(No Model.) 3 Sheets—Sheet 1.

R. & F. GARRETT & J. D. ELLIS.

BEATER FOR THRASHING MACHINES.

No. 297,781. Patented Apr. 29, 1884.

Fig. 1.

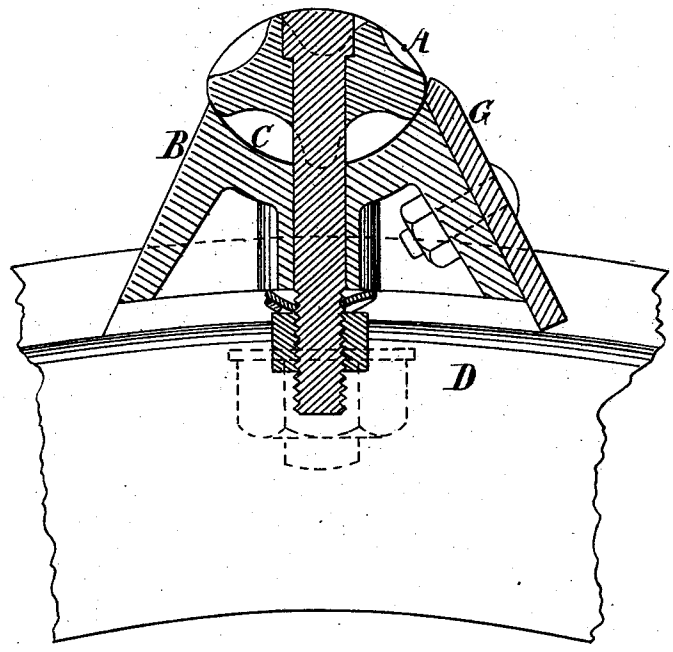
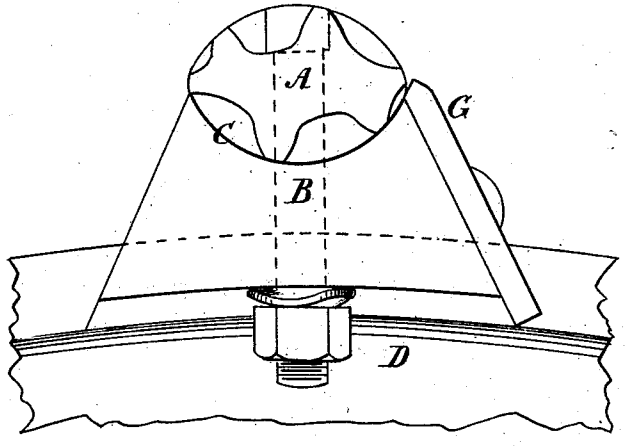


Fig. 2.



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(No Model.) 3 Sheets—Sheet 2.

R. & F. GARRETT & J. D. ELLIS.

BEATER FOR THRASHING MACHINES.

No. 297,781. Patented Apr. 29, 1884.

Fig. 2a

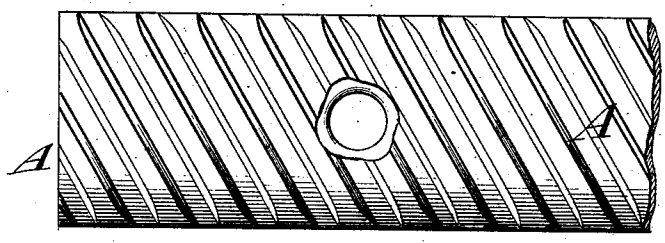
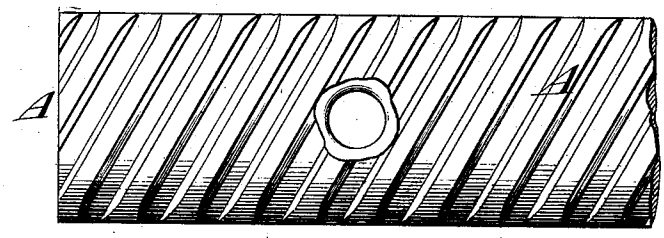


Fig. 2b



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(No Model.) 3 Sheets—Sheet 3.

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BEATER FOR THRASHING MACHINES.

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Fig. 4.

