

Patented Aug. 21, 1860.



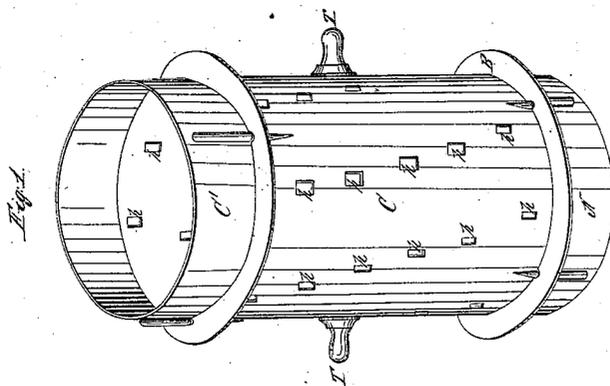
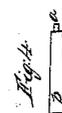
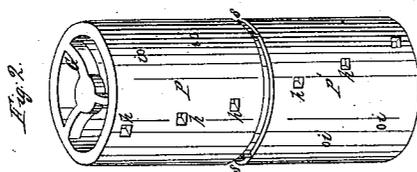
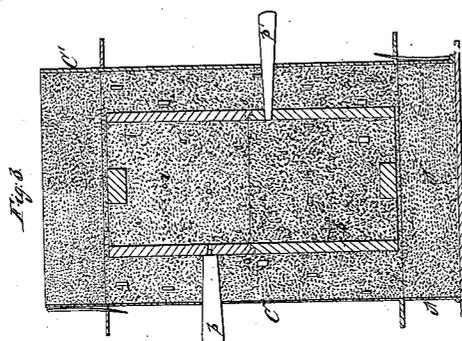
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E. & L. Whitman, Casting Thrashing Cylinders.

N^o 29,738.

Patented Aug. 21, 1860.



Witnesses:

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Luther Whitman &
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UNITED STATES PATENT OFFICE.

LUTHER WHITMAN, OF WINTHROP, MAINE, AND EZRA WHITMAN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN CASTING CYLINDERS FOR THRASHING-MACHINES.

Specification forming part of Letters Patent No. 29,738, dated August 21, 1860.

To all whom it may concern:

Be it known that we, LUTHER WHITMAN, of Winthrop, in the State of Maine, and EZRA WHITMAN, of Baltimore, in the State of Maryland, have invented an Improved Method of Casting the Cylinders of Thrashing-Machines; and we do hereby declare the following to be a correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the flask complete. Fig. 2 is a perspective view of the pattern. Fig. 3 is a vertical central section of the flask with the pattern in place. Figs. 4 and 5 are views of the chills.

The nature of our invention consists in casting the cylinders of thrashing-machines with rectangular tapering holes in them for the reception of the teeth, as hereinafter more particularly set forth.

Cylinders of thrashing-machines have heretofore been cast either with round holes, which required to be afterward squared or rendered rectangular by means of punches and chisels—a difficult and expensive process—or without any holes for the teeth, which had to be inserted in holes expressly drilled for their reception. We have succeeded, by a peculiar construction and management of the flask and chills, in producing rectangular and tapering holes sufficiently accurate in position and dimensions to receive the teeth, which are fitted without the holes being in any way altered after they leave the mold. This is a great economy of time, labor, and expense, and a valuable improvement in the art of casting.

To enable others to make use of our improved method, we will proceed to describe it with reference to the accompanying drawings, in which the same part is marked by the same letter of reference wherever it occurs.

In the drawings, Fig. 1 represents the entire flask, which consists of the cope *C*, the cheeks *C*, the bottom board, *B*, and the nowel *N*. On the sides of the flask are trunnions *T* for turning the flask over in drawing the pattern. The pattern is made in two parts, *P* and *P'*, and is united at the shoulder *s*, the parts being held in exact position by means

of pins. (Shown in Fig. 2.) The pattern may either be perforated with rectangular and tapering holes *h* of the exact size and shape, and in the position required in the finished cylinder, or it may have round holes *i* for the reception of the pin projecting from the end of the chill *p*, Fig. 5. The lower half of the pattern is exactly like the upper half.

To cast a cylinder in this flask the process is as follows: The pattern being placed in the flask, the chills *p* are inserted through the holes *h* in the flask, and the pins *a* on their ends are received by the round holes *i* in the pattern. One chill is used for each hole that is to be made in the cylinder. The flask is then rammed in the usual way, after which the chills *p* are removed and the pattern drawn. The pattern is drawn one-half from each end of the flask, which is turned on its trunnions *T* for that purpose. When the pattern is removed, the chills *p'*, having tapering ends of the exact shape of the holes it is desired to make in the cylinder, are inserted in the holes *h* of the flask, and abut against the core within it. The flask being thus completed, the metal is poured and forms a cylinder in a single piece, perforated with the proper number of rectangular tapering holes in the exact positions required for the reception of the thrasher-teeth. The chills are now removed and the casting drawn, which completes the operation. It will readily be seen that the same result could be attained by having the rectangular tapering holes in the pattern, as at *h h*, Fig. 2, and inserting the chills *p'*, Fig. 5, in them before ramming the flask; but we have found the method above described to be the best in practice. Straight holes—*i. e.*, holes with parallel sides—can be made in the same way, but with more difficulty in drawing the chills. Such holes are, moreover, inferior to tapering ones, inasmuch as the latter afford the means of tightening the teeth by drawing them up by nuts on the interior of the cylinder.

We believe, after long experience as extensive manufacturers of agricultural machinery, that no thrashing-cylinder cast in a single piece has ever been cast with holes in it of any shape for the reception of the teeth.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

The method hereinbefore described of casting thrashing-machine cylinders in a single piece, and having rectangular tapering holes in them for the reception of the thrashing-teeth, as set forth.

The above specification signed and witnessed this 13th day of April, A. D. 1858.

LUTHER WHITMAN.
E. WHITMAN.

Witnesses:

JNO. G. THOMPSON,
CHAS. F. STANSBURY.