(No Model.) 2 Sheets—Sheet 1.

L. T. SMITH.

REVOLVING RIDDLE FOR THRASHING MACHINES.

No. 282,790. Patented Aug. 7, 1883.

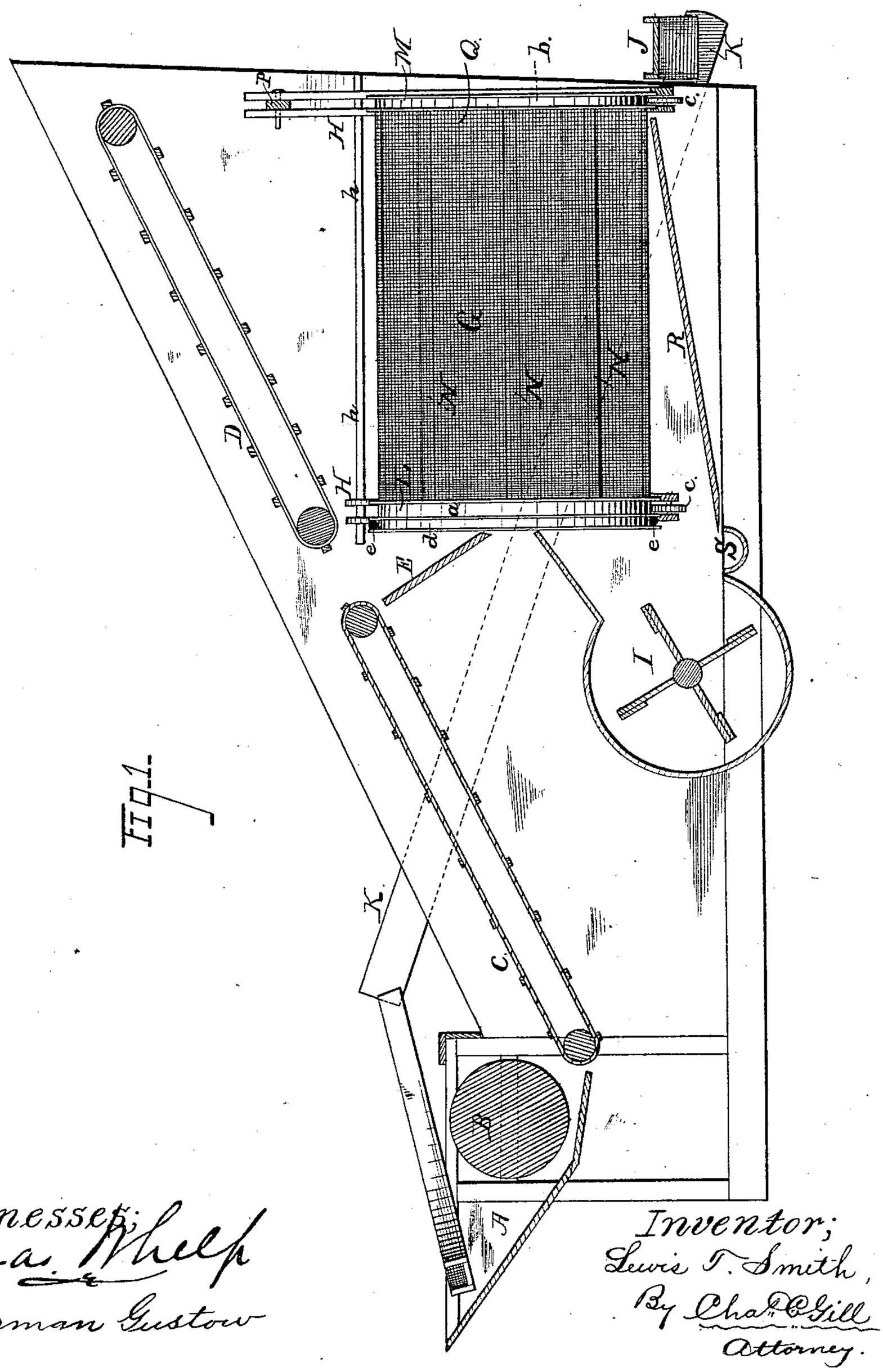


Fig. 1.

Witnesses;
Chas. Wolf
Herman Gustow

Inventor;
Lewis T. Smith,
By Chas. C. Gill
Attorney.

(No Model.) 2 Sheets—Sheet 2.

L. T. SMITH.

REVOLVING RIDDLE FOR THRASHING MACHINES.

No. 282,790. Patented Aug. 7, 1883.

Fig. 2.

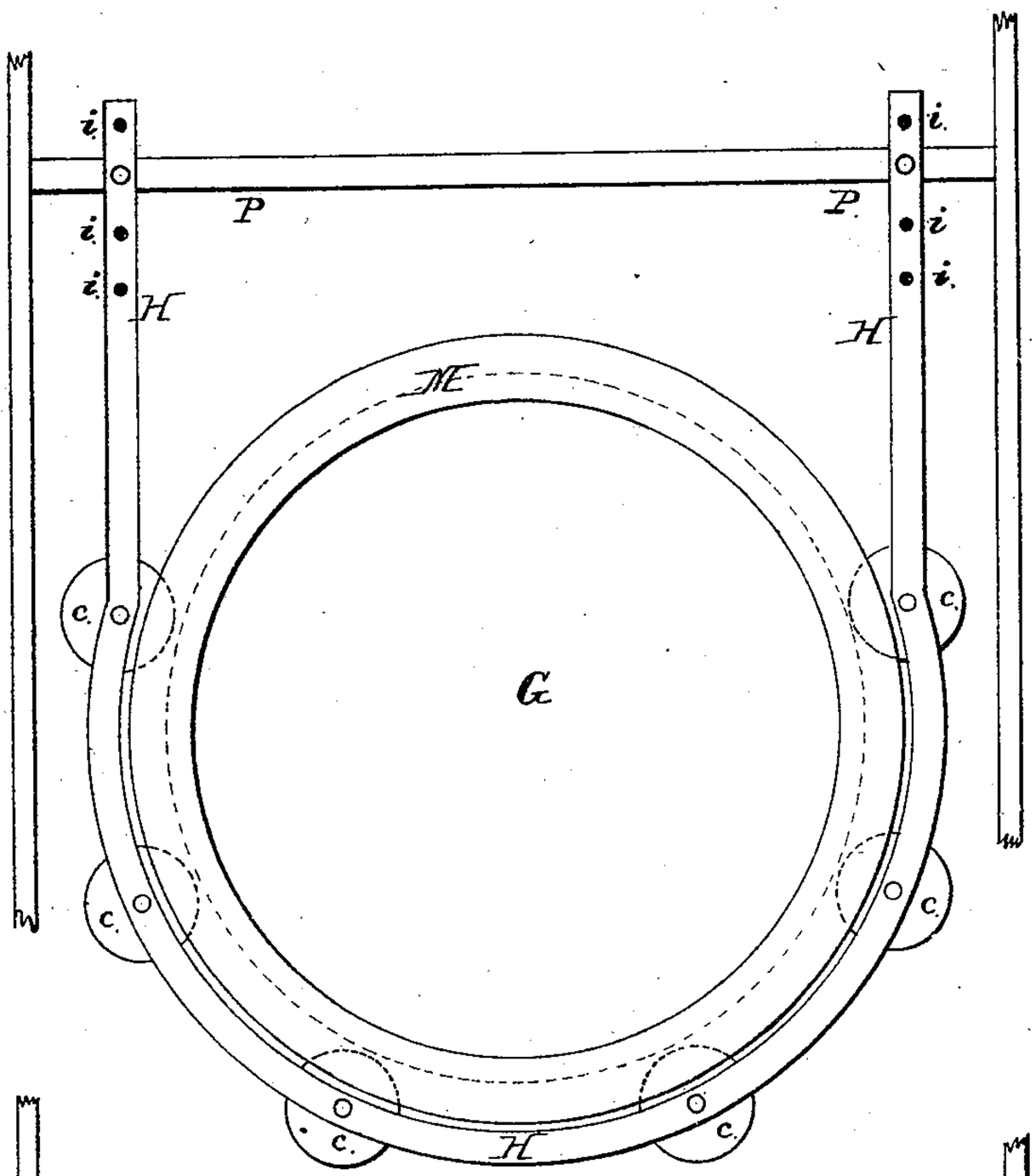
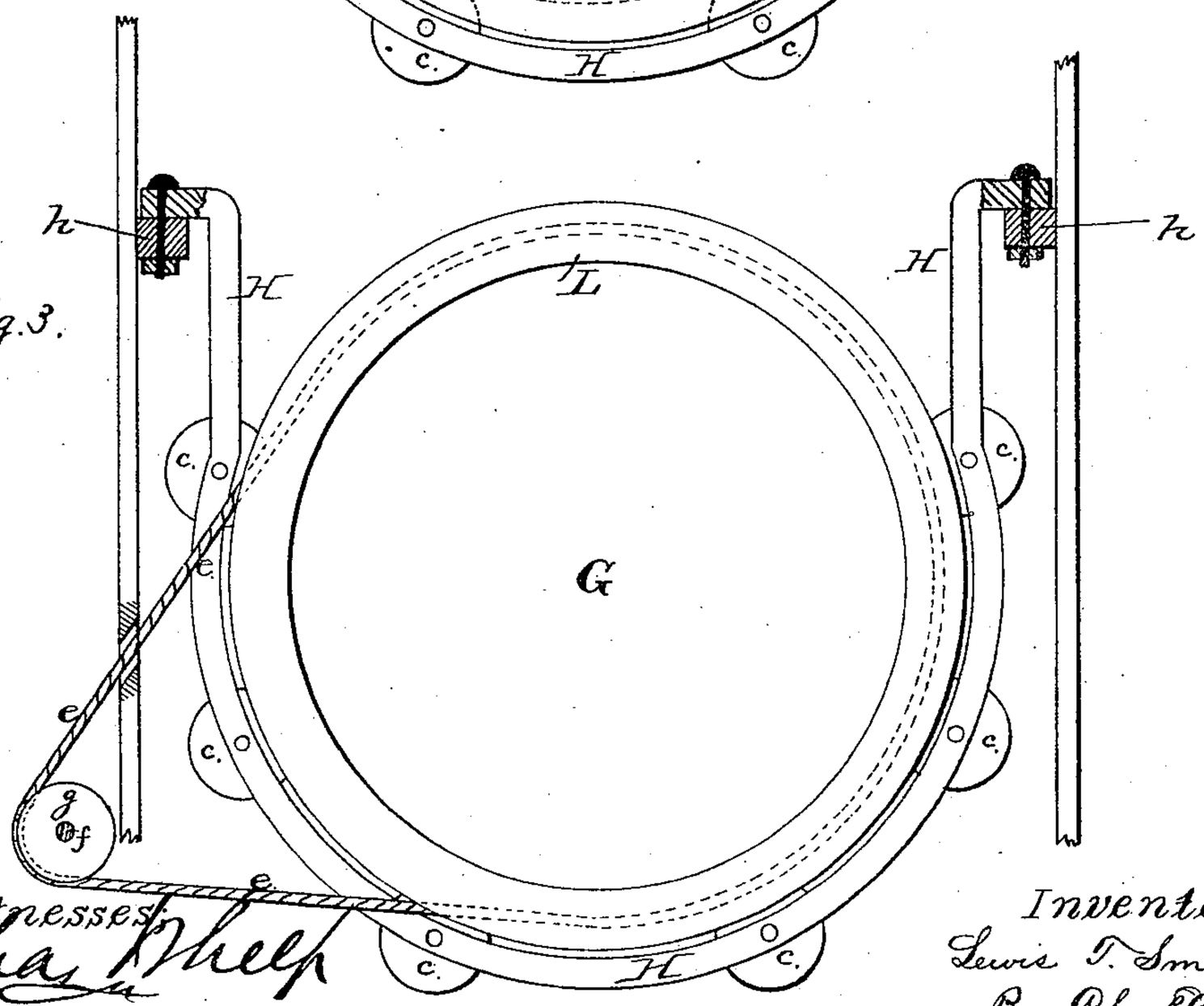


Fig. 3.



Witnesses:
Chas. Dietz
Herman Gustow

Inventor;
Lewis T. Smith
By Chas. C. Gill
Attorney.

UNITED STATES PATENT OFFICE.

LEWIS T. SMITH, OF CANTRIL, IOWA.

REVOLVING RIDDLE FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 282,790, dated August 7, 1883.

Application filed April 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, LEWIS T. SMITH, a citizen of the United States, residing at Cantril, in the county of Van Buren and State of Iowa, have invented certain new and useful Improvements in Revolving Riddles for Thrashing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to an improvement in thrashing-machines; and it consists in the elements hereinafter described, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a plan view, partly in section, of a machine embodying the elements of the invention. Fig. 2 is a rear and Fig. 3 is a front end view of the same.

A denotes the hopper in which the grain—such as wheat—to be thrashed is fed. In this hopper is the revolving thrashing or hulling roller B, and beyond this is the endless traveling belt C, which is of appropriate construction and passes upward to a point adjacent to the lower end of the elevator-belt D, upon which the straw and similar elements are carried to and over the rear end of the machine, while the grain and partially-cleaned heads fall upon the inclined board E and are by it thrown into the revolving riddle G, which is mounted upon the sustaining-bars H. Below and in front of the inclined board E and revolving riddle G is the usual fan, I, for creating a blast through the grain in the customary manner. In rear of the revolving riddle G is the trough J, which leads to the lower end of tailing-spout K, by which the partially-cleaned pods are returned to the hopper A, according to the well-known methods of cleaning grain. The revolving riddle is a cylindrical screen formed of the two end pieces, L M, the connecting-bars N, and the covering Q, which will be of wire, perforated metal, or other suitable material. In the end pieces, L M, are provided the annular grooves *a b*, which are of sufficient depth and appropriately arranged to receive the small sheave *c*, mounted at suitable intervals between the bars for sustaining the cylinder and permitting its rapid revolution. The annular grooves *a b* are of such size as to permit the sheaves to rapidly travel therein without danger of binding and without unnecessary friction. Beyond the groove *a*, at the front end of the revolving riddle G, is, in the present instance, provided the groove *d*, to receive the cord or belt *e*, whereby motion is communicated from the shaft *f* and pulley *g* to the riddle or screen. The bars H are so formed that they will encircle a little over the lower half of the circumference of the cylinder or riddle, and then diverge upward therefrom, the upper ends of the front bar, H, being secured upon the side bars, *h*, while the upper ends of the rear bar, H, are adjustably secured upon the bar P, which passes between the sides of the said bar H, the latter bar being adjustable by means of the pins passing through the apertures *i* provided therein. It will be observed that by reason of the grooves *a b* and the particular arrangement shown and described it will be impossible for the cylinder to slip from its position no matter how rapidly it might be revolving. I have found this means of securing the cylinder and causing it to revolve upon the sheaves to be of great advantage. It is impossible to disarrange it or interrupt its operation under any ordinary circumstances, and, when in operation, the movement of the cylinder is easy and regular and the work very effective.

Below the revolving riddle G is secured the inclined board R, which leads to a spout, S, by which the cleaned grain is conveyed away.

The different parts of the apparatus shown are run by suitable gearing, so as to have a simultaneous action, and their operation will be readily understood. The grain is thrown into the hopper A; thence it passes upward on the belt C, the cleaned grain and partially-cleaned heads being thrown into the revolving riddle G, while the straw and other refuse is carried away by the traveling belt D. During the revolution of the riddle G the grain and heads therein are thoroughly screened, the heads passing out through its rear end into the trough J, while the grain falls through its perforated sides upon the inclined board R, which leads it to the spout S, whence it is conveyed away. The partially-cleaned heads or tailings which escape out of the rear end of the revolving riddle pass to the trough J by means of the return elevating-spout K. The

invention is a great simplicity, and, since it relates particularly to the revolving riddle and its sustaining-bars, it is believed a further description will be unnecessary.

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

1. In a thrashing-machine, the revolving riddle G, provided at its ends with the grooves *a b*, in combination with the sustaining-bars H, which encircle a little more than the lower half of the ends of the riddle, and carry sheaves *c*, adapted to enter the grooves *a b*, the upper portions of the bars H diverging from the surface of the riddle and being secured at opposite sides of the machine, substantially as set forth.

2. In a thrashing-machine, the revolving riddle G, having grooves *a b*, in combination with the sustaining-bars H, which encircle circumferentially a little more than the lower half of the ends of the riddle, and carry sheaves adapted to enter the grooves *a b*, the upper portions of the bars H diverging from the surface of the riddle and the rear bar being adjustable vertically by means of the pins passing through the apertures *i*, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS T. SMITH.

Witnesses:
ANDREW STONEBRAKER,
H. E. HARMON.