

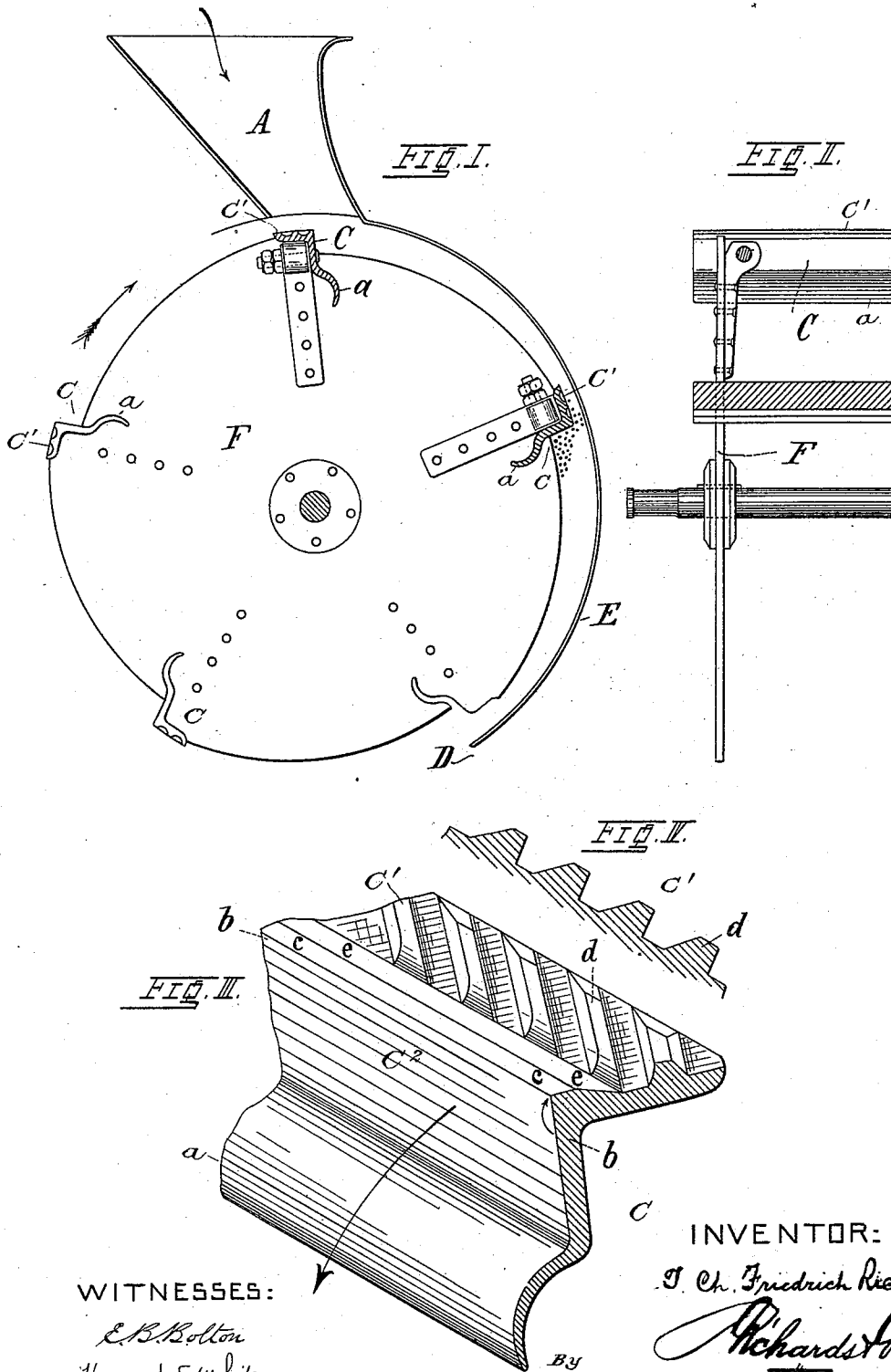
(No Model.)

J. C. F. RICHTER.

STRIP OR LEDGE FOR BEATERS OF THRASHING MACHINES.

No. 426,856.

Patented Apr. 29, 1890.



WITNESSES:

E. B. Bolton
Howard L. White

INVENTOR:

J. Ch. Friedrich Richter

By *Richardson*
his Attorney.

UNITED STATES PATENT OFFICE.

JOHANN CH. FRIEDRICH RICHTER, OF RATHENOW, PRUSSIA, GERMANY.

STRIP OR LEDGE FOR BEATERS OF THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 426,856, dated April 29, 1890.

Application filed July 24, 1889. Serial No. 318,566. (No model.)

To all whom it may concern:

Be it known that I, JOHANN CHRISTIAN FRIEDRICH RICHTER, a subject of the Emperor of Germany, residing at Rathenow, Prussia, Germany, have invented a new and useful Strip or Ledge for Beaters of Thrashing-Machines, of which the following is a full, clear, and exact description.

The type of thrashing-machine for which especially my invention is designed as a substitute presents in practice a number of inconveniences caused by the usual construction of the beater-ledges. A frequently-occurring feature, especially when the thrashed grain is wet, is the tendency of the straw to wind around the thrashing-drum, which not only impedes the movement of the machine, but also causes the straw to be broken, and thus to lose considerable of its value. A further drawback presented by the usual beater-ledges is that small ears, called "roughs" or "shorts," are frequently not thrashed out, thus causing a loss. All these inconveniences are avoided by the use of my new improved beater-ledges, which form the object of the present invention.

In the annexed drawings, which form a part of this specification, Figures I and II show a thrashing-drum armed with the beater-ledges in side view and in front view, partly in section. Fig. III shows a perspective view of part of the ledge, and Fig. IV shows a partial section through the ribs of the ledge.

In the drawings, A represents the hopper, F the cylinder, and E the concave, of a thrashing-machine.

I do not show the other operating parts of the machine, for the reason that my invention does not relate to them, and they may be of any suitable construction and kind.

Around the circumference of the cylinder F, and at various points thereon, I arrange my improved beater-ledges C, which may be secured to the cylinder in any suitable way, but preferably by bolts, as shown. These ledges are preferably formed of metal—as, for instance, cast-iron—and consist of a head C' and body C². The operating surface head C' is formed with a smooth edge *c*, an inclined plane *e*, and with transverse ribs *d* running obliquely across the head. The body C² of the ledge terminates in a curved lip *a*.

The grain fed to the cylinder F through the inlet A is partly seized by one of the beaters and carried along. The curved lip *a* of the ledge will prevent the straw from winding around the lower edge of the ledge, it being obvious that the grain projecting through the feed-opening A cannot move before the rotating beater-ledge, and that consequently the curved lip *a* will always be placed before the grain. Consequently it is impossible that the straw should wind itself around the beater-ledge and be carried along farther instead of being thrown out at the discharge-opening of the concave, and in this manner be injured by breaking, and at the same time impede the movement of the machine or eventually stop it altogether. Another and important advantage presented by my beater-ledge is that the grain seized by a beater is quickly conveyed from the feed-opening A to the discharge-opening D, instead of being thrown out by jerks. This fact, that the grain is worked upon only by a single beater and is passed through the machine in a single and quick stroke, prevents, of course, a repeated breaking of the straw, which is yielded in a smooth and unbroken condition, and consequently of a higher value than broken straw. The grain is seized by the edge *c* of the beater-ledge in a perfectly uniform manner, so that small ears cannot lodge in the ribs *d* and thus pass the machine unthrashed. This result is still more assured by the arrangement of an inclined plane *e* along the straight edge *c*. By this arrangement the position of the ears is changed, so that even the smallest ear is seized by the ribs *d* and thrashed out.

It is evident that the arrangement of the smooth edge *c* of the inclined plane *e* and of the short oblique ribs *d* has an entirely definite purpose and attains an essential result in the practice—*i. e.*, a more efficient thrashing.

Another equally valuable result is obtained by the use of the new beater-ledges—namely, that with an increased efficiency the machine requires a smaller driving-power than the machines of the usual construction and of the same size. This is caused by the above-mentioned fact that the grain seized by each beater is conveyed with a single quick stroke through the machine, thus preventing an unnecessary accumulation of the straw in the

space between the cylinder F and the concave E, which would have about the same effect as a brake, and might eventually result in the cylinder stopping its rotation. Consequently
5 the distance between the concave and the beater-ledges can be made larger than hitherto usual, and, the straw being less crushed in the space between the cylinder and the concave than this was made necessary by the
10 application of the usual ledges, it is evident that the passage of the straw through the machine will require a considerably smaller power, which effects an important saving.
15 Resuming, I obtain the following results by the application of the new and special beater-ledges of my construction: First, the straw is prevented from winding around the thrashing-drum, which facilitates the easy working of the machine; second, the straw delivered
20 by the machine is smoother, and consequently

of a greater value; third, the grain is more thoroughly thrashed out; fourth, the machine requires a smaller driving-power, performing at the same time more and better work.

Having fully described my invention, what 25 I claim as new, and desire to secure by Letters Patent, is—

A beater-Jedge for thrashing-machines, having a projecting lip *a* turned toward the cylinder and arranged at its upper part, which 30 is tangential to the cylinder, with a smooth edge *c*, an inclined plane *e*, and the oblique ribs *d*, substantially as and for the purpose hereinbefore described and set forth.

In witness whereof I have hereunto set my 35 hand in presence of two witnesses.

J. CH. FRIEDRICH RICHTER.

Witnesses:

A. B. REICHARDT,
B. ROl.