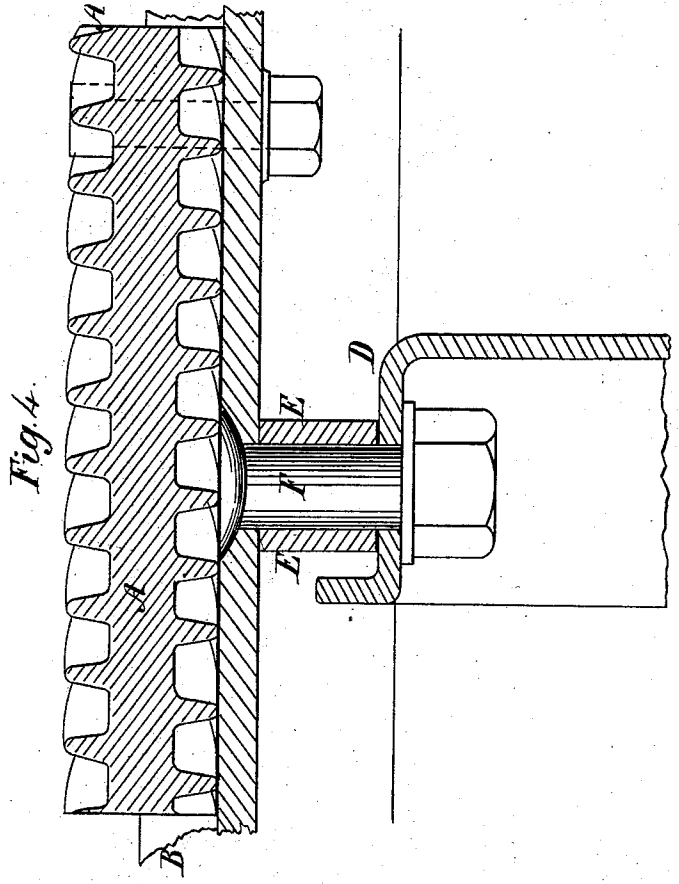
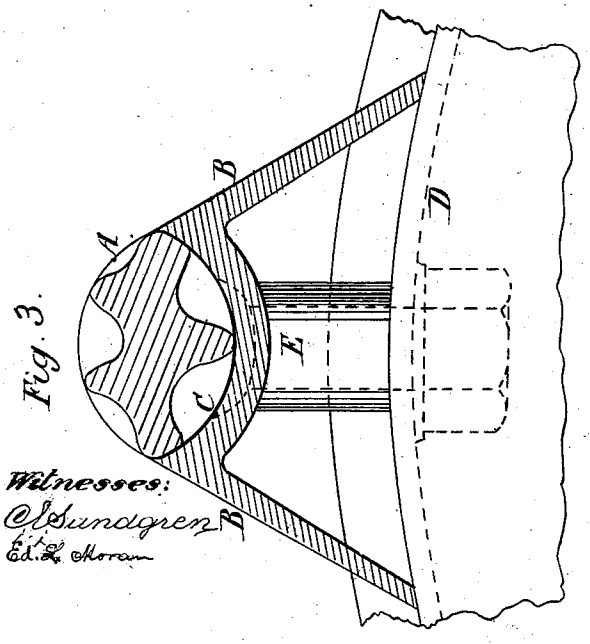


Fig. 3.



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Fig. 5.

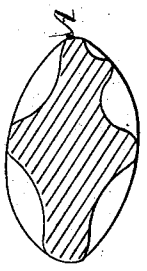
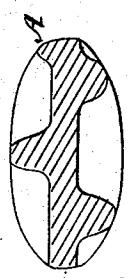


Fig. 6.



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UNITED STATES PATENT OFFICE.

RICHARD GARRETT AND FRANK GARRETT, OF LEISTON WORKS, COUNTY OF SUFFOLK, AND JOHN DEVONSHIRE ELLIS, OF SHEFFIELD, COUNTY OF YORK, ENGLAND.

BEATER FOR THRASHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 297,781, dated April 29, 1884.

Application filed September 3, 1883. (No model.) Patented in England February 5, 1883, No. 607.

To all whom it may concern:

Be it known that we, RICHARD GARRETT and FRANK GARRETT, both of Leiston Works, in the county of Suffolk, England, agricultural engineers and copartners, and JOHN DEVONSHIRE ELLIS, of the Atlas Works, Sheffield, in the county of York, England, engineer, all subjects of the Queen of Great Britain, have invented Improvements in Beaters for Thrashing-Machines, and in the application of the same to the revolving drums of such machines, (for which we have obtained a patent in Great Britain, No. 607, bearing date February 5, 1883,) of which the following is a specification.

Our invention relates both to the construction of the beaters and to the means employed for securing them to the thrashing-drum.

The invention includes a reversible beater, consisting of a bar having oblique ribs on opposite faces, the ribs on one face having an inclination toward the right, and the ribs on the other face having an inclination toward the left. This construction is advantageous, because the beaters can be reversed when worn on one side, and also because they can be arranged so as to present alternately right-hand and left-hand ribs to operate on the grain. We prefer to make these beaters of rolled iron or steel, and their manufacture by rolling is facilitated by making their opposite ribbed faces transversely rounded or convex, which construction is also included in our invention.

Our invention also includes the combination, in the drum of a thrashing-machine, of disks or heads, chairs secured to the peripheries of said disks or heads, and having in their faces concave seats extending lengthwise of the drum, and reversible beaters consisting of bars having opposite faces formed with oblique ribs, and transversely rounded or convex to fit the concave seats in said chairs in which they may be secured with either face outermost, the ribs on one face of said beaters having an inclination toward the right and those on the other face having an inclination toward the left; or the said reversible beaters may be fixed to the drum in any other suitable manner.

In order that our invention may be fully understood and readily carried into effect, we will refer to the accompanying drawings in illustration of the same.

In the drawings, Figure 1 is a transverse section, showing a reversible beater applied to a drum. Fig. 2 is an end view of the same. Figs. 2^a and 2^b represent the opposite faces of a portion of a beater embodying our invention, showing the reverse inclination of the ribs. Fig. 3 a section showing another mode of fixing the beater to the drum. Fig. 4 is a longitudinal section of a beater fixed to the drum in the manner shown in Fig. 3, and Figs. 5 and 6 are sections of other forms of reversible beaters.

In these several figures the same letters of reference indicate corresponding parts.

A A are the ribbed reversible beaters, of rolled or pressed steel, iron, or other suitable material, which may be varied in section, as shown, or otherwise, provided they be made with ribs right-handed on one side or face and left-handed on the other, as best shown in Figs. 2^a and 2^b, so as to admit of their being used interchangeably, as hereinbefore stated.

B B are chairs, by preference of wrought-iron or steel, in the form shown in Figs. 3 and 4, to which the beaters are fixed or bolted. These chairs are continuous longitudinally, and they are hollowed out on the upper surface, as shown, in order to form a suitable and continuous bed or seat for the beaters to rest in or on, a packing of paper or other suitable material being inserted between the lower surface of the beater and the hollowed part of the chair at C. These continuous chairs B B are bolted, as required, to the drum heads or disks D D, and they may be supported by cylindrical parting blocks or collars E E around the bolts F F; or the cavity beneath the chair may be entirely filled with strips of wood of suitable shape.

Figs. 1 and 2 show another method of fixing the reversible beaters to the drum by means of any suitable number of cast-iron or other chairs, B B, bolted to the drum heads or disks D D, and having a continuous face-plate, G, bolted to them in order to afford the requisite

depth of thrashing-surface; or strips of hard wood, suitably shaped and hollowed out and having the face-plates G G bolted to them, may be used to serve either as continuous or detached chairs or packing-pieces between the reversible beaters A A and the drum heads or disks D D.

Having thus described the nature of our said invention and in what manner the same is to be performed, we hereby declare that what we claim as of our invention is—

1. A reversible beater for a thrashing-machine, consisting of a bar having oblique ribs on opposite faces, the ribs on one face having an inclination toward the right, and the ribs on the other face having an inclination toward the left, substantially as and for the purpose herein described.

2. A reversible beater for a thrashing-machine, consisting of a bar having opposite faces rounded or convex in a transverse direction, and formed with oblique ribs on both faces, the ribs on one face having an inclination toward the right, and the ribs on the other face having an inclination toward the left, substantially as and for the purpose herein described.

3. The combination, with the disks or heads D, of the chairs B, secured on the peripheries of said disks or heads and having concave seats in their faces, and the reversible beaters A, having opposite faces transversely rounded or convex to fit said seats, and provided with oblique ribs, the ribs on one face having an inclination toward the right, and the ribs on the other face having an inclination toward the left, substantially as and for the purpose herein described.

RICHARD GARRETT.
FRANK GARRETT.
JOHN DEVONSHIRE ELLIS.

Witnesses to the signatures of Richard Garrett and Frank Garrett:

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RUDOLPH CHAS. NICKOL,
Both of 31 *Lombard Street, London.*

Witnesses to the signature of John Devonshire Ellis:

JOHN C. DUNCAN,
J. E. TOWNSEND,
Atlas Works, Sheffield.