



# UNITED STATES PATENT OFFICE.

JOHN J. STOKER, OF RICHMOND, INDIANA.

## IMPROVEMENT IN GRAIN THRASHERS AND CLEANERS.

Specification forming part of Letters Patent No. 131,192, dated September 10, 1872.

### SPECIFICATION.

I, JOHN J. STOKER, of the city of Richmond, county of Wayne and State of Indiana, have invented certain Improvements in Machines for Thrashing and Cleaning Grain, of which the following is a specification:

#### *Nature and Object of the Invention.*

The first part of my invention relates to constructing a rotating ribbed cylinder with a revolving beater or beaters on the inside, for the purpose of agitating the straw and assisting its progress through the ribbed cylinder. The second part of my invention relates to arranging a beater or beaters, a rotary ribbed cylinder, screens, wires, and air-passage, in a manner hereafter fully described, so as to effectually carry off the straw and chaff from a thrashing-cylinder and clean the grain, as hereafter described. The third part of my invention relates to combining a beater or beaters and rotating ribbed cylinder with a thrashing-machine cylinder and raker, as hereafter more fully described.

#### *Description of the Accompanying Drawing.*

Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a longitudinal vertical section of my machine, showing the spiral ribs, beater, screens, and wires. Fig. 3 is an elevation, showing the belts and pulleys on the opposite side of the thrasher from that seen in Fig. 1. Fig. 4 is an elevation, showing that end of my machine which is at the left hand when viewing Fig. 1, and at the right hand when viewing Fig. 2.

#### *General Description.*

The same letters refer to corresponding parts in the several figures.

A is the frame of the machine; B, the uprights of the frame; C, a cross-piece, (of which there are several, not seen;) D, a piece projecting downward from cross-piece C, on which the journal of the pulley T turns, and motion is given to the cylinder F by means of pinion 7 on the shaft of pulley T; E, a bearing made of wood or iron, secured to upright B', which supports one end of beater H; the other end is supported by a similar bearing attached to upright B at the other end of the machine or cylinder. F is the main cylinder. G G are

spiral ribs which are secured to the inside of the cylinder F by means of wood screws, and should be set a suitable distance apart to form cells between them. H is a beater (of which there may be one or more) formed by placing curved teeth in a spiral position around a wooden shaft extending from one end of the cylinder F to the other. This beater requires a much higher speed than the cylinder F, and runs in a contrary direction. I, screens extending back from the end of cylinder F, and attached to it by means of screws, or may be slipped into grooves. K are rollers on which the periphery of the end of the cylinder rolls; L, projecting periphery of cylinder F; M, wires placed in a diagonal position over the screens I, and extending from the upper edge of the ribs G G to the outer end of cylinder F. These wires M are intended to support the straw and keep it off the screens after it has left the spiral ribs G G, when it passes freely out at the end of the cylinder F. N, an air-passage through which air is forced by the fan V to the screens I, for the purpose of blowing out chaff and other impurities. O is a cheat-screen; P, passage for tailings; Q, passage for grain to a receiver; R, a shaft which receives motion from a pinion, 2, on the shaft of the raker Y gearing into wheel 3, and communicating motion to the pulley T by means of a belt from pulley S' on the side of pulley S. S is a pulley; T, a pulley. U is a pulley on the end of the beater H, and is operated by a belt connecting pulley U with pulley S. S' is a pulley. V is an ordinary blast-fan as used for cleaning grain in other separators. W is sitting on the frame to prevent the grain from scattering; X, a thrashing-cylinder—a well-known device for separating grain from straw. Y is a raker, also a well-known device. 1 is the main driving-pulley on the end of the shaft of the thrasher X; 2, a bevel-pinion on the end of the shaft of the raker Y. 3 is a beveled cogged wheel on the end of the line-shaft R; 4, a pulley on the opposite end of the shaft of the thrashing-cylinder from the driving-pulley 1. This pulley 4 communicates motion to pulley 6 by means of a belt. 11 is a pulley on the same shaft as pulley 4, and imparts motion to pulley 5 by means of a belt. 5 is a pulley on the raker-shaft; 6, a pulley on the shaft of the fan V. 7 is a cogged pinion which

imparts rotary motion to the cogged segments which are screwed on the end of the cylinder F. 8 is a cogged wheel formed of the segments of a circle; 9, a belt; 11, a pulley. The object of the beater H is to agitate the straw and assist in its passage through the cylinder F, that the grain may be more effectually separated from the straw.

I claim as my invention—

1. The beater or beaters H, in combination with rotating cylinder F, constructed as described.

2. The construction and arrangement of the beater or beaters H, cylinder F, screens I, wires M, and air-passage N, as described, and for the purpose set forth.

3. The beater or beaters H and rotating cylinder F, in combination with thrashing-cylinder X and raker Y, all constructed and arranged as above set forth, and for the purposes specified.

Witnesses: JOHN J. STOKER.

JOHN YARYAN,  
THOS. A. DUGDALE